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ABSTRACT BOOK

INTERNATIONAL INTERDISCIPLINARY
RESEARCH & INNOVATION CONFERENCE

(IIRIC 2026)



Orchid International College,
Kathmandu, Nepal 



19–20
May 2026



Building a better future
through research and
innovation

IN ACADEMIC COLLABORATION WITH



Nepal Statistical Society
(NeSS)

ISBN: 978-93-48849-52-6

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IIRIC-2026

— Kathmandu, Nepal —

International Interdisciplinary Research & Innovation Conference

— WORLD RESEARCH CONFERENCE —



INTERNATIONAL INTERDISCIPLINARY RESEARCH & INNOVATION CONFERENCE (IIRIC 2026)

Kathmandu, Nepal | 19–20 May 2026

Organized by



WORLD RESEARCH CONFERENCE

(A Unit of ALP Integrated Services LLP)

In Academic Collaboration with



ORCHID INTERNATIONAL COLLEGE

Kathmandu, Nepal



Nepal Statistical Society (NeSS)

Kathmandu, Nepal

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“Bridging Frontiers: Integrating Innovation Across Global Disciplines”

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ABOUT THE ORGANIZER

WORLD RESEARCH CONFERENCE

Advancing Global Research, Innovation & Academic Excellence

World Research Conference is an emerging international academic and research platform dedicated to fostering interdisciplinary scholarship, global innovation, academic excellence, and transformative intellectual collaboration across borders.

Established with the vision of creating a globally connected research ecosystem, the organization brings together academicians, researchers, scientists, policymakers, industry experts, professionals, and students from diverse disciplines and nations to promote meaningful scholarly engagement and future-oriented research initiatives.

The organization firmly believes that research and innovation are among the most powerful catalysts for sustainable development, societal transformation, and global progress. Through international conferences, academic forums, keynote sessions, research collaborations, workshops, publications, and interdisciplinary initiatives, World Research Conference continuously promotes knowledge exchange, academic networking, and impactful global partnerships.

Committed to academic integrity, ethical research practices, inclusivity, and professional excellence, the platform provides an international environment where innovative ideas, emerging research, and multidisciplinary perspectives can flourish and contribute toward addressing contemporary global challenges.

CORE AREAS OF ACADEMIC ENGAGEMENT

- International Research & Academic Collaboration
- Interdisciplinary and Innovation-Driven Scholarly Dialogue
- Global Networking & Young Researcher Empowerment
- Research Publication & Knowledge Dissemination
- Hybrid and Inclusive Academic Participation
- Sustainable Development & Global Challenges Research
- Innovation, Technology & Future-Oriented Learning
- Professional Development & International Academic Exchange

With a strong commitment to quality, global engagement, and academic advancement, World Research Conference aspires to become a globally respected center for interdisciplinary research excellence, international scholarly cooperation, and innovation-driven academic leadership.

Through impactful international conferences and multidisciplinary initiatives, the organization continues to strengthen global research connectivity, encourage collaborative learning, and create long-term opportunities for researchers and institutions worldwide.

WORLD RESEARCH CONFERENCE

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Official Website : worldresearchconference.com

Official Email : info@worldresearchconference.com

Connecting Researchers, Innovators & Academic Institutions Worldwide

ABOUT THE CONFERENCE

International Interdisciplinary Research & Innovation Conference (IIRIC 2026)

Kathmandu, Nepal | 19-20 May 2026

Hybrid Mode (Physical & Virtual Participation)

The International Interdisciplinary Research & Innovation Conference (IIRIC 2026) is a prestigious global academic platform organized by World Research Conference with the vision of promoting interdisciplinary research, innovation, academic excellence, and international scholarly collaboration.

IIRIC 2026 aims to bring together researchers, academicians, scientists, industry professionals, policymakers, and students from diverse disciplines and countries to exchange innovative ideas, present high-quality research, and foster meaningful academic networking on a global level. The conference provides an inclusive international environment for intellectual discussions, future collaborations, and research-driven solutions addressing contemporary global challenges.

The conference welcomes research contributions from a broad range of disciplines including science, technology, engineering, management, law, education, healthcare, social sciences, humanities, artificial intelligence, and interdisciplinary studies. Through keynote sessions, technical presentations, panel discussions, and collaborative interactions, IIRIC 2026 seeks to encourage knowledge sharing and promote impactful research for sustainable academic and societal development.

IIRIC 2026 will be hosted at Orchid International College, Kathmandu, Nepal, a renowned academic institution affiliated with Tribhuvan University, Nepal. The conference reflects a strong commitment to international academic standards, research integrity, and global scholarly engagement.

The organizing committee envisions IIRIC 2026 as a growing international research platform dedicated to empowering researchers, strengthening global academic partnerships, and advancing innovation-driven interdisciplinary learning for the future.

Organized by

World Research Conference

(A Unit of ALP Integrated Services LLP)

Academic and Venue Partner

Orchid International College, Kathmandu, Nepal

(Affiliated with Tribhuvan University, Nepal)

MESSAGE FROM THE CONFERENCE CHAIRPERSON

Dear Participants,

It gives me immense pleasure and heartfelt satisfaction to welcome all researchers, academicians, scientists, industry professionals, scholars, and students to the International Interdisciplinary Research & Innovation Conference (IIRIC 2026), Kathmandu, Nepal.



IIRIC 2026 has been envisioned as a prestigious international academic platform dedicated to promoting interdisciplinary research, innovation, knowledge sharing, and global scholarly collaboration. In an era of rapidly evolving global challenges, this conference aims to bring together brilliant minds from diverse disciplines and countries to exchange ideas, inspire innovation, and encourage meaningful academic discussions for the advancement of research and society.

The conference provides an opportunity for researchers and professionals to present their valuable work, build international academic connections, and contribute toward future-oriented research across fields including science, technology, law, management, education, health sciences, humanities, and social sciences. The abstracts published in this volume reflect the dedication, creativity, and intellectual efforts of the participating authors, whose contributions make this conference truly meaningful and impactful.

We are delighted to witness enthusiastic participation from scholars and institutions from different parts of the world, making IIRIC 2026 a truly global academic gathering. I sincerely believe that this conference will not only promote academic excellence and research collaboration but will also inspire young researchers and future innovators to contribute positively toward global development.

I extend my heartfelt gratitude to all keynote speakers, reviewers, organizing committee members, academic collaborators, institutional partners, and participants for their trust, support, and valuable contribution toward the successful organization of this conference.

I hope that IIRIC 2026 will provide a memorable academic experience, encourage long-term collaborations, and create opportunities for innovative research initiatives in the years ahead. I wish all participants a successful, enriching, and inspiring conference experience.

With Warm Regards,
Adv. Rajesh Kumar Verma
Conference Chairperson & Founder
International Interdisciplinary Research & Innovation Conference (IIRIC 2026)
World Research Conference

MESSAGE FROM THE ACADEMIC HOST INSTITUTION

Dear Participants,

I am very pleased to welcome esteemed researchers, academics, scholars, industry professionals, and students from across the globe to the World Research Conference, hosted in collaboration with Orchid International College situated in Kathmandu.



The theme, “**Bridging Frontiers: Integrating Innovation Across Global Disciplines**,” signifies the increasing significance of cooperation extending beyond conventional academic limits. In the current interconnected world, innovation flourishes when insights from various fields, cultures, and viewpoints are combined to tackle intricate global issues. This conference acts as a venue for the exchange of ideas, collaborative research across disciplines, and significant partnerships that can influence the future of education, science, technology, business, healthcare, and society.

As the Principal of Orchid International College, I am proud that our institution can serve as an academic partner in this esteemed assembly of international intellects. We firmly hold that research and innovation are the crucial elements fuelling sustainable development and transformative change. The abstracts gathered in this volume reflect the commitment, ingenuity, and academic quality of researchers striving to enhance knowledge for the improvement of humanity.

I express my sincere gratitude to all authors, reviewers, organizing committee members, and participants for their significant contributions in ensuring this conference's success. I believe that the sharing of insights and discoveries highlighted here will encourage future partnerships, creative solutions, and meaningful research results.

I hope all attendees have a fruitful, valuable, and unforgettable conference experience.

Regards,
Bidur Dahal
Principal
Orchid International College
Kathmandu, Nepal

PREFACE

It gives us immense pleasure to present the Abstract Book of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026), organized by World Research Conference in collaboration with Orchid International College, Kathmandu, Nepal, on 19–20 May 2026. This international academic gathering has been envisioned as a global platform for researchers, academicians, scientists, industry experts, scholars, professionals, and students to exchange innovative ideas, research findings, and interdisciplinary perspectives for the advancement of knowledge and society.

In the present era of rapid scientific and technological transformation, interdisciplinary research has become essential for addressing complex global challenges and promoting sustainable development. IIRIC 2026 has been organized with the objective of encouraging meaningful academic dialogue, fostering international collaboration, and creating opportunities for intellectual exchange across diverse disciplines including science, technology, management, law, education, social sciences, healthcare, sustainability, and emerging innovations.

The conference received an encouraging response from researchers and institutions from different parts of India and abroad. The abstracts included in this book reflect a wide spectrum of contemporary research themes, innovative methodologies, and future-oriented academic discussions. These contributions demonstrate the growing importance of collaborative and interdisciplinary approaches in advancing research excellence and societal progress.

We express our sincere gratitude to all keynote speakers, invited speakers, session chairs, organizing committee members, advisory board members, reviewers, collaborators, and participants for their valuable support and contribution in making this conference successful. We also extend special thanks to Orchid International College, Kathmandu, Nepal, for their academic collaboration and support in hosting this international event.

We hope that the research contributions presented in this Abstract Book will inspire further scholarly discussions, collaborative research initiatives, and innovative solutions for global challenges. We believe that IIRIC 2026 will serve as a meaningful platform for strengthening international academic cooperation and promoting future research partnerships among institutions and researchers worldwide.

On a personal note, I express my heartfelt gratitude to my family for their constant encouragement and support throughout this journey. I especially acknowledge my children, Prayag Verma and Yashasvi Verma, whose love and inspiration remained a source of strength during the preparation of this conference.

“IIRIC 2026 received an overwhelming response with over 280 abstract submissions, out of which selected high-quality abstracts were accepted for publication following the academic review process.”

We warmly welcome all participants to IIRIC 2026 and wish them a highly enriching, productive, and memorable academic experience in Kathmandu, Nepal.

Adv. Rajesh Kumar Verma
Conference Chairperson & Founder
World Research Conference
(A Unit of ALP Integrated Services LLP)



Wishes From Prof. Dr. Bijay Lal Pradhan, NEPAL

It is my great honor and privilege to extend a warm welcome to all distinguished delegates, researchers, academicians, practitioners, and students around the world participating in the World Research Conference (ICIRI 2026), hosted at Orchid International College, Kathmandu, Nepal in collaboration with Nepal Statistical Society.



In an era where knowledge is rapidly evolving and global challenges demand interdisciplinary solutions, this conference serves as a vital platform for intellectual exchange, collaboration, and innovation. ICIRI 2026 brings together scholars from diverse academic backgrounds to share original research findings, explore emerging ideas, and foster meaningful academic dialogue that transcends disciplinary boundaries.

The theme of this conference, “Bridging Frontiers, Integrating Innovation Across Global Disciplines,” truly reflects the spirit of contemporary research. It emphasizes the importance of bringing together both young and senior researchers to share ideas, address complex challenges, and learn from each other’s experiences and expertise. Each participant contributes unique perspectives, knowledge systems, and cultural insights, which collectively enrich the academic dialogue and enhance the quality of global research discourse. Such interactions not only advance scientific and scholarly understanding but also foster a sense of unity and shared responsibility towards solving real-world problems.

I would like to express my sincere appreciation to Adv. Mr. Rajesh Kumar Verma, World Research Conference, India, and the dedicated faculty members of Orchid International College, Nepal, for their commendable efforts in jointly organizing this significant international academic event.

I warmly welcome all guests, presenters, researchers, students, teachers, and attendees to experience the breathtaking natural beauty and rich cultural heritage of Nepal, and to actively participate and contribute towards making this conference a meaningful, impactful, and memorable academic gathering.

I wish the International Interdisciplinary Research & Innovation Conference (IIRIC 2026) grand success.

Regards,

**Prof. Dr. Bijay Lal Pradhan
Vice President, Nepal Statistical Society
Professor at Tribhuvan University, Nepal**

Wishes From Shri Mahendra Hardiya M.L.A Indore M.P. India

महेन्द्र हार्डिया

विधायक
इन्दौर -5



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Goodwill Message



I am delighted to know that the World Research Conference is organizing an International Conference in Nepal, bringing together researchers, academicians, and scholars from different parts of the world. Such conferences provide an excellent platform for intellectual exchange, innovation, and global academic collaboration.

I truly appreciate the efforts of Adv. Rajesh Kumar Verma and the entire organizing team for promoting quality research and creating opportunities for talented individuals to present their work at an international level. I believe this initiative will greatly contribute to academic growth and nation-building.

On this special occasion, I extend my heartfelt best wishes for the successful organization of the conference and for the publication of the conference book.

With best wishes,

To,
Adv. Rajesh Kumar Verma
World Research Conference


महेन्द्र हार्डिया
(महेन्द्र हार्डिया)
विधायक, इन्दौर -5

Wishes From Smt. Malini Laxmansingh Gaur, Pro. V.C.

श्रीमती मालिनी लक्ष्मणसिंह गौड़
विधायक-क्षेत्र क्र. 4, इन्दौर
पूर्व महापौर - इ.न.पा.नि. इन्दौर



निवास : 8/1, लोधीपुरा, इन्दौर
फोन : 2343999

क्र.

शुभकामना संदेश



अत्यंत ही हर्ष का विषय है कि, “वर्ल्ड रिसर्च कॉन्फ्रेंस” द्वारा नेपाल में एक “अंतर्राष्ट्रीय सम्मेलन” का आयोजन किया जा रहा है। यह आयोजन विश्व के विभिन्न क्षेत्रों से शोधकर्ताओं, शिक्षाविदों और विद्वानों को एक मंच पर लाने का एक सराहनीय प्रयास है।

इस प्रकार के सम्मेलन बौद्धिक विचार-विमर्श, नवाचार और वैश्विक शैक्षणिक सहयोग के लिए एक उत्कृष्ट अवसर प्रदान करते हैं।

मैं गुणवत्तापूर्ण शोध को बढ़ावा देने तथा प्रतिभाशाली व्यक्तियों को अंतर्राष्ट्रीय स्तर पर अपना कार्य प्रस्तुत करने के अवसर प्रदान करने के लिए “एडवोकेट राजेश कुमार वर्मा” एवं संपूर्ण आयोजन दल के प्रयासों की हृदय से प्रशंसा करती हूँ।

मेरा विश्वास है कि, यह पहल शैक्षणिक प्रगति और राष्ट्र निर्माण में महत्वपूर्ण योगदान देगी।

इस विशेष अवसर पर, मैं सम्मेलन के सफल आयोजन और “कॉन्फ्रेंस बुक” के सफल प्रकाशन हेतु शुभकामनाएँ प्रेषित करती हूँ।

भवदीया,

मालिनी लक्ष्मणसिंह गौड़
(विधायक क्षेत्र क्र. 04, इन्दौर)

Wishes From Prof.(Dr.) Satish Chander Sharma, Pro. V.C.



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Website : www.bbdu.ac.in / Email ID : info@bbdu.ac.in

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Dated: 13.05.2026

Warm Blessings



"I extend my heartfelt blessings and congratulations to the organizers and participants of IIRIC 2026 at Orchid International College. May this gathering in the historic city of Kathmandu serve as a vibrant bridge between global expertise and innovative solutions, nurturing interdisciplinary innovations that transcend borders. To the scholars and students gathered at Orchid International College: My sincerest blessings go out to you as you embark on these two days of intellectual exchange. Research is more than data and citations; it is an act of hope for a promising future.

I wish all scholars a spirit of fearless inquiry, and may your deliberations ignite the spark of discovery and lead to meaningful actions for the betterment of society.

With best wishes!

Thanks & regards,

Satish Chander Sharma
13.05.26
Prof. (Dr.) Satish Chander Sharma
Pro Vice Chancellor
Babu Banarasi Das University
Lucknow, U.P. (INDIA)

Wishes From Prof. Prafull Sharma, INDIA



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Sagar Road, Damoh (M.P.) Bharat



As the Registrar of Eklavya University, it is a privilege to extend my support to the International Interdisciplinary Research & Innovation Conference (IIRIC 2026). While the breathtaking landscapes of Kathmandu provide the physical venue for this gathering, the true "frontiers" being explored are the intellectual boundaries between our diverse academic disciplines.

The pursuit of innovation serves as the primary engine for societal growth, and the theme of this year's conference, "Bridging Frontiers," highlights the necessity of breaking down academic silos. Whether it is through the advancement of digital transformation or the integration of corporate governance into public policy, a unified, interdisciplinary approach is now essential for modern progress.

This forum serves as more than just an academic exchange; it is a catalyst for practical progress. By bringing together seasoned experts and the next generation of researchers, IIRIC 2026 creates a unique ecosystem where theory meets application. Such initiatives are vital to empower scholars to contribute to a sustainable and research-driven global future.

I congratulate the organizers and the World Research Conference for their dedication to this hybrid forum. To all the participants, I wish you a series of productive discussions that translate into lasting global collaborations. May your time in Kathmandu be both professionally rewarding and personally inspiring.

With Best Wishes,

Dr. Prafull Sharma
Registrar,
Eklavya University, Damoh
Madhya Pradesh

Wishes From Prof. T. Nataraja Moorthy, Malaysia

Good day, dear guests, students, teachers, researchers, presenters, friends, and participants from around the world. I am Prof. Nataraja Moorthy, Professor of Forensic Sciences, Management and Science University, Malaysia. I am honoured and delighted to welcome you all to the International Interdisciplinary Research & Innovation Conference, IIRIC 2026, to be held in Orchid International College, affiliated with Tribhuvan University, Kathmandu, Nepal, on 19–20 May 2026.



International conferences like this one are particularly special and important because they foster understanding between people from diverse parts of the world, and this is our opportunity to build friendships, teamwork, and research collaboration that transcend borders. The theme of this conference is “Bridging Frontiers, Integrating Innovation Across Global Disciplines”, with meaningful words. This conference would definitely bring young and senior minds together to share ideas, solve problems, and learn from one another. Each one of you brings your own experience, knowledge, and culture, which will help us all learn and grow.

It is time to appreciate Adv. Mr. Rajesh Kumar Verma, World Research Conference, India, and the faculty members of Orchid International College, Nepal, for jointly organising this wonderful, knowledge-gaining International Conference in Nepal. I would like to welcome all the guests, presenters, researchers, students, teachers, and attendees to make this conference brighter and more meaningful. I wish this international conference all success.

Regards,
Prof. T. Nataraja Moorthy
Professor of Forensic Sciences
Faculty of Health and Life Sciences (FHLS)
Management and Science University (MSU)
Shah Alam, Selangor, MALAYSIA

State University of New York (SUNY) Rockland Community College
145 College Road, Suffern, NY 10901

Wishes From Patricia Szobonya, Esq, New York

It is a tremendous honor and privilege to serve as a keynote speaker at the *International Interdisciplinary Research & Innovation Conference (IIRIC 2026)* in Kathmandu, Nepal. This prestigious international conference arrives at a defining moment for higher education and global society, where rapid technological transformation, geopolitical instability, climate disruption, migration crises, widening inequality, and social polarization continue to shape our interconnected world.



These realities remind us that the challenges of the twenty-first century are no longer confined by borders, disciplines, or cultures. They are shared global concerns that require collective understanding, interdisciplinary collaboration, ethical leadership, innovation, and responsible global engagement. In this context, IIRIC 2026 serves as a vital international platform bringing together scholars, educators, researchers, professionals, and students from around the world to exchange innovative ideas, promote ethical scholarship, and engage in meaningful interdisciplinary dialogue.

As higher education institutions continue to evolve, internationalization must move beyond traditional notions of mobility or institutional prestige. Today, education must prepare students with intercultural competency, empathy, ethical awareness, critical thinking, and the ability to engage constructively with diverse global communities. Learning environments should encourage students not only to critically analyze global challenges but also to approach them with humanity, compassion, and responsibility.

Collaborative Online International Learning (COIL) and virtual exchange initiatives have emerged as transformative approaches for fostering intercultural understanding and inclusive global learning. Through meaningful dialogue and collaboration across borders, students gain not only academic knowledge but also deeper insights into empathy, cultural humility, and shared humanity. Such initiatives democratize global education by making international engagement more accessible and equitable for students worldwide.

I sincerely hope that IIRIC 2026 inspires transformative scholarship, meaningful partnerships, interdisciplinary innovation, and renewed commitment toward ethical global engagement and human connection. Conferences such as this remind us that education remains one of the most powerful tools for advancing human dignity, fostering global understanding, and building a more collaborative and compassionate world. I extend my heartfelt congratulations to the organizers, academic collaborators, keynote speakers, researchers, presenters, and participants for contributing to this important international academic initiative. I wish the conference grand success and a highly enriching experience for all participants.

With Best Wishes,

Patricia Szobonya, Esq.

Professor & Program Director, Legal Studies
State University of New York (SUNY) Rockland Community College
New York, United States of America

Wishes From ADV. J.P. Sharma
Chairman, Zakir Hussain Delhi College, INDIA

It gives me immense pleasure to extend my heartfelt greetings and best wishes for the successful organization of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026), being organized by World Research Conference in collaboration with Orchid International College, Kathmandu, Nepal, on 19–20 May 2026.



In today's rapidly evolving global environment, academic research, innovation, and interdisciplinary collaboration play a vital role in shaping a progressive, inclusive, and knowledge-driven society. Conferences such as IIRIC 2026 provide an important international platform where researchers, academicians, legal professionals, scientists, educators, policymakers, and young scholars from diverse disciplines can come together to exchange ideas, share research insights, and collectively address contemporary global challenges.

The theme of this conference reflects the growing importance of integrating innovation and interdisciplinary understanding across academic and professional domains. Such initiatives significantly contribute to strengthening international academic cooperation, intellectual dialogue, ethical research practices, and collaborative problem-solving approaches that are essential for sustainable global development.

I sincerely appreciate the efforts of Adv. Rajesh Kumar Verma, Conference Chairperson & Founder, World Research Conference, along with the organizing committee and academic collaborators, for their dedication and vision in organizing this prestigious international conference. Their commitment toward promoting global research culture and scholarly excellence is truly commendable.

I am confident that IIRIC 2026 will serve as a meaningful platform for knowledge exchange, professional networking, academic growth, and future international collaborations among institutions and researchers worldwide. I extend my best wishes to all keynote speakers, presenters, delegates, researchers, students, and participants for a highly enriching and successful conference experience in Kathmandu, Nepal.

I wish the conference grand success and hope that its academic outcomes contribute positively toward research advancement, innovation, and global intellectual development.

Adv. J.P. Sharma
Senior Advocate
Supreme Court of India & High Courts
Standing Counsel for the Central Government
Chairman, Zakir Hussain Delhi College (Evening)

Wishes From Dr. Sonal Sisodia, Principal DCBM

It is a distinct honor and a privilege to pen the foreword for the International Interdisciplinary Research & Innovation Conference (IIRIC 2026). Hosted in the inspiring and serene environment of the Himalayan region in Kathmandu, Nepal, this conference stands as a testament to the power of collective intellect and global academic synergy.



The theme of this year's conference, "Bridging Frontiers: Integrating Innovation Across Global Disciplines," underscores a vital truth in our modern era: the most transformative solutions to global challenges rarely exist within a single silo. Whether we are addressing sustainable development, the complexities of AI and digital transformation, or the evolving landscapes of corporate governance and public policy, an interdisciplinary approach is no longer optional—it is essential.

IIRIC 2026 serves as a critical junction where researchers, academicians, and industry professionals from around the world converge to exchange ideas that are as practical as they are innovative. By fostering knowledge dissemination and interdisciplinary collaboration, this platform empowers both seasoned experts and early-career researchers to contribute to a sustainable and research-driven future.

As we navigate an increasingly interconnected world, the dialogue facilitated here at Orchid International College is instrumental in shaping the academic and professional standards of tomorrow. The diverse array of tracks—spanning from social sciences to engineering and technology—ensures a holistic exploration of how innovation can be integrated across every facet of society.

I wish to congratulate the World Research Conference and its partners for their meticulous organization of this hybrid forum, which ensures that geographic boundaries do not limit the flow of knowledge. To the participants: your contributions are the heartbeat of this conference. May your discussions be fruitful, your networking lead to lasting global collaborations, and your research continue to push the frontiers of what is possible. Welcome to IIRIC 2026.

Regards,

**Dr. Sonal Sisodia
Principal and Director,
Daly College of Business Management
(DCBM), Indore**

Wishes From Dr. S.M. Anas Iqbal, Director VSM

Tel.: 0731-2423222

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BLESSINGS MESSAGE

It gives me immense pleasure to extend my heartfelt greetings and best wishes to the organizers, participants, academicians, researchers, scholars, and students associated with the *International Interdisciplinary Research & Innovation Conference (IIRIC 2026)* being organized by World Research Conference in collaboration with Orchid International College at Kathmandu, Nepal on 19–20 May 2026.

In the present era of innovation, globalization, and knowledge-driven development, interdisciplinary research plays a vital role in addressing emerging challenges and creating sustainable solutions for society. Conferences like IIRIC 2026 provide a remarkable platform for intellectual exchange, collaborative learning, and the promotion of innovative ideas across various academic and professional disciplines.

I highly appreciate the dedicated efforts of the organizing committee in bringing together eminent scholars, industry experts, academicians, and young researchers from different parts of the world. Such academic gatherings not only strengthen global research collaboration but also motivate budding researchers to contribute meaningfully toward academic excellence and nation-building.

I am also delighted to know that the official Conference Souvenir and Abstract Book has been published with an International ISBN Number (ISBN: 978-93-48849-52-6). The publication of an ISBN-recognized conference book is indeed a significant academic achievement, as it will serve as a valuable repository of research contributions, innovative ideas, and scholarly discussions presented during the conference. This initiative will undoubtedly enhance the global visibility and academic impact of the research work shared through this prestigious platform.

I firmly believe that the deliberations and presentations during this international conference will contribute significantly toward the advancement of knowledge, innovation, and interdisciplinary understanding.

On this prestigious occasion, I convey my sincere blessings and best wishes for the grand success of the conference. I also extend my heartfelt congratulations to all contributors whose research work has been included in the ISBN Conference Book. I express very special best wishes to Mr. Rajesh Kumar Verma– Organizing Secretary of IIRIC 2026.

May this conference continue to inspire research, innovation, and academic excellence in the years to come.

With warm regards and best wishes,



12/05/2026

(Dr. S. M. Anas Iqbal)

Director

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CONFERENCE THEMES & RESEARCH TRACKS

International Interdisciplinary Research & Innovation Conference (IIRIC 2026)

The International Interdisciplinary Research & Innovation Conference (IIRIC 2026) invites researchers, academicians, scientists, professionals, policymakers, and students worldwide to contribute original research papers, abstracts, case studies, and innovative ideas across diverse academic disciplines.

The conference promotes interdisciplinary knowledge exchange, innovation-driven research, global collaboration, and future-oriented academic discussions addressing contemporary global challenges and emerging opportunities.

1. Engineering, Technology & Applied Sciences

- Engineering & Technology
- Computer Science / IT
- Artificial Intelligence & Data Science
- Digital Transformation & Emerging Technologies

2. Management, Commerce, Law & Public Policy

- Management & Business Studies
- Commerce & Finance
- Economics & Entrepreneurship
- Law & Legal Studies
- Governance & Public Administration
- Public Policy & Criminology

3. Education, Psychology, Humanities & Social Sciences

- Education & Educational Technology
- Psychology & Behavioral Sciences
- Sociology & Political Science
- Humanities, Arts & Literature

4. Health, Medical, Agriculture & Life Sciences

- Medical & Health Sciences
- Pharmacy & Nursing
- Agriculture & Life Sciences

5. Environment, Sustainability & Global Challenges

- Environmental Science
- Sustainability Studies
- Climate & Development Studies

6. Media, Communication & Interdisciplinary Research

- Media & Journalism ,
- Communication Studies
- Interdisciplinary & Multidisciplinary Research
- Forensic Science , Innovation & Future Studies

IIRIC 2026 strongly encourages innovative, impactful, and interdisciplinary research contributions that promote academic excellence, international collaboration, sustainable development, and transformative global solutions.

“Bridging Frontiers, Integrating Innovation Across Global Disciplines”

KEYNOTE SPEAKERS

International Interdisciplinary Research & Innovation Conference (IIRIC 2026)

Kathmandu, Nepal | 19–20 May 2026

Prof. T. Nataraja Moorthy

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An internationally recognized academician and forensic science expert with extensive contributions in forensic anthropology, criminal investigation, and interdisciplinary research.

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Professor & Program Director, Legal Studies

State University of New York (SUNY) Rockland Community College New York, United States of America

A distinguished academic and legal studies expert recognized for her contributions to international education, intercultural learning, and global academic engagement.

Dr. Prakash Singh

Associate Professor

Saudi Electronic University, Kingdom of Saudi Arabia

An accomplished academic in e-commerce, digital transformation, and emerging technologies with research interests in innovation-driven business systems and global education.

Dr. Jeetendra Bhawsar

Assistant Professor

Department of Chemistry, Atal Bihari Vajpayee Hindi Vishwavidyalaya, India

A dedicated researcher and educator specializing in chemistry and interdisciplinary scientific research with active involvement in academic innovation and research development.

Additional International Keynote Speakers

Please note that additional distinguished international keynote speakers are currently being finalized and will be included in the final publication version of the IIRIC 2026 Abstract Book. The organizing committee is continuously coordinating with eminent academicians, researchers, and global experts from various disciplines to further strengthen the international academic profile of the conference.

Global Experts • Academic Excellence • International Research Leadership

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SECTION – 1

ENGINEERING, TECHNOLOGY & APPLIED SCIENCES

The Engineering, Technology & Applied Sciences track of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026) highlights innovative research, emerging technologies, scientific advancements, and interdisciplinary applications shaping the future of global development and sustainable innovation.

This section brings together researchers, academicians, engineers, scientists, technology professionals, and innovators working across diverse domains of engineering, computer science, artificial intelligence, digital systems, and applied technological research. The abstracts included in this section reflect contemporary research trends, practical innovations, and future-oriented solutions addressing industrial, societal, scientific, and technological challenges.

The conference encourages interdisciplinary collaboration and knowledge exchange in rapidly evolving areas of science and technology that contribute toward intelligent systems, sustainable development, digital transformation, and innovation-driven global progress.

Major Research Areas

- Engineering & Technology
- Computer Science / Information Technology
- Artificial Intelligence & Data Science
- Digital Transformation & Emerging Technologies

Advancing Innovation Through Engineering, Technology & Scientific Research

AI-Driven Productivity Impact Analysis Using GIS and IoT Data in Sugar Industries: A Pilot Study

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Abstract

Increasing demands in terms of efficient operations, cost reduction, and improving productivity have emerged in the sugar industry due to increased competition and sustainable developments. The current pilot study suggests a framework to evaluate the impact that integration of AI, GIS, and IoT would bring on productivity of sugar mills. Based on the simulated data that represents more than 20 sugar mills operating in Maharashtra, India, our findings suggest that adoption metrics concerning these technologies positively correlate with performance metrics such as productivity index, cost reduction, downtime reduction, and improvement in sugar recovery. Thus, AI adoption correlated most strongly with productivity index ($r = 0.264$), followed by integration of IoT technologies ($r = 0.119$) and GIS-based monitoring ($r = 0.042$). Random Forest regression provided R^2 value of 0.082. Among the most significant predictors, predictive maintenance score (14.8%) and scores of AI adoption and road quality index (13.5% each) were detected. The average productivity index was at 85.82, while average reductions in cost, downtime, and sugar recovery amounted to 14.12%, 31.92%, and 4.86% correspondingly. In general, it could be noted that the proposed framework is applicable to various locations where sugar is produced. This study provides a methodology that can be replicated to explore the relationship between technology and productivity in the agro-industrial sector, while emphasizing the importance of predictive maintenance and AI decision-making systems to achieve business outcomes.

Keywords: Artificial Intelligence, Geographic Information Systems, Internet of Things, Sugar Industry, Productivity Analysis, Predictive Maintenance, Digital Transformation, Operational Efficiency.

————— IIRIC 2026 —————

A Similarity Fusion Framework for Integrating User-Based and Item-Based Collaborative Filtering

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Abstract

Memory-based collaborative filtering algorithms predict new ratings by averaging (weighted) scores from pairs of similar individuals or things. Because rating data is naturally sparse, a significant number of ratings from comparable users or objects are difficult to obtain in practice. As a result, forecast quality may be compromised. Specific user-item evaluations are utilized to forecast missing ratings in this paper's reformulation of the difficulty of memory-based collaborative filtering within a generative probability framework. The final rating is calculated by combining forecasts from three sources: those based on other users' ratings for the same item, those based on the user's rankings across multiple items, and predictions based on other users' ratings of related items. Our framework's two straightforward circumstances correspond to the current item- and user-based techniques. However, because several rating forms are integrated and supplementary ratings from similar users for related objects are used as a background model to smooth predictions, the model is more robust to data scarcity. Experiments reveal that the proposed methods are more robust to data sparsity and produce more accurate suggestions.

Keywords: Collaborative Filtering, Recommender Systems, User-Based Filtering, Item-Based Filtering, Similarity Fusion, Data Sparsity, Rating Prediction, Recommendation Accuracy.

————— IIRIC 2026 —————

AI Resume Analyzer: A Lightweight NLP-Based Smart CV Screening System with Pure-Python TF-IDF and Serverless Deployment

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Tiruchirappalli Tiruchirappalli , INDIA

Abstract

The increasing volume of job applications has made manual resume screening highly inefficient, leading to the widespread adoption of Applicant Tracking Systems (ATS). However, commercial ATS solutions are often opaque, expensive, and disadvantage candidates who are unaware of their parsing mechanisms. This paper presents the AI Resume Analyzer, a lightweight, open-source CV screening system that provides transparent, AI-driven feedback to job seekers. Built with a pure-Python TF-IDF and cosine similarity engine, the system eliminates heavy dependencies like scikit-learn, enabling seamless serverless deployment. It incorporates heuristic ATS compatibility checking, skills gap analysis, and format quality scoring. Deployed on Vercel with Neon PostgreSQL, the architecture demonstrates that sophisticated Natural Language Processing (NLP) pipelines can be efficiently executed in resource-constrained edge environments. By bridging the information asymmetry between applicants and recruiters, this system empowers candidates to optimize their resumes for automated screening.

Keywords: Resume Screening, Natural Language Processing, TF-IDF, Cosine Similarity, Applicant Tracking System, Flask, Serverless Deployment, Skills Gap Analysis.

————— IIRIC 2026 —————

Experimental and Computational Investigation of Dye Injection Flow Visualization for NACA 2412 Airfoil

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Abstract

This study presents the design, fabrication, and validation of an experimental dye injection flow visualization setup to investigate flow behavior around a NACA 2412 airfoil. The primary objective is to develop a cost-effective and accessible alternative to conventional wind tunnel experiments, particularly suitable for regions with limited laboratory infrastructure. The experimental setup consists of a transparent flow channel, a controlled water circulation system, and a precise dye injection mechanism that enables clear visualization of flow patterns. The experiment allows detailed observation of key aerodynamic phenomena such as boundary layer development, flow separation, vortex formation, and wake structures at different angles of attack. To complement the experimental analysis, Computational Fluid Dynamics (CFD) simulations are performed using ANSYS Fluent. The numerical model is developed with appropriate boundary conditions and turbulence models to replicate experimental conditions as closely as possible. A comparative analysis between experimental results and CFD simulations is conducted to validate the reliability of the setup and to enhance understanding of flow characteristics. The results demonstrate good agreement between visualization patterns and numerical predictions, confirming the effectiveness of the methodology. This project not only provides valuable insights into the aerodynamic performance of the NACA 2412 airfoil but also establishes a practical framework for future research, educational purposes, and low-cost aerodynamic experimentation in developing regions.

Keywords: NACA 2412, Flow visualization, Dye injection, CFD simulation, Aerodynamics.

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Automated Detection of *Aedes aegypti* and *Culex* Mosquitoes Using YOLOv8 for Dengue Vector Surveillance

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Abstract

Dengue remains a significant mosquito-borne disease worldwide. Rapid and accurate identification of vector species, particularly *Aedes aegypti* and *Culex*, is crucial for control measures. This study presents a deep learning-based detection framework using YOLOv8n for automated mosquito identification. A dataset of 1,352 images was collected and annotated. The images were split into a training set (949 images), a validation set (272 images), and a test set (131 images). Two experiments were conducted: high-resolution training (100 epochs, 640×640) and low-resolution training (10 epochs, 480×480). The high-resolution model achieved an overall precision of 0.99, recall of 1.0, mAP@0.5 of 0.995, and F1-score of 0.923 on the test set. In contrast, the low-resolution model achieved a precision of 0.988, recall of 0.987, mAP@0.5 of 0.995, and F1-score of 0.889 on the validation set. Species-specific F1-scores ranged from 0.882 to 0.952. Both models demonstrated fast inference suitable for real-time applications. The results confirm that YOLOv8n provides accurate and efficient detection of mosquito species, supporting vector surveillance and public health interventions.

Keywords: Deep Learning, CNN, YOLOv8, Mosquito Detection, Surveillance.

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Cloud-Based Behavioral Ransomware Detection and Containment Framework

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Abstract

Ransomware attacks have also been identified as a major threat to cloud computing environments due to their ability to encrypt important data and cause disruptions in system operations. Signature-based detection methods have proven to be ineffective in detecting new variants of ransomware attacks. This paper proposes a cloud-based behavioral detection system for ransomware attacks using a machine learning approach to detect abnormal system activities. The proposed system focuses on detecting key behavioral parameters such as file modification rate, extension change rate, CPU usage rate, and entropy level, which are key factors that are often associated with ransomware attacks. The proposed system uses a Random Forest classifier to detect normal or malicious activities based on the key behavioral parameters. In addition to the classification approach, a simulated containment approach is also proposed to isolate the attacks in a cloud computing environment. The proposed system is implemented using a Flask-based web application with a user-friendly interface for accessing the system securely. The proposed system is also simulated using a synthetically generated dataset to validate the proposed approach for detecting ransomware attacks in cloud computing environments. The proposed system provides a framework for enhancing the detection of ransomware attacks in cloud computing environments

Keywords: Ransomware Detection, Machine Learning, Behavior-Based Analysis, Cloud Computing, Cybersecurity, Random Forest, Anomaly Detection.

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Software Project Management Approach for Developing a Smart Toll Gate Vehicle Monitoring System

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Abstract

The rapid growth of urban transportation systems has increased the need for efficient vehicle monitoring and management solutions. This project presents the project planning and management of a Smart Toll Gate System designed for vehicle tracking and long-term stay detection in cities. The primary objective is to develop a structured approach for managing the development of a system that identifies vehicles entering a city through toll gates and detects those that remain beyond a predefined duration without exiting through registered checkpoints.

This work emphasizes key principles of Software Engineering and Project Management, including requirement analysis, effort estimation, scheduling, risk management, and cost analysis. A suitable Software Development Life Cycle (SDLC) model is selected to ensure systematic development, while estimation techniques such as COCOMO are considered to predict development effort and resources. The project also outlines risk factors such as data inconsistency, hardware failure, and privacy concerns, along with mitigation strategies.

Additionally, a detailed project schedule is proposed using Gantt charts, and team roles are defined to ensure efficient coordination. Testing and maintenance strategies are also incorporated to enhance system reliability and scalability. By focusing on project management aspects rather than implementation alone, this study demonstrates how structured planning and management can ensure the successful development Implementing and rolling out a smart toll-based vehicle monitoring system.

Keywords: Smart Toll System, Vehicle Tracking, Long Stay Detection, Software Project Management, COCOMO, SDLC.

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A User-Centered Usability Evaluation of an Academic Web Prototype Using System Usability Scale (SUS)

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Abstract

Increased use of digital technology in the realm of higher education requires developing efficient academic systems. This study aims to evaluate a Figma-based web prototype's usability intended to let faculty members and MCA students access academic resources, get notifications, and collaborate with specialists in the field. The research methodology involved conducting a task-based usability test where 50 students and 21 faculty members participated. The students were assigned five tasks, while the faculty members received four tasks. At the conclusion of the task completion process, students and faculty members evaluated the academic platform according to the System Usability Scale (SUS). An evaluation of the results shows that the SUS score for students was 88.7 while that of the faculty members was 81.54. From the analysis of the responses given by participants, it can be seen that the prototype is handy and useful in performing various academic tasks. Nonetheless, some recommendations have been made on areas such as user logins, navigation, placement of interface controls, quick access, role-based security, analysis, and live interactions in discussions.

Keywords: Usability, System Usability Scale (SUS), Figma Prototype, User Experience, Academic Website.

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Analysis of Leaf Spring of E-rickshaw using FEA: Provision of Using Composite Materials.

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Abstract

Electric rickshaws have become one of the most practical and environmentally friendly solutions to the short-distance transport in the city. The suspension system is the core of their ride quality, and the leaf spring contributes significantly to ride quality by absorbing road shocks and keeping the passenger comfortable. However, traditional steel leaf springs are usually too heavy and low shock absorbing capabilities thus, reducing the level of ride comfort and overall performance of the vehicle.

This paper explores the possibility of substituting conventional steel leaf springs with modern composite materials, such as Carbon Fiber Reinforced Polymer (CFRP), and Glass Fiber Reinforced Polymer (GFRP), through Finite Element Analysis (FEA) in ANSYS software. The leaf spring was initially designed in SolidWorks using real e-rickshaw measurements and then a static structural analysis, as well as, modal analysis, was performed. Modal analysis was used to identify the natural frequencies and mode shapes of six modes of vibration and static analysis was used to identify the deformation and stress distribution.

According to the results, composite materials have a strong case to make in comparison to steel in the form of reduction of weight, better energy absorption, and better durability, which in turn translate into a smoother and more reliable ride. The final goal of this work is to recommend a lean, affordable and high- performance leaf spring design specifically designed to be used in e-rickshaw.

Keywords: Leaf Spring, Composite Materials, Static Analysis, Modal Analysis.

————— IIRIC 2026 —————

Cyber Crime Awareness and Prevention in India

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Abstract

Purpose: The study aims to analyze the growing issue of cyber crime in India and examine the role of cyber awareness in its prevention. It focuses on understanding how lack of digital literacy increases the risk of cyber fraud among users.

Design/Methodology/Approach: This research is descriptive and survey-based in nature. Primary data is collected through structured questionnaires from college students and general smartphone users. Secondary data is obtained from government reports, research papers, and cyber crime complaint platforms such as helpline 1930. Real-life cases like UPI fraud and phishing scams are also considered for analysis.

Findings: The study finds that although people are actively using digital platforms, they lack practical knowledge about cyber safety. Cybercriminals use psychological tactics such as fear, urgency, and greed to trap victims. It is also observed that many victims do not report cyber crimes due to lack of awareness or trust.

Research Implications: The research highlights the urgent need to improve cyber awareness among users. It suggests that educational institutions should play a key role in spreading digital literacy and safe online practices. **Practical Implications:** The study recommends making cyber awareness programs compulsory in schools and colleges. It also emphasizes strengthening government awareness campaigns and encouraging timely reporting of cyber fraud cases.

Originality/Value: This research provides a practical understanding of the link between cyber awareness and cyber crime prevention, especially in the Indian context, and offers simple yet effective solutions.

Keywords: Cyber Crime, Cyber Awareness, Digital Literacy, Online Fraud, Cyber Security, Phishing Scams.

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Food Net: A Web-Based System for Surplus Food Collection and Delivery to NGOs

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Abstract

Food waste is a pressing issue in urban areas, where edible food is often discarded while many people remain hungry. *FoodNet* is a web-based system under development that integrates technology and community networks to facilitate the collection and redistribution of surplus food. Donors upload details such as quantity, location, and time constraints; nearby NGOs are identified, and volunteers are assigned to collect and deliver food efficiently. If no NGO can accept the food in time, surplus items are placed in community fridges to prevent wastage. The system aims to improve coordination, reduce delays, and increase effective utilization of surplus food. By combining web technologies with volunteer and NGO networks, Food Net provides a practical, innovative approach to urban food sustainability.

Keywords: food waste management, web-based system, NGO coordination, volunteer networks, community fridge, social innovation, smart sustainability systems.

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Automated Customer Grievance Classification

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Abstract

The banking and financial industry is undergoing swift digital revolution and this has greatly propelled the number of customer complaints being raised through online platform including mobile applications, email and web portals. These complaints can be categorized manually, which is time-consuming, inconsistent, and ineffective, which causes delays in resolving the issue and operational overhead. In this paper, I will introduce an Automated Customer Grievance Classification System that uses Natural Language Processing (NLP) and supervised Machine Learning (ML) algorithms. The proposed system extracts the feature using TF-IDF vectorization and classifies the unstructured textual complaints under a set of financial categories which include Credit Cards, Loans and Savings Accounts and Fraud. The system is installed on a web architecture based on Flask, which is lightweight, to provide the opportunity of real-time complaint classification and administrative monitoring. Human-in-the-Loop (HITL) feedback mechanism is included to provide flexibility in the models as well as continuous improvement. The suggested framework will greatly minimize the human intervention, increase accuracy of routing and efficiency in the management systems of financial complaints.

Keywords: Customer Grievance Classification, Natural Language Processing, TF-IDF, Logistic Regression, XGBoost, Flask, Machine Learning, Financial Complaint Analytics.

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Strategic Integration of AI-based Image Recognition in E-Commerce for Intelligent Transformation.

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Abstract

AI-based image recognition, emotion-based recommendation systems and virtual try-ons are changing the way of online commerce. Despite increasing adoption, strategic integration is still fragmented and lacks a unified framework for transformative impact. This study fills such gap by proposing the VISTA (Visual Intelligence Strategy for Transformative Adoption) framework to assist retailers in aligning visual intelligence with digital transformation objectives. The research utilizes a qualitative synthesis approach to draw insights from interdisciplinary literature, documented case studies and thematic analysis, to delineate capabilities, maturity levels, and governance requirements. Key findings indicate that visual intelligence enhances personalization, operational flexibility, and consumer engagement; however, ethical implementation necessitates gradual adoption and trust-building strategies. The VISTA framework stresses the importance of being ready as an organization and having a clear strategy for intelligent retailing. The implications encompass academic theory, policy formulation, and retail strategy, establishing visual intelligence as a catalyst for intelligent, inclusive, and ethical commerce in personalized shopping experiences rather than merely a technological enhancement.

Keywords: AI-based Recognition; E-Commerce Transformation; Visual Intelligence; Virtual Try-On; VISTA Framework.

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Explainable Multi-Agent Reinforcement Learning with Graph Neural Networks for Real-Time Smart Traffic Signal Control Using Video-Based Vehicle Detection

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Abstract

Urban traffic congestion remains a primary concern for the efficiency and sustainability of cities, and traditional traffic signal control methods are unable to respond quickly to the complex changes in traffic flow and the relationships among multiple intersections. This paper presents the first intelligent traffic management system that combines explainable multi-agent reinforcement learning (MARL) or Graph Neural Networks (GNNs) or real-time video-based vehicle detection or explainable signal control. Our system provides adaptive signal control for each of the urban intersections in the system. Our system views intersections as nodes in a graph that represent and respond to the spatial dependencies among a set of intersections. Additionally, to endow socially responsible traffic signal control to the system, we provide an explainable module for inter-sectional influence (explanation) and emergency vehicle (EV) prioritization. Our extensive experimental simulations provide evidence that supports the claims made above, allowing for the conclusion that the proposed system is a viable, practical, and intelligent transportation system that is able to provide safe adaptive signal control, as well as safe control and safely explain the operational control of urban traffic to the system.

Keywords: Adaptive Traffic Control, Explainable AI, Graph Neural Networks, Multi-Agent Reinforcement Learning, Real-Time Vehicle Detection, Emergency Vehicle Prioritization.

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Design and Implementation of an Automatic Traffic Violation Reporting Application for Indian

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Abstract

The challenge of highway safety in India is compounded by the growing number of vehicles on the road, lane discipline, unsafe overtaking maneuvers, and the lack of real-time enforcement coverage. Conventional monitoring systems based on patrol vehicles and fixed CCTV camera networks are geographically constrained and expensive. In this paper, an AI-driven Automatic Traffic Violation Reporting Mobile Application is proposed to improve highway enforcement through scalable digital engagement. The proposed system combines mobile video recording, GPS-assisted geo-tagging, timestamp authentication, and AI algorithms such as YOLO-based vehicle detection, CNN-based lane detection, and Automatic Number Plate Recognition (ANPR). A multi-layer verification system that combines AI confidence measures and human verification is used to prevent errors and abuse. Experimental results show that detection rates of 92% for vehicle detection, 89% for lane violations, and 94% for ANPR are achievable in standard conditions. The proposed system enables secure, privacy-respecting, and legally valid digital enforcement, providing a cost-effective and scalable solution for improving highway safety.

Keywords: Traffic Enforcement, Artificial Intelligence, Highway Safety, Intelligent Transportation Systems.

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The AI Divide: How the Fourth Industrial Revolution Could Cleave Nepal's

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Abstract

The Artificial Intelligence (AI) revolution threatens to dramatically widen Nepal's severe economic inequalities, creating a deeper chasm between a prepared urban elite and an isolated rural majority. This report argues that AI will act as an "inequality accelerator" on both national and global scales. Nationally, it will amplify Nepal's pre-existing digital and capital divides, where wealth and opportunity are concentrated in urban centers. This gap is further entrenched as powerful AI tools become premium services, creating a new class divide based on the ability to pay. Globally, the concentration of AI development in a few powerful economies is forging a new knowledge- and data-based economy. This creates a perilous dynamic for developing nations like Nepal, which risk becoming dependent on foreign AI models, leading to significant capital outflow and a crippling competitive disadvantage for local industries.

While AI will disrupt domestic sectors, the most critical threat is external. Nepal's economy is heavily reliant on remittances from migrant workers in manual labor jobs. As host countries in the Gulf and Malaysia automate these roles, the demand for such labor is set to plummet, creating the risk of a "stranded worker" crisis that could destabilize the entire economy. However, the report identifies a unique strategic advantage: Nepal's potential to become a global hub for Green Data Centers. By leveraging its surplus hydroelectricity and cool Himalayan climate, the country can host energy-efficient computing infrastructure. This pivot would not only create a high-value economic engine but also decentralize technology access, pulling fiber-optic infrastructure and jobs into remote, energy-rich provinces.

The article concludes that a passive approach will be catastrophic. It calls for a national mission for digital equity that goes beyond policy papers to include aggressive investment in rural infrastructure and digital literacy, a fundamental overhaul of the education system, and proactive economic planning to harness green computing and build national resilience in the new global AI landscape.

Keywords: Artificial Intelligence, Digital Divide, Economic Inequality, Green Data Centers, Digital Equity, Nepal.

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Design and Implementation of Navigation Based on Devices

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Abstract

There are many academic buildings, hostels, offices and other centers spread over a massive location and this makes it hard for college kids and personnel working there to transport around the campus. Traditional techniques of navigation aren't appropriate enough because they may be now not interactive, do not offer relevant facts, nor do they assure your arrival on the desired destination on campus. In this paper, a smart navigation device called CampusGo is proposed to solve the troubles associated with college campus navigation.

CampusGo: It is a smart navigation device for the university campus, which presents an entire navigation device in the college area. This consists of geospatial mapping of the premises, willpower of the shortest path between two points within the premises and provision of applicable records to the user. It can be developed the usage of the trendy internet development tools which include HTML5, CSS3, JavaScript and Node.js together with geospatial technology to design and expand the functions of the device. It could have a frontend where the consumer will engage with the system, and a backend where routes inside the complicated will be calculated. It will also assist the user to discover centers inside the university campus through clever routing and provide the user with an interface where they can easily have interaction with the device. The smart navigation gadget for the college campus can also be tested to show its effectiveness.

Keywords: Smart Campus, Campus Navigation System, AI Navigation, Geospatial Mapping, Route Optimization, Smart University Infrastructure.

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Natural Corrosion Inhibitors for Sustainable Development

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Abstract

In the fast-growing world metals and alloys are used in many industries for the construction and fabrication of materials. Corrosion of metals in aggressive environment is common phenomena. It affecting industrial system, infrastructure and economic stability worldwide, specially in metal, oil and gas, transportation and construction. Use of inhibitors are the best option to mitigate corrosion. Most commonly synthetic compounds those are prepared in laboratory used as corrosion inhibitors. These compounds are non-degradable and toxic in nature and harmful for environment and human beings. In the context of Sustainable development goals, this time we need to develop eco-friendly and renewable alternatives.

The topic explores the emerging role of green corrosion inhibitors derived from natural sources such as plant extracts, expired drugs, biomolecules, and agricultural waste. These natural inhibitors are rich in phytochemicals such as alkaloids, flavonoids, tannins and many more compounds which containing hetero atoms and lone pair of electrons in their long chain structure. These compounds are adsorbed on metal surfaces and forming protective layer for reduce corrosion of metal.

In this presentation highlights different extraction techniques, characterization methods and evaluation of inhibitors in acidic environments. To improve economic viability and environmental compatibility, particular attention is given to the integration of green chemistry, inexpensive raw materials, and waste valorization.

The cost of corrosion is rising daily, which has led to an increase in research to manage it. while ecological coast is receiving more attention, the primary causes of corrosion costs that directly or indirectly impact materials energy and human safety need to be taken into consideration. The primary causes of corrosion costs, which directly or indirectly impact materials, energy and human safety, must be taken into consideration even though ecological coasts are more concentrated.

In this keynote we discuss different methods of corrosion monitoring which are used to complement this discussion of mechanistic insights into inhibitor-metal interaction. Future research directions including nanotechnology and monitoring by AI and the potential role of inhibitor to reduce environmental impact, promote resource efficiency and contribute to the broader framework of sustainable development.

Keywords: Corrosion Inhibitor, Plant Extract, DFT, SDGS, Metal.

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The Architecture of The Pause: Why the Future of it is Not Seamless, But Social

Nitu Kedia

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Abstract

For decades, the gold standard of Information Technology has been "seamlessness"—the removal of all friction between a user and their data. However, as we move toward an era requiring deep interdisciplinary dialogue, this paper argues that "seamlessness" is actually a barrier to innovation. When our tools make things too easy, they keep us on a narrow, automated path, preventing the "accidental" discoveries that happen when different fields collide.

I introduce the concept of "Interdisciplinary Friction"—the intentional design of IT interfaces that force a momentary pause, requiring researchers to view their data through the lens of a different discipline before proceeding. By moving from "User Experience" (UX) to "Collaborative Experience" (CX), we can transform IT from a silent utility into an active mediator. This paper explores how "stuttering" by design can lead to more robust, ethically grounded, and creative research outcomes.

Keywords: Information Technology; Interdisciplinary Research; Collaborative Experience (CX); User Experience (UX); Interdisciplinary Friction; Human-Computer Interaction (HCI); Digital Innovation; Ethical Technology Design; Research Collaboration; Technology and Society.

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SECTION – 2

MANAGEMENT, COMMERCE, LAW & PUBLIC POLICY

The Management, Commerce, Law & Public Policy track of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026) focuses on emerging perspectives, contemporary challenges, and transformative research shaping business systems, legal frameworks, governance models, public administration, and economic development in an increasingly interconnected world.

This section provides an international academic platform for researchers, academicians, legal professionals, policymakers, management experts, economists, entrepreneurs, and scholars to exchange innovative ideas, interdisciplinary insights, and research-driven solutions addressing global organizational, legal, economic, and governance-related challenges.

The abstracts included in this section highlight significant contributions in areas such as management innovation, business transformation, finance, entrepreneurship, legal studies, governance, public policy, criminology, and sustainable institutional development. The research contributions emphasize ethical leadership, policy innovation, inclusive governance, economic resilience, and interdisciplinary approaches essential for future global progress.

IIRIC 2026 encourages meaningful scholarly dialogue and collaborative research initiatives that strengthen international academic cooperation, professional excellence, and sustainable socio-economic development.

Major Research Areas

- Management & Business Studies
- Commerce & Finance
- Economics & Entrepreneurship
- Law & Legal Studies
- Governance & Public Administration
- Public Policy & Criminology

Strengthening Global Leadership Through Research, Governance & Innovation

Digital Financial Transformation and Sustainable Banking Outcomes: An Analysis of Profitability and Asset Quality in Indian Banks

Prof. (Dr.) Sonal Sisodia^{1*} and Dr. Kush Singodiya

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Associate Professor, Daly College of Business Management, INDIA

Abstract

Purpose – This study aims to examine the impact of DPE on banking performance in India, focusing on PROF, AQ, and SBP. The study seeks to understand how digital financial transformation influences both financial efficiency and risk management in the banking sector.

Design/methodology/approach – Using a quantitative research design, the study analyzes panel data from banks listed in the NIFTY Bank index over the period FY 2016–17 to FY 2024–25. DPE is proxied using UPI transaction volume. The analysis employs correlation, regression, and group-based comparison techniques to examine the relationships between DPE and key performance indicators, including ROA, ROE, and NPA.

Findings – The results indicate that DPE has a positive and statistically significant impact on PROF, as reflected in improved ROA and ROE. Further, DPE is negatively associated with NPA, indicating enhanced AQ. The findings also reveal that banks operating under higher levels of DPE demonstrate superior SBP, characterized by increased profitability and reduced credit risk.

Practical implications – The study highlights the importance of digital payment systems as a strategic tool for improving both operational efficiency and risk management in banks. The findings provide useful insights for banking institutions and policymakers in designing digital strategies that enhance financial performance and stability.

Originality/value – The study contributes to the literature by integrating profitability and risk dimensions within a unified framework to assess sustainable banking outcomes. It provides empirical evidence from an emerging economy context, demonstrating the role of digital payment expansion as a key driver of balanced and long-term banking performance.

Keywords: Digital Payment Expansion (DPE); Profitability (PROF); Asset Quality (AQ); Sustainable Banking Performance (SBP); UPI; Indian Banking Sector; Financial Technology; Non-Performing Assets; Digital Transformation.

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Does the Platform Economy Influence Youth Employment in India? An Empirical Analysis of Employment Outcomes and Economic Well-Being

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Abstract

The rapid expansion of the platform economy has transformed labour market dynamics, particularly in developing economies like India. This study examines the influence of the platform economy on youth employment, with a focus on both employment outcomes and economic well-being. Using time-series data for the period 2015–2024, the study employs an empirical approach to analyse the relationship between key platform economy indicators - such as internet penetration, digital transactions, and platform workforce - and youth employment in India.

The findings indicate that the platform economy has a positive and statistically significant impact on youth employment. However, the magnitude of this impact is moderate, suggesting that while digital platforms contribute to employment generation, they are not sufficient to address the broader challenge of youth unemployment. Furthermore, the study highlights that improvements in employment quantity are not necessarily accompanied by improvements in employment quality. To capture the qualitative dimensions of employment, the study constructs a multidimensional Economic Well-Being Index (EWI), incorporating indicators such as income stability, employment security, work flexibility, social security, and skill development. The results reveal that platform-based employment, despite offering flexibility and access to income opportunities, is associated with concerns related to income instability and limited social protection.

The study concludes that the platform economy represents an important but limited avenue for employment generation in India. Its long-term contribution to sustainable and inclusive labour market outcomes depends on the development of appropriate regulatory frameworks, social security mechanisms, and skill development initiatives.

Keywords: Platform Economy, Youth Employment, Economic Well-Being, Gig Work, Digital Labour Market.

Does Profitability Support Sustainability? Examining the Influence of Financial Performance and ESG Controversies on ESG Ratings – Evidence from INDIA

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Abstract

The intersection of corporate financial performance and environmental, social, and governance (ESG) accountability has emerged as one of the most debated frontiers in contemporary corporate governance and sustainability research. This study examines the influence of financial performance indicators and ESG controversies on ESG ratings among listed Indian companies, drawing on a robust panel dataset of 28,274 firm-year observations derived from firms listed on the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) for the period 2019–2023. Leveraging financial metrics—specifically Net Income and Return on Assets (ROA)—alongside ESG controversy scores sourced from the Refinitiv Eikon database and supplemented by Bloomberg ESG data, the study employs panel data regression techniques, including fixed-effects and random-effects models, to empirically assess the directional and magnitude-wise relationship between profitability, reputational risk, and ESG performance across all three pillars: Environmental, Social, and Governance. The findings reveal that more profitable firms exhibit statistically significant and consistently higher ESG performance across all three pillars, thereby reinforcing the complementarity hypothesis that financial strength serves as a critical enabler of comprehensive sustainability efforts. Conversely, firms associated with higher ESG controversy scores demonstrate significantly lower aggregate ESG ratings, underscoring the reputational and accountability erosion triggered by incidents of misconduct, governance failures, or greenwashing. These results contribute meaningfully to the growing body of ESG literature in the Indian context, where regulatory developments under the Securities and Exchange Board of India's (SEBI) Business Responsibility and Sustainability Reporting (BRSR) framework have created an evolving institutional environment for ESG disclosure. The study offers practical insights for regulators, institutional investors, corporate managers, and policymakers by demonstrating that while profitability facilitates improved ESG transparency and capability, proactive oversight mechanisms and stronger accountability frameworks are indispensable for managing controversies, ensuring reporting credibility, and mitigating greenwashing risks. The findings also carry implications for portfolio allocation strategies and sustainable finance initiatives in emerging economies.

Keywords: ESG Ratings, Financial Performance, ESG Controversies, Corporate Sustainability, India, BRSR

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Eroding the Ecosystem: Measuring User Disengagement from Mobile Financial Services Following Fraud Incidents

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Abstract

This study examines the intersection of organized crime, urban informality, and structural vulnerability in rapidly growing cities. It argues that informal economic systems are not merely parallel to formal governance but are often deeply entangled with organized criminal networks. Using an interdisciplinary analytical framework, the paper explores how marginalized populations—particularly those engaged in informal labor—become embedded within illicit economies through mechanisms of dependency, coercion, and survival. The study highlights how weak institutional capacity, regulatory gaps, and socio-economic exclusion enable organized crime to exploit and regulate informal sectors. It further demonstrates that such dynamics reinforce cycles of inequality and undermine urban resilience. By linking criminological theory with urban studies, the paper provides new insights into the socio-economic foundations of organized crime and offers policy implications for inclusive governance and crime prevention strategies.

Keywords: Organized crime, Urban informality, Informal economy, Structural vulnerability, Governance, Illicit networks, Urban inequality.

————— IIRIC 2026 —————

Trust, Transparency and Ethics Meaning in the Public Space

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Abstract

Background: In a democratic setup, the foundation of effective governance is based on the robustness of trust, which is deeply rooted in transparency. Transparency is not mere disclosure but being honest, fair, reliable, and relevant and timely in information and having clarity in the form of how and why rather than just what. Globalization and the boom of media platforms due to technological transformation have shaped stakeholders' expectations from institutions. Further, without establishing ethical standards, it is tough to ensure transparency in public space. In India, the Right to Information (RTI) Act, 2005, ethical standards viz., democratic accountability, combating corruption, citizen empowerment, ethical administration, etc., help achieve transparency in governance.

Purpose: This chapter aims to explore concepts of trust, transparency, and ethics and establish their relationship and applicability in public space. Further, it critically examines reasons behind distrust in communication and implications of ethics and transparency to gain trust.

Methodology: The research design of the study is cross-sectional, using primary data collected through a structured questionnaire based on a five-point Likert scale. Further, established constructs, viz., transparency, ethics, trust, and governance, have been used to develop a questionnaire, post testing its reliability and validity. Structural Equation Modelling (SEM) has been used to empirically test the conceptual model.

Contribution: This chapter posits an empirically validated conceptual model to create good governance through stakeholders' trust.

Keywords: Trust, Transparency, Ethics, Communication, Good Governance.

————— IIRIC 2026 —————

Interdisciplinary Research in Commerce: Driving Innovation, Sustainability, and Global Development through Entrepreneurship

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Abstract

The research explores the importance of interdisciplinary approaches in promoting innovation and sustainable economic growth through entrepreneurship. Entrepreneurship plays a crucial role in economic development by generating employment, encouraging innovation, and supporting technological advancement. However, in the modern global economy, businesses face complex challenges such as environmental concerns, rapid technological changes, and intense competition. Traditional business methods are often inadequate to address these issues, making interdisciplinary research essential. Interdisciplinary research integrates knowledge from various fields such as commerce, economics, technology, environmental science, and management. This integration enables entrepreneurs to develop innovative products, services, and business models that contribute to sustainable development and global progress.

The study focuses on examining the role of entrepreneurship in innovation, understanding the significance of interdisciplinary knowledge in business development, and analyzing the integration of sustainability into entrepreneurial practices. It also explores the relationship between interdisciplinary learning and entrepreneurial success. The research adopts a descriptive and analytical approach, using both primary and secondary data. Primary data was collected through questionnaires and interviews with entrepreneurs, commerce students, and small business owners, while secondary data was gathered from books, journals, and government reports. The data was presented in tabular and graphical forms for effective analysis.

The findings reveal that interdisciplinary knowledge significantly enhances entrepreneurial innovation and business success. Entrepreneurs with diverse knowledge backgrounds are more capable of developing sustainable and innovative solutions. The study also highlights the growing importance of sustainable entrepreneurship, where businesses focus on environmental protection and social responsibility along with profit. In conclusion, interdisciplinary research is vital for fostering innovation, sustainability, and global development, and should be encouraged in educational and business environments.

Keywords: Entrepreneurship, Interdisciplinary Research, Innovation, Environmental Protection, Technological Advancement, Sustainability, Global Development, Commerce.

————— IIRIC 2026 —————

Impact of Globalization on marketing in E-Commerce Platform

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Abstract

Globalization has significantly transformed marketing practices in the e-commerce sector by expanding market reach, increasing competition, and enabling cross-border trade. With the integration of global markets, e-commerce businesses can now access diverse customer bases, adapt to varying cultural preferences, and leverage digital technologies to deliver personalized marketing strategies. Globalization has facilitated the rapid exchange of information, allowing companies to analyze consumer behavior across regions and implement data-driven decision-making.

However, it also presents challenges such as regulatory differences, logistical complexities, and the need for localization of products and marketing content. The rise of global platforms and digital payment systems has further accelerated international transactions, making it essential for businesses to adopt innovative marketing approaches to remain competitive. Overall, globalization has reshaped e-commerce marketing by driving innovation, enhancing customer engagement, and creating opportunities for businesses to operate on a global scale while addressing local demands.

Keywords: Globalization, E-commerce, Digital Marketing, Competitive Strategy, Customer Engagement.

————— IIRIC 2026 —————

The role of entrepreneurship in economic development

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Abstract

This study demonstrates that a nation's degree of economic growth is significantly positively correlated with its level of entrepreneurship. This study has found evidence that, contrary to some well-established theories, a country's level of entrepreneurship is not explained by the levels of the traditional causes of economic growth in that country (a country's labor capital, knowledge, and market-friendly government policies, for example). Rather, entrepreneurship functions as a separate element. Entrepreneurship is the backbone of society for growth of nation. An essential component of a nation's economic growth and development is entrepreneurship. Innovation and job creation are two benefits of entrepreneurship. They are regarded as the catalyst for economic expansion.

Keywords: Entrepreneurship, Economic growth, Independent factor.

————— IIRIC 2026 —————

A Comprehensive Review of Learning Agility as a Determinant of Effective Artificial Intelligence Tool Adaptation

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Abstract

As organizations become more dynamic and complex, individuals' ability to learn from past experience becomes essential. The rapid integration of artificial intelligence (AI) technologies across industries and organizations has underscored the importance of human adaptability for its successful implementation. Learning agility defined as the ability to learn, adapt, and apply knowledge in novel and changing contexts as an important determinant of effective AI tool adoption. By synthesizing insights from organizational behaviour, digital transformation, and technology acceptance literature, the review explores how learning agility influences individuals' and organizations' readiness for AI-driven change.

This review paper includes behavioural and psychological dimensions of learning agility, its role in overcoming hurdles to AI adaptation, and its contribution to continuous learning in dynamic work environments. The findings suggest that high-learning-agile individuals are more likely to engage proactively with AI tools.

This comprehensive analysis shows learning agility as both an organizational imperative and a personal trait. It concludes with implications for research and practice, recommending that future studies develop standardized metrics to assess learning agility and further explore its role across different AI use cases and industries.

Keywords: Learning Agility, AI adaptation, Adaptability.

————— IIRIC 2026 —————

Challenges and Opportunities Faced by Seasonal Cane-Cutting Labors in Maharashtra: A Systematic Review

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Abstract

The migrant labors involved in seasonal Sugarcane Harvesting in Maharashtra, India form a vulnerable group. They face numerous problems related to occupation, health & socioeconomic aspects but in spite of their important role in Maharashtra's Sugarcane industry- a prominent agrarian industry of India- they face occupational hazards, health risks, economic exploitation & a lack of social protection. This systematic review brings together available studies on issues & emergent opportunities for this group of vulnerable workers.

A thorough systematic literature review was done using PRISMA 2020 guidelines. Search performed in many databases like Sci Space, Google Scholar, PubMed retrieved 593 articles. Duplicates (97) were removed & the remaining 496 records screened at title/abstract level (threshold 4.0). From these records, 12 papers were chosen for full-text assessment. Following full-text review (threshold 4.5) 11 papers satisfied all the inclusion criteria & were used. Inclusion criteria are Maharashtra Sugarcane Labors, occupational health, migration issues, social economic vulnerability & policy measure. 11 articles were selected & qualitative synthesis was done. Work conditions described are inhumane with prolonged working hours, intense heat exposure & poor sanitation facilities coupled with severe occupation hazards. Gender issues prevalent among female workers with consistent reports of hysterectomies (36% in 2018), reproductive health problems, wage disparity & menstruation issues. Children working alongside parents and not able to access education. Economically, workers live in poverty with debts, debt bondage and low financial inclusion. Social protection mechanisms are lagging. However, there are emergent opportunities through Government policy, mechanization & NGO involvement and improved labor rights. Overall, Seasonal Sugarcane Harvesting Labors in Maharashtra are multidimensionally vulnerable with regards to their occupational health, economic safety, gender equality and social protection. Policy interventions urgently needed in enforcement of labor rights, access to health and education, skill development and financial inclusion and overall social security scheme.

Keywords: seasonal migrant labor, sugarcane harvesting, Maharashtra, occupational health, reproductive health, child labor, systematic review.

————— IIRIC 2026 —————

Interdisciplinary Knowledge Integration for Global Problem Solving and Sustainable Growth

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Abstract

In the contemporary global landscape, societies are confronted with complex and interconnected challenges such as climate change, economic inequality, rapid technological transformation, and social instability. These multidimensional problems cannot be effectively addressed through a single disciplinary perspective. Consequently, the integration of knowledge across multiple academic and professional disciplines has emerged as a critical strategy for developing innovative solutions and ensuring sustainable global development. Interdisciplinary knowledge integration promotes collaboration among fields such as science, technology, management, economics, and social sciences, enabling a comprehensive understanding of global issues. The present study aims to examine the role of interdisciplinary knowledge integration in addressing global challenges and fostering sustainable growth. The research highlights how the convergence of diverse knowledge systems encourages innovative thinking, collaborative research, and the development of practical solutions that respond to contemporary global needs. By bridging disciplinary boundaries, interdisciplinary research not only enhances academic inquiry but also strengthens the connection between theoretical knowledge and real-world applications. This study adopts a conceptual and analytical research design based on secondary data collected from scholarly journals, books, institutional reports, and international publications related to interdisciplinary studies and sustainable development. The analysis indicates that interdisciplinary collaboration enhances creativity, improves problem-solving capacity, and facilitates more effective policy formulation. It enables researchers and policymakers to consider economic, environmental, technological, and social dimensions simultaneously while designing sustainable solutions.

Furthermore, interdisciplinary integration strengthens global cooperation among researchers, academicians, industry experts, and policymakers. Such collaboration encourages the exchange of ideas, development of innovative methodologies, and implementation of inclusive development strategies. It also supports the creation of knowledge networks that accelerate research impact and promote sustainable innovation across sectors. The findings of the study suggest that higher education institutions and research organizations must actively promote interdisciplinary research frameworks, collaborative platforms, and innovation-driven academic environments. Encouraging cross-disciplinary dialogue, research partnerships, and integrated curricula can significantly contribute to solving global challenges. Ultimately, interdisciplinary knowledge integration serves as a powerful catalyst for innovation, enabling societies to achieve sustainable growth, inclusive development, and long-term global prosperity.

Keywords: Interdisciplinary Research, Knowledge Integration, Global Problem Solving, Sustainable Development, Innovation

————— IIRIC 2026 —————

Rearticulating Arrest in The Digital Age As The Emerging Cybercrime Tactics in India

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Abstract

The rapid growth of the digital ecosystem in India has created new opportunities for the people and the development of the country. In this digital era and fast paced society, people are evolving from passive to active digital lives through constant interaction with technology. People are shifting towards cyber communities, balancing the real world with virtual life. With such an emerging digital ecosystem, various sophisticated cybercrimes are also evolving, one of the such cybercrime which is highly deceptive and causes serious financial and emotional harm to the people is known as “Digital Arrest”. In Digital Arrest crime, the people are being targeted with grave offences such as money laundering, drug trafficking or any other crime or incident supported by the misrepresentation and forged documents to create the pressure and make the situation so vulnerable that the victim is bound to take impulsive decisions under the continuous and intense pressure. The victims of the abovementioned crimes are kept on long video calls, creating fear, confusion and cutting off from family on any legal help. They are manipulated and forced to transfer a hefty amount of money in the name of “bail” or “security deposits”. Digital arrest, which has no legal standing in India and entirely fake concept, but the people, due to unawareness and exposure to unregulated emerging technology, become victims of such crimes, where they face severe financial damages. Such cybercrimes are often operated across borders and use advanced technology where offenders exploit legal gaps and destroy digital evidence. In response to such cybercrimes, a regulated legal framework, the formulation of digital procedures, the identification of digital imprints, and public awareness are necessary. This initiates the requisite analysis of the issue in detail, strengthening the legal framework and reforms in the digital age.

Keywords: Digital ecosystem, digital arrest, misrepresentation, unawareness, financial damages.

————— IIRIC 2026 —————

Artificial Intelligence and Sustainable Rural Housing in India: A Doctrinal and Rights-Based Analysis

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Abstract

The integration of Artificial Intelligence (AI) into rural development frameworks has emerged as a significant area of inquiry, particularly in the context of sustainable housing in India. This research paper examines the potential and limitations of AI-driven interventions in addressing persistent challenges in rural housing, including infrastructural deficits, insecure land tenure, environmental degradation, and governance inefficiencies. While state-led initiatives such as Pradhan Mantri Awas Yojana–Gramin (PMAY-G) and the SVAMITVA scheme have contributed to improving rural housing delivery, structural gaps in implementation, monitoring, and legal compliance continue to undermine their effectiveness.

This study critically analyses how AI technologies—such as predictive modelling, geospatial mapping, machine learning algorithms, and drone-based surveys—can enhance planning, design, and execution of sustainable rural housing. AI-enabled systems offer opportunities for optimizing resource utilization, ensuring climate-responsive architectural designs, improving land record accuracy, and facilitating real-time monitoring and legal auditing of housing projects. These technological interventions can potentially strengthen transparency, reduce corruption, and ensure adherence to statutory and environmental standards.

However, the paper adopts a cautious and critical perspective by foregrounding the legal, ethical, and human rights implications of AI deployment in rural contexts. The use of AI raises significant concerns regarding data privacy, algorithmic bias, lack of accountability, and the digital divide.

The existing Indian legal framework—including the Digital Personal Data Protection Act, 2023, the Environment Protection Act, 1986, and judicial interpretations of the right to housing under Article 21—provides only fragmented regulatory guidance and is not adequately equipped to address the complexities introduced by AI-based governance. The absence of a comprehensive AI-specific regulatory regime further exacerbates these challenges.

From a rights-based standpoint, the paper emphasizes that the right to adequate housing must remain central to technological integration. There is a risk that AI systems, if not carefully designed and regulated, may reinforce existing socio-economic inequalities by excluding

marginalized communities lacking digital access and literacy. Accordingly, the role of decentralized governance institutions, particularly Panchayati Raj bodies, is highlighted as crucial in ensuring participatory decision-making and contextual relevance of AI-driven housing solutions.

The research adopts a doctrinal methodology, involving a systematic analysis of statutes, policy frameworks, judicial precedents, and international human rights instruments. This approach enables the identification of normative gaps in the current legal regime and provides a foundation for proposing regulatory and policy reforms.

The paper contends that while AI holds transformative potential in advancing sustainable rural housing and achieving broader developmental goals, its deployment must be guided by robust legal frameworks, ethical safeguards, and inclusive governance mechanisms. A balanced integration of technological innovation with constitutional values and social justice principles is essential to ensure that AI functions as an instrument of equitable and sustainable rural development.

Keywords: Artificial Intelligence; Sustainable Rural Housing; Legal Framework; Data Protection; Human Rights.

————— IIRIC 2026 —————

Privacy Under Surveillance: Navigating the Tension Between Data Protection and National Security

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Abstract

The rapid expansion of digital technologies has intensified the tension between the individual's right to privacy and the state's obligation to ensure national security. In an era marked by cyber threats, terrorism, and transnational crime, governments increasingly rely on surveillance mechanisms, data collection, and intelligence gathering to safeguard public order. However, such measures often encroach upon fundamental privacy rights, raising significant legal and ethical concerns. The recognition of privacy as a fundamental right in Justice K.S. Puttaswamy v. Union of India and its protection under international instruments such as the International Covenant on Civil and Political Rights highlight the growing importance of data protection in democratic societies.

This paper critically examines the evolving conflict between data privacy and national security through a comparative analysis of legal frameworks, including India's Digital Personal Data Protection Act, 2023, the European Union's General Data Protection Regulation, and surveillance laws in the United States, particularly the USA PATRIOT Act enacted after the September 11 attacks. By analyzing key case studies such as mass surveillance programs and data misuse scandals, the study highlights the risks of unchecked state power and the potential erosion of civil liberties.

The paper adopts the doctrine of proportionality as a framework to evaluate whether state actions are justified, necessary, and balanced against individual rights. It argues that while national security is a legitimate state interest, its pursuit must not undermine the rule of law or democratic accountability. The study concludes by advocating for stronger safeguards, judicial oversight, and the development of a harmonized global data governance framework that ensures both security and privacy in the digital age.

Keywords: Data Privacy, National Security, Surveillance Laws, Digital Data Protection, Fundamental Rights.

————— IIRIC 2026 —————

Boardrooms in a Broken World: Governing Corporations Amid Geopolitical Turbulence

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Abstract

The global business landscape is increasingly shaped by geopolitical instability, including trade conflicts, economic sanctions, regulatory divergence, and shifting power dynamics. These developments have transformed geopolitics into a central concern for corporate governance, as firms face rising exposure to supply chain disruptions, policy uncertainty, and reputational risks. Geopolitical risk is no longer a peripheral issue but a strategic determinant influencing corporate decision-making and long-term value creation. Despite this shift, many governance frameworks remain rooted in traditional compliance-oriented models, lacking the adaptability required to respond to rapidly evolving geopolitical conditions.

This study examines how corporate governance systems must evolve to integrate geopolitical intelligence into board-level decision-making. It highlights the growing expectation for boards to actively oversee geopolitical risks, align strategy with external political developments, and enhance organizational resilience. Emerging evidence suggests that geopolitical risks vary significantly across firms and sectors, requiring more granular, firm-level assessment tools rather than generalized approaches. Methodologically, the paper adopts a qualitative and analytical research design, combining an extensive review of academic literature, policy reports, and global governance frameworks with comparative analysis across developed and emerging economies. It further incorporates secondary data insights from recent empirical studies examining the relationship between geopolitical risk and corporate behavior, including ESG adaptation and financial risk exposure. The study also employs a conceptual framework approach to develop the notion of “corporate geopolitics,” emphasizing scenario analysis, risk mapping, and board-level strategic oversight.

The findings underscore that effective governance in the current era requires a shift from reactive compliance to proactive, strategy-driven oversight. Integrating geopolitical risk into governance structures enhances corporate resilience, supports informed decision-making, and strengthens stakeholder trust. This transformation is particularly critical for firms operating in emerging markets, where institutional volatility amplifies exposure to global geopolitical shocks.

Keywords: Corporate Governance, Geopolitical Risk, Geopolitics, ESG, Global Business.

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Reframing Migration Through Virtual Exchange: Intercultural Dialogue, Legal Consciousness, and Human Dignity in an Era of Global Displacement

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Abstract

Global migration and displacement are reshaping legal systems, national identities, and human rights frameworks at an unprecedented scale. Higher education is increasingly called upon to prepare students to navigate the ethical, legal, and human dimensions of migration in a world marked by geopolitical instability and conflict. This presentation situates migration not simply as a policy issue, but as a lived human experience embedded in systems of inequality, power, and global interdependence in the United States and South Africa.

Using Collaborative Online International Learning (COIL) as a pedagogical model, this session explores how virtual exchange can cultivate intercultural competence and legal awareness through sustained, structured dialogue between students in the United States and South Africa through binational teamwork. COIL projects that center on migration, can engage students in comparative analysis of asylum systems, refugee protections, and internal displacement within distinct constitutional and socio-political contexts. Students can exchange perspectives on policy outcomes and resolutions.

Students also critically exam migration terminology such as “migrant,” “refugee,” “asylum seeker,” “immigrant,” and “expatriate” and how the terms shape access to rights, legal protections, and social inclusion. Students interrogate how language operates as a tool of both legal distinction and social hierarchy, reflecting broader historical forces such as colonialism, globalization, and conflict.

Aligned with the United Nations Sustainable Development Goals: SDGs 4 (Quality Education), 8 (Decent Work and Economic Growth), 10 (Reduced Inequalities), 16 (Peace, Justice, and Strong Institutions), and 17 (Partnerships for the Goals), this COIL exchange positions migration as a cross-cutting global issue requiring interdisciplinary and intercultural engagement. The COIL virtual format advances equity and access by removing financial and geographic barriers, while simultaneously developing students’ capacity to collaborate across borders using digital tools essential for the modern workforce.

This presentation will highlight how virtual exchange fosters critical reflection, empathy, and global citizenship by connecting students to diverse perspectives on migration. It will also offer practical insights into course design and facilitation strategies in regard to COIL and how it can serve as a scalable and inclusive pedagogy for addressing urgent challenges in migration.

Keywords: Global Migration, Collaborative Online International Learning (COIL), Intercultural Competence, Human Rights, Global Citizenship.

————— IIRIC 2026 —————

Legal Safeguards or Legal Misconceptions? An Analysis of Criminal Laws Safeguarding Women

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Abstract

The protection of women through laws in India is a significant topic that lies at the intersection of safeguarding and bias against women. The fundamental question is whether these protections exist as solid, legal measures, or if they perpetuate inaccurate beliefs about the law. This paper studies elements of Indian laws that protect women, with an emphasis on the Indian Penal Code and the Protection of Women from Domestic Violence Act, and various other pieces of legislation designed specifically for gender-based protection.

While it is true that these provisions have been instrumental in ushering in an era of transformation in the manner in which gender-based violence is viewed and dealt with, the manner in which they are viewed and interpreted is an important one. While on one hand they are important tools of the criminal justice system, designed to promote dignity, equality, and security for women, on the other hand, misconceptions and apprehensions about over-criminalization and gender bias have also been an important factor in perpetuating an alternate narrative. This paper is an analysis of the manner in which these provisions have been interpreted and viewed, with an aim to evaluate whether they are clear-cut legal protections or whether they are also found to perpetuate misconceptions. The balance that is to be maintained is an important one, and it is also one that is to be viewed with greater sensitivity. Ultimately, the purpose of this paper is to provide an informed view on gender-specific criminal legislation in India, with an emphasis on the fact that the effectiveness of these provisions is not in their existence but in their equitable application.

Keywords: Women Protection Laws, Gender Justice, Domestic Violence Act, Criminal Law, Gender Equality, Legal Protection.

————— IIRIC 2026 —————

Escrow Accounts in India: Legal Framework, Real Estate Implications, and Enforcement Challenges

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Abstract

This paper attempts to examine India's Escrow Account administration in real estate , focusing on the RERA Act 2016 mandate under section 4(2)(l)(D)), that 70 % of the amount realized from the allottees, to be held in the project specific escrow account. This paper attempts to analyses the purpose of this rule (Protecting homebuyers), the methods (legal analysis of statutes , regulations , case laws and reports) and findings (widespread non – compliance ,funding diversion, and stalled projects.) Key results indicate identified misuse patterns of diverting escrow Funds, lender encashment, audit frauds and enforcement gaps in both RERA ACT 2016 and IBC 2016.The paper further compares the best practices of the international experiences. Finally proposes actionable solutions: stronger bank o oversight, a centralized registry, statutory trust status for buyer funds and harmonization of RERA with IBC. The implications are that without rigorous enforcement and legal reforms, escrow protections will remain hollow and homebuyers' interests vulnerable.

Keywords: RERA Act 2016, Escrow Account, Allottees Protection, IBC –RERA Interface.

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GST Implications for Social Media Platforms in the Emerging Influencer Economy

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Abstract

The creator economy of India has become bigger than its fiscal set up that was estimated to be about INR 2,344 crore in 2023 and is expected to grow to more than USD 3.4 billion in 2028. Social media, including Instagram, YouTube, and Share-Chat, are currently multi-faceted online markets linking brands to consumers via influences directing promotional trade. However, the system of Goods and Services Tax in India, which is designed in terms of the Central Goods and Services Tax Act, 2017 ("CGST Act"), regards such platforms as passive advertising infrastructure and not as tax payable platform actors subject to platform good and services tax.

In this paper, it introduces what it calls the Creator Economy Tax Gap i.e. the structural deficit that results when platforms enable and commercialise large-scale commercial activity, while GST compliance is atomised across the millions of individual creators who are institutionally unprepared to comply. The paper will achieve three novel contributions to the field of study, the first one being its development of a functional equivalence argument between influencer marketing platforms and ride-hailing or food delivery platforms, which are already subject to GST under section 9(5) of the CGST Act and the second is its analysis of the problem of barter transaction valuation due to non-monetary forms of influencer compensation and the third being its formulation of a valuation framework under Rule 27. This paper concludes that expansion of Section 9(5) to social media platforms is legally viable, financially viable and constitutionally viable.

Keywords: GST, Section 9(5) CGST Act, Platform Liability, Influencer Marketing, E- Commerce Operator, Barter Transactions, Tax Policy, Digital Intermediation.

————— IIRIC 2026 —————

Digital Governance and Human Rights in the Era of Big Data

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Abstract

The increasing dependence on digital technologies and large-scale data systems has transformed governance practices across many parts of the world. Governments and institutions are increasingly adopting digital platforms to enhance administrative efficiency, improve public service delivery, and support data-based decision-making. While such developments have introduced greater speed and accessibility in governance processes, they have also raised important concerns relating to the protection of human rights. In particular, issues of privacy, data protection, personal autonomy, and equality have gained attention due to the extensive collection and processing of personal information through digital systems.

This paper examines the relationship between digital governance and the protection of human rights in the context of expanding big data technologies. It focuses on identifying the legal and ethical concerns that arise from the use of automated systems, predictive tools, and digital surveillance mechanisms in governance structures. The study adopts a doctrinal and comparative research approach by analyzing international legal principles, policy frameworks, and scholarly interpretations that address emerging digital governance challenges. Emphasis is placed on the importance of transparency, accountability, and regulatory oversight in ensuring responsible use of data.

The study highlights that effective digital governance requires the development of strong legal safeguards capable of protecting individual freedoms while encouraging technological advancement. It concludes that a balanced regulatory framework grounded in human rights principles is essential to maintain public trust and ensure responsible governance in the era of big data.

Keywords: Digital Governance, Human Rights, Big Data, Data Privacy and Regulatory, Accountability.

————— IIRIC 2026 —————

Ecocide in War: Should Environmental Destruction During Armed Conflict Be Recognized as an International Crime?

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Abstract

This paper assesses the lawful practicability and inevitability of recognizing "ecocide" as the 5th international crime under the jurisdiction of the International Criminal Court (ICC). It examines whether the modern Rome Statute, specifically Article 8(2)(b)(iv), is functionally archaic because of its elevated evidentiary bar, recommending in its place a codified crime of ecocide established on unprejudiced scientific thresholds.

The assessment employs a legal analysis quantitatively done of environmental demolition in conflict. It studies the "widespread, long-term, and severe" (WLS) criteria by investigating data-driven case studies, during the Gulf War, and the 2023 Kakhovka Dam collapse.

Research also reveals that the present-day "proportionality test" is statistically slanted with respect to the military requirement. Under the current ICC standards, "long-term" is frequently construed as decades, a timeframe that impedes urgent prosecution. Scientific data recommend that the irreversibility of biodiversity loss, for instance, the 30% increase in soil salinity in flooded Ukrainian regions, exceeds the current legal definition of "severe." The study discovers that an eco-centric amendment would replace idiosyncratic military "balance" with objective ecological limits.

Establishing ecocide as an International Crime would frame an absolute legal deterrent. By enumerating "widespread" as the damage that exceeds 10,000 km² and "long-term" as damage that persists beyond one generation, the ICC can shift from abstract condemnation to concrete criminal liability, by ensuring that the environment is no longer a "silent victim" of the total war.

Keywords: Ecocide, Rome Statute, Environmental Warfare, Quantitative Legal Analysis, ICC Amendment.

————— IIRIC 2026 —————

The Smart City Dilemma: Bridging the Governance Gap Between Urban AI and Social Equity

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Abstract

Rapid urbanisation and the use of Artificial Intelligence (AI) in city management have changed how infrastructure, public services, and citizen engagement are handled. AI technologies are now used in areas like surveillance, traffic control, waste management, energy use, and predictive policing. While these tools can improve efficiency, sustainability, and service delivery, they also create tension between effective administration and the protection of fundamental rights. This article examines the social and legal effects of AI in urban governance and highlights the growing gap between new technology and existing legal systems.

This study explores how AI systems in smart cities affect privacy, accountability, social equity, and digital justice. Using surveillance and automated decision-making often involves collecting large amounts of data, raising concerns about privacy, consent, and potential misuse of personal information. Algorithmic bias in AI can also exacerbate social and economic inequalities, especially for vulnerable and marginalised groups. Without strong legal protections, AI-based city management could become less transparent, more discriminatory, and less accountable.

This paper uses a socio-legal research approach to review current laws and governance practices for AI in cities. It examines new legal standards, policy efforts, and international best practices that support the ethical and rights-based use of AI in urban areas. The research identifies important gaps in legal oversight, particularly in transparency, algorithmic accountability, human rights, and fair access to digital infrastructure. The article argues that legal systems need to keep pace with technology to ensure smart city growth remains inclusive and democratic. It suggests using governance models that put people first, incorporate 'Human-in-the-Loop' systems, ensure transparency in decision-making, and provide independent oversight. These steps are needed to balance innovation with constitutional values, civil rights, and social justice. The paper concludes that effective AI governance in cities requires a combined legal and social framework that protects citizens' rights and supports sustainable, fair development.

Keywords: Artificial Intelligence, AI Governance, Smart Cities, Urban Governance, Smart City Law, Data Privacy, Surveillance Technologies, Algorithmic Accountability, Ethical AI, Human-in-the-Loop, Digital Justice, Social Equity, Urban Policy, Socio-Legal Framework, AI Regulation, Sustainable Urban Development, Transparency, Human Rights, Algorithmic Bias, Digital Governance.

Digital Banking and Customer Satisfaction: An Empirical Investigation Using Structural Equation Modeling

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Abstract

Digital banking has rapidly expanded in recent years, transforming the entire banking landscape and making customer satisfaction a crucial element of competitive strategy. This study aims to explore how digital banking contributes to heightened customer satisfaction within the Nepalese banking sector. Utilizing a quantitative research approach, primary data was gathered from 388 customers across three commercial banks located in the Kathmandu Valley. The relationship between various factors was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) after data collection. The findings indicate that all five dimensions efficiency, privacy, reliability, responsiveness, and cost-effectiveness have a positive and significant effect on customer satisfaction. Among these dimensions, responsiveness emerged as the most influential predictor of customer satisfaction, demonstrating a substantial impact on overall satisfaction levels. This research adds to the existing body of knowledge regarding digital banking in developing nations by examining how technology-driven banking experiences shape consumer perceptions and satisfaction with banking services. Additionally, it offers valuable insights for bank leaders and policymakers aiming to create customer-centric digital experiences. By enhancing these critical aspects of digital banking quality, banks can effectively distinguish their services in the market and foster enduring customer satisfaction.

Keywords: Digital banking, customer satisfaction, reliability, responsiveness, and cost effectiveness.

————— IIRIC 2026 —————

Human Trafficking Across Borders: Assessing India's Legal and Policy Response within the Framework of International Humanitarian and Human Rights Law

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Abstract

In South Asia, Human trafficking is still a major international problem that is made worse by lax borders, socioeconomic disparities, and lax enforcement. Within the larger framework of international humanitarian law and international human rights law, this article investigates India's legal and policy response to cross-border human trafficking. It positions human trafficking as a serious violation of basic human rights and human dignity in addition to being a criminal justice problem. Adopting a doctrinal and analytical methodology, the study evaluates India's compliance with international legal instruments such as the Palermo Protocol, alongside domestic legislation including the Immoral Traffic (Prevention) Act. The paper further explores constitutional protections, particularly the right to life and personal liberty under Article 21, to assess the extent to which anti-trafficking measures are grounded in a rights-based approach.

The analysis highlights critical governance and policy gaps, including inadequate victim identification, limited cross-border coordination, and challenges in rehabilitation and reintegration. It also examines the role of regional cooperation mechanisms, particularly under SAARC, in addressing trafficking networks that operate across India's borders with neighbouring countries such as Nepal and Bangladesh.

The paper argues that while India has established a comprehensive legal and policy framework, its effectiveness is constrained by implementation deficits and lack of harmonization with international standards. It calls for stronger institutional coordination, enhanced regional collaboration, and a more integrated approach that bridges international humanitarian law and human rights obligations. By situating India's response within a transnational legal context, this study contributes to broader debates on strengthening anti-trafficking governance in developing regions.

Keywords: Human Trafficking, Cross-Border Crime India, International Human Rights Law, Legal Framework SAARC Regional Cooperation, Victim Protection and Rehabilitation.

Financial Resilience and Strategic Diversification: A Longitudinal Analysis of Coromandel International Limited

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Abstract

Food Stability and agricultural production in India depend significantly upon the fertilizer industry. The paper analyses the financial performance and strategic capabilities of Coromandel International Ltd between FY 2019-2024 using a ratio analysis approach to assess profitability, liquidity, solvency and efficacy based on secondary data that has been collected from annual reports and other sources in the industry.

The results demonstrate that the business improved liquidity management, maintained high profitability with steady returns on equity, and established a debt-free capital structure after FY2021. Coromandel showed operational stability and economical resilience in the face of worldwide disruptions like the COVID-19 pandemic and fluctuations in the price from raw materials.

The business's distinct advantage in profitability and capital efficiency is highlighted by a comparison with significant industry players. Revenue stability and sustainability over time were further enhanced by prudent diversification into specialty agricultural products, crop protection, biofertilizers, and Agri-retail. According to the study's findings, the resilience of companies in capital-intensive and regulated industries is increased whenever financial discipline is paired with related diversification as well as sustainability orientation.

Keywords: Ratio analysis, sustainability, corporate resilience, strategic diversification, financial performance, and the fertilizer industry.

————— IIRIC 2026 —————

A Systems Perspective on Sustainable Supply Chain Finance: An Empirical Analysis of Drivers, Barriers, and Performance Outcomes

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Abstract

The integration of sustainability principles into supply chain finance has gained increasing attention, yet empirical evidence on its systemic drivers, barriers, and performance implications remains limited, particularly in emerging economies. This study adopts a systems perspective to examine the interrelationships between financial integration and sustainable supply chain outcomes. Drawing on data collected from 250 Indian manufacturing firms, the study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to test a conceptual model linking key drivers, barriers, and performance outcomes. The findings indicate that strategic alignment, technological capability, and stakeholder collaboration significantly drive the adoption of sustainable supply chain finance practices, while financial constraints, regulatory complexity, and organizational resistance act as critical barriers. The results further reveal that sustainable financial integration has a significant positive impact on both operational performance and environmental sustainability. Additionally, the analysis highlights the mediating role of financial integration in strengthening the relationship between organizational drivers and sustainability outcomes. This study contributes to the literature by providing empirical validation of a systems-based framework that integrates financial and sustainability dimensions within supply chains in the context of an emerging economy. The findings offer practical insights for managers and policymakers to enhance sustainable performance through financial innovation and strategic coordination. The study also outlines directions for future research to extend the applicability of sustainable supply chain finance across industries and geographical contexts.

Keywords: Sustainable Supply Chain Finance, Supply Chain Management, Financial Integration, Sustainability Performance, PLS-SEM, Emerging Economies, Stakeholder Collaboration, Environmental Sustainability, Operational Performance, Strategic Alignment, Financial Innovation, Manufacturing Firms.

————— IIRIC 2026 —————

From Mills to Modern Manufacturing: A Skill-Centric Analysis of Indore's Textile Evolution

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Abstract

Indore has historically been recognized as a prominent center of textile production in India. From the late nineteenth century to the present, the city has played a crucial role not only in Central India but also in the national textile economy. This research paper traces the developmental trajectory of Indore's textile industry, from the establishment of the first textile mill in 1866 to the recent development of the PM MITRA Park. The study examines historical, economic, social, and industrial dimensions, highlighting the transformation of the sector over time. It further analyzes current production trends, employment generation, and sustainability initiatives, and evaluates future growth prospects in the context of globalization and technological advancement.

Keywords: Textile Industry, Skill Development, Manufacturing Transformation, Industrial Growth, Sustainable Manufacturing, PM MITRA Park.

————— IIRIC 2026 —————

From Tool to Teammate: Artificial Intelligence And The Evolving Inventive Step

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Abstract

The rapid integration of Artificial Intelligence into the research and development has sparked a paradigm shift in Intellectual Property Law, transitioning AI from a passive instrument to a generative collaborator. This paper examines the critical transition of AI from a “Tool” to a “Teammate” analysing the shifting threshold of non-obviousness and its impact on the statutory requirements of the Indian Patent Regime.

As AI tools become ubiquitous in technical fields, the concept of “obvious” is shifting. This study argues that the “Person Skilled in the Art” (PHOSITA) is no longer a human expert acting alone, but an augmented entity whose capabilities are significantly enhanced by algorithmic assistance. Consequently, the threshold for non-obviousness must be recalibrated to prevent the “Evergreening” of Patents through routine AI-assisted optimizations.

By analyzing the 2025 CRI Guidelines and global jurisprudential trends, the paper critiques the “natural person” requirement for inventorship. It proposes a socio-legal framework that recognizes the collaborative nature of modern innovation while ensuring that patent protection is reserved for advancements exhibiting a genuine “creative spark” beyond predictable algorithmic output. The research concludes with suggestive legislative refinements to balance AI-driven progress with the foundational patentability principles and global IP Harmonization.

Keywords: Artificial Intelligence, Inventive Step, PHOSITA, 2025 CRI Guidelines, Patentability, AI-Human Collaboration, Non-Obviousness.

————— IIRIC 2026 —————

Cross-Border Insolvency and the Indian Framework: A Critical Need for Reform

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Abstract

The rapid growth of globalization, international trade, and cross-border investments has increased the complexity of insolvency proceedings involving multiple jurisdictions. With businesses operating across national boundaries, insolvency cases frequently involve foreign assets, creditors, and parallel legal proceedings in different countries. India's Insolvency and Bankruptcy Code, 2016 (IBC) introduced significant reforms in insolvency law; however, its cross-border insolvency framework remains limited to Sections 234 and 235, which primarily rely on bilateral agreements and lack a comprehensive procedural mechanism.

This paper critically examines the inadequacies of India's present cross-border insolvency regime and highlights the practical difficulties faced by courts, creditors, and insolvency professionals in multinational insolvency cases. The study evaluates the UNCITRAL Model Law on Cross-Border Insolvency, 1997, and analyzes its successful implementation in jurisdictions such as the United States and the European Union. It further explores the recommendations of the Insolvency Law Committee and the proposed Draft Part Z under the IBC.

The research adopts a doctrinal and comparative methodology to assess how international best practices may be adapted within the Indian legal framework. The paper argues that adopting the UNCITRAL Model Law, with suitable modifications tailored to Indian conditions, would improve judicial cooperation, increase investor confidence, and strengthen the efficiency and predictability of insolvency resolution in India.

Keywords: Cross-Border Insolvency, IBC 2016, UNCITRAL Model Law, Draft Part Z, International Insolvency, Corporate Law.

————— IIRIC 2026 —————

Family Law Reform in Algeria: Polygamy, Women's Rights, and Evolving Interpretations of Islamic Law

“...marry women of your choice, two, three, or four; but if you fear that you will not be able to deal justly with them, then (only) one...”

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Abstract

The present research examines the growth of Algerian family law from the 1984 Family Code to the substantial amendments implemented in 2005 and following legal developments, with a focus on the legislative framework of polygamy. The evaluation places these improvements in a larger legal and socioeconomic framework that has been affected by Algeria's membership in international rights-related frameworks, changing cultural expectations, women's rights operations, and financial circumstances. The way Algerian parliamentarians have attempted to balance contemporary demands for equal treatment, equality, and state control alongside conventional Islamic legal principles (Shari'a) is at the heart of the discussion.

The study demonstrates that polygamy has changed from a largely unsupervised legal entitlement to a technically restricted practice subject to legal oversight and consent necessities by drawing on legal provisions, legislative practices, social and economic data, and philosophical explanations of Islamic law. The modification indicates a changing perspective on Islamic law that emphasises ethical objectives like equitable treatment ('adl) and common interests ("maslaha") over a strict obedience of conventional interpretations.

The implications of these changes on women's legal positions, relationships within families, and sociocultural views of marriage in Algerian are further examined in the present study. The report additionally points out persistent difficulties such as inconsistent implementation and ongoing arguments about fundamental equality, even though the modifications indicate substantial advancement towards strengthening procedural safeguards for women. In the end, the study makes the case that Algeria's experience highlights both the potential and the limitations of transforming family law within an Islamic judicial system.

Furthermore, the Algerian experience reveals the significant role of judicial institutions in shaping the practical operation of family law reforms. While legislative amendments introduced stricter procedural requirements for polygamous marriages, the effectiveness of these reforms has often depended on judicial interpretation and administrative enforcement. Courts have increasingly been entrusted with evaluating the husband's financial capacity, the existence of “justified” reasons for entering an additional marriage, and the ability to ensure

equal treatment among spouses. This judicial involvement reflects a broader transition from purely personal or religious regulation of marriage toward greater state supervision of family relations. At the same time, disparities in legal awareness, regional social customs, and access to judicial remedies continue to affect how women experience these protections in practice. Consequently, the gap between legal reform and social reality remains an important challenge within the Algerian family law system.

In addition, the continuing debate surrounding polygamy in Algeria illustrates the broader tension between cultural authenticity and universal human rights norms in many Muslim-majority societies. Reform advocates argue that limiting polygamy through procedural safeguards is consistent with the higher objectives of Islamic law, particularly the protection of dignity, justice, and family welfare. Conversely, conservative perspectives often view extensive legal restrictions as an erosion of religious-based personal status law and religious identity.

Despite these competing viewpoints, Algeria's reforms demonstrate that Islamic legal traditions are neither static nor immune to reinterpretation in response to evolving social conditions. The Algerian model therefore serves as an important case study for comparative family law scholarship, showing how gradual legal reform can function as a mechanism for reconciling religious traditions with modern constitutional principles of gender equality, social justice, and state accountability.

Keywords: Family Law Reform; Polygamy; Women's Rights; Islamic Law (Shari'a); Algerian Family Code; Gender Equality; Judicial Authorization; Legal Modernization; Social Change; Human Rights.

————— IIRIC 2026 —————

Regulating Artificial Intelligence and Digital Harm: Emerging Challenges for Cyber Governance in the Global Legal Order

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Abstract

The accelerated integration of artificial intelligence (AI) into governance, commerce, and communication ecosystems has generated unprecedented regulatory challenges across jurisdictions. While AI-driven systems enhance efficiency and decision-making, they simultaneously produce new forms of digital harm, including algorithmic bias, deepfakes, automated misinformation, and privacy intrusions. This research critically examines the evolving global legal landscape governing AI and cyber harms, with particular emphasis on the tension between innovation and accountability.

Adopting a doctrinal and comparative methodology, the study analyses key regulatory frameworks such as the , the , and India's . It evaluates how these regimes address issues of transparency, liability, and algorithmic governance, while also identifying normative gaps in tackling emerging threats like synthetic media and platform-enabled radicalization. The paper further explores the role of intermediary liability, state surveillance, and constitutional safeguards in shaping a rights-based approach to cyber governance.

The findings reveal a fragmented regulatory architecture marked by jurisdictional inconsistencies, weak enforcement mechanisms, and inadequate recognition of transnational digital harms. The research argues for a harmonized global framework grounded in principles of human dignity, accountability, and technological neutrality. It proposes a multi-layered governance model integrating hard law, soft law standards, and platform self-regulation to effectively mitigate AI-induced risks.

This study contributes to contemporary legal scholarship by advancing a cohesive regulatory discourse on AI and digital harm, offering policy-oriented recommendations for strengthening cyber governance in an increasingly interconnected digital society.

Keywords: Artificial Intelligence, Digital Harm, Cyber Governance, Algorithmic Accountability, Data Protection, Deepfakes, Intermediary Liability, Comparative Law.

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Trademark Infringement and Misuse in India: Rethinking Legal Frameworks In The Age Of Digital Commerce

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Abstract

India's rapid transformation into a digital economy has significantly impacted the country's trademark law by exposing significant vulnerabilities in its legal framework. The expansion of e-commerce platforms such as Amazon and Flipkart and social commerce channels have increased opportunities for brand engagement but has also aggravated threats posed by counterfeiting, piracy, cybersquatting, and the misuse of brand identifiers online. These challenges accompanied by the anonymity of online actors, cross-border transactions, and the sheer scale of digital marketplaces complicate the enforcement and traceability even more. India's Trade Marks Act, 1999, particularly Section 29, defines infringement and provides remedies such as passing off and enhanced protection for well-known marks. However, these provisions were originally formulated to cater the traditional, offline commerce and struggle to address the complexities of the digital environment by the judiciary has responded by adopting innovative doctrines to have a clarified platform liability, establishing that intermediaries lose safe harbour protections when they aid or abet infringing activities. Yet the enforcement remains inconsistent due to technical limitations, high listing volumes, and limited cybercrime expertise among local enforcement agencies. This paper through a comprehensive analysis of the current legal landscape which is governing online trademark protection in India as well as identifying critical gaps and proposing targeted reforms in the Trade Marks Act to include digital infringements, instituting clear due diligence requirements for online platforms and clarifying obligations for "actual knowledge" and "expeditious action" under the Information Technology Act. As only a dynamic, technology-driven, and collaborative approach will effectively safeguard brand equity, consumer trust, and economic growth in India's expanding digital marketplace.

Keywords: Counterfeiting, Cybersquatting, E-commerce, Infringement, Intermediary Liability, Trade Marks Act 1999.

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SECTION – 3

EDUCATION, PSYCHOLOGY & SOCIAL SCIENCES

The Education, Psychology & Social Sciences track of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026) focuses on contemporary educational practices, psychological well-being, social transformation, cultural understanding, and interdisciplinary approaches addressing emerging societal challenges in a rapidly evolving global environment.

This section provides an international academic platform for educators, psychologists, researchers, social scientists, scholars, policymakers, and students to exchange innovative ideas, research findings, and scholarly perspectives related to education, behavioral sciences, social development, humanities, political studies, arts, and literature.

The abstracts presented in this section reflect significant academic contributions in areas such as educational innovation, digital learning, mental health, social dynamics, cultural studies, political discourse, human behavior, and interdisciplinary humanities research. These studies emphasize inclusive education, ethical awareness, social responsibility, cultural diversity, and sustainable human development essential for building progressive and globally connected societies.

IIRIC 2026 encourages meaningful interdisciplinary dialogue and collaborative academic engagement that promotes intellectual growth, social understanding, research excellence, and transformative learning experiences across diverse educational and social science disciplines.

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Forging Frontiers: BRI as China's Geopolitical Influence in South and Southeast Asia

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Abstract

The Belt and Road Initiative (BRI) is a key component of China's growing geopolitical ambitions in South and Southeast Asia. This paper explores the BRI's role in leveraging economic engagement to achieve geopolitical objectives. Through infrastructure-building in essential sectors such as ports, railways and energy, China improves connectivity while strengthening its political influence over recipient nations. The research suggests that the BRI enables a form of lopsided interdependence, with countries becoming economically dependent on China, granting Beijing leverage over domestic and foreign affairs. Using examples from Pakistan, Sri Lanka, and Cambodia, the paper demonstrates trends of debt vulnerability, control of strategic assets and foreign policy convergence with China. Although the project offers economic growth and regional connectivity, it also raises issues of sovereignty, transparency, and sustainable debt. Ultimately, the paper argues that the BRI is a multi-faceted tool of influence, combining economic diplomacy with geopolitical aspirations, in which China is redefining its role in the Indo-Pacific.

Keywords: Belt and Road Initiative (BRI); Geopolitical Influence; South Asia; Southeast Asia; China's Strategic Expansion.

————— IIRIC 2026 —————

Mental Health Problems of Dalit women and Associated Factors

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Abstract

Globally, mental health in women's health is a neglected issue especially among Dalit marginalized women with the intersection of social, economic and gender disadvantages. Even though Dalit women are facing overlapping structural inequalities there is limited evidence. This study aims to examine the prevalence of mental illness and associated factors.

A Cross-sectional study with correlation analysis was conducted among 422 Dalit women aged 15–49 years in Tarkeshwor Municipality, Kathmandu. Data were collected using socio-demographic variables with the General Health Questionnaire (GHQ-28). Descriptive statistics, chi-square tests, bivariate and multivariate logistic regression were conducted to determine the factors associated with mental illness.

The prevalence of mental illness was 19.2% with the highest burden 19% in social dysfunction. In the both bivariate analysis and bivariate logistic regression Kuppushamy's socio-economic status showed significant association. Occupation and religion showed limited association.

The findings revealed that one in five women from marginalized Dalit community is facing mental health problems. It reveals that there is a high burden of mental illness among women highlighting the influence of gender, cast and economic condition. There is a need for culture sensitive and community based health promotive activities. The future researches should focus on longitudinal effects of marginalization to understand and improve the mental health of Dalit women.

Keywords: Mental illness, Dalit women, Socioeconomic determinants, GHQ-28, Marginalized women.

————— IIRIC 2026 —————

Impact Assessment of the Collaborative Learning Environment Center (CLEC) Implemented in Community Schools at Bhimsenthapa Rural Municipality of Gorkha District, Nepal

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Abstract

Digital Bridges for Nepal (DB4N), a 501(c)(3) non-profit organization, was established to help reduce technological and educational disparities in remote and underserved communities across Nepal. Public schools in these areas commonly face challenges such as limited technological and financial resources, inadequate teacher training, and overall low educational quality. DB4N aims to address these gaps by introducing modern technology and effective teaching methodologies through the establishment of Collaborative Learning Environment Centers (CLECs) in public schools.¹

To support research and teacher training, DB4N partnered with the Kathmandu University School of Education (KUSOED). Kathmandu University (KU), an autonomous and not-for-profit public institution founded in 1991, is dedicated to maintaining high academic standards across classical and professional disciplines. Guided by its mission, "to provide quality education for leadership," and its vision, "to become a world-class university devoted to bringing knowledge and technology to the service of mankind," KU strives to extend learning "from the campus to the community."²

DB4N began its activities in Nepal following the devastating 2015 earthquake and has since continuously implemented programs aimed at improving the quality of education in rural community schools. To date, DB4N has implemented 17 CLECs in various regions of Nepal.

In partnership with KUSOED, DB4N launched the Collaborative Learning Environment Center (CLEC) project in four public schools within Bhimsen Thapa Rural Municipality, Gorkha, in April 2025. The project aims to reduce digital inequity and enhance collaborative, peer-to-peer learning. The specially designed CLEC classrooms primarily serve students in Grades 9–12. This report presents the findings from an impact assessment conducted six months after the project's implementation.

Keywords: Digital Education, Collaborative Learning Environment Centers (CLEC), Rural Education, Educational Technology, Digital Equity.

————— IIRIC 2026 —————

Educational Ecosystems: Integrating Dynamic Skills and Knowledge Systems for a Sustainable Future

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Abstract

The world of work is changing fast because of artificial intelligence and digital technologies. This means we need to think about how we learn and what we learn. For a time schools have focused on teaching people facts and figures but now they need to help people learn by doing things and getting experience. This research paper looks at how education learning skills and getting knowledge are all connected. It says we need to bring what we learn in theory with the skills we need in practice.

By 2026 schools need to stop teaching people to remember things and start helping them develop thinking, adaptability and emotional intelligence. The big problem is that what we learn in school is not what we need to succeed in the workforce. This paper looks at ideas in education like learning, micro-credentials and using traditional knowledge to help us think about sustainability and ethics.

What we found out is that using intelligence in education can be really helpful if it is used to reduce the workload of teachers and help students learn in a more personal way. Also combining ways of thinking with teaching methods can lead to really good results in critical thinking and innovation. The ability to keep learning is a skill in a world that is changing fast. Education is really important. We need to get it right.

The paper says that the education systems that will be successful in the future are the ones that help people be resilient use intelligence in a good way and bring together different types of knowledge to help learners succeed. It suggests a plan for educators and policymakers to create learning environments that're flexible and of high quality and that prepare people for jobs that do not exist yet. Education systems need to change. They need to change fast.

Keywords: Education Systems; Skill Development; Knowledge Integration; Future Learning; Artificial Intelligence, in Education; Sustainability; Pedagogical Innovation; Experiential Learning.

————— IIRIC 2026 —————

Beyond Russia: Central Asian Labour Migration and the Search for Alternative Destinations

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Abstract

This study explores the evolving dynamics of labour migration from Central Asia in the post-Soviet period, with a particular focus on the growing search for alternative destinations beyond Russia. After the collapse of the Soviet Union, the Central Asian region witnessed economic crises, political instability, and ecological challenges. Once a land of large-scale immigration during the Soviet era, it soon became a region of mass outmigration. Russia emerged as the primary destination for Central Asian labour migrants due to geographical proximity, a shared Soviet past, linguistic familiarity, and well-established physical and social networks. However, as the number of Central Asian migrants, who differed racially, linguistically, and religiously, increased in Russia, native insecurities also grew, especially after the 2008 economic crisis and the rise of ISIS. In response, Russia implemented stricter migration policies, creating significant barriers for the entry and employment of Central Asian migrants.

The ongoing Russia-Ukraine war has further exacerbated these challenges, compelling many Central Asians to seek alternative destinations to Russia. Using a qualitative and analytical approach, the study investigates the shifting dynamics of labour migration patterns from Central Asia in the post Soviet period. In doing so, it contributes to broader debates on migration, geopolitics, and regional transformation by foregrounding the Central Asian experience in a period of heightened uncertainty.

Keywords: Labour migration, Central Asia, Russia, Alternative migration destinations, Russia-Ukraine war.

————— IIRIC 2026 —————

Thang-Ta as Indigenous Pedagogy: Reconstructing the Traditional Education System of Ancient Manipur

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Abstract

The study of martial arts, when viewed through the lens of pedagogy, offers important insights into the ethical, social, and intellectual foundations of a society. In many pre-modern contexts, martial traditions were not merely systems of combat but integral to education, governance, and identity formation. Within South and Southeast Asian studies, the martial traditions of Northeast India—particularly those of Manipur—remain a comparatively underexplored archive of indigenous knowledge.

This paper examines Thang-Ta, the indigenous martial tradition of Manipur, as a structured pedagogical system embedded within the traditional educational framework of early Meitei society. Drawing on qualitative methodologies, including oral testimonies of practitioners and analysis of historical texts such as the Cheitharol Kumbaba and Chainarol, the study demonstrates that Thang-Ta functioned as a holistic educational institution integrating physical discipline, ethical formation, socio-political conditioning, and cultural continuity. It further argues that Thang-Ta represents an alternative epistemological paradigm that challenges Eurocentric, text-centric models of education by privileging experiential, ritual-based, and community-oriented learning. The paper concludes that Thang-Ta is not merely a martial practice but a living pedagogical system central to identity formation, moral development, and social cohesion in Manipuri society.

Keywords: Thang-Ta, Indigenous Education, Embodied Knowledge, Moral Pedagogy, Manipur.

————— IIRIC 2026 —————

Folk Culture, Social Life, and Literature of Malwa: A Historical Study

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Abstract

This research paper presents an analytical study of the historical development of folk culture, social life, and literary traditions in the Malwa region. Since ancient times, Malwa has been known for its rich cultural diversity, unique folk traditions, customs, and social structure. This study examines the transformations in social life from the Mughal period to the colonial era and analyzes their impact on literature.

The folk culture of Malwa is reflected through its folk songs, folk tales, festivals, traditions, and lifestyle, which represent the collective consciousness of society. The social structure has been significantly influenced by caste systems, economic conditions, and rural life. With the advent of British rule, noticeable changes occurred in social and cultural values, which were also reflected in literary expressions.

This research highlights that literature in Malwa is not merely an artistic expression but also a mirror of societal realities, struggles, and transformations. Various dimensions of folk culture and social life are vividly portrayed through literary works.

In conclusion, the cultural heritage and social structure of Malwa have deeply influenced its literature, and this relationship continues to evolve over time.

Keywords: Malwa Folk Culture, Social Life, Literary Traditions, Cultural Heritage, Folk Literature.

————— IIRIC 2026 —————

Self-sufficient in Defence Production, Global Leadership and Geo Political Development

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Abstract

Our defence industry is now capable of manufacturing wide variety of high-end requirements like Tanks, Armoured vehicles, Fighter aircrafts, Helicopters, warships, Submarines, Missiles, Electronic equipment, Special alloys, special purpose steels, and variety of ammunition. Rapid progress has been made towards achieving complete Aatmanir bharta in the manufacturing of defence equipment required by our Armed Forces within the country. As a result of these initiatives, many State-of-the-art products including 155 mm Artillery Gun system 'Dhanush', Light Combat Aircraft 'Tejas', Surface to Air Missile system 'Akash', Main Battle Tank 'Arjun', T-90 Tank, T-72 Tank, Armoured Personnel Carrier 'BMP-II/IJK', Su-30 MK1, Cheetah Helicopter, Advanced Light Helicopter, Dornier Do-228, High Mobility Trucks, INS Kalvari, INS Khanderi, INS Chennai, Anti-Submarine Warfare Corvette (ASWC), Arjun Armoured Repair and Recovery Vehicle, Bridge Laying Tank, Bi-Modular Charge System (BMCS) for 155 mm Ammunition, Medium Bullet Proof Vehicle (MBPV), Weapon Locating Radar (WLR), Integrated Air Command and Control System (IACCS), Software Defined Radios (SDR), Lakshya Parachute for Pilotless Target Aircraft, Opto Electronic Sights for Battle Tanks, Water Jet Fast Attack Craft, Inshore Patrol Vessel, Offshore Patrol Vessel, Fast Interceptor Boat, Landing Craft Utility, 25 T Tugs, etc. have been produced in the country during the last few years. These such a types of weapons, tools and defence mechanisms will give vigour to our armed forces. So that India can strengthen its geostrategic position in entire Asia including south Asia. Its also help for India's image for becoming the global power in deference production area. As we saw India has recently sold his Brahmos Missile to Philippines and Vietnam it creating a good atmosphere for India's Global Defence Industry.

Keywords: Aatmanir bharta, Anti-Submarine Warfare Corvette, Global Defence Industry, (GDI) Landing Craft Utility, Integrated Air Command and Control System (IACCS), Weapon Locating Radar (WLR)

————— IIRIC 2026 —————

The emergence of the Masakhe Ladies’ Stokvel in the ‘rough neighbourhood’ of Gugulethu township as social innovation: toward new theoretical geographies of governance innovation

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Abstract

South Africa, like many countries in the Global South, is experiencing a severe housing crisis in which many people continue to live in substandard conditions within townships and informal settlements, often described as “rough neighbourhoods.” The continued growth of these areas can be attributed to limited state capacity, rapid urbanisation, poverty, unemployment, and the increasing demand for housing. This chapter focuses on Gugulethu Township in the City of Cape Town, South Africa, commonly framed as a “rough neighbourhood” characterized by informality, urban precarity, and self-built housing practices.

Methodologically, the study adopts a qualitative research approach using a single case study design. Secondary data were collected through a desktop review and analysed using qualitative content analysis. The chapter presents the case of the Masakhe Ladies’ stokvel in Gugulethu Township as an example of civil society-led governance innovation. Through collaborative self-building practices, the stokvel model demonstrates how governance capacity can emerge from the lived realities, indigenous knowledge, and everyday practices of marginalized communities. This perspective challenges state-centered notions of governance and broadens the understanding of governance to include informal, local rationalities and forms of “vernacular governance.” The findings reveal that rough neighbourhoods, despite housing shortages and exclusion from formal state housing and financial systems, can become spaces of social and governance innovation. The women involved in the stokvel used informal collective saving practices to navigate urban precarity, adapt to challenges, and improve their livelihoods. The case further demonstrates the potential of the stokvel model for “scaling out” governance practices through differently networked and community-led forms of collaboration. Theoretically, the chapter contributes to public administration, governance, and decolonial scholarship by positioning rough neighbourhoods in the Global South as “living laboratories” for the development of new theoretical geographies and governance models.

Keywords: Decolonisation, Governance, Global South, Urban Precarity, Informal Settlements, Rough Neighbourhoods, Stokvel, Community-led Governance.

————— IIRIC 2026 —————

India and South Asia: Navigating Contemporary Regional Dynamics and Strategic Challenges

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Abstract

This paper examines India's evolving role in South Asia within the context of contemporary regional dynamics and emerging strategic challenges. In the post–Cold War era, India has recalibrated its foreign policy to align with shifting global and regional realities, positioning itself as a key balancing power in the international system. Despite its growing economic and geopolitical influence, India faces persistent challenges in managing relations with its neighbouring countries. The South Asian region is characterized by political transitions, economic interdependence, security concerns, and increasing external influence, particularly from China. Developments such as political changes in Bangladesh, strategic competition in the Maldives and Sri Lanka, shifting alignments in Nepal, and Pakistan's deepening ties with China reflect the complex and dynamic nature of regional geopolitics. The study critically analyzes India's Neighbourhood First Policy, focusing on its objectives, achievements, and limitations. It further explores the sources of mistrust among neighbouring countries, the strategic implications of China's expanding presence through initiatives such as the Belt and Road Initiative (BRI), and the role of regional organizations like SAARC and BIMSTEC. Using an analytical and descriptive methodology based on secondary sources, the paper argues that India must adopt a more inclusive, cooperative, and flexible approach to regional diplomacy. Strengthening connectivity, promoting economic integration, and enhancing trust-building measures are essential for ensuring sustainable peace and stability in South Asia.

Keywords: Neighbourhood First Policy, Regional Dynamics, Strategic Challenges, China's Influence, Geopolitics, Regional Cooperation, Indo-Pacific.

————— IIRIC 2026 —————

The Impact of Digital Addiction and Phubbing Behaviour on the Social Well-Being of Agriculture Undergraduates at Rajarata University of Sri Lanka

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Abstract

The increasing use of digital devices among youth in recent years has raised concerns regarding their effects on mental health and social well-being. Within the agricultural sector, the younger generation is rapidly adapting to digitalization, despite agriculture being inherently human-centered. This dual dynamic underscores the importance of ensuring that agricultural undergraduates possess a balanced understanding of digital device usage and its associated services. Assessing their level of digital addiction is essential for guiding them toward responsible and productive engagement. Accordingly, this study aimed to develop an aggregate scale to measure smartphone, internet, and social media addiction, as well as their interactive effects, among undergraduates. The scale was developed by adapting and integrating items from multiple established instruments (e.g., Smartphone Addiction Scale–Short Version) to capture the multidimensional nature of digital addiction. Principal Component Analysis (PCA) was employed to identify the underlying factor structure and confirm alignment with theoretical constructs. Confirmatory Factor Analysis (CFA) further validated the model, demonstrating acceptable goodness-of-fit indices ($\chi^2/df = 2.487$, CFI = 0.950, RMSEA = 0.075, SRMR = 0.0404). Reliability analysis indicated strong internal consistency (Cronbach's alpha = 0.933). A z-score cutoff method based on the 85th percentile was used to classify addiction levels. The findings revealed that 45.87% of participants were non-addicted, 41.35% moderately addicted, and 12.78% highly addicted. The developed scale provides a valid and reliable tool for measuring aggregate digital addiction and can be applied in future behavioral research to examine its broader impacts on youth.

Keywords: Aggregate digital addiction scale, Smartphone addiction, Internet addiction, Social media addiction, Youth.

————— IIRIC 2026 —————

Revisiting the Forms of Folk Theatre in India as an Art of Expression and Communication

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Abstract

Theatre is considered as one the greatest forms of all forms of arts. It is a fusion of dialogues, gestures, song, music, dance and spectacle. It is a composite art form and an expeditious way of human expression. Folk theatre deeply rooted in local identity and culture plays a significant role and preserving India's past tradition and cultural heritage. As an indigenous tool, the folk theatre, mirrors the society and reflects the social, economic, political, educational realities of its time. Theatre performances are built on the foundation - the drama - which consists of the literary text, the underlying story or the written script. Drama is the content and theatre is the action, the final execution. This study explores the richness and varieties of folk theatre in India. It re-introduces drama with the perspective of leveraging its potential role in developing and enhancing interpersonal communication.

Keywords: folk theatre, human expression, past tradition, cultural heritage, drama, interpersonal communication.

————— IIRIC 2026 —————

Women in Local Governance: Representation, Participation, and Structural Constraints in India

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Abstract

The democratic participation of women in local governance represents one of the most significant democratic transformations in contemporary India. It examines the role of women in village-level governance in India, with particular attention to their participation and leadership within Gram Panchayats under the framework of decentralized democracy. The introduction of mandatory reservations for women through constitutional reforms significantly expanded their numerical presence in rural local bodies, marking an important step toward inclusive governance. However, increased representation does not automatically translate into substantive empowerment or independent decision-making authority.

This study critically analyses whether women elected to village panchayats can influence policy priorities and governance. This paper shows women representatives operate within layered structures of patriarchy, caste hierarchies, economic dependency, and limited access to administrative resources and political networks. Informal practices such as proxy leadership, where male family members exercise controls behind elected women representatives, continue to weaken the transformative impact of reservations. At the same time, evidence from various rural contexts indicates that many women leaders have redirected attention toward issues such as sanitation, health, education, welfare access, and community development, thereby reshaping local governance priorities.

Women have active political actors rather than symbolic representatives, this work highlights the tension between institutional inclusion and structural inequality, contributing to wider debates on gender justice, decentralization, and democratic deepening in rural India.

Keywords: Women Empowerment, Local Governance, Gram Panchayats, Decentralized Democracy, Gender Justice, Rural Governance.

————— IIRIC 2026 —————

Education Policy in Transition: Comparative Insights from India and Nepal

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Abstract

This research paper analyses the evolution of education policy in South Asia by comparing India and Nepal. Both of these South Asian countries have undergone major shifts in their education systems, driven by the growing demands of socio-economic transformation, globalization, and overall development. India's National Education Policy (2020) showcases the Indian Government's attempt to restructure the education policy and promote multidisciplinary learning and a skill-oriented syllabus. In contrast, Nepal's education policy reform is shaped by its transition to federalism, decentralization, and expansion of basic education.

The paper compares to show how differing governance systems, institutions, and socio-economic contexts influence policy-making and implementation in the two countries. It argues that both countries show strong policy ambition, but face significant policy gaps and implementation hindrances. This paper also highlights how the SDGs on education help shape national policy in both countries, and despite differences in the scale of implementation, both India and Nepal face similar challenges in ensuring quality, equity, and accountability in education.

The paper concludes by showing how effective reforms in education require constant support of the governance mechanism and institutions. By doing the comparative study, this paper adds to the broader debate on education policy, governance, and development in South Asia.

Keywords: Education Policy, Education Reform, National Education Policy 2020, Decentralization and Public vs Private Education.

————— IIRIC 2026 —————

A Humanistic Study of Advertising's Impact on Indian Youth Culture through Emotional and Humorous Appeals

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Abstract

In today's digital world, the way Indian youth think and act is shifting fast, shaped by the stories that brands tell. To name a few, brands like Cadbury and Airtel use heart-tugging moments to remind us why family and friends matter, while Tanishq bridges the gap between our deep-rooted traditions and our modern dreams. On the flip side, the clever wit of Fevicol, Amul, Mentos, and 5-Star does more than just produce laugh; it sticks in our minds because it feels real and relatable.

This research looks at these ads through a humanistic perspective: are they just pushing us to buy more, or are they actually inspiring us? While these appeals can spark creativity and bring people together, seeing too many perfect lives online can sometimes leave young people feeling anxious or less than enough. Because digital ads now know us so well, they can sway our choices almost instantly, which brings up big questions about what is fair and ethical.

Ultimately, advertising needs a heart. Brands should use emotional and humorous appeal not just to hit sale targets, but to treat young people with respect—helping them grow into confident, thoughtful, and responsible citizens as opposed to merely faces in a crowd of consumers.

Keywords: Humanistic Perspective, Digital Platforms, Creativity, Social Connectivity, emotional and humorous appeal, digital ads.

————— IIRIC 2026 —————

Psychological Well-Being As A Predictor Of Work–Life Balance Among Nepalese Secondary School Teachers: Ryff’s Perspective

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Abstract

This study investigates the association between Psychological Well-being (PWB) and Work–Life Balance (WLB) among Nepalese secondary school teachers. The study is necessitated by increasing workplace demands and stress levels among teachers, making the maintenance of work–life balance essential for their overall well-being and professional development. The research primarily addresses two questions: (1) Is there a significant association between psychological well-being and work–life balance among secondary school teachers? and (2) Does psychological well-being significantly influence the work–life balance of secondary school teachers?

To systematically examine these variables, the study employs a quantitative research approach. The primary objective is to determine the statistical relationship between PWB and WLB and to evaluate the predictive effect of psychological well-being on teachers’ work–life balance. Furthermore, the study hypothesizes that psychological well-being significantly influences work–life balance, while demographic variables such as gender, age, marital status, salary, and work experience may act as moderating factors in this relationship.

The expected outcomes aim to develop culturally relevant psychometric constructs demonstrating validity and internal consistency within the Nepalese context. Ultimately, the findings are expected to provide evidence-based recommendations for school administrators and policymakers to design effective intervention programs that enhance teachers’ overall well-being, professional effectiveness, and personal development.

Keywords: Ryff’s Six-Factor Psychological Well-being Model, Work–Life Balance, Nepalese Secondary School Teachers, Psychological Well-being, Teacher Development.

————— IIRIC 2026 —————

Quantum Leap in the Field of Pedagogy through AI-Assisted Technology: A Study of In-Service Teachers Awareness and Practices

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Abstract

The pedagogical aspect of the educational landscape evolves through the integration of technology and Artificial Intelligence (AI). Given current technology, pedagogical practices for “digital native” learners should be well- equipped with technological tools. The objective of this paper is to examine in- service teachers’ awareness of and exposure to AI in education, as well as their confidence in AI-based pedagogical software/apps, aligned with the Technological Pedagogical Content Knowledge (TPACK) framework. The paper also explores in-service teachers’ opinions on AI literacy as a form of Continuous Professional Development and how they envision the role of AI in their future classrooms. Qualitative data were collected through semi-structured interviews with in-service teachers from Kendriya Vidyalaya (IFFCO-Prayagraj & B.H.U.- Varanasi). Codes and themes were identified from respondents’ narratives. The study’s conclusions indicate that in-service teachers’ awareness and exposure to AI in education are limited. However, their confidence in pedagogical practices grows with the use of AI-assisted educational technology. Although most are unaware of the TPACK framework, they incorporate technology into their pedagogy. All of them are eager to participate in CPD programs to improve their AI literacy. They also called for a government policy on AI usage, especially as they imagine future classrooms enhanced with AI.

Keywords: Pedagogy, Technology, AI, TPACK, In-service Teacher.

————— IIRIC 2026 —————

Dharma, Danda and Nayaya: Reconstructing Genealogy of Sovereignty Through Indigenous Text.

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Abstract

What narrates researchers and political analyst to identify and uphold key values as intrinsic to a nation's very existence? In order to seek answers to these questions, this paper try to problematises attempts at theorising how does the development of sovereign authority from dharmic order to political rationality get illuminated by the Manusmriti, Arthashastra and Lokik Nayaya? And what significance does it have for modern theories of sovereignty? This paper leverages history to interrogate contemporary concerns by recovering the contingent foundations of India's strategic tradition. It seeks to explores what this intellectual exercise-tracing the genealogy of Indian statecraft reveals about present understandings of sovereignty and political authority, that lead us non-western concept of sovereignty. By situating the morality within the Manusmriti and examining Kautilya's articulation of statecraft in the Arthashastra as a synthesis of both realpolitik and moralpolitik, this study reconstructs the normative and strategic dimensions of governance. The inclusion of Lokik Nayaya upheld the layer of rational enquiry that underpins these traditions. Together this framework illuminates how dharma, kinship structures, legal norms and coercive power are interwoven in maintaining order and articulating political authority within the Indian civilizational framework. The paper forges the significance of the ancient Indian embeddedness of the concept sovereignty, arguing that it can only be meaningfully grasped through an engagement with the material and ideational conditions that shaped it. More specifically, an appreciation of sovereignty in ancient India is crucial for interpreting the patterns of state behavior, diplomatic practices, ethical foundation of statecraft and spatial imagination of territoriality. In doing so, it helps in reconstructing the intellectual genealogy of political authority and ultimately challenges dominant Westphalian assumptions, opening space for a non-western theorization of sovereignty.

Keywords: Sovereignty, Manusmriti, Arthashastra, Lokik Nayaya, Power, Kinship, Statecraft, Law, Dharma.

————— IIRIC 2026 —————

AI-Assisted Peer Review in ESP Classrooms: Enhancing Critical Thinking Skills among Economics Students

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Abstract

English for Specific Purposes (ESP) occupies a central position in higher education curricula because it equips university students with the language and communication competencies required for success in their academic disciplines and future professions. In many Algerian ESP contexts, however, instructional practices remain predominantly teacher centered, which restricts opportunities for collaborative dialogue, reflective critique, and the development of higher order thinking skills. Economics students, in particular, frequently rely on rote memorization rather than cultivating the analytical and evaluative abilities that are essential for interpreting complex economic texts, constructing evidence based arguments, and making informed professional decisions. Recognizing this mismatch between current classroom dynamics and the skill demands of the modern workforce, the present study proposes to integrate AI assisted peer review as an instructional intervention designed to foster critical thinking and promote more active, student centered engagement in ESP classrooms.

The investigation adopts a mixed methods design to capture both the measurable effects of the intervention and the nuanced experiences of participants. Quantitatively, the research employs a quasi experimental approach involving two intact groups of economics students from Tamanrasset University, each comprising 3540 learners. The experimental group will undertake a series of peer review tasks supported by artificial intelligence tools such as automated grammar checkers, sentiment analyzers, and rubric based suggestion generators to assist in the analysis, evaluation, and formulation of feedback on peers' written work.

In contrast, the control group will engage in conventional peer review or teacher led feedback activities that do not incorporate AI assistance. By comparing pre and post intervention scores on validated critical thinking assessments, the study aims to determine whether AI enhanced peer review yields statistically significant improvements in learners' analytical capabilities.

Qualitatively, the research will gather rich observational data through systematic classroom observations and semi structured interviews with a purposive sample of students from both groups. These data will illuminate learners' perceptions of the AI tools, reveal patterns of interaction during peer review sessions, and explore how the technology influences reflective processes and collaborative knowledge construction. Particular attention will be paid to

whether students justify their evaluations with evidence, how they negotiate differing interpretations of task requirements, and the extent to which they develop self assessment skills that transfer beyond the ESP classroom.

The study anticipates that embedding AI within peer review will deepen the quality and specificity of feedback, prompting learners to articulate clear rationales for their assessments and to engage more critically with disciplinary content. Through the combined guidance of explicit rubrics and AI generated insights, students are expected to strengthen their reasoning, argumentation, and self regulatory competencies, thereby contributing to a more interactive, student centered ESP environment. Ultimately, the research positions AI assisted peer review not as a mere technological add on but as a pedagogical innovation that can enhance critical thinking, foster collaboration, and support learner autonomy outcomes that are vital for economics students striving to excel in both academic and professional arenas.

Keywords: AI-assisted peer review, ESP, critical thinking, economics students, quasi- experimental design, student engagement.

————— IIRIC 2026 —————

From Civilizational Intimacy to Political Distrust: A Constructivist Study of Indo-Nepal Relations

Sakshi Rathi

Abstract

South Asia constitutes a significant regional arena marked by immense opportunities, shared historical experiences, and a deeply rooted civilizational heritage. Once part of a broader civilizational continuum, the region gradually evolved into distinct modern nation-states as sovereignty, territorial boundaries, and formal political institutions emerged. Despite this transformation, borderland communities, cultural linkages, democratic transitions, trade relations, and shared religious ties continue to transcend formal treaties and sustain enduring interconnections among the states of the region.

However, such proximity does not necessarily translate into political trust, as is particularly evident in Indo-Nepal relations. While India and Nepal share an open border, deep people-to-people ties, religious affinity, and historical interdependence, their bilateral relationship has frequently been marked by suspicion, recurring tensions, and competing political narratives. India's geopolitical asymmetry vis-à-vis its neighboring states, coupled with evolving assertions of sovereignty and identity, has further complicated regional relationships.

In this context, this paper employs a constructivist framework to examine how identity, historical memory, perceptions of asymmetry, and contested understandings of sovereignty shape Indo-Nepal relations beyond material interests and strategic calculations. It argues that the recurrent trust deficit between the two countries cannot be fully understood through realist or purely strategic explanations alone, but must also be situated within the social construction of meanings, mutual perceptions, and political narratives. By analyzing the interplay between civilizational intimacy and political distrust, the paper seeks to offer a deeper understanding of the persistent complexities that continue to define Indo-Nepal relations.

Keywords: Indo-Nepal Relations, Constructivism, Regional Politics, Sovereignty, Political Trust, South Asia.

————— IIRIC 2026 —————

Religion and Society in the 21st Century: Challenges and Transformations

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Abstract

The connection between the society and religion in the twenty-first century is experiencing an absolute change that is influenced by globalization, digitalization, migration, and changing political landscape. Although previous modernization theories anticipated a slow erosion of religion, current realities are proposing reorganization of religious authority, identity and practice in lieu of its extinction. This paper aims at discussing the current dynamic and multi-faceted role that religion has in influencing social life in various contexts. The paper uses interdisciplinary approaches to religious studies, sociology, and political theory to discuss some of the major challenges of the religious communities in the current day, such as the bargaining between tradition and modernity, the emergence of online religious worlds, and the challenge to moral and ethical standards in pluralistic societies. It also considers the reactions of religious agents on such global matters as social inequality, environmental crises, and political polarization, where they tend to align as sources of tension and forces of cohesion. The research states that instead of being in antithesis with modernity, religion is being actively reconfigured in it, giving rise to new modes of interaction, articulation, and power. In the digital era, special focus is placed on how the younger generations redefine religious identities, which is a part of the dynamics of belonging and participation. By making these changes known, the paper leads to a deeper appreciation of religion as a survivor and change agent in modern society. It finally demands the rethink of simplistic narratives of secularization and makes it clear that religion should be considered as part of global social change.

Keywords: Religion; Society, Modernity; Globalization, Digital Religion, Religious Identity, Social Change, Pluralism, Ethics, Youth Culture.

————— IIRIC 2026 —————

Navigating Caste Boundaries: Socio-Spatial Patterns of Inter-Marriage in Pokhara Metropolitan City, Nepal

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Abstract

Marriage across caste, ethnicity, and religion has gained momentum with endorsement of laws against caste-based discrimination. However, informal social and familial segregation is still prominent in Nepal, including in South Asia. Pokhara, one of the metropolitan cities of Nepal, infuses a diverse nature of inter-marriage, reciprocating their inclusion in society. This study explores socio-spatial patterns of intermarriage across the metropolitan area of Pokhara in relation to their caste/ethnic identity and faith-based distinctions.

This study applied a descriptive approach using secondary quantitative data, including relationship test across the various variables such as the Monte Carlo Exact (Chi-square) test. Digital records of marriage registration of a decade (from 14 April 2017 to 14 March 2026) were obtained from Pokhara Metropolitan City Office. The data were abstracted manually to gain the population size of intermarriage, which were then divided into 7 major groups, based on intercaste-ethnic-faith marital union categories: Brahmin-Chettri, Brahmin/Chettri-*Janajati*, Brahmin/Chettri-Dalit, *Janajati-Janajati*, *Janajati-Dalit*, *Dalit-Dalit*, and Others (foreigner/ Muslim-Others).

Out of 22,737 registered marriages, 4,865 (21.4%) couples were identified as intermarriages unions. Among the groups, Brahmin/Chettri and *Janajati* had the highest share, almost a third (29.2%), followed by *Janajati-Janajati* (28.9%), Brahmin-Chettri (18.5%), *Janajati-Dalit* (8.0%), *Dalit-Dalit* (6.9%), Brahmin/Chettri-Dalit (5.5%), and Others (3.1%). In terms of spatial distribution, Ward 1 housed the highest share (34.1%) of couples practicing intermarriage, while Ward 28 had the lowest (13.4%) share. The chi-square test revealed a statistically significant association between spatial clusters (wards) and types of intermarriage, $\chi^2(192) = 713.98$, $p < .001$. This demonstrated that the distribution of marriage categories varied substantially across spatial units such as wards. Furthermore, it advises the municipality offices to digitalize pre 2017 marriage registration records of 2017 and made available for research purposes for extensive profiling of intermarriage unions. It also advocates reforms in policies regarding tax reduction, educational and health perks to intermarried communities.

Keywords: Caste, ethnicity, exogamy, intermarriage, Pokhara.

————— IIRIC 2026 —————

A Critical Review of the Condition and Direction of the Transgender Community in the Present Time

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Abstract

The term ubhaylingi (third gender) was commonly prevalent in ancient Indian society, but unfortunately, except for the state of Tamil Nadu, its acceptance has remained very limited in the rest of India. In Chhattisgarh and Odisha as well, work has been undertaken in recent years for the betterment of this community. In accordance with their specific physical structure, behavior, and psychology, Vedic literature has given due consideration to the causes of their origin, various types, behavior, problems, and occupations. Contrary to the present social system, in the Vedic period, ubhaylingi persons were neither ostracized from society nor punished. They were permitted to establish households, live together in a married form, and lead their lives with participation in social practices. In that era, more attention was given to their art and professional skill than to their physical structure; they lived as part of society working in fields such as dance, singing, acting, barbering, hairdressing, and domestic service. They were fully allowed to participate in social activities, marriages, births, and other ceremonies, and their presence was considered auspicious.

The ubhaylingi community is an integral yet neglected part of Indian society. In ancient times, they were honored with names such as ‘Kinnar’, ‘Hijra’, and ‘Ardhanarishvara’. References to Shikhandi in the Mahabharata and to Kinnars in the Ramayana are evidence of their social acceptance. Even during the Mughal period, they were part of the royal harem and administration. However, in the British era, the ‘Criminal Tribes Act’ of 1871 declared them criminals, marking the beginning of their plight, which continued for a long time even after independence. Present Condition: According to the 2011 Census, there are approximately 4.9 lakh ubhaylingi (third gender) persons in India, although the actual number is considered to be higher. In 2014, the Supreme Court’s ‘NALSA vs Union of India’ judgment granted them legal recognition as the third gender and conferred fundamental rights. In 2019, the ‘Transgender Persons (Protection of Rights) Act’ was passed.

Efforts in a Positive Direction: Over the past decade, a wave of change has also been visible. In 2017, the Kerala government implemented a transgender policy. Transgender Welfare Boards have been formed in Tamil Nadu, Odisha, and Uttar Pradesh. Provisions for reservation and scholarships in education have been initiated. Personalities such as Laxmi Narayan Tripathi, Gauri Sawant, and Joyita Mondal have set examples by becoming judges, social workers, and motivational speakers. Companies like Kochi Metro and Tata Steel have provided jobs to transgender persons. In the 2024 Lok Sabha elections, more than 15 transgender candidates contested, reflecting political awareness.

Keywords: Transgender Community, Third Gender, Ubhaylingi, Gender Studies, Social Inclusion, Human Rights, NALSA Judgment.

————— IIRIC 2026 —————

Curriculum Reform in Transition: Syllabus Update Dilemmas in the Bangladesh Education System

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Abstract

Curriculum change is essential to ensure educational relevance in a transitioning society. The study focuses on the syllabus update behavior seen in the Bangladesh education system about textbooks for Grades 6–10, taking into account all education boards. I conducted a secondary data analysis by reviewing textbooks produced between 2014 and 2025 to ascertain the number of modifications made over time. The findings indicate that most changes were minor, involving tweaks to existing content, rearranging of themes, and occasional additions and deletions, rather than a comprehensive curriculum redesign. These subtle swings appear to have been affected by administrative choices, policy changes, examination requirements, and similar factors. Furthermore, the results affirm that these relatively slight revisions provide a dilemma for educators and learners, as the curriculum frequently remains obsolete and less relevant to current educational needs. Consequently, the syllabus fails to fulfill the advanced educational demands for critical thinking, creativity, and application. This study highlights the disparity between policy goals and actual curriculum implementation, underscoring the necessity for systematic, well-planned, research-driven syllabus reform to effectuate genuine changes in teaching and learning in Bangladesh.

Keywords: Curriculum Modification, Syllabus Evaluation, Secondary Research Assessment, Educational System in Bangladesh, Textbook Revisions

————— IIRIC 2026 —————

The Alienation of “Thrifting” in Sarojini Nagar Street Markets

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Abstract

This paper examines the cultural and economic alienation of the term “thrifting” as it is applied to the street markets of Sarojini Nagar in Delhi, India. While “thrifting” in the Global North has been romanticized and rebranded as a sustainable, fashionable, and even aspirational practice, its application to traditional second-hand markets like Sarojini distorts the lived realities of both sellers and buyers. This study argues that the term, when appropriated by a new generation of consumers, strips these markets of their historical, social, and economic context. It ignores the complex ecosystem of informal labor, low-profit margins, and necessity-driven consumption that underpins these spaces.

Through a qualitative analysis of interviews with vendors, shoppers, and online influencers, this research investigates how the term “thrifting” is being used to frame Sarojini Nagar. We find that for many local vendors, the word is an unfamiliar and irrelevant concept; their business is not a trend but a means of survival. Simultaneously, a growing number of middle- and upper-class consumers use the term to elevate their shopping experience, disassociating it from the labor and poverty inherent in the supply chain. This re-framing is further amplified by social media, where hauls from Sarojini are presented as “thrift finds” alongside items from curated vintage shops, blurring the lines between conscious consumerism and aestheticized poverty.

The paper concludes that the adoption of “thrifting” in this context represents a form of linguistic and cultural alienation. It commodifies and sanitizes a historically marginalized economic practice, allowing a privileged class to consume the ‘authenticity’ of the street market without engaging with its socio-economic realities. This process not only misrepresents the markets but also contributes to the devaluation of the labor of the vendors who sustain them. The research highlights the need for a more nuanced understanding of second-hand economies, one that respects their local nomenclature and socio-economic functions rather than imposing foreign, consumerist frameworks.

Keywords: Thrifting, Cultural Alienation, Informal Economy, Consumer Culture, Sarojini Nagar, Social Media.

Counting What Counts: Inequality, Care, and the Politics of Economic

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Abstract

There is a quiet paradox at the heart of our modern economies: the more essential a form of labour is to sustaining life, the less likely it is to be counted. Nowhere is this more evident than in unpaid domestic and care work - labour that underpins households, reproduces the workforce, and stabilises societies, but still remains systematically excluded from economic evaluation. This exclusion is not merely a statistical oversight; it is a political choice. And like all political choices, it produces inequality. Across the world, but particularly in the Global South, women disproportionately bear the burden of unpaid labour and the daily maintenance of social life. These activities are foundational to economic productivity, yet they are treated as residual, naturalised extensions of femininity rather than recognised as work. The result is a form of structural inequality that operates not only through wages and employment gaps, but through the very frameworks used to define what counts as “productive” labour in the first place.

Keywords: Unpaid Care Work, Gender Inequality, Feminist Economics, Labour Valuation, Political Economy, Global South.

————— IIRIC 2026 —————

Buddhist Perspective on Conflict Transformation: Based on the Abhayaraja Kumara Sutta of the Majjhima Nikaya

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Abstract

According to Buddhist teachings, conflicts in society can arise in two ways. The first is due to psychological causes that arise within the individual. The second is due to the weaknesses of social institutions. The Blessed One's sermons on the emergence of conflicts in society, the nature of conflicts, and their resolution are found in the Nikaya texts. Namely, the Sakkapanha Sutta of the Digha Nikaya, the Madhupindika Sutta of the Majjhima Nikaya, the Atthaka Vagga of the Sutta Nipata, and especially the Kalaha Vivada Sutta that appears there, etc. Among them, the Abhayaraja Kumara Sutta of the Majjhima Nikaya is important. The research question here is: What is the utility of the Abhayaraja Kumara Sutta for conflict transformation? The research objectives are to study the sweet and bitter truths revealed by the Abhayaraja Kumara Sutta. This sutta explains the philosophical basis of Buddhism regarding the importance of expressing ideas at the appropriate time and subject area. There, the Buddha describes six ways to communicate effectively. There, the Buddha analyzes when to speak and when not to speak, based on the criteria of whether a fact or event is true, beneficial, or pleasing to others. "yaṃ tathāgatō vācāṃ jānāti abhūtaṃ atavacharaṃ anattasamhitam, sā ca paresaṃ appiyā amanāpā...." That is, the Tathagata does not speak false, useless, or unpleasant things. And even if it is true, he does not speak useless or unpleasant things. He speaks the truth, useful, or unpleasant things at the right time. These teachings are also relevant to today's society. The study methodology here is the qualitative research method. The Tripitaka was used as the primary source, and books and academic articles on conflict translation were used as secondary sources. This research can conclude that the practical application of the Buddhist principles of truth, effectiveness, and timeliness directly contributes to successful conflict management as well as to building a harmonious society with coexistence.

Keywords: Conflict, Abhayaraja Kumara Sutta, Truth, Tathagata, Buddhist view

————— IIRIC 2026 —————

A Critical Study of the Place of Devi Ahilyabai Holkar in Historical Novels

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Abstract

Historical novels have given special descriptions of numerous brave warriors. Renowned historical novelist Shri Vrindavan Lal Verma, through his novel Ahilyabai, has elaborated the saga of valour of Lokmata Devi Ahilyabai. In Ahilyabai, the author has taken up his pen in a refined and mature language to portray the dutiful life of Devi Ahilyabai. Ahilyabai was not the queen of a large kingdom; she was the wife of Khanderao, son of Subedar Malharrao Holkar. After her husband's death, she took the reins of the state into her own hands. In this novel, the author has based the life of the great ruler of the Holkar dynasty, Devi Ahilyabai Holkar. The backdrop of the novel is the eighteenth century, a period when the common people—labourers, farmers, and middle-class households—were afflicted by economic poverty, insecurity, and exploitation. In society, babas, fakirs, and sadhus who spread superstition in the name of religion were engaged in deceiving the people. In such adverse times, the personality of Ahilyabai emerges as a ray of hope. She was not only an efficient administrator but also a ruler who was just, compassionate, and believed in public welfare. The religious, social, and administrative works undertaken by her created stability and faith in the lives of the people. The central theme of the novel is women's power, ideal governance, and public welfare. During her lifetime, through her war strategy, cultural unity, reconstruction of temples and ghats, and well-organized justice system, the public respectfully accepted her as Lokmata Devi.

Keywords: Devi Ahilyabai Holkar, Historical Novels, Vrindavan Lal Verma, Women Empowerment, Ideal Governance, Public Welfare, Holkar Dynasty, Literary Studies, Cultural Unity, Historical Literature.

————— IIRIC 2026 —————

Human Rights of Children – A Legal Perspective

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Abstract

Children are akin to delicate buds in a vast garden, requiring a nurturing environment for their holistic development. Historically, the global community paid little special attention to children and often treated them on par with adults. The concept of specialized child protection first emerged in France in 1840, followed by the enactment of laws in 1841 aimed at safeguarding children in workplaces and ensuring their right to education. However, the global necessity for distinct child rights gained serious recognition only after the First World War.

Recognizing women, children, persons with disabilities, the elderly, minorities, Scheduled Castes, and Scheduled Tribes as vulnerable sections of society, special protections have been instituted for their welfare and dignity. Consequently, numerous international conventions and declarations have been adopted to safeguard their human rights. This research paper presents a concise analytical overview of major international frameworks, including the Declaration of the Rights of the Child (1959), the Convention on the Rights of the Child (1989), the Declaration on the Protection of Women and Children in Emergency and Armed Conflict, the Declaration on Social Progress and Development, the Beijing Rules, and the various Minimum Age Conventions adopted by the ILO in 1919, 1921, and 1973.

Keywords: Children's Rights, Human Rights, International Conventions, Child Protection, Social Justice.

————— IIRIC 2026 —————

Men's Mental Health in India- Governance, Barrier, and Policy Interventions

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Abstract

Every seventy-nine seconds, a person dies by suicide in India- and in seven out of ten those deaths, the victim is a man. India has heard this number. India has responded with courage and legislation. But the question this paper raises is quitter, and harder: has that response yet found him?

India's Mental Healthcare Act (2017) and National Mental Health Policy (2014) mark genuine milestones- decriminalizing suicide, enshrining mental health as a fundamental right, and expanding institutional reach. These are achievements worth acknowledging. Yet data surfaces a stubborn paradox: men account for nearly 70% of suicide (NCRB,2021), yet only 15% seek professional help (NIMHANS,2016). This is not a failure of intent- it is an unfinished chapter in an otherwise progressive governance story, one shaped by deeply entrenched masculinity norms that current gender- neutral frameworks were never designed to confront.

Grounded in hegemonic masculinity theory (Connell,1995), stigma theory (Goffman,1963), structural violence (Galtung,1969), and transformative governance (Kooiman,2003), this study employs a mixed methods design – semi structured interviews across intersectional demographics including Adivasi, rural, urban working-class men – alongside a comparative policy audit of gender sensitive mental health governance in Australia, the United Kingdom, and Canada. The comparative lens is not invoked for criticism, but for learning – to identify what context – sensitive innovations could enrich India's already – functioning governance ecosystem.

The paper proposes a gender responsive mental health governance framework- inclusion male specific provision within existing legislation, community anchored outreach for marginalized men, and workplace mental health integration- designed to work alongside India's governance structure, Deepening their reach rather than questioning their foundation. Because the true measure of a maturing democracy is to the boldness of its first steps but its willingness to keep walking – until every citizen, regardless of gender, is found.

Keywords: Men's Mental health, Mental health governance, Hegemonic masculinity, Transformative governance, stigma theory, Global south Governance, Welfare state, Gender neutral policy, suicide prevention.

————— IIRIC 2026 —————

“From „Yogaḥ Karmasu Kauśalam” to Skill India : Evolution of Skill in Indian Knowledge Tradition”

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Abstract

The Indian Knowledge Tradition (IKT) presents a holistic understanding of skill, integrating knowledge, action, and ethics. Unlike the modern perception of skill as merely technical proficiency, Indian philosophy considers skill as a means of self-realization, social contribution, and national development. This paper explores the conceptual evolution of skill from the Vedic period to contemporary India, highlighting its role in education, economy, and culture. The study also examines the integration of skill with morality, women empowerment, and modern policy initiatives such as Skill India Mission. The findings emphasize that skill in Indian tradition is not only a livelihood tool but a pathway to holistic human development.

Keywords: Indian Knowledge Tradition (IKT); Skill Development; Yogaḥ Karmasu Kauśalam; Skill India Mission; Holistic Education; Vocational Education and Training; Women Empowerment; Human Development; Ethics and Education; Nation Building.

————— IIRIC 2026 —————

SECTION – 4

HEALTH, MEDICAL & LIFE SCIENCES

The Health, Medical & Life Sciences track of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026) focuses on advancing scientific research, healthcare innovation, medical practices, life sciences, and sustainable approaches that contribute toward improving global health and human well-being.

This section provides an international academic platform for medical professionals, healthcare researchers, scientists, pharmacists, nursing scholars, agricultural experts, academicians, and interdisciplinary researchers to exchange innovative ideas, research findings, and evidence-based practices addressing emerging challenges in healthcare, medicine, public health, agriculture, and life sciences.

The abstracts included in this section highlight contemporary developments in medical research, healthcare systems, pharmaceutical sciences, nursing education, biotechnology, agricultural innovation, and life science research. These contributions emphasize interdisciplinary collaboration, scientific advancement, ethical healthcare practices, sustainable development, and innovation-driven solutions essential for building healthier and resilient global communities.

IIRIC 2026 encourages meaningful scholarly dialogue and collaborative research initiatives that strengthen international academic cooperation, scientific excellence, healthcare innovation, and sustainable development across medical and life science disciplines.

Major Research Areas

- Medical & Health Sciences
- Pharmacy & Nursing
- Agriculture & Life Sciences

***Advancing Global Health, Scientific Innovation & Sustainable Life Sciences
Research***

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Application of Nanoparticles As Biostimulator For Growth of *Digitalis Ferruginea* Subsp. *Ferruginea* L. Under In Vitro Conditions

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Abstract

Nanoparticles (NPs) have emerged as potent modulators of plant growth and metabolism, influencing physiological and biochemical pathways. *Digitalis purpurea*, a medicinally important plant known for its cardiac glycosides, exhibits significant responses to NP exposure. This study investigates the impact of different nanoparticles on the growth, biomass accumulation, and secondary metabolite production in *Digitalis purpurea*. Various concentrations of metal-based and biogenic NPs were applied to assess their influence on physiological parameters, including chlorophyll content, antioxidant activity, and enzymatic responses. The results demonstrated that specific NPs enhance growth parameters and stimulate secondary metabolite biosynthesis, particularly cardiac glycosides, through oxidative stress-mediated pathways and enzyme activation. However, excessive NP concentrations induced toxicity, leading to oxidative damage and growth inhibition. These findings provide insights into the potential application of nanoparticles for enhancing bioactive compound production in medicinal plants while highlighting the need for controlled NP usage to mitigate phytotoxic effects.

Keywords: Nanoparticles, *Digitalis purpurea*, secondary metabolites, oxidative stress, cardiac glycosides, plant growth modulation.

————— IIRIC 2026 —————

Burden of Caregivers of Patients with Chronic illness

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Abstract

Caregiving for patients with chronic illness is a demanding responsibility that often leads to physical, emotional, and psychological strain on caregivers. The present study was conducted to assess the Burden of Caregivers of Patients with Chronic illness.

A quantitative research approach with a descriptive cross-sectional design was adopted for the study. The study was conducted at Sir Sunder Lal Hospital, Varanasi, among 100 caregivers selected using a non-probability convenient sampling technique. Data were collected using a structured questionnaire consisting of socio-demographic variables, the Zarit Burden Interview (ZBI) scale to assess caregiver burden, and the Activities of Daily Living (ADL) scale to assess patient dependency.

The findings of the study revealed that 45% of caregivers experienced mild to moderate burden, 24% experienced moderate to severe burden, and 31% had little or no burden. The assessment of ADL showed that 66% of patients were independent, 29% were partially dependent, and 5% were fully dependent.

A statistically significant negative correlation ($r = -0.62$, $p < 0.05$) was found between caregiver burden and ADL, indicating that as patient independence increases, caregiver burden decreases. The Chi-square analysis revealed no significant association between caregiver burden and most socio-demographic variables, except the health status of caregivers.

The study concludes that caregiver burden is significantly influenced by patient dependency and highlights the need for supportive interventions, including caregiver education and assistance programs, to reduce burden and improve quality of life.

Keywords: Caregiver burden. Chronic illness, Caregivers, Activities of Daily Living, Zarit Burden Interview, Patient dependency.

————— IIRIC 2026 —————

Exploration of Medicinal plants and their uses in the Chepang community, Shaktikhor, Chitwan, Nepal

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Abstract

Medicinal plants are those plants used in therapeutic purposes by tribal and rural people as traditional medicine or as private remedies against various ailments. The study focused on the exploration of medicinal plants, the mode of preparation of herbal remedies and their uses. Understanding and documenting plants along with the traditional knowledge of the chepang community is important for improving their economic condition and protecting natural resources. Both field survey and semi- structured interviews were used to collect data for the investigation. The comprehend how medicinal plant species are employed in the community, two metrics were used: the information consensus factor (Fic) and relative frequency of citations (RFCs). There are 60 species of medicinal plants known to exist belonging to 41 families and 59 genera. In treating maternal health conditions, the Fic value was found to be high (0.85) followed by dermatological (0.82), neurological (0.80), musculoskeletal (0.71), ENT problem (0.70), urinogenital (0.70), respiratory diseases (0.60) metabolic (0.58), fever (0.57) and gastrointestinal (0.53). The lowest value was found for parasitic disease (0.50). Highly recommended plant parts was leaves and rhizomes for their medicinal uses. Based on the RFCs values, the most important medicinal species were *Pogostemon benghalensis* (0.84), *Allium sativa* (0.79), *Centella asiatica* (0.77), *Aloe vera* (0.66), *Cissomelos pareira* (0.54), *Mentha spicata* and *Nyctanthes arborescens* (0.39), *Amaranthus retroflexus* and *Artocarpus heterophyllus* (0.28), *Artemisia dubia* (0.25), *Tinospora cardifolia* (0.24), *Mecrotyloma uniflorum* (0.21) and *Citrus limon* (0.09).

Keywords: Medicinal plants, herbal remedies, musculoskeletal, urinogenital, rhizomes.

————— IIRIC 2026 —————

A Study on Physiological Benefits of Yogic Practices: Enhancing Body and Mind

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Abstract

Yogic practices, rooted in ancient wisdom, have transcended time to become a beacon of holistic health in the modern world. These practices encompass a range of physical postures, breathing techniques, and meditative exercises that aim to harmonize the body, mind, and spirit. The physiological benefits of yoga are manifold and scientifically substantiated. Regular engagement in yoga has been shown to improve cardiovascular efficiency, enhance pulmonary function, and promote autonomic nervous system balance. It fosters muscular flexibility, joint mobility, and bone strength, while also aiding in the regulation of endocrine function and the improvement of gastrointestinal health. Furthermore, yoga's impact on stress reduction is profound, with its ability to lower cortisol levels, thus mitigating the deleterious effects of chronic stress on bodily systems. Collectively, these benefits not only contribute to the prevention of various diseases but also bolster the body's healing processes, paving the way for sustained well-being and vitality. As such, the integration of yogic practices into daily life stands as a testament to the power of self-care and preventive medicine. Pulmonary function is a critical indicator of respiratory health, reflecting the capacity of the lungs to exchange oxygen and carbon dioxide effectively. It encompasses various aspects such as lung volume, capacity, rates of flow, and gas exchange.

The term “yoga” and the English word “yoke” are derived from Sanskrit root “yuj” which means union. Yoga is a discipline for achieving union & harmony between our mind, body and soul and the ultimate union of our individual consciousness with the Universal consciousness. Yoga is mind-body technique which involves relaxation, meditation and physical exercises performed in sync with breathing. It is the best means for achieving physical, mental, social and spiritual well being. This can be achieved by systematic and disciplined practice of “ashtanga” yoga described by sage Patanjali.

Yoga's physiological effects are important to understand since they shed light on how this age-old practice might benefit contemporary health and fitness. Researchers can find possible advantages including better stress management, enhanced respiratory health, improved cardiovascular health, and general well-being by examining the impact of yoga on the body. This information can assist the incorporation of yoga into therapy programs meant to prevent and manage a variety of health disorders, as well as guide individuals in making decisions about their own health. In the end, an understanding of yoga's physiological effects can support the promotion of a body-mind-harmonized holistic approach to wellness.

Keywords: Effect on pregnancy, Importance of Meditation, Physiology, Yoga Stress.

Yoga as a global public health movement

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Abstract

Yoga, an ancient practice originating in India, has evolved into a globally recognized approach to promoting health and well-being. Rooted in holistic principles, Yoga integrates physical postures, breathing techniques, and meditation to enhance both physical and mental health. In recent years, it has gained prominence as a cost-effective and accessible strategy to address growing public health challenges, particularly the rise of non-communicable diseases and mental health disorders.

The global acceptance of yoga has been significantly strengthened by initiatives such as the International Day of Yoga, which highlights its universal appeal and encourages widespread participation across diverse populations. International organizations like the World Health Organization have also emphasized the importance of physical activity and mental well-being, aligning closely with the principles of yoga.

As a public health intervention, yoga contributes to disease prevention, stress reduction, and the promotion of healthier lifestyles. Its adaptability across age groups and socio-economic backgrounds makes it a powerful tool for community health promotion. Furthermore, the integration of yoga into healthcare systems, educational institutions, and workplace wellness programs demonstrates its growing relevance in modern society.

In conclusion, yoga represents a sustainable and inclusive approach to global health, bridging traditional knowledge with contemporary public health needs. Its continued promotion and integration can play a vital role in improving population health outcomes and fostering a culture of well-being worldwide.

Keywords: Yoga, Public Health, Mental Well-being, Physical Health, Holistic Health, Disease Prevention, Stress Management, Healthy Lifestyle, International Day of Yoga, Global Health Promotion, Wellness Programs, Sustainable Health, Community Health, Non-Communicable Diseases, Meditation.

————— IIRIC 2026 —————

In Silico Approach To Determine Target Specificity Of Several Phytoconstituents Against Human Alpha-Dystroglycan Receptor: Challenging Lassa Virus Infectivity, Virulence, And Pathogenicity

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Abstract

For the discovery of agents from natural sources for effectively managing the numerous challenges (Infectivity, Virulence, and Pathogenicity) imposed by Lassa virus, the present study involved screening of few natural bioactives; (1) Peonidin; (2) β -Cryptoxanthin; (3) Zeaxanthin; (4) Hydroxy cinnamic acid; (5) Myricetin; (6) Quercetin; (7) Kaemferol; (8) Luteolin; (9) Apigenin; (10) Chlorogenic acid; (11) 3,4-di-O-caffeoylquinic acid; (12) 4,5-di-O-caffeoylquinic acid; (13) 3,4,5-tri-O-caffeoylquinic acid; (14) 1-Ipomeanol; (15) 4-Ipomeanol; (16) 1,4-Ipomeadiol; (17) Ipomeanine; (18) Cyanidin; (19) Delphinidin; and (20) Malvidin via in silico structure-based drug design (SBDD) technique by utilizing the Schrodinger Maestro 9.1 software against the crystal structure of human alpha-dystroglycan (PDB ID: 5LLK), a target known for the entrance of virus into host cells by interfering with the development of the glycoprotein. Also, drug-likeness studies, bioavailability studies, and pharmacokinetic studies have been performed for the most effective compound, Malvidin using SwissADME online tool. The study will provide clues, motivate, and throw light on imperative aspects for the globally working medicinal chemists in the rational designing of anti-infective drugs in the near future.

Keywords: Lassa virus, α -dystroglycan, Molecular docking, Pharmacokinetics, Phytoconstituents, In silico

————— IIRIC 2026 —————

Study Of Salmonella Spp. From Fecal Samples Of Common Wall Lizard (Hemidactylus Spp.) In Kalika Municipality, Chitwan, Nepal

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Abstract

Common wall lizards (*Hemidactylus* spp.), commonly known as house geckos, are widely distributed reptiles found across Southeast Asia. These lizards readily adapt to human environments and are frequently observed in households and food establishments. They are recognized as natural reservoirs of *Salmonella* spp., harboring the bacteria in their gastrointestinal tract without exhibiting clinical symptoms, while intermittently shedding the organism through feces. Despite their close association with human habitats, limited studies have investigated the prevalence of *Salmonella* in the feces of common wall lizards, particularly in areas with high risks of food contamination. Therefore, this study aimed to assess the occurrence of *Salmonella* spp. in fecal samples collected from common wall lizards inhabiting non-rated eateries in Kalika Municipality, Chitwan, Nepal.

A total of 75 pooled fecal samples were randomly collected from 75 non-rated eateries within the municipality. Isolation and identification of *Salmonella* spp. were carried out using selective differential media followed by biochemical characterization. Antimicrobial susceptibility testing was performed using the Kirby–Bauer disk diffusion method, and the results were interpreted according to CLSI guidelines.

The findings revealed that 28% (21/75) of the fecal samples tested positive for *Salmonella* spp. The antibiogram demonstrated high sensitivity to gentamicin (95.2%), followed by ciprofloxacin (90.5%), cotrimoxazole (85.7%), and both tetracycline and chloramphenicol (81%). In contrast, complete resistance was observed against ampicillin (100%).

The study concludes that common wall lizards inhabiting non-rated eateries in Kalika Municipality may serve as significant reservoirs of *Salmonella* spp., posing a potential risk of food contamination through fecal shedding. The varying patterns of antibiotic sensitivity further emphasize the importance of maintaining proper hygiene and sanitation practices, along with effective regulatory monitoring of food establishments.

Keywords: antibiogram, common wall lizard, public health risk, resistant, salmonella.

Optical Management of Irregular Astigmatism in Post-HZV: A Case Report

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Abstracts

Herpes zoster is a common condition, and involvement of the trigeminal nerve results in herpes zoster ophthalmicus (HZO). Acute keratitis is one of the most common of these ocular complications associated with HZO. The findings associated with and the management of acute zoster keratitis will be reviewed. The incidence rate of herpes zoster has been on the rise over the past several decades. At the same time, the average patient age at presentation is declining with similar trends also seen in HZO. The cause of these changes has yet to be determined. Our understanding of corneal involvement in HZO continues to evolve with new imaging demonstrating viral particles within keratocytes in a case of zoster stromal keratitis. New medications such as topical ganciclovir are also helping to better manage acute zoster keratitis that is unresponsive to oral antiviral therapy.

Keywords: Astigmatism, Contact lenses, Cornea, Herpes zoster ophthalmicus.

————— IIRIC 2026 —————

The Growing Use of Artificial Intelligence in the Medical Field

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Abstract

Artificial Intelligence (AI) has emerged as one of the most transformative technologies of the 21st century, significantly impacting various industries, especially healthcare. The integration of AI into the medical field is revolutionizing diagnosis, treatment planning, patient care, drug discovery, and healthcare management. This research paper explores the increasing role of AI in healthcare, focusing on its applications, benefits, challenges, ethical considerations, and future prospects. AI technologies such as machine learning, deep learning, natural language processing, and robotics are enhancing efficiency and accuracy in healthcare systems worldwide. Despite its advantages, AI also raises concerns related to data privacy, ethical responsibility, and system reliability. This paper provides a comprehensive analysis of how AI is reshaping the medical field and its potential to create a more efficient, accessible, and patientcentered healthcare system.

Keywords: Artificial Intelligence, Healthcare Technology, Machine Learning, Patient Care, Medical Diagnosis, Healthcare Innovation.

————— IIRIC 2026 —————

Impact of Medical Technology on Reproductive Rights of women- A Comparative Study

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Abstract

Health of an individual is part of fundamental right to Life and bodily autonomy is part of personal liberty under Article 21 of the Constitution of India. Both rights aim to ensure dignified life to an individual. Another right that emerged from the notion of autonomy is women's decision as to her body. Autonomy to choose whether to have pregnancy or not, when to have and how many times has been recently considered as choice of women and not of any authority. The enactment of Medical Termination of Pregnancy (MTP) Act, 1971, gave power to the medical body to decide on termination of pregnancy but the Supreme Court of India in the last five years has decided in favor of women as to her autonomy to decide on her body. The equality to reproductive health is available to both men and women but women being the most affected one require the autonomy to decide on her body. This autonomy is now being impacted by the evolution of medical technology from In-vitro fertilization (IVF) to intracytoplasmic sperm injection (ICSI), etc around the world. Addition to this is artificial intelligence and another right recognized that is being considered as part of life, is the right to privacy. With the change in lifestyle and women getting more power to decide on their body, technology plays a crucial role, but it varies across jurisdictions. The paper will cover the comparative study of laws regulating reproductive autonomy and medical technology affecting reproductive autonomy in Asian countries. The authors will adopt doctrinal research of methodology using primary secondary resources such as research papers and reports. The authors presume that medical technology helps women in exercising reproductive rights.

Keywords: Medical, Technology, Reproductive, Autonomy, Liberty, Artificial Intelligence, Women.

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SECTION – 5

ENVIRONMENT, SUSTAINABILITY & GLOBAL CHALLENGES

The Environment, Sustainability & Global Challenges track of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026) focuses on contemporary environmental concerns, sustainable development strategies, climate-related challenges, and interdisciplinary research addressing pressing global issues affecting humanity and the future of the planet.

This section provides an international academic platform for environmental scientists, sustainability researchers, policymakers, development professionals, academicians, and interdisciplinary scholars to exchange innovative ideas, scientific findings, and research-driven solutions aimed at promoting environmental protection, ecological balance, climate resilience, and sustainable global development.

The abstracts included in this section highlight emerging research and practical approaches related to environmental science, climate change, sustainable resource management, green innovation, ecological conservation, development studies, and global sustainability initiatives. These contributions emphasize the importance of collaborative action, scientific advancement, ethical responsibility, and policy-driven solutions necessary for addressing complex environmental and developmental challenges worldwide.

IIRIC 2026 encourages meaningful interdisciplinary dialogue and global academic collaboration that contribute toward building environmentally responsible, socially inclusive, and sustainable societies for future generations.

Major Research Areas

- Environmental Science
- Sustainability Studies
- Climate & Development Studies

Promoting Sustainable Futures Through Environmental Research & Global Collaboration

Determinants of Market Participation Among Smallholder Indigenous Crop Producers of Karnali Province, Nepal

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Abstract

Indigenous crops are the basis of livelihoods for smallholder farmers in Karnali Province. Commercialization of indigenous crops is an important way to improve the livelihoods and incomes of smallholder farmers. Despite the high demand for and marketability of indigenous crops, the marketing of indigenous crops has not gotten enough attention in Karnali Province. Indigenous crops are produced by smallholder farmers in geographically poor terrain. These smallholder indigenous crop producers lag in commercialization due to different hurdles like limited access to transport, poor access to extension advisory services, low bargaining power, and inadequate marketing infrastructure.

The study focused on examining the commercialization status and commercialization perception of farmers, identifying determinants of market participation, and assessing the intensity of market participation. Jumla district was selected as a representative study area of Karnali Province. Five local levels in Jumla district: Chandannath Municipality, Tatopani Rural Municipality, Tila Rural Municipality, Patarasi Rural Municipality, and Sinja Rural Municipality, were selected for the study. These local levels were considered to obtain the major crop production area of six indigenous crops: Jumli Marshi rice, Jumli bean, Proso millet, foxtail millet, and finger millet.

The data was collected using a pre-tested questionnaire survey with the randomly sampled 200 indigenous crop producers, evenly distributed to each local level. Five focus group discussions (FGDs) were carried out to capture the qualitative data specific to the study locations. A rapid market appraisal, including key informant interviews (KIIs), with five market actors from Jumla, Surkhet, and Kathmandu, was also carried out. Descriptive statistics and the Double Hurdle (DH) model were employed for the data analysis. The study findings showed that out of 200 indigenous crop producers, 98 producers have participated in the market.

The market participants also operate at a low level of commercialization, as the average Household Commercialization Index (HCI) was 21.03% with a range from 0% to 70.07%. From a production point of view, out of 2,058.29 quintals of indigenous crop produced, 507.1 quintals of indigenous crop produce was marketed in the 2023/24 production year. The intensity of commercialization was also concentrated on a few indigenous crops, particularly

Jumli Marshi rice and Jumli bean. Smallholder farmers have a high positive perception of the high value and marketability of indigenous crops in Karnali Province. However, they have a lower perception of productivity and price spread. This contrast implies that, despite farmers’ positive perceptions of the value and potential of indigenous crops, poor productivity and price instability could hinder the wider adoption and long-term commercialization of indigenous crops. Determinants of market participation and intensity of market participation were identified using the Double-Hurdle model.

The first hurdle revealed that determinants such as quantity of indigenous crops produced, membership in farmer organizations, access to extension services, and tourism proximity had a positive and significant effect on the market participation of smallholder indigenous crop producers. The second hurdle showed that factors such as gender of household head, quantity of indigenous crops produced, membership in farmer organizations, availability of collection centers, household income, lagged market price perception, and tourism proximity had a positive and significant effect on the intensity of market participation among smallholder indigenous crop producers. The farming experience had a negative effect on the intensity of market participation. The empirical evidence of the study revealed that the understanding of socioeconomic and institutional factors is important to increase the market participation and intensity of market participation among smallholder indigenous crop producers. Furthermore, policy implications that increase the market access and institutional access of smallholder farmers contribute to increasing commercialization of indigenous crops.

Keywords: Indigenous Crops, Commercialization, Smallholder Farmers, Market Participation, Household Commercialization Index (HCI), Karnali Province, Jumla District, Double Hurdle Model, Indigenous Crop Marketing, Farmer Organizations, Extension Services, Tourism Proximity, Market Access, Institutional Access, Price Perception, Collection Centers, Livelihood Improvement, Agricultural Commercialization, Nepal Agriculture, Jumli Marshi Rice, Jumli Bean.

————— IIRIC 2026 —————

Environmental Degradation and Its Role In Global Warming- A Critical Study

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Abstract

Environmental pollution has emerged as a critical global concern, affecting not only India but the entire international community. Rapid industrialization, urbanization, and unsustainable patterns of consumption have significantly contributed to environmental degradation. This has manifested in severe consequences such as climate change, rising global temperatures, biodiversity loss, and an increased frequency of natural disasters, including droughts, floods, and landslides. Although various international agreements and conventions have been formulated to address environmental challenges, their implementation has often been inadequate, resulting in limited tangible outcomes. The present study seeks to examine the underlying causes of environmental degradation and analyse its impact on human health, as well as on flora and fauna. It further aims to explore effective legal, policy, and institutional measures that can be adopted to mitigate environmental harm. The research is based on data collected from credible and authoritative sources, which has been systematically analysed and interpreted to derive meaningful and reliable conclusions.

Keywords: Environmental, Pollution, Industrialization, Unsustainable, Disasters.

————— IIRIC 2026 —————

Environmental Awareness and Sustainable Behaviour as Drivers of Sustainable Transition

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Abstract

The growing environmental challenges facing the planet have intensified the need for sustainable transition driven by responsible human behaviour and environmental consciousness. This study examines how environmental awareness and sustainable behaviour contribute to sustainable transition through the lens of sustainable consumption practices. The research investigates the influence of environmental knowledge, environmental influences, materialism, promotion of sustainable consumption, and sustainable consumption behavioural intention on sustainable consumption behaviour among consumers in Indore.

A quantitative research design was adopted using a structured questionnaire administered to 110 respondents across different demographic groups. The study employed Partial Least Squares–Structural Equation Modelling (PLS-SEM) using SmartPLS 4 to analyse the proposed relationships. Sustainable consumption behaviour was examined through dimensions such as quality-of-life well-being, care for environmental well-being, and concern for future generations.

The findings reveal that environmental knowledge, environmental influences, the promotion of sustainable consumption, and behavioural intention significantly influence sustainable consumption behaviour, whereas materialism negatively affects sustainable behavioural intention and practices. Respondents demonstrated environmentally responsible behaviour through energy conservation, reduced wastage, preference for eco-friendly products, and concern for future generations. Younger respondents were found to be more inclined toward sustainable behavioural practices, indicating the growing role of environmental consciousness among the youth.

The study highlights that environmental awareness acts as a critical driver in shaping sustainable behaviour and fostering long-term sustainable transition. The research contributes to the existing literature by integrating behavioural, environmental, and social dimensions of sustainable consumption and offers practical implications for policymakers, educational institutions, and organisations to strengthen sustainability-oriented initiatives and awareness campaigns. The findings further emphasize the importance of promoting environmentally responsible lifestyles to achieve a more sustainable and resilient future.

Keywords: Sustainable Transition, Environmental Awareness, Sustainable Behaviour, Sustainable Consumption Behaviour, Green Consumer Behaviour.

————— IIRIC 2026 —————

Comparative Analysis of Nepal's Water Resources Agreements with India and the Indus Waters Treaty: Institutional Robustness, Equity and Lessons for Upper Riparian States in South Asia

Indra Narayan Shrestha

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Abstract

Nepal, positioned as an upper-riparian Himalayan state, possesses significant freshwater resources and hydropower potential. However, its bilateral water agreements with India—primarily project-based treaties such as Koshi (1954), Gandak (1959), and Mahakali (1996)—have yielded limited strategic and economic benefits. In contrast, the Indus Waters Treaty (1960) between India and Pakistan demonstrates remarkable institutional resilience, equitable allocation, and durability despite geopolitical tensions. This study conducts a comparative institutional analysis of these frameworks, focusing on robustness, equity, and dispute-resolution mechanisms. Using the hydro-hegemony framework and qualitative-comparative methodology, the research identifies structural deficiencies in Nepal's treaty architecture, including weak institutional mechanisms, vague benefit-sharing provisions, and lack of basin-wide governance. Findings suggest that Nepal's agreements disproportionately favor downstream interests, limiting its ability to leverage its upper-riparian advantage. The study proposes a basin-level "Himalayan Waters Accord" modeled on the Indus framework to ensure equitable utilization, institutional stability, and long-term regional cooperation. The research contributes to transboundary water governance discourse and offers policy-relevant insights for Nepal and similar upper-riparian states in South Asia.

Keywords: Indus Waters Treaty, Nepal-India water agreements, hydro-hegemony, upper-riparian equity, transboundary water governance, South Asia.

————— IIRIC 2026 —————

Food Waste Management in Pokhara: Pathways Toward Achieving SDG 12.3

Pawan Baral

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Abstract

Food waste represents a critical global challenge with profound environmental, economic, and social consequences. This research investigates the specific context of food waste management in Pokhara, Nepal, a rapidly urbanizing metropolitan and tourism hub. The study employs a mixed-methods approach, combining a targeted quantitative survey of university students with a review of existing literature to provide a detailed empirical analysis of waste generation patterns, contributing factors, and existing management practices. Findings from the original survey reveal a high degree of awareness and willingness among the student population to adopt sustainable practices, with a significant portion already engaged in composting and food redistribution. This paper argues that Pokhara is at a unique inflection point, possessing the opportunity to bypass traditional linear waste models and directly adopt circular economy principles. Based on these findings, a multi-pronged strategy is proposed, including the establishment of municipal-level composting, incentivizing food redistribution partnerships, and launching targeted public awareness campaigns. These recommendations provide policymakers, local government, and NGOs with an evidence-based roadmap for enhancing sustainable urban management and contributing to the global target of halving food waste by 2030, as mandated by Sustainable Development Goal (SDG) 12.3.

Keywords: Food Waste Management, SDG 12.3, Pokhara, Circular Economy, Sustainable Urban Development, Composting.

————— IIRIC 2026 —————

Spatial-Temporal Variability of Rainfall over Chitwan District, Nepal

Rajan Khadka

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Abstract

This study investigates the spatial and temporal variability of rainfall across Chitwan District from 2014 to 2024 using data from ten meteorological stations. The analysis focuses on seasonal distribution, spatial patterns, and long-term trends in precipitation. Results indicate substantial intra-annual variability, with July recording the highest mean monthly rainfall (435–644.6 mm) and November the lowest (7.9 mm). The monsoon season (June–September) contributes the majority of annual rainfall (78–83%), followed by the pre-monsoon (10.7–15%), post-monsoon (4.1–4.5%), and winter (2.2–2.5%) seasons. Spatial analysis using the Inverse Distance Weighted (IDW) method reveals significant variation, with higher rainfall in regions such as Madi (up to 2,150 mm/year) and lower amounts in urban areas like Bharatpur (approximately 1,400 mm/year). Trend analysis using the Mann-Kendall test and Sen's slope estimator indicates a general decreasing trend in annual rainfall, with 8 out of 10 stations showing declines, including 2 statistically significant trends. The average rate of decrease ranges from -0.82 to -1.03 mm/year. These findings highlight increasing hydrological vulnerability in the district and emphasize the need for adaptive water resource management and climate-resilient planning in this agriculturally significant region.

Keywords: Rainfall Variability, Climate Change, Spatial Analysis, Chitwan District, Hydrological Vulnerability, Monsoon Rainfall.

————— IIRIC 2026 —————

Intelligent Energy: How Artificial Intelligence is Transforming the Global Energy Landscape

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Abstract

Intelligent Energy is a platform that uses artificial intelligence technology to provide online assistance for learners and also connects to a multi-tenancy energy sector management platform where energy consumers can easily get immediate energy help, and administrators and faculties handle the data for their institutions in a systematic digital ecosystem. Current energy AI systems have limitations such as static knowledge base, lack of real-time data integration, and siloed approach to institution-specific data and information. In order to counteract these limitations, Intelligent Energy plans to use natural language processing techniques to handle queries, integrate databases in real-time, escalate difficult queries to the faculties and develop a system that provides a scalable model to mitigate administrative burden and provide energy consumers with energy help. The future developments in Intelligent Energy include using machine learning algorithms, integration of learning management systems (LMS), personalized learning analysis and multilingual mobile apps.

Keywords: Artificial Intelligence, Academic Chat bot, Educational Technology, Fast API, Student

————— IIRIC 2026 —————

Challenges of Cultural Tourism in Nepal

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Abstract

Nepal is rich in cultural heritage because of its cultural diversity; however, the situation of cultural tourism is not seen as attractive in Nepal. In this context, the study analyzes the major challenges of the promotion of cultural tourism in Nepal from the perspective of tourism activists and policymakers. The main objectives of this study are to analyze the primary weaknesses in the promotion of cultural tourism in Nepal, based on the perceptions of stakeholders such as tourism activists and policymakers. The study follows the qualitative interpretive paradigm and explores the subjective insight of the participants on the major challenges of cultural tourism and its possibility for development in Nepal. In-depth interviews are used as the main tool of data collection from the field. Five individuals are purposively selected based on their professional involvement and depth of knowledge. Open-ended questions are used to collect information. Thematic analysis was used to interpret patterns and meanings in the narratives, situating findings within broader socio-economic and policy contexts. Limited strategic planning and coordination among government agencies and private stakeholders; inadequate marketing that fails to leverage digital platforms and international networks; poor infrastructure and visitor services around cultural sites; and insufficient capacity building for local communities to engage effectively in promotion activities are the main challenges of the promotion of cultural tourism in Nepal. To promote cultural tourism in Nepal, they fulfill the policy gap related to cultural tourism and enhance promotional programs.

Keywords: culture, tourism, Challenges, Nepal, and Promotion.

————— IIRIC 2026 —————

Mountains, Laws And Gaps: Environmental Governance Frameworks In India And Nepal Himalayas

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ABSTRACT

India Himalayan Region and Nepal belong to the most vulnerable mountain ecosystem on Earth. Though belonging to the same category of mountains, both India and Nepal have developed their own environmental laws based on their unique constitution and legislation systems.

The current research is focused on carrying out a comparative analysis of environmental governance of Indian Himalayan states vis-a-vis Nepal's Himalayan region with respect to forest governance, environmental impact assessment law, climate change law and judiciary role. In this research, the role of the federalism in India, apart from the effect of other laws enacted at the national level such as the Forest Conservation Act 1980, Environmental Protection Act 1986, and the National Action Plan on Climate Change, along with the current state governance framework, is examined in comparison with the unitary-federal structure of Nepal, which was established by its constitution in 2015 and the Environmental Protection Act 2076. This article brings to light some major deficiencies in the field of law implementation, public involvement, and transboundary governance, and it is suggested that the interlinked fates of both territories necessitate greater cooperation between them. Based on legislative documents, legal precedents, and policy documents of both nations, this article provides insights into and recommendations for policy solutions for the enhancement of environmental resilience in the Himalayan region amid rapid climate change.

Keywords: Himalayan environmental governance, comparative environmental law, Nepal Environment Protection Act 2076, judicial activism, transboundary ecological governance.

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SECTION – 6

MEDIA, COMMUNICATION & INTERDISCIPLINARY RESEARCH

The Media, Communication & Interdisciplinary Research track of the International Interdisciplinary Research & Innovation Conference (IIRIC 2026) focuses on emerging trends in media studies, communication systems, interdisciplinary scholarship, forensic science, innovation studies, and future-oriented research shaping contemporary global society.

This section provides an international academic platform for researchers, media professionals, communication scholars, forensic experts, academicians, innovators, and interdisciplinary researchers to exchange ideas, present scholarly findings, and explore collaborative approaches toward addressing complex global challenges through integrated knowledge systems.

The abstracts included in this section reflect significant contributions in areas such as media and journalism, digital communication, interdisciplinary methodologies, forensic sciences, innovation-driven research, future studies, and multidisciplinary academic exploration. These studies highlight the growing importance of collaborative thinking, technological advancement, scientific inquiry, and integrated research approaches in today's interconnected world.

IIRIC 2026 encourages meaningful academic dialogue and interdisciplinary collaboration that strengthen global knowledge exchange, research excellence, innovation, and future-oriented scholarly engagement across diverse disciplines.

Major Research Areas

- Media & Journalism
- Communication Studies
- Interdisciplinary & Multidisciplinary Research
- Forensic Science
- Innovation & Future Studies
- Other Related Disciplines

***Encouraging Global Knowledge Exchange Through Interdisciplinary
Innovation & Research***

Research areas in Forensic Sciences and their applications

Prof. T. Nataraja Moorthy

Management and Science University, MALAYSIA

Abstract

Science is being used in many fields like Agriculture, Forestry, Astronomy, Aeronautical engineering, Civil engineering, Biomedicine, and many other areas. The science used to identify the culprits is called Forensic Science. Forensic science is the application of sciences, mainly Chemistry, Physics and Biology. Recently, Digital and AI-driven Forensics has been added to overcome the challenges. Chemistry research can be conducted with poisonous gases, liquids, and solid substances, as well as various drugs. Research on Physics can be developed on firearms, fired bullets, documents and so on. Biological research aims to examine blood, saliva, semen, etc. Currently, researchers are showing interest in Digital Forensics, which focuses on the investigation and analysis of digital evidence, such as smartphones, laptops, computers, and storage discs that can be used in criminal investigations. Thus, many areas in forensic sciences are available for research and can be effectively done by collaboration, both nationally and globally.

Keywords: Forensic Science, Forensic Research, Chemistry, Physics, Biology, Digital.

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Emerging Trends in Forensic Toxicology and Chemical Analysis

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Abstract

Forensic toxicology plays a crucial role in the detection and interpretation of drugs, poisons, and other toxic substances in biological samples. With rapid advancements in science and technology, modern forensic toxicology has undergone significant transformation. This paper highlights emerging trends in forensic toxicology and chemical analysis that enhance the accuracy, sensitivity, and speed of forensic investigations. Advanced analytical techniques such as gas chromatography-mass spectrometry (GC-MS), liquid chromatography-tandem mass spectrometry (LC-MS/MS), and inductively coupled plasma mass spectrometry (ICP-MS) have improved the detection of trace-level toxic substances. The integration of nanotechnology and biosensors has enabled rapid and on-site analysis. Additionally, artificial intelligence and machine learning are increasingly being applied for data interpretation and pattern recognition in complex forensic cases. The concept of green forensic chemistry is also gaining importance by promoting environmentally sustainable analytical practices. Furthermore, high-resolution mass spectrometry and toxicogenomic are emerging as powerful tools for identifying unknown compounds and understanding toxic effects at the molecular level. These advancements collectively contribute to more reliable forensic results and strengthen the role of forensic toxicology in the criminal justice system.

Keywords: Forensic Toxicology, Chemical Analysis, LC-MS/MS, GC-MS, Artificial Intelligence.

————— IIRIC 2026 —————

Using artificial intelligence (AI) to improve the sexual and reproductive health and rights (SRH-R) of indigenous women in South Asia: A Feminist , Intersectional and Decolonial Policy Approach

Pushpika Sapna Bara

Independent Scholar, INDIA

Abstract

The AI-SRH(R) intersection is a growing field of research, innovation and practice; however, the state of the art excludes marginalized groups like indigenous women in the global south regions like South Asia. Literature suggests poorer SRH(R) outcomes for indigenous women in South Asia (UN Women, 2018; Sciortino, 2020; Hiddink, 2021; Silva et al., 2024), yet there is a research gap on the application of technological advancements like AI for improving their SRH(R) outcomes. Moreover, technological optimism in the use of AI in achieving SRH(R) targets has impeded in-depth understanding of the needs of vulnerable groups in less developed regions such as indigenous women using feminist, intersectional and decolonial approaches. The current use of AI in SRH(R) includes: (1) facilitating access to SRH(R) information/ knowledge, (2) Using predictive AI for screening, (3) Tailoring treatments, (4) Monitoring personal health, (5) Monitoring population health; (6) Managing health system needs; and (7) Accelerating clinical research/ drug discovery. Major initiatives in South Asia are run collaboratively by organizations like Canadian International Development Research Center (IDRC) for Artificial Intelligence for Global Health, WHO, United Nations Population Fund (UNFPA), academic institutions like the Aga Khan University, and governments of various states.

They are centered around AI for Sexual Reproductive and Maternal Health in South Asia (AI-SAROSH) hub that runs nine projects across Bangladesh, Nepal, Pakistan, and Sri Lanka, focusing primarily on predictive AI for improving maternal health; personal SRH monitoring AI applications like ‘Naree’, ‘SuSastho’, ‘Maya Digital Health’; screening and monitoring SRH concerns like cervical cancer, using AI; and chatbots like ‘SnehAI’, ‘Awaaz-e-Sehat’, ‘Raaji’ and ‘Ask Sri’. These are useful for the needs of large sections of population in the region, but they lack sensitivity and relevance to SRH(R) needs of indigenous women here. They remain largely excluded from these innovations due to data poverty, language barriers, and lack of cultural nuances. Also, these initiatives primarily focus on the medical and maternal needs of women and lack a rights-based approach. Hence, this paper attempts to bring inclusivity in the AI-SRH(R) intersection, using an intersectional, feminist and decolonial approach.

The overall aim is to contribute to advancing inclusive and ethical AI-SRH(R) research, innovation and practice in South Asia for improving the SRH(R) outcomes of indigenous women, particularly from a rights-based perspective, moving beyond the medical field. It adds to the existing AI-SRH(R) research and provides policy insights for guiding future research, policies and innovations in South Asia. I use critical review of literature - journal articles, reports, conference proceedings, and other grey literature using PubMed, Web of Science, Scopus, CORE, BASE, preprint repositories, organizational and governmental websites; thematic and discourse analyses, theoretical framework of intersectional feminism, and draw upon critical indigenous theories to achieve the overall and particular objectives of the research and answer its primary research question.

Keywords: Artificial Intelligence, Sexual and Reproductive Health Rights (SRH-R), Indigenous Women, Intersectional Feminism, Decolonial Approach, South Asia.

————— IIRIC 2026 —————

Estimation of Stature From Handprint Among Indians in Klang Valley, Malaysia.

Prof. T. Nataraja Moorthy* and Kirubalani Maruthuvanan.

Management and Science University, MALAYSIA

Abstract

Stature estimation plays a vital role in crime scene investigation. Physical evidence such as footprints, fingerprints, handprints, hairs, fibres, etc., is found at the crime scenes. Handprints are found either in visible or latent forms. This research focused on the estimation of stature from handprints among Indians in Klang Valley, Malaysia. In total, 150 consented Indians, born and living in Klang Valley, Malaysia, with 75 males and 75 females, were recruited in this study, with ages ranged from 18 to 60 years old. Following the standard procedure, stature and handprints were collected from all subjects. Ten length measurements were taken from each subject. The data were analyzed statistically to determine stature from handprint anthropometry. The mean stature of males is 172.47 cm, while female 164.63 cm. The mean handprint lengths of males are longer than those of females. The research concluded with the development of regression equations to determine stature from handprint anthropometry among Indians in Klang Valley in Malaysia. These equations can be used in a real crime scene investigation for person identification.

Keywords: Forensic Science, Crime Scene Investigation, Stature, Handprint, Malaysian Indian, Klang Valley.

————— IIRIC 2026 —————

Gender prediction from footprint among Malaysian Indians in Selangor region

Prof. T. Nataraja Moorthy* and Shiwanesh Parithy Thasan

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Abstract

In the current scenario, Forensic Crime Scene investigators are facing hurdles in solving crimes because of technological development. Stature and gender prediction from physical evidence at the scene provides a lead to the investigation. Footprint is forms valuable evidence found at the scenes for gender determination, considering the ethnicity. This study investigated the relationship between gender and footprint for use in person identification. The study included 150 participants, with 75 males and 75 females of Indians living in the Selangor region, Malaysia, with aged between 18 and 60 years old. There were five measurements were taken from each left and right footprint. The data were analyzed statistically using SPSS software, version 26, to determine gender from footprint. The mean footprint length of females ranged from 18.67 cm to 22.07 cm, while male ranged from 20.64 cm to 35.63 cm. The mean footprint length of female is shorter than that of males. The results show the existence of a strong relationship between gender and footprint length. The study concluded that gender can be predicted from footprint anthropometry and can be applied in real crime scene investigations.

Keywords: Forensic Science, Crime Scene Investigation, Footprint, Gender, Malaysian Indian, Selangor Region.

————— IIRIC 2026 —————

Targetting Oxidative Stress-Induced Bone Injury With Arjuna Ksheerapaka Powder –A Cellular And Molecular Study

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Abstract

Ayurveda presents numerous cost-effective solutions with minimal side effects compared to conventional therapies in fracture bone healing. Formulations like Arjuna Ksheerapaka, mentioned in ancient texts such as Chakradatta and Sarangadhara Samhita, have been recommended for fracture treatment over centuries but remains largely unexplored in controlled scientific settings. Arjuna bark sourced from verified suppliers was authenticated microscopically and analyzed using HPTLC to ensure phytochemical consistency.

Ksheerapaka was prepared following traditional methods and spray-dried for experimental procedures. Comparative HPTLC and LCMS-QTOF analyses identified active compounds, including beta-sitosterol, ellagic acid, baicalein, and gallic acid, known for their fracture-healing properties. Calcium content, critical for bone repair, was measured via ICP-MS. MG63 human osteosarcoma cell line was employed as models as they closely mimic bone cells. H₂O₂ was used to generate reactive oxygen species (ROS), mimicking oxidative stress associated with fracture injuries. MTT viability assays were performed to determine optimal dosing, with osteoprotection observed at 6.25 µg. Annexin V assays confirmed anti-apoptotic activity, and ELISA was used to measure restored ALP activity following treatment. Alizarin red staining assessed calcium homeostasis, and Picrosirius polarization revealed enhanced collagen matrix formation. Arjuna Ksheerapaka powder demonstrated significant osteoprotective effects in MG63 cells subjected to H₂O₂-induced oxidative stress. The treatment restored ALP activity, enhanced calcium homeostasis, and promoted collagen matrix formation. Molecular analysis showed modulation of β-catenin signaling, crucial for mesenchymal cell differentiation and osteoblast maturation. Additionally, the powder inhibited RANKL-mediated pathways associated with osteoclastogenesis, promoting balanced bone remodeling.

This study highlights the potential of Arjuna Ksheerapaka powder as an osteoprotective agent, leveraging its antioxidant properties and calcium-rich composition to counteract oxidative stress and support bone healing. Its active compounds and calcium content make it a promising candidate for bone regeneration therapies, aligning traditional Ayurvedic knowledge with modern scientific approaches.

Keywords: Ayurveda, Arjuna Ksheerapaka, Fracture Healing, Osteoprotective Activity, Bone Regeneration, Oxidative Stress.

Gender Norms and Occupational Segregation: A Multinomial Analysis of Two Young Lives Cohorts

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Abstract

The paper investigates how gender norms categorized as traditional or progressive influence the job choices among men and women. I have used young lives data across two cohort groups analysing how gender norms evolve and influence their job choices. I have used a multinomial logistic regression and Predicted Probabilities margin to analyse five different job categories. The findings reveal that while progressive gender norms do pull women into labour force but it does not necessarily lead to a gender- neutral workforce. Instead, it further polarizes men and women into different job categories. Notably, as youngsters age their aspirations become more gender-specified rather than diverse. Furthermore, even the most progressive mindsets fail to encourage men into domestic roles. Ultimately, mindset shifts alone is insufficient to dismantle structural occupational segregation.

Keywords: Gender Norms, Occupational Segregation, Labor Force Participation, Job Choice, Gender Inequality, Youth Aspirations.

————— IIRIC 2026 —————

South-South Cooperation or Asymmetric Interdependence? Trade, Investment and Economic Diversification in the India Ghana Partnership under the India- Africa Forum Summit

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Abstract

The India-Africa Forum Summit (IAFS) has been presented as a cornerstone of South–South cooperation, promoting trade expansion, investment flows and development partnerships between India and African states. Ghana has emerged as one of India’s most significant partners in West Africa due to its political stability, resource wealth and strategic regional position. However, despite the expansion of bilateral economic relations, the developmental implications of this partnership remain contested. This paper critically examines the structure of India-Ghana economic engagement within the broader IAFS framework, focusing on trade patterns, investment flows and their implications for Ghana’s economic diversification. While India is among Ghana’s largest trading partners and investors, particularly in pharmaceuticals, manufacturing, information technology and infrastructure, Ghana’s exports to India remain largely concentrated in primary commodities such as gold, cocoa and crude oil. This raises an important analytical question: does the India-Ghana partnership represent a transformative model of South-South cooperation, or does it reproduce patterns of asymmetrical interdependence similar to earlier North-South economic relations?

Using a political economy approach, the study analyses bilateral trade data, investment patterns and policy frameworks associated with the IAFS process. The research draws on official government reports, trade statistics and secondary literature on South-South cooperation and development partnerships. The analysis situates India-Ghana relations within broader debates on economic diversification, structural transformation and emerging power engagement in Africa.

The paper argues that while India’s development partnership model, characterised by concessional credit, capacity building and technology cooperation, offers important opportunities for Ghana’s industrial development, the current trade structure continues to favour the export of raw materials from Ghana and the import of manufactured goods from India. As a result, the transformative potential of the partnership remains constrained unless economic engagement is more closely aligned with Ghana’s industrialisation and diversification strategies. By reassessing India-Ghana economic relations within the IAFS framework, this paper contributes to ongoing debates on the evolving nature of South-South cooperation and the role of emerging powers in shaping Africa’s development trajectory.

Keywords: Trade asymmetry, structural transformation, economic diversification, India-Ghana Economic relations.

PneumoSense: A Deep Learning Framework for Automated Pneumonia Detection from Chest X-Ray Images

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School of computing SRM Institute Of Science And Technology Tiruchirapalli, INDIA

Abstract

Pneumonia is a potentially life-threatening lung infection that requires timely and accurate diagnosis. This project aims to automate pneumonia detection from chest X-ray images using Efficient Net, a cutting-edge convolutional neural network architecture. The proposed system uses deep learning to analyze medical images and classify them as pneumonia-positive or normal with high accuracy. Efficient Net is chosen due to its optimized performance in terms of speed and accuracy with fewer parameters. The model is trained on a large dataset of annotated chest X-rays, using advanced image preprocessing and augmentation techniques. Through rigorous training and evaluation, the system demonstrates reliable diagnostic performance. This AI-driven approach offers a scalable and efficient solution to reduce diagnostic errors and improve patient outcomes.

Keywords: Pneumonia Detection, Efficient Net, Deep Learning, Convolutional Neural Network (CNN), Chest X-ray, Medical Image Classification, Artificial Intelligence, Image Preprocessing, Data Augmentation, Healthcare AI

————— IIRIC 2026 —————

Realism and its Influence on Geopolitics

Deepshikha Saikia

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Abstract

Realism is one of the important theories in international relations. Realism determines the geopolitics and power politics in international relations. Realism emphasizes national interest and power politics as the main key and human nature is selfish; therefore states act in self interest. According to realism, conflict is inevitable. Conflict are resolved by war. At present time Realism is play an important role in geopolitics. Therefore this paper examine the role of realism in geopolitics from the cold war period to the contemporary world. How power and national interest influence among the nation.

Keyword: Realism, Geopolitics, National interest, Power politics.

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We express our sincere appreciation to **Orchid International College, Kathmandu, Nepal**, for graciously serving as the *Academic Host Institution* and for providing continuous academic and institutional support toward the successful organization of IIRIC 2026.

We are deeply thankful to **Nepal Statistical Society (NeSS)**, our institutional collaborators, advisory board members, scientific committee members, editorial board members, session chairs, media partners, and dedicated volunteers whose guidance, encouragement, and tireless efforts played a vital role in making this conference successful and impactful.

A special note of appreciation is extended to **4 Nations Education & Visa Services** for their valuable support, cooperation, and encouragement in strengthening international academic participation and global connectivity for the conference. Their support is sincerely acknowledged and appreciated.

Most importantly, we warmly acknowledge all authors and presenters representing diverse countries, universities, and organizations for sharing their innovative ideas, research findings, and scholarly insights. Your participation has enriched this platform and strengthened the spirit of interdisciplinary collaboration and global knowledge exchange.

IIRIC 2026 was envisioned not merely as a conference, but as a platform to connect minds, inspire innovation, encourage research excellence, and foster meaningful international collaborations. We sincerely hope that the relationships, discussions, and ideas generated during this conference will continue to create new opportunities for future research, publications, academic partnerships, and global impact.

We look forward to welcoming you again in our upcoming international conferences and academic initiatives.

With Deep Gratitude,

Team IIRIC 2026

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International Interdisciplinary Research & Innovation Conference (IIRIC 2026)

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