

4th LASMCER 2026

International Conference on
**Latest Advancements in Science,
Management, Commerce and Educational
Research**



26th August, 2026



Toronto, Canada

Organized by:



IFERP Academy

Theme:

*"Innovation Across Frontiers: Multidisciplinary
Research Driving Sustainable Societies"*

ISBN: 978-81-993581-6-4

4th International Conference on Latest Advancements in Science, Management, Commerce and Educational Research (LASM CER-2026), Toronto, Canada

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ISBN: 978-81-993581-6-4

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CONFERENCE THEME



Innovation Across Frontiers: Multidisciplinary Research Driving Sustainable Societies

Preface

We are delighted to extend a warm welcome to all participants attending 4th International Conference on Latest Advancements in Science, Management, Commerce and Educational Research (LASMCER-2026), taking place in Toronto, Canada on 26th August, 2026. This conference provides a vital platform for researchers, students, academicians, and industry professionals from all over the world to share their latest research results and development activities in the field of Sustainable Agriculture and Climate Resilience. It offers delegates an opportunity to exchange new ideas and experiences, establish business or research relationships, and explore global collaborations.

The proceedings for LASMCER-2026 contain the most up-to-date, comprehensive, and globally relevant knowledge in the field of Latest Advancements in Science, Management, Commerce and Educational Research. All submitted papers were subject to rigorous peer-reviewing by 2–4 expert referees, and the papers included in these proceedings have been selected for their quality and relevance to the conference. We are confident that these proceedings will not only provide readers with a broad overview of the latest research results in Latest Advancements in Science, Management, Commerce and Educational Research but also serve as a valuable summary and reference for further research in this field.

We are grateful for the support of many universities and research institutes, whose contributions were vital to the success of this conference. We extend our sincerest gratitude and highest respect to the many professors who played an important role in the review process, providing valuable feedback and suggestions to authors to improve their work. We also extend our appreciation to the external reviewers for providing additional support in the review process and to the authors for contributing their research results to the LASMCER-2026.

Since June 2026, the Organizing Committees have received more than 50+ manuscript papers, covering all aspects of LASMCER-2026. After review, approximately 10 papers were selected for inclusion in the proceedings of LASMCER-2026. We would like to thank all participants at the conference for their significant contribution to its success.

We express our gratitude to the keynote and individual speakers and all participating authors for their dedication and hard work. We also sincerely appreciate the efforts of the technical program committee and all reviewers, whose contributions made this conference possible. Finally, we extend our thanks to all the referees for their constructive comments on all papers, and we express our deepest gratitude to the organizing committee for their tireless work in making this conference a reality.

About LASMCER-2026

The 4th International Conference on Latest Advancements in Science, Management, Commerce and Educational Research (LASMCER-2026) is a premier multidisciplinary platform designed to bring together academics, researchers, industry leaders and policymakers from across the globe.

With the theme “Innovation Across Frontiers: Multidisciplinary Research Driving Sustainable Societies”, LASMCER-2026 emphasizes the importance of cross-disciplinary collaboration in addressing global challenges and shaping smarter, sustainable futures. The conference highlights how science, management, commerce and education can converge to generate innovative solutions that have both academic and societal impact.

Vision:

- To establish LASMCER as a global catalyst for multidisciplinary innovation, advancing knowledge that drives sustainable societal progress.

Purpose:

- Promote cross-disciplinary dialogue and collaboration.
- Align academic and professional practices with global sustainability goals.
- Empower future leaders and innovators in science, management, commerce and education.
- Generate policy recommendations and frameworks for sustainable development.
- Strengthen global partnerships for impactful research and practice.

Scope of the Conference:

The 4th International Conference on Latest Advancements in Science, Management, Commerce and Educational Research (LASMCER-2026) provides a global platform for academics, researchers, industry leaders and policymakers to share knowledge, showcase innovations and co-create solutions for sustainable societal progress. Its scope reflects the interdisciplinary convergence of science, management, commerce and education, aligned with the United Nations Sustainable Development Goals (SDGs).

Key Features:

Multidisciplinary Integration: A unique forum that bridges science, technology, management, commerce and education.

Global Collaboration: Opportunities to build international partnerships and strengthen research networks.

SDG Alignment: Sessions mapped to United Nations Sustainable Development Goals (SDGs), ensuring global relevance and measurable outcomes.

Cutting-Edge Research: Presentations on the latest advancements, innovations and transformative practices.

Capacity Building: Dedicated tracks for young researchers, educators and professionals to enhance skills and leadership.

Publication Opportunities: Indexed journals and proceedings to ensure global visibility of research contributions.

Awards & Recognition: Honoring outstanding contributions in multidisciplinary research and innovation.

About IFERP

The IFERP Academy is a committed professional organization that advances engineering, science, and technology. IFERP anticipates a global scientific community brought together by digital innovation. This organization puts a great emphasis on promoting research activities, communicating the newest insights, and driving industrial trends.

IFERP has built strong networks throughout Asia, the Middle East, Europe, and countries such as Iraq, Malaysia, Australia, and more. They have incorporated networking, research support, publications, and worked in other scientific areas.

IFERP excels in organizing International Conferences that connect researchers worldwide. It holds important international webinars, publishes journals and publications that are indexed by Web of Science and SCOPUS, and provides thorough research assistance and guidance. Engaging in Youth Empowerment projects and encouraging Industry-Institute Interaction are key components of IFERP's goal. The organization is committed to enabling professionals through faculty advancement, skill development, and persistent research and publication initiatives.

Mission



Upskilling the knowledge hub through technological innovation and excellence for the benefit of humanity.

Vision



A Digitally equipped robust, dynamic & swift professional community integrating academics & industry for upgraded technical knowledge implementation.

Value



IFERP values the restoration of high-level technological research, learning, collaboration, resource sharing & community-building traditions.

Goal



To serve as the foundation for all technological progress and advancement activities around the world.

From Managing Director, IFERP



Mr. A. Siddh Kumar Chhajer

MD & Founder,
IFERP, Technoarete Group

On behalf of Institute For Educational Research and Publications (IFERP) & the organizing Committee, I express my hearty gratitude to the Participants, Keynote Speakers, Delegates, Reviewers and Researchers.

The goal of the 4th International Conference on Latest Advancements in Science, Management, Commerce and Educational Research (LASM CER-2026), is to provide knowledge enrichment and innovative technical exchange between international researchers or scholars and practitioners from the academia and industries in the field of Latest Advancements in Science, Management, Commerce and Educational Research.

This conference creates solutions in different ways and to share innovative ideas in the field of Latest Advancements in Science, Management, Commerce and Educational Research. LASM CER-2026 provides a world class stage to the Researchers, Professionals, Scientists, Academicians and Students to engage in very challenging conversations, assess the current body of research and determine knowledge and capability gaps.

4th International Conference on Latest Advancements in Science, Management, Commerce and Educational Research (LASM CER-2026) will explore the new horizons of innovations from distinguished Researchers, Scientists and Eminent Authors in academia and industry working for the advancements in Science and Engineering from all over the world. LASM CER-2026 hopes to set the perfect platform for participants to establish careers as successful and globally renowned specialists in the field of Latest Advancements in Science, Management, Commerce and Educational Research.

From Chief Executive, IFERP



Mr. Rudra Bhanu Satpathy

CEO & Founder, IFERP
Technoarete Group

IFERP is hosting the 4th International Conference on Latest Advancements in Science, Management, Commerce and Educational Research (LASMCER-2026), this year in month of 26th August, 2026, Toronto, Canada. The main objective of LASMCER-2026 is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts.

Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader. I express my hearty gratitude to all my Colleagues, Staffs, Professors, Reviewers and Members of Organizing Committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to make this conference successful.

About Invited Keynote Speaker



Mr. Phillip J. Richardson CD, CRRP, CSM

Professor, International Entrepreneurship,
Canadore College, CEO, Black Opal Property
Advisors Inc, Canada

Professor Phillip Richardson is a distinguished educator, keynote speaker, and co-author with over four decades of global experience in leadership development, international entrepreneurship, and mixed-use innovation. As a Professor, International Entrepreneurship at Canadore College for fourteen years and visiting Professor at Shenzhen University, Professor Phillip is dedicated to empowering the next generation of business leaders through engaging instruction, mentorship, and applied global insights. Professor Phillip is a sought-after international speaker and presenter, having delivered keynote addresses and academic papers on global development, neuroscience in design, and resilience leadership—including at the Université de Paris International Conference on Global Innovation in Architecture and Engineering. A prolific writer, Professor Phillip has co-authored multiple influential publications, including:

- Winning On and Off the Track: Ferrari's Business Model
- Design Plasticity – a groundbreaking paper linking neuroscience and design thinking
- Vertical Villages: The Magic of Mixed-Use Developments inspired by his leading some of the world's most important projects.
- Tough Resiliency, Smart Agility (2024) for individuals and companies
- Funny/Not Funny! Humanity's Risk Register (2025, upcoming) to help meet our species existential challenges with practical solutions understandable to the average reader Professor Phillip's work bridges theory and practice, from classroom to boardroom, across continents. Through speaking engagements and educational initiatives, he continues to inspire innovation, ethical leadership, and global collaboration.

About Keynote Speaker



Dr. Murad Mohammed Al-Nashmi

Professor, Director, Arab Academy for
Management, Financial, and Banking Sciences,
Yemen

Prof. Dr. Murad Mohammed Al-Nashmi is a distinguished academic and researcher with a Ph.D. in Business Administration from Universiti Utara Malaysia (UUM). He currently serves as the Director of the Yemen Branch of the Arab Academy for Management, Financial, and Banking Sciences, where he is also a faculty member in the Department of Administrative Sciences. Dr. Al-Nashmi has played a key role in developing and evaluating academic programs in administrative sciences for several higher education institutions, including the Arab Academy, the Lebanese University, Al-Rasheed University, and the University of Science and Technology. Renowned for his significant contributions to scientific research, Dr. Al-Nashmi has earned numerous certifications and awards. He has authored over forty-five published research papers, many of which appear in high-impact international journals classified under Q1 and Q2 categories. Additionally, he has written three books on administrative sciences and has supervised numerous master's and doctoral theses. He has also served as Editor-in-Chief of two peer-reviewed journals and has actively participated in various international conferences. Dr. Al-Nashmi is an expert in strategic and institutional development and has contributed to designing organizational structures and strategic plans for various institutions, companies, and banks. He has also worked as a consultant for several organizations, companies, and universities. Furthermore, he is a certified trainer in governance, strategic, and institutional development.

About Keynote Speaker



Dr. Trilochan Tripathy

Professor, Xavier School of Management (XLRI),
India

Prof. Trilochan Tripathy is a distinguished finance academic with nearly 25 years of experience across academia, research, consulting, and executive education. He holds a Ph.D. in Applied Financial Economics and currently serves as Professor of Finance at XLRI. His expertise spans Corporate Finance, Financial Derivatives, Risk Management, Financial Markets, International Finance, and Financial Analytics using AI. His research focuses on Asset Pricing, Market Microstructure, Climate Risk Modelling, and Tokenized Asset Valuation. He has guided 15 Ph.D. scholars and contributed extensively as an external examiner and research mentor. Prof. Tripathy has authored 5 books, over 50 journal articles, and 40+ award-winning business cases recognized by global institutions such as EFMD and Emerald. He holds key editorial roles in reputed journals and is an active keynote speaker at international forums. Beyond academia, he consults for organizations including the World Bank, USAID, and corporates, while also advising startups and delivering executive training programs across industries.

About Keynote Speaker



Dr. Arul Joseph G

Associate Professor, SRM Institute of Science and
Technology, India

Dr. Arul Joseph G is an Associate Professor in the Department of Mathematics at SRM Institute of Science and Technology, with over 13 years of teaching experience at the university level. He earned his Ph.D. in Mathematics from Madurai Kamaraj University in 2018. His research interests include Mathematical Modelling, Fractal-Fractional Dynamical Systems, Neural Network Dynamics, and Fixed Point Theory. Dr. Arul has published over 90 research articles in reputed SCIE and Scopus-indexed journals, with a strong citation record and an H-index of 15 (Scopus). He has successfully guided four Ph.D. scholars and is currently supervising four more. In addition, he has delivered several invited lectures on mathematical and AI-driven modeling of infectious diseases. He is a life member of leading professional bodies, including the Indian Mathematical Society and the Ramanujan Mathematical Society.

About **Keynote Speaker**



Dr. Zaleha Abdullah

Associate Professor, Universiti Teknologi Malaysia,
Malaysia.

Associate Professor Dr. Zaleha Abdullah is an expert in Visual Communication and Educational Technology. Her significant contributions include a collaborative project with the Massachusetts Institute of Technology (MIT), training educators to design innovative STEM lessons, which resulted in Malaysia receiving top global partner recognition. She has also led a European Erasmus+ Project involving 11 institutions across Europe and Asia. Dr. Zaleha's international achievements include the UKCGE Recognised Research Supervisor award, the Outstanding e-Learning Award, a UNESCO Malaysia nomination, and being shortlisted for the prestigious Wharton-QS Reimagine Education Awards.

About Keynote Speaker



Dr. Uday K Ghosh

Professor, Director of Applications and
Marketing, Lincoln University, USA

Dr. Uday Kumar Ghosh is a globally recognized academic and multinational executive with over 30 years of corporate leadership and a decade of higher education experience. He currently serves as Professor and Director of Applications and Marketing at Lincoln University, California. His corporate career spans leadership roles with renowned organizations such as Grundig AG and G-Hanz SAMPO, where he managed global operations across 50+ countries, achieved market leadership, and led a landmark USD 2 billion merger. Transitioning into academia, he teaches doctoral, MBA, and undergraduate programs in International Business, Leadership, Operations, and AI-powered leadership. An active scholar, he has published multiple peer-reviewed works and serves as Editor-in-Chief of the International Journal of Social Responsibility. Dr. Ghosh is known for integrating real-world global business expertise with academic rigor, fostering international collaborations, and advancing innovative, technology-driven education.

About Keynote Speaker



Ms. Danielle Papillon-Richardson CSM

Founder, Black Opal Property Advisors Inc.,
Canada

Danielle Papillon-Richardson, PRP, PDU, is a seasoned corporate educator, keynote speaker, and published author with over 20 years of experience in leadership facilitation, adult coaching, and corporate training. Fully bilingual in French and English, she has empowered over 6,500 professionals through customized training programs delivered across government, private, and academic sectors. Danielle has designed and facilitated high-impact workshops in software training, project management, technical writing, public speaking, and soft skills development. Her expertise includes program development, policy and procedure design, strategic consulting, and end-user documentation. Known for her engaging delivery and practical insights, she was invited to speak at the Université de Paris in 2017 on personal resilience and leadership. A graduate of Algonquin College in Business Administration and Retail Marketing, Danielle also studied Journalism at Carleton University, where she developed a strong foundation in communication and storytelling—skills that continue to shape her dynamic teaching style. She is the founder of Black Opal Property Advisory's education division, where she leads initiatives in customized corporate needs, leadership training, and professional development. Her workshops are trusted by Fortune 500 companies, government agencies, post-secondary institutions, and industry leaders. Danielle's published work includes:

- Funny/Not Funny! Humanity's Risk Register (2025, upcoming)
- Tough Resiliency, Smart Agility
- Vertical Villages: The Magic of Mixed-Use Development
- Negotiate Your Adversary into Your Ally With a unique blend of strategy, empathy, and humour, Danielle continues to inspire growth and transformation in every audience she serves.

About Session Speaker



Dr. Irfan ul Haq

Professor, Yorkville University, Canada

Irfan ul Haq is the Managing Director of the Scientific Societal & Behavioral Research Center (SSBRC), where he provides strategic leadership to advance impactful, real-world research. He brings over two decades of experience across project management, academia, and logistics, ensuring strong operational execution across research initiatives. Mr. Haq holds an MBA in Entrepreneurship with Distinction, a PGD in Leadership and Change Management (Distinction), and is a certified Project Management Professional (PMP). He is currently a PhD candidate at Anglia Ruskin University (ARU), further strengthening his expertise in research methods and statistical analysis. In addition to his leadership role, he serves as an Adjunct Professor at Yorkville University, teaching courses in Project Management, Human Resource Management, and Organizational Behavior. He regularly publishes chapters and articles in reputed and impact-factor journals and series, with research interests including entrepreneurial stress, occupational psychology, and sustainability. Irfan is also committed to advancing diversity and inclusion and contributes to community well-being through his volunteer governance role with Simcoe Addiction & Mental Health.

About Session Speaker



Dr. C. Divya

Manonmaniam Sundaranar University, India

Dr. C. Divya is an Assistant Professor in the Centre for Information Technology and Engineering at Manonmaniam Sundaranar University, Tirunelveli, India. She holds a Ph.D. in Information Technology and has over 16 years of teaching and research experience. She completed her B.E. in Electronics and Communication Engineering and M.E. in Communication Systems from Anna University. Her research interests include communication networks, wireless sensor networks, cybersecurity, deep learning, antenna design, and artificial intelligence applications. She has published numerous research articles in reputed international journals and conferences and has contributed chapters to books published by leading academic publishers. She has also guided doctoral scholars and served as a reviewer and editorial board member for various indexed journals. Dr. Divya has received the TNSCST Young Scientist Fellowship and has been actively involved in funded research projects, academic committees, conference organization, and curriculum development, contributing significantly to innovation and quality enhancement in higher education.

About Session Speaker



Dr. Riffat Faizan

SSBRC (Social Societal Behavioural Research
Centre), Canada

Dr. Riffat Faizan, DBA, is a world-class leadership architect, corporate trainer, and strategic relationship innovator, renowned for transforming professionals into influential leaders and high-impact decision-makers. As an adjunct professor at Yorkville University and research scientist at SSBRC, Canada, she seamlessly bridges cutting-edge academic research with actionable executive strategies. With over two decades of experience cultivating international networks, steering cross-cultural teams, and orchestrating multi-million-dollar professional partnerships, Dr. Faizan is a master of influence, negotiation, and career acceleration. Her doctoral research, coupled with extensive publications in Scopus and ABS-ranked journals, underpins her evidence-driven methodologies that empower organizations and individuals to achieve exponential growth. A sought-after keynote speaker, conference chair, and executive coach, she translates complex leadership theories into actionable frameworks that drive measurable results. In Mastering Networking for Career Success, Dr. Faizan delivers a dynamic, scalable blueprint enabling universities, corporations, and emerging leaders to not only connect but dominate in the global professional arena.

About Session Speaker



Dr. Cordelia Mason

Professor, Universiti Kuala Lumpur, Malaysia

Cordelia Mason is a professor in management and entrepreneurship. She is also a Member of the Board of Examiners for the Asian Institute of Chartered Bankers (since 2015), an alumna of the UNESCO UNEVOC TVET Leadership Programme, advisory board for the Global Knowledge Index, TVET Expert Panel for UNESCO UNEVOC, and pro-bono advisor of PSPK where she advises on social enterprises and refugee related research. She was Chair of the Examination Committee at the Chartered Institute of Islamic Finance Professionals (CIIF), a Visiting Fellow at the MyRIVET (Malaysia Research Institute for Vocational Education and Training), Vice-President of the Malaysian Association of Applied Linguistics, research advisory member for Counselling and Credit Management Agency Agensi (AKPK) and an active member of the International Women's Federation of Commerce and Industry, Malaysia. Cordelia mainly trains and consults in the areas of education (curriculum and assessment), ethics, innovation, leadership, strategy, case writing and social entrepreneurship. Her current research interest is in green business, greening TVET, social innovation and applications of Artificial Intelligence in various industries including education. A self-professed informal knowledge-broker, Cordelia continuously seeks insights on how to transform teaching and learning in this VUCA world.

About Session Speaker



Dr. Leonardo F. Castillo Navarro

Professor, Director of FIC-UNI Research Institute,
National University of Engineering, Peru

Dr. Leonardo Franco Castillo Navarro is a Civil Engineer from the National University of Engineering (UNI), Lima, Peru, with over 20 years of experience in Hydrology, Hydraulics, and hydraulic modeling of rivers and creeks. He holds a Master's degree in Water Resources and a Doctorate in Sciences with a specialization in Energy. He serves as a Principal Professor in the Department of Hydraulics and Hydrology at the Faculty of Civil Engineering (FIC), UNI, and is also the Director of the FIC-UNI Research Institute. As a research lecturer, he has contributed to several Scopus-indexed publications in water resources and hydraulic systems. He is the President of the Committee on Hydraulic Works of the Civil Engineering Chapter of the Departmental College of Lima. Additionally, he is the CEO of ACC Ingenieros S.A.C., leading consulting projects in water resources and hydraulic infrastructure.

About Plenary Speaker



Ms. Runhe Huang

Professor, Hosei University, Tokyo, Japan

Runhe Huang received her B.Sc. in Electronics Technology from the National University of Defense Technology, China, in 1982, and her Ph.D. in Computer Science and Mathematics from the University of the West of England, UK, in 1993. She has been a full professor in the Faculty of Computer and Information Sciences at Hosei University, Japan, since 2003. She served as Head of the Department of Computer Science from 2008 to 2010 and is currently Deputy Director of the Hosei University Library. She is a Senior Member of IEEE and ACM and served as Chair and Vice Chair of the IEEE CIS Smart World Technical Committee (SWTC) from 2019 to 2022. She was the General Chair of the 2024 IEEE Smart World Congress and the 2024 IEEE International Conference on Ubiquitous Intelligence and Computing (UIC). She is an Associate Editor of IEEE Transactions on Computational Social Systems and a member of the Editorial Board of IEEE Systems, Man, and Cybernetics Letters. She has also served as an Associate Editor of Frontiers in Neuroinformatics and the International Journal of Network Dynamics and Intelligence. Her research interests include artificial intelligence, ubiquitous intelligence and computing, machine intelligence, cognitive computing, knowledge modeling, and embodied intelligence for robotics. She has authored over 250 academic papers.

About Session Chairs



Dr. Melanie Quimson

Chair, Student Affairs Department Adult Learning,
Brookes College, Alberta, Canada



Dr. Malak Attia

Business Professor, Windsor University, USA

About Conference Convenor



Dr. G. P. Ramesh

Professor, Conference Convenor, India

Dr. G.P.Ramesh is a distinguished academician, visionary technologist and ambitious researcher with over 26 years of multifaceted experience spanning higher education, advanced research and industry leadership. His career reflects a seamless integration of academic excellence and technological innovation, positioning him as a transformative force in engineering education and applied research. A dynamic leader and passionate educator, Dr.G.P.Ramesh has served as Professor and Head of Electronics and Communication Engineering at prestigious institutions across India and abroad. He has mentored undergraduate, postgraduate and doctoral scholars, successfully guiding Twenty-Two Ph.D. candidates and nurturing a culture of inquiry and excellence. His academic expertise encompasses artificial intelligence, machine learning, embedded systems, VLSI design and antenna technologies. With more than 125 publications in Scopus-indexed journals, his scholarly influence is evidenced by an H-index of 32 and an i10-index of 70, marking him as a prominent contributor to global research discourse. He has also organized Twelve International and Six National conferences, publishing proceedings with Springer and ensuring global visibility through Scopus and Web of Science. A pioneer in Outcome-Based Education and a strategic advisor for NAAC, NBA and Autonomous frameworks, Dr.G.P.Ramesh continues to shape future-ready engineers and scalable, tech-driven solutions for India and beyond.

About Committee Members

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Statistics Informed EFuNN Based Solar Power Forecasting

Ronak Dave

Ph.D. Scholar, Department of Electrical Engineering, MBM University, Jodhpur, Rajasthan

Dr. Jayashri Vajpai

Professor, Department of Electrical Engineering, MBM University, Jodhpur, Rajasthan

Abstract:

Accurate solar power forecasting is essential for the reliable integration of photovoltaic (PV) generation into modern electrical power systems. The inherent variability of meteorological conditions introduces significant uncertainty in solar power generation, thereby affecting energy scheduling, reserve allocation, and grid stability. In this paper a statistics informed Evolving Fuzzy Neural Network (EFuNN) based solar power forecasting framework is proposed in which statistical temperature slab information is incorporated into the EFuNN model to enhance the forecasting accuracy. Historical meteorological data obtained from the Photovoltaic Geographical Information System (PVGIS) database is utilized for model development. Initially, an EFuNN model is developed using direct irradiation, diffuse irradiation, temperature, wind speed, and cloud cover as input parameters. Subsequently, temperature slabs representing different operating regions of photovoltaic modules are introduced as an additional input parameter. The forecasting performance of both the models is evaluated using Mean Squared Error (MSE) and Mean Absolute Percentage Error (MAPE). Experimental results demonstrate that the proposed statistics informed EFuNN model substantially improves the forecasting accuracy compared with the original EFuNN model. The Mean Squared Error is reduced from 0.020 to 0.012, and the Mean Absolute Percentage Error is reduced from 0.0428% to 0.0332%, showing that statistical feature engineering significantly enhances the learning capability of the EFuNN model. The proposed framework provides an efficient approach for improving the accuracy of solar power forecasting and can assist utility companies and system operators in achieving more reliable renewable energy integration.

Keywords:

Solar power forecasting, Evolving Fuzzy Neural Network, renewable energy, soft computing techniques.

Faculty Adaptation as a Mediator Between AI Adoption and Institutional Value Creation in Business Education

Kalaiarasan C

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Nirmala A

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Purushothaman N

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Assistant Professor of B.Com Computer Applications, Loyola College (Autonomous), Chennai, India

Delphine Valarina A

Assistant Professor of B.Com Computer Applications, Loyola College (Autonomous), Chennai, India

Abstract:

Artificial Intelligence is no longer a peripheral tool in business education; it is reshaping how faculty teach, how institutions operate, and how competitive advantage is built in academic markets. Yet most discussions of AI in the classroom stop at adoption rates and technology features, saying little about whether faculty are actually equipped to turn these tools into meaningful pedagogical change, or how that change translates into value for the institution itself.

This study addresses that gap directly. Using survey data from 320 business school faculty across private and public institutions, we test a model linking AI adoption, faculty adaptation, teaching transformation, and institutional value creation. Data were analyzed using Confirmatory Factor Analysis and Structural Equation Modeling to assess both the measurement properties of the constructs and the structural relationships between them.

The results show that AI adoption on its own has only a modest direct effect on teaching transformation. Its larger impact runs through faculty adaptation – technological readiness, digital competence, and willingness to redesign pedagogy – which functions as the critical mechanism converting AI investment into classroom change and, in turn, into institutional gains in academic effectiveness, innovation capacity, and competitive positioning. All hypothesized paths were statistically significant, and the model demonstrated acceptable fit across standard indices.

These findings extend technology adoption and dynamic capabilities perspectives into the business education context, positioning faculty adaptability as a strategic institutional resource rather than a secondary implementation detail. For academic leaders, the practical implication is straightforward: AI infrastructure spending delivers limited returns without parallel investment in faculty development. Business schools seeking durable value from AI should treat faculty readiness – not technology procurement – as the primary lever for institutional transformation.

Keywords:

Artificial Intelligence in Education; Faculty Adaptation; Teaching Transformation; Institutional Value Creation; Business Education; Structural Equation Modeling.

Studies of Quantum Computing and AI-Based Models for Web Traffic Monitoring and Cyber Threat Detection

Sindhu G

Research Scholar, SRM Institute of Science and Technology, Kattankulathur, Chennai, India

Dr. R. Jeya

Associate Professor, Department of Computing Technologies, SRM Faculty of Engineering and Technology, Chennai, India

Dr. R. Pandiyarajan, ME., Ph.D

Professor and Dean, Centre for Research and Development, Department of Mechatronics Engineering, Agni College of Technology, Thalambur, Chennai, India

Abstract:

Web traffic analysis in time-series environments involves collecting and analyzing data related to website activity over time. The data contains page views, clicks, user visits, request rate, session length and server load statistics. The main aim is to identify traffic patterns, trends, seasonal variations and anomalous behaviours in web usage. By treating web traffic as sequential time-dependent data, analytical models can effectively capture variations occurring over seconds, minutes, hours, days and weeks. Such pattern analysis is critical for traffic forecasting, anomaly detection, server capacity planning and overall system performance optimization. In this paper, we propose a Hybrid Multiscale Transformer (HMT) model to learn the short-term fluctuation, medium-term trend and long-term seasonal dependence under the multi-scale temporal analysis to tackle the challenges of complicated and time-varying web traffic patterns. In addition, the HMT framework is incorporated with Quantum Neural Networks (QNNs) to improve prediction accuracy, anomaly detection capability, and computational scalability in a high-frequency web traffic environment. The proposed hybrid approach aims to provide enhanced forecasting performance, effective cyber threat detection and robust monitoring of large-scale web systems, thereby enabling intelligent decision-making in modern network infrastructures

Keywords:

Web Traffic Analysis, Time Series Forecasting, Hybrid Multiscale Transformer, Quantum Neural Networks, Cyber Threat Detection, Anomaly Detection, Artificial Intelligence, Quantum Computing.

Beyond Survival: Rethinking Resilience of MSMEs during Chaos

Vandit Shah

LJ University, Ahmedabad, Gujarat, India

Abstract:

Disasters have fundamentally reshaped how Micro, Small and Medium Enterprises (MSMEs) pursue survival and growth. Classical growth strategy theories, including Ansoff's Growth Matrix, Porter's Generic Strategies, the Resource-Based View, and Dynamic Capabilities, largely assume stable business environments and therefore offer limited explanations for firm behavior during crises. Emerging evidence suggests that MSMEs prioritize resilience through innovation and strategic adaptation before pursuing growth. This conceptual paper critically examines the applicability of classical growth theories in disaster contexts by synthesizing literature on strategic management, organizational resilience, innovation, and disaster response. Drawing on global and Indian evidence, it compares theoretical prescriptions with the adaptive strategies adopted by MSMEs during disruptions. The analysis identifies a gap between traditional growth-oriented frameworks and the resilience-led approaches observed in practice. To address this gap, the paper proposes an Innovation-Resilience-Growth Framework (IRGF), positioning innovation as the catalyst that transforms resource constraints into organizational resilience and, ultimately, sustainable growth. The framework extends existing growth theories to disaster settings and offers theoretical, managerial, and policy insights for enhancing MSME competitiveness in increasingly uncertain environments.

Keywords:

MSMEs, Innovation, Organizational Resilience, Growth Strategies, Disasters, Strategic Management, Innovation-Resilience-Growth Frameworks.

Fractional Stochastic System Model to Re-Lift Luo Converter

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Abstract:

The PID fractional order controller utilized in the Positive Output Re-Lift Luo converter for electric vehicle applications is optimized in this work using a Particle Swarm Based optimization algorithm. The work's innovation is in creating a better PID controller to investigate the re-lift Luo converter's dependability using a fractional stochastic differential system.

K_p , K_i , and K_d values are adjusted using the Particle Swarm Optimization control technique to achieve the proper steady-state condition with no peak overshoot or undershoot, significantly reduced settling time, no steady-state error, and enhanced dynamic performances.

Reduced-order fractional state-space modeling of the Re-lift Luo converter, which offers great computational speed and accuracy, is used to examine the system stability and produce superior results. The robustness of the suggested converter with PID controller improved using the Particle Swarm Optimization algorithm was demonstrated by the simulation results, which were confirmed experimentally.

Influence of Local Governance Stability and Recruitment on Retention of Barangay Health Workers Continuity of Care

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Abstract:

This study examined how local governance stability and recruitment practices affect the retention and continuity of care among Barangay Health Workers (BHWs). Keeping BHWs engaged is important to ensure continuous and quality primary health services in the community. The study focused on governance factors such as training, supervision, and resource continuity, as well as recruitment factors like political turnover and program focus. A quantitative descriptive-correlational design was used. Ethical approval and permissions were secured before data collection. Data were gathered using a questionnaire with informed consent and were completed within one week. The data were analyzed using descriptive statistics, correlation, and regression. The results showed that local governance stability was high in terms of training, supervision, and resource continuity. Recruitment was moderately affected by political turnover but showed high alignment with program needs. Retention of BHWs was also high, showing strong motivation and commitment. The study found a significant relationship between governance stability and retention, while recruitment had no significant relationship. Resource continuity and program focus were identified as key factors that influence retention. In conclusion, stable governance, consistent resources, and clear program direction help improve BHW retention and continuity of care. Strengthening these areas is recommended to support long-term community health services.

Keywords:

Local governance stability, recruitment practices, retention, Barangay Health Workers, continuity of care.

