SRM UNIVERSITY AP
Andhra Pradesh

Newsletter of SRM University-*AP*

The Bulletin

SEPTEMBER 2025 EDITION VOLUME VIII Number 9

Seven Professors Ranked Among World's Top 2% Scientists by Stanford University

STAFF WRITER

Seven of SRM AP's distinguished faculty members have been recognised among the World's Top 2% Scientists for the year 2025, a list published by Elsevier and compiled by Stanford University. This global recognition stands as a testament to the university's expanding research footprint and the academic excellence of its scholars.

The honourees include Dr Rangabhashiyam Selvasembian, Associate Professor and Head, Department of Environmental Science and Engineering, in the domain of Earth and Environmental Sciences; Dr Karthik Rajendran, Associate Professor, Department of Environmental Science and Engineering, in the domain of Enabling and Strategic Technologies; Dr Randhir Kumar, Assistant Professor, Department of Computer Science and Engineering, in the domain of Information and Communication Technologies; and Dr Kshira Sagar Sahoo, Assistant Professor, Department of Computer Science and Engineering, in the domain of Information and Communication Technologies. In recognition of their achievement, these four scientists will also receive a cash award of ₹50,000/- each.

The other honourees are Dr Vinodkumar Etacheri, Associate Professor of Practice, Center for Interdisciplinary Research, in the domain of Enabling and Strategic Technologies; Dr Prabhujit Mohapatra, Assistant Professor, Department of Computer Science and Engineering, in the domain of Information and Communication Technologies; and Dr Pintu Bhunia, Assistant Professor, Department of Mathematics, in the domain of Functional Analysis and Operator Theory, making a total of seven SRM AP faculty members in the global list. This recognition underscores the university's multidisciplinary research excellence and its

commitment to advancing science, technology and innovation to address global challenges.

Congratulating the scientists during the felicitation ceremony, Prof. Ch Satish Kumar, Vice Chancellor(I/C), said, "I am honoured to felicitate our faculty ranked among the world's top 2% scientists by Stanford University. They are role models for colleagues and society alike. This recognition is a proud moment for SRM University-AP and a validation of the world-class research culture we nurture. The global impact of our faculty not only advances scientific knowledge but also inspires our students to innovate fearlessly and contribute meaningfully to society."

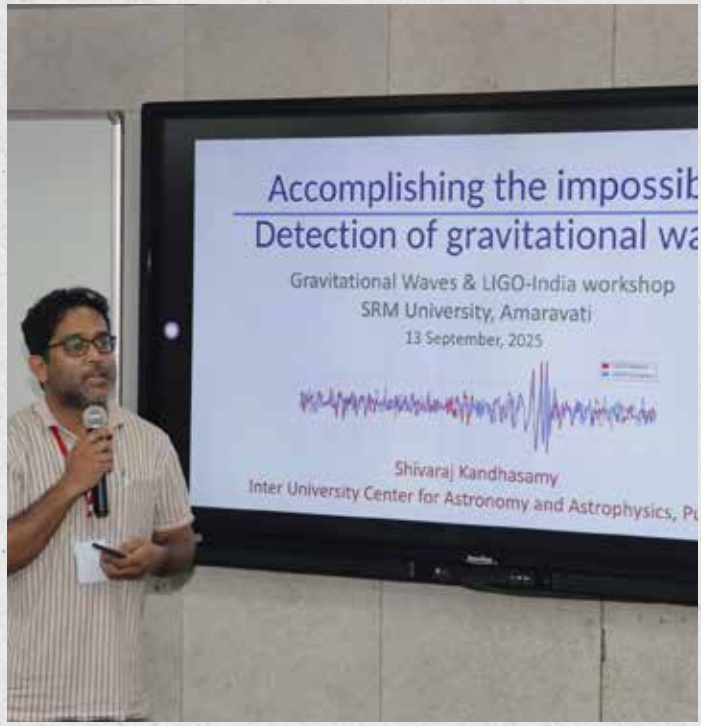
The event concluded with a vote of thanks delivered by Mr Issac Samala Gerard, Director-HR, who lauded the faculty for their achievements and encouraged them to continue raising the bar, thereby strengthening SRM University-AP's presence on the global research map.

"Phy-Spark 3.0" – Igniting a Passion for Astrophysics

STAFF WRITER

SRM University-AP hosted Phy-Spark 3.0: Stars, Scopes & Spacetime on September 13, 2025, as an outreach initiative for school students. A combination of lectures, experiments, demonstrations and interactive sessions took place throughout the day-long programme introducing young students to the exciting fields of physics and astrophysics. 120 students from Geethanjali School, Kunchana, K V School, Nallapadu and Vijetha School, Guntur participated in the programme.

A public lecture delivered by Dr Shivaraj Kandhasamy, renowned scientist from the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, on the Detection of Gravitational Waves by LIGO was the highlight of the programme. Dr Kandhasamy explained how gravity shapes the fabric of spacetime and introduced the concept of gravitational waves. He walked through the historic Michelson-Morley experiment, the design and functioning of the Laser Interferometer



Gravitational-Wave Observatory (LIGO) and the challenges of detecting such incredibly faint signals. The lecture also covered landmark detections, including gravitational waves generated from black hole mergers and binary neutron star collisions.

Expert faculty members Dr Gangireddy Salla, Dr Ashmita Das and Dr Krishna Prasad Maity from the Department of Physics of SRM AP delivered academic sessions on several intriguing topics such as Telescope: Fundamentals and Designs, Binary Star Systems and General Theory of Relativity. The lectures were followed by a lab visit and live demonstrations of telescopes, binary star experiment using LED bulbs, Michelson interferometer etc. and an interactive Q&A session facilitating hands-on experiential learning on astronomical observations, scientific equipment and the application of ideas they had learned in theory.

The programme conducted to ignite the spirit of learning physics among the budding minds of school students was a resounding success. Through Phy-Spark 3.0, SRM University-AP successfully made complex concepts in physics and astrophysics accessible to school students, providing them with a glimpse of how physics is applied in real-world research environments. The event was coordinated by Dr Pranab Mandal, Dr Gangireddy Salla and Dr Soumyajyoti Biswas of SRM AP.

19th National Frontiers of Engineering Symposium and Innovation in Manufacturing Practices

Marking Engineers' Day 2025, SRM University-AP, in association with the Indian National Academy of Engineering (INAE), inaugurated the 19th National Frontiers of Engineering (NatFoE) Symposium and the Innovation in Manufacturing Practices (IMP) competition on September 15th and 16th. The prestigious event serves as a platform for academia, industry leaders, innovators and young researchers to deliberate on India's technological roadmap and to showcase transformative ideas in engineering and innovation.

The inaugural ceremony began with a welcome address by Prof. C V Tomy, Dean – School of Engineering and Sciences, who underlined the importance of hosting the event on Engineers' Day—a day that commemorates the legendary engineer and statesman Sir M Visvesvaraya.

Prof. Ramesh Vaddi, Convener, briefed the gathering on the objectives and scope of the symposium, highlighting the themes that resonate with India's national priorities:

India's Semiconductor Roadmap – From Atmanirbharta to Global Leadership
Quantum Leap – Harnessing the Power of Quantum Technology

The event features plenary talks, invited lectures, startup showcases, panel discussions and poster presentations, with participation from over 230 delegates, 15 startups and 40+ student research submissions.

Addressing the audience virtually, Mr J D Patil, President, INAE, lauded SRM University- AP for hosting this significant event and shared insights on India's rise in the fields of semiconductors and quantum technologies. He urged young engineers to harness innovation for national growth, stressing that the coming decades offer unparalleled opportunities for India to become a global leader.

Prof. Satish Kumar, Vice Chancellor, SRM University-AP, extended festive greetings on Engineers' Day and reiterated the university's commitment to creating an innovation-driven ecosystem. He emphasised that engineers of tomorrow must be equipped with resilience, creativity and adaptability to meet the challenges of an ever-changing technological landscape. NatFoE-2

The Chief Guest, Dr Parthasaradhi, delivered an enlightening talk on using the Internet of Things (IoT) in civil engineering foundations, showcasing applications such as thermal integrity profiling for sustainable and reliable infrastructure development.

As part of the symposium, on September 16, 2025, SRM University-AP organised an award distribution ceremony to recognise outstanding contributions under the Best Poster/Innovation in Manufacturing Practices (IMP) projects. The awards were conferred upon:

Dr Mohana Sheela – Ph.D. Startup Category

Mr Pavanesh Gogineni – Undergraduate Category

Ms Sree Laasya & Team – Postgraduate Category

This recognition highlighted the dedication, creativity and problem-solving approach of young innovators and researchers, further motivating the engineering community to pursue impactful solutions.

The two-day symposium continues to inspire collaborations, foster innovation and strengthen India's vision for global leadership in semiconductors, quantum technologies and sustainable manufacturing practices.

Alumni Meet and Greet: Bangalore Edition

STAFF WRITER

SRM University-AP proudly hosted the third edition of its Alumni Meet & Greet in Bengaluru on September 21, 2025, following the successful gatherings earlier this year in Pune and Hyderabad. The evening brought together over *220 alumni from the graduating batches of 2021 to 2025, creating a vibrant celebration of memories, connections and collective achievements.

Our alumni, now thriving in leading organisations such as Toshiba, Bosch, Tech Mahindra and many others, as well as building successful startups in veterinary sciences, mental health and IT, reunited to network, exchange ideas and relive their journey at SRM University-AP.

A special highlight of the evening was the inspiring address by Vice-Chancellor (I/C), Prof. Ch Satish Kumar, who celebrated the exponential growth of SRM University-AP since the alumni's graduation years. He acknowledged their success stories as a source of pride, appreciated their role as ambassadors of the university and encouraged them to continue bridging academia and industry to create opportunities for the next generation.

The event opened with engaging games and team-building activities, sparking laughter and camaraderie while rekindling the unique bonds between alumni and their alma mater.

The event was further graced by the presence of distinguished faculty and leaders including Associate Professor Dr Ashok Kumar Pradhan (Department of Computer Science and Engineering), Prof. C V Tomy (Dean, School of Engineering and Sciences; Associate Dean, Academic Operations and Outreach), Prof. Vandana Swami (Department of Liberal Arts), Dr S V Ramana Rao (Dean I/C, Paari School of Business), Dr Vinayak Kalluri (Dean, Academic Affairs) and Mr Shantanu Garg (Chief Experience Officer, SRM Group). Their interaction with the alumni added a personal touch, rekindling cherished bonds and creating new avenues for collaboration.

With enthusiastic participation, heartfelt conversations and a spirit of togetherness, the Alumni Meet & Greet – Bengaluru reaffirmed the ever-growing strength of the SRM University-AP alumni community.

National Educators Summit at Jaipur

STAFF WRITER

The Pink City witnessed an engaging exchange of ideas as SRM University-AP successfully hosted the National Educators Summit 2025 at Hotel Fern Ecotel, Tonk Road, Jaipur. The summit brought together leading school counsellors, coordinators, HODs and principals from some of the most reputed schools to deliberate on the theme, “Liberal Arts and 21st Century Learning.”

The event was graced by Mr. Ashok Vaid, Principal of Maheshwari Public School and Chairman of Sahodaya Group of Institutions, as the Chief Guest. Prominent educators from institutions including JGPS, MPS, Dharav, Ryan International, SJ Public School and Vivek Techno School actively participated in the discussions, underscoring the growing relevance of liberal arts in shaping holistic education.

SRM University-AP was represented by Prof. Vishnupad, Dean of the Easwari School of Liberal Arts and Dr. Nishant K.S., Assistant Professor of Anthropology. Prof. Vishnupad shared insights on “Liberal Arts is not a Back-up Plan: Why the World Needs Humanities More Than Ever”, while Dr. Nishant led a thought-provoking session on “Defining and Understanding the Social Embeddedness of Technology.”

The summit witnessed dynamic panel discussions and brainstorming sessions where educators collectively emphasised that liberal arts education is not just relevant but essential in today’s fast-evolving academic and professional landscape. The deliberations highlighted how critical thinking, creativity and interdisciplinary learning- the hallmarks of liberal arts- are key to preparing students for the challenges of the 21st century.

Speaking about the initiative, the organizers from SRM-AP reiterated the University’s commitment to extending its learning and vision to a wider student community across India. “This summit is a step toward reimagining education that nurtures both intellect and empathy. We look forward to hosting more such impactful engagements in the future,” they said.The evening concluded with a felicitation ceremony followed by a networking dinner, leaving participants inspired to integrate liberal arts perspectives into mainstream education.

Ten Faculty Honoured with Excellence Awards on Teachers' Day

STAFF WRITER

SRM University-AP observed Teachers’ Day 2025 by honouring its faculty members for their contribution to teaching, research and institutional growth. The celebration was attended by the Chief Guest, Prof. V Chandrasekhar, Visiting Distinguished Professor, Tata Institute of Fundamental Research, Hyderabad, along with SRM Group Research Executive Director, Prof. D Narayana Rao; Advisor-SRM Group, Prof. V S Rao; Pro Vice Chancellor, Prof. Ch Satish Kumar; Registrar, Dr R Premkumar; Deans; Directors; Faculty, Staff and Students of the varsity.

The Pro Vice-Chancellor in his welcome address remarked on how teachers hold the

ability to transform students. Addressing the popular misconception of how AI can replace teachers, Prof. Satish remarked, “AI may advance to great extent, but it can never replace the profound impact of teachers. Just as a restaurant meal can never match a mother’s cooking, so too can AI never replicate the love and transformation that educators bring to their students’ lives.” He also added that, in his opinion, the most respected strata of teachers are the primary and secondary school teachers, as they lay the foundation of knowledge and discipline in students. He mentioned that the university teachers fine-tune the students’ future.

Chief Guest Prof. V Chandrasekhar underscored the transformative power of education and the lasting legacy that educators can impart to their students by sharing the inspiring story of Acharya Prafulla Chandra Ray, a notable scientist, educator and nationalist, who pursued a career in chemistry only due to the profound impact of a dedicated teacher.

As part of the ceremony, University Outstanding Faculty Awards 2025 were presented to Prof. Ramesh Vaddi, Dr G V P Bhagath Singh, Dr Pradyut Kumar Sanki, Dr K A Sunitha, Dr Tousif Khan N, Dr Javid Ahmad Dar, Dr Lalitha Mohan Mohapatra, Dr Vineeth Thomas, Dr Jatis Kumar Dash and Dr Saleti Sumalatha, recognising their academic contributions and commitment to excellence. Dr Anirban Ghosh, Associate Professor was awarded the Prof. V S Rao Foundation – Prof. H P Tiwari Best Faculty Award 2025 for his outstanding achievements in teaching and research. All the awardees were presented with mementos, certificates and a cash prize of 50k.

The event also featured the presentation of 22 Five-Year Service Awards to long-serving faculty members. Additionally, 10 faculty members were awarded the Popular Faculty Award. These awards underscored the institution’s commitment to celebrating and encouraging academic excellence.

In his message, Prof. D Narayana Rao, SRM Group Research Executive Director, highlighted the significant transformation in the global perception of India. Prof. Rao underscored that this progress ultimately boils down to the making of world-class scientists, innovators and leaders and the teachers play a crucial role in this aspect. Their influence is pivotal in fostering an environment where curiosity thrives and future breakthroughs are born.

The Teachers’ Day celebration reaffirmed the university’s belief that teachers are central to nurturing future generations and advancing knowledge for the betterment of society. At SRM University-AP, this commitment aligns with the institution’s vision of fostering innovation, driving cutting-edge research and preparing globally competent graduates who contribute meaningfully to nation-building and societal progress.

Exploring History through Cinema: Screening of Sadgati

STAFF WRITER

The History and Heritage Club screened the movie Sadgati (1981) on Aug 19, 2025, that gave students a chance to experience one of the significant pages of Indian cultural and social history. Not only is Sadgati an excellent piece of cinema, but it is also a written account of history because of the way the traditions, usages and hierarchies influenced the lives in the past.

The telefilm is a landmark in Satyajit Ray's career, as this was his first film which was produced in collaboration with television. In addition to its artistic mastery, the film is also historically relevant since it speaks of the social realities deeply embedded in the society of India, rural India in particular, the social realities of caste and inequality.

The motivating theme of the event was to influence students to regard film as a historical text, like literature and archival records, that expresses and critiques society. Participants learned the historical experiences of injustice to social equality in our current society by becoming immersed in the film.

The screening developed a ripple effect as it made the students think about how history can define society and how art remains a provocation and a life changing factor.

SRM AP Explore Research Collaborations in Public Health

STAFF WRITER

SRM University-AP had the privilege of hosting Prof. Sasee Pallikadavath, Professor of Demography and Global Health at the University of Portsmouth, UK. A globally renowned scholar, Prof. Pallikadavath is widely recognised for his expertise in low fertility, health systems, health inequalities, family planning, women's autonomy and well-being, HIV and AIDS research.

The visit was organised to create meaningful academic exchanges, explore collaborative opportunities and deepen engagement in areas of public health research and capacity building.

With over two decades of impactful research, Prof. Pallikadavath has worked extensively across India, Indonesia, several African nations and the UK. His projects range from demographic health surveys and fertility research to international migration studies and health policy evaluations. His work has been instrumental in shaping perspectives on traditional family planning methods, maternal and child health and women's empowerment in developing countries.

Prof. Pallikadavath has also led multi-country projects funded by prestigious organisations such as the Medical Research Council (UK), Bill & Melinda Gates Foundation and the British Council. His studies have addressed implementation research, migration, antibiotic misuse and innovative AI-driven decision support systems in healthcare.

During his visit, Prof. Pallikadavath engaged with the Deans, faculty, researchers and Ph.D. scholars of SRM University-AP. He emphasised the importance of interdisciplinary research—bringing together social sciences, health systems, computer science and public policy to tackle contemporary global health challenges.

He also shared insights from his ongoing projects, including:

Revisiting fertility decline in India with a focus on Andhra Pradesh
Developing AI-assisted tools for antibiotic prescription monitoring
Cross-country studies on sexual and reproductive health policies
Exploring migration trends and their socio-economic implications

His discussions highlighted the potential of collaborative research between SRM University-AP and international institutions, particularly in public health innovation and global demographic studies.

The session concluded with a roadmap to pursue joint grant applications, capacity-building workshops and faculty-student collaborations. Prof. Pallikadavath's visit has laid the foundation for strengthening SRM University-AP's global research footprint in areas of health systems, population studies and sustainable development goals (SDGs).

Beyond the Fabric: Weaving Sustainability into the Handloom Sector

STAFF WRITER

In an era where fast fashion dominates, students of Paari School of Business, SRM University-AP, took a step towards understanding the roots of sustainable fashion. As part of a community outreach and engagement initiative, the 2nd-year BBA & B.Com students visited the Handloom Weavers' Sheds in Mangalagiri The field visit was enriched with valuable insights from Ms Vanaja, Assistant Director, O/o Commissioner of Handlooms & Textiles, Government of A.P. and guided support from Assistant Development Officers Mr Prithvi and Ms Jayalakshmi, along with Department staff member Ms Padmavathi.

During the visit, the students:

Explored the operational aspects of the handloom weaving industry

Understood the working conditions and livelihood challenges of artisans

Identified gaps in forward and backward linkages within the sector

Reflected on sustainable practices and solutions that align with UN Sustainable Development Goals 8 (Decent Work & Economic Growth) and 12 (Responsible Consumption & Production)

This hands-on engagement offered students more than just academic knowledge – it allowed them to witness resilience, creativity and heritage in action, while inspiring them to rethink how sustainability can be woven into business and society.

SRM AP Hosts Korean Consulate Delegation for Academic and Cultural Collaborations

STAFF WRITER

SRM University-AP had the honour of hosting a distinguished delegation from the Consulate General of the Republic of Korea on September 11th, 2025. The delegation was led by H.E. Mr Chang Nyun Kim, Consul General of the Republic of Korea in Chennai, and Mr Suresh Chukkapalli, Honorary Consul General of the Republic of Korea in Hyderabad, who interacted with university leaders, faculty, and students in a series of thought-provoking sessions. The program commenced with a boardroom meeting between the delegates and the university leadership.

In his remarks, H.E. Mr Chang Nyun Kim commended SRM University-AP for its world-class infrastructure and academic excellence that could lead to potential international collaborations. A conversation on nurturing graduates who are not only technologically skilled but also guided by strong ethical principles took center stage, discussing the global concern surrounding artificial intelligence.

Mr Kim also praised SRM's entrepreneurial focus, encouraging students to embrace innovation and leadership. "Don't try to be a job seeker, be a job provider," he urged, emphasising the need for future entrepreneurs. He expressed keen interest in establishing Korean studies and language training programs at SRM, while also exploring avenues for student exchange and joint research projects.

Moving forward, Mr Suresh Chukkapalli stressed the potential of India as a destination for higher education for Korean students, noting the growing demand for global partnerships. He drew attention to the possibilities of university-to-university collaborations, scholarship

opportunities, and the integration of language learning with degree programs, calling it "the beginning of a good friendship."

Following the leadership interactions, both dignitaries addressed the students of SRM University-AP, delivering inspiring messages about future opportunities for collaboration. Mr Kim shared Korea's remarkable transformation from one of the poorest countries in the 1960s to a global leader in technology and innovation, pointing out that "Korea invests 5.21% of its GDP in research and development to maintain technological competitiveness." He further spoke on Korea's alignment with India's "Make in India" vision, describing Korea as "one of the ideal partners for India's economic vision."

In his address, Mr Chukkapalli encouraged students to consider Korea as a serious destination for higher education and research. He also spoke passionately about the need for innovation and self-reliance, saying, "The entrepreneurship cell here and government subsidies can support you to stand tall with your own business enterprise." Drawing parallels between India and Korea, he shared cultural values that make Korea a natural partner for Indian students seeking global exposure.

The event concluded with a Korean movie screening, which offered students a glimpse into Korean culture and entertainment. Beyond being a cultural exchange, the visit created fresh enthusiasm among students to explore academic, cultural, and research opportunities in Korea.

RESEARCH

Sustainable Development in the BRICS Economies

Dr Lakshmana Rao Ayyagari, Assistant Professor, Department of Commerce, along with his scholars Mr Navin Y and Ms Anusha Rajan, has published an article **"Balancing Growth and Green Goals: Financial Access, Entrepreneurship, and Sustainable Development in the BRICS Economies"** in the Q1 journal Discover Sustainability.

Abstract

This study examines the dual role of financial systems in promoting entrepreneurial growth and sustainable development across BRICS nations (2000–2023). Using robust PLS-SEM analysis, the research reveals that while financial access drives business formation and economic resilience, it also poses ecological challenges through resource overuse and pollution.

Practical Implementation / Social Implications of the Research

Informs BRICS governments to introduce green credit quotas, eco-tax incentives and sustainability assessments in funding policies.
Encourages banks to incorporate environmental risks into lending practices.
Highlights the importance of inclusive entrepreneurship programmes, especially for rural and marginalized communities.
Provides a foundation for integrating sustainability into entrepreneurship curricula and public discourse.

Future Research Plans

Explore the role of blockchain and AI in promoting transparent, sustainable financial systems.
Investigate gender and social equity in sustainable entrepreneurship ecosystems.
Conduct comparative studies on green finance policy innovations beyond BRICS (e.g., ASEAN or African Union).
Develop longitudinal, mixed-methods frameworks to assess cultural, institutional, and digital factors in sustainability transitions.

Transforming IoT Performance: Deep Learning in the Fog–Cloud Continuum

In the paper titled "Deep Learning-centric Task Offloading in IoT-Fog-Cloud Continuum: A State-of-the-Art Review, Open Research Issues and Future Directions," by Dr Kshira Sagar Sahoo, Assistant Professor, Department of Computer Science and Engineering and collaborators, the role of machine learning and deep learning in optimising IoT systems is comprehensively reviewed.

Abstract

Our study provides a comprehensive review of task offloading and resource allocation in fog–cloud continuum, with a focus on machine learning and deep learning–based approaches.

Explanation in Layperson's Terms

Our research looks at how to use fog–cloud continuum, where nearby devices like routers or gateways help with computation instead of sending everything to the cloud.

Practical Implementation

Key applications include:

Healthcare monitoring (real-time alerts)
Smart cities (traffic management, surveillance)
Autonomous vehicles (low-latency decision-making)
Industrial IoT (automation, predictive maintenance)

Social Impact

Faster decision-making
Cost efficiency
Data privacy

Collaborations

This research is a joint collaboration between:

University of Saskatchewan, Saskatoon, SK, Canada
GITAM Deemed to be University, Visakhapatnam, India
SRM University-AP

An Innovative Approach to Adaptive NDN Caching

Assistant Professor, Dr M Krishna Kumari, Assistant Professor, Department of Computer Science and Engineering, SRM University AP, has published her paper "Adaptive NDN Caching: Leveraging Dynamic Behaviour for Enhanced Efficiency" in the Q1 Journal of Network and Computer Applications with an impact factor of 8.0.

Abstract of the Research:

The publication "Adaptive NDN Caching: Leveraging Dynamic Behaviour for Enhanced Efficiency" proposes a dynamic caching strategy for Named Data Networking (NDN), a next-generation Internet architecture that shifts from host-based to data-centric communication.

Practical Implementation and Social Implications:

The caching innovation strengthens NDN's role in delivering secure, delay-sensitive and efficient communication for these emerging domains, while also reducing congestion and making networks more sustainable.

Collaborations:

This research is a collaboration between the Department of Computer Science and Engineering, SRM University-AP, Amaravati and the Department of Computer Science and Engineering, Indian Institute of Technology (ISM, Dhanbad), in collaboration with Dr. Nikhil Tripathi (IIT Dhanbad).

Future Research Plans:

Future directions include extending adaptive caching

to vehicular networks (VANETs), tactical communications and other mission-critical systems, with a focus on AI-driven predictive caching for real-time applications. The goal is to enable networks to anticipate demand, ensure secure data delivery and minimise delays.

THOUGHT LEADERSHIP

The Zen of Storytelling

Dr Srabani Basu

In a quiet university nestled at the foot of a mountain, a young professor, newly appointed, full of ideas, sought to master the art of storytelling.

One day, she approached an old gardener named Anan, who was known to captivate students during lunch breaks with the simplest of stories,yet no one ever forgot them.

"Anan," she said, "I have read Aristotle, studied narrative arcs and watched hundreds of TED talks. But still, I struggle to hold my students' attention. Can you teach me how to tell a good story?"

Anan smiled. "Come tomorrow. Bring a cup."

The next day, the professor came with a tall, sleek coffee cup, polished and branded.

Anan nodded and began pouring tea into the cup. He kept pouring even after the tea reached the brim. It overflowed and spilled onto the professor's notes.
"Wait! It's full!" she cried.
Anan stopped. "Exactly," he said. "You've come with a full cup. Full of theories, full of technique, full of what stories should be."
He sat down and added, "Storytelling begins not with knowledge but with listening. To people. To silence. To the

spaces between events. If your cup is full, nothing new gets in."
The professor was silent.
Anan continued, "A good story is not a performance. It's a bridge. It invites others to walk across and see their own lives reflected."

"Whether you teach thermodynamics, literature, finance, or biology," he said, "your story must breathe. Leave space. Let students lean in and not just be told."

He picked up a dry leaf from the ground. "This leaf has a story. Not because it's dramatic. But because it's part of something alive."

The professor looked at her cup, now stained and steaming

From that day forward, she began her lectures not with slides, but with a story, often a small one. Sometimes from her childhood. Sometimes from a failed experiment. Sometimes from a student's doubt.

She noticed something change not just in the students, but in herself.

She had become a storyteller. Not by knowing more, but by learning to listen and leaving her cup just a little empty.

Zen principles applied to storytelling emphasise simplicity, presence, depth and the intuitive over the intellectual. Zen storytelling is not about elaborate plots or dramatic twists; it is about conveying profound truths with minimal elements. Here are the core Zen principles often seen in storytelling:

Simplicity (Kanso – 簡素)
Essence: Strip away the non-essential. Focus on what is left. What matters?
In storytelling: Avoid unnecessary exposition, dialogue, or description. Use clear, sparse language. A short story or anecdote can carry immense depth.

Subtlety and Suggestion (Yugen – 幽玄)
Essence: Evoke rather than explain. Let mystery and ambiguity create emotional resonance.
In storytelling: Leave space for the audience's imagination. Do not over-explain motivations or outcomes. Let the meaning emerge organically.

Naturalness (Shizen – 自然)
Essence: Flow with the natural order. Be unforced and authentic.
In storytelling: Let characters and events unfold naturally, without obvious manipulation. Avoid contrivance.

Impermanence (Mujo – 無常)
Essence: All things change and pass. Life is transient.
In storytelling: Stories often highlight fleeting moments or the inevitability of change emphasising beauty in what is brief or passing.

Emptiness / Space (Ma – 間)
Essence: The pause, the silence, the unspoken space is meaningful.
In storytelling: Silence or what is not said can carry as much meaning as words. Pacing and pauses create rhythm and depth.

Presence / Mindfulness (Zanshin – 残心)
Essence: Total awareness of the moment, even in stillness.
In storytelling: Deep focus on a moment or detail. A story might dwell on a single instant with full presence, revealing universal truths.

Non-attachment (Mushin – 無心)
Essence: Let go of ego and expectation.
In storytelling: Avoid imposing a moral or message. The story exists for its own sake, not to "teach." Let readers take what they will.

Wabi-sabi (侘寂)
Essence: Beauty in imperfection, incompleteness and the passage of time.
In storytelling: Characters or narratives may remain unresolved, flawed, or unfinished by reflecting life's real texture.

Trade Wars Are Less About Tariffs, More About Power: India's Strategic Autonomy in a Shifting World

Dr Manasi Sinha

As the US-China trade war deepens, Washington has opened a volatile new front: slapping punitive tariffs on India for its continued imports of Russian oil. In August 2025, the Trump administration doubled tariffs on Indian goods to 50 percent, accusing New Delhi of indirectly bankrolling Moscow's Ukraine war. The move has rattled Indian exporters, but its impact runs deeper: exposing cracks in America's Indo-Pacific Strategy and risking a tilt of India toward Beijing and Moscow.

The U.S. tariffs on India arrive atop Washington's intensifying economic war with China, turning trade into a global battlefield. America's tariff war with China has hit a fever pitch recently.

In a dramatic escalation, Donald Trump's administration threatened duties as high as 145 percent on all Chinese goods, slapping a sweeping new tariff on Chinese imports, spiking as high as 245 percent on syringes, 173 percent on batteries and 20 percent on laptops. The move, framed under "America First Trade Policy," targets China's export controls on critical minerals, state subsidies, tech coercion and even its role in fentanyl trafficking.

Full Blown Trade War

What began with Donald Trump's steel tariffs in 2018, has spiraled into a full blown trade war engulfing semiconductors, batteries, pharmaceuticals and electric vehicles (EV). However, far from protecting American industry, the policy has backfired. A 2023 National Bureau of Economic Research (NBER) study revealed tariffs slashed U.S exports, jobs and productivity, while widening the trade deficit—evidence that protectionism often wounds the protector. WTO data echo the fallout: US-China trade flows have plummeted, yet China has deftly rerouted exports to ASEAN, the EU and Arica- swelling its surplus to nearly $1.2 trillion. Global supply chains, once seamless arteries of globalisation, now resemble tangled knots. Multinational companies scramble for "China+1" strategies, shifting production to Vietnam, Mexico and India.

But diversification comes at a cost: pandemic-era shortages of medical supplies, ballooning logistics expenses and raw material bottlenecks - a Journal of International Economics analysis links these disruptions to slower import growth in tariff-hit sectors. By 2025, hopes of de-escalation dimmed as rivalries hardened, turning what was meant as targeted pressure into a broader economic drag. The ripple effects are uneven: Mexico thrives on "nearshoring"; Vietnam and Taiwan capture electronics manufacturing; Africa deepens ties with China; while Russia and Brazil weather the storm with minimal exposure.

Economics binding India, Russia

The U.S.-India bond is fraying, caught at the intersection of tariffs and energy politics and the ripple effects are reshaping the global order. Nowhere was this clearer than at the recent Shanghai Cooperation Organisation (SCO) Summit in Tianjin, where Chinese President Xi Jinping, Indian Prime Minister Narendra Modi

In a dramatic escalation, Donald Trump's administration threatened duties as high as 145 percent on all Chinese goods, slapping a sweeping new tariff on Chinese imports, spiking as high as 245 percent on syringes, 173 percent on batteries and 20 percent on laptops. The move, framed under "America First Trade Policy," targets China's export controls on critical minerals, state subsidies, tech coercion and even its role in fentanyl trafficking.

Full Blown Trade War

What began with Donald Trump's steel tariffs in 2018, has spiraled into a full blown trade war engulfing semiconductors, batteries, pharmaceuticals and electric vehicles (EV). However, far from protecting American industry, the policy has backfired. A 2023 National Bureau of Economic Research (NBER) study revealed tariffs slashed U.S exports, jobs and productivity, while widening the trade deficit—evidence that protectionism often wounds the protector. WTO data echo the fallout: US-China trade flows have plummeted, yet China has deftly rerouted exports to ASEAN, the EU and Arica- swelling its surplus to nearly $1.2 trillion. Global supply chains, once seamless arteries of globalisation, now resemble tangled knots. Multinational companies scramble for "China+1" strategies, shifting production to Vietnam, Mexico and India.

But diversification comes at a cost: pandemic-era shortages of medical supplies, ballooning logistics expenses and raw material bottlenecks - a Journal of International Economics analysis links these disruptions to slower import growth in tariff-hit sectors. By 2025, hopes of de-escalation dimmed as rivalries hardened, turning what was meant as targeted pressure into a broader economic drag. The ripple effects are uneven: Mexico thrives on "nearshoring"; Vietnam and Taiwan capture electronics manufacturing; Africa deepens ties with China; while Russia and Brazil weather the storm with minimal exposure.

Economics binding India, Russia

The U.S.-India bond is fraying, caught at the intersection of tariffs and energy politics and the ripple effects are reshaping the global order. Nowhere was this clearer than at the recent Shanghai Cooperation Organisation (SCO) Summit in Tianjin, where Chinese President Xi Jinping, Indian Prime Minister Narendra Modi and Russian President Vladimir Putin shared the stage - an unmistakable signal of an Asia-centric power shift unfolding without the U.S. While Modi's meeting with Putin indicates a deepening India-Russia partnership, fortified rather than weakened by the tariff-and-oil standoff with the U.S., on the other hand, the Xi-Modi bilateral meeting yielded a rare 10-point consensus on boundary issue, hinting at a cautious resetting Sino-Indian relations despite enduring mistrust and geopolitical worries.

Beyond geopolitics, economics is binding New Delhi and Moscow closer. Russia's consumer market is opening to Indian farm exports, while Russian labs tout breakthroughs like a personalised mRNA-based cancer vaccine, potentially significant for India, where nearly 2.5 million new cancer cases are expected in 2025. Once a low-profile forum, the

The Future of Learning Lies in Synergy—AI for Data, Teachers for Dreams

Dr Yasir Afaq

Education is undergoing an unprecedented transformation. The shift from conventional classrooms to digital learning environments has significantly altered how knowledge is imparted and acquired. Artificial Intelligence (AI) is a key player in this evolution, reshaping student learning experiences and teaching methods. However, amid this modernisation, it's crucial to remember that technology cannot substitute the human connection provided by teachers. AI can manage information, but only teachers can nurture dreams. Both elements are vital for genuine learning.

The appeal is clear. Market investments have delivered higher returns compared to modest bank deposit rates, while rising financial literacy, fintech access and favourable tax treatment have encouraged this shift. For households, this means more prospects to grow wealth. But for banks, especially public sector

banks (PSBs), the trend brings challenges.PSBs have traditionally depended on household deposits to fund their lending. With deposits slowing, their profit margins are under pressure, liquidity is tightening and lending capacity is constrained. Private sector banks appear

taking care of routine administrative tasks such as grading, recording attendance and preparing progress reports, allowing them more time to concentrate on teaching.

Andrew Ng once likened artificial intelligence to electricity, calling it "the new electricity." A century ago, electricity transformed all industries and today, AI is revolutionising education. Yet, just as electricity didn't ignite imagination, AI by itself cannot foster creativity.

Teachers: The Power of Dreams

As William Arthur Ward eloquently put it, **"The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires."** AI might manage to tell and explain, but only a teacher has the power to inspire.

Education transcends the mere acquisition of information; it's a journey of transformation. In this journey, teachers play an indispensable role. Unlike machines, emotions like empathy, motivation and wisdom are infused by teachers. They can sense when a student feels confused, discouraged or unmotivated. They have the skills to coax a reserved student into speaking up or soothe a nervous one before an exam.

In this era, teachers' role extends beyond imparting knowledge; they cultivate confidence, resilience and creativity. Teachers plant the seeds of ambition that blossom into lifelong dreams. While AI can guide a student through solving an equation, only a teacher can instil the belief that they can tackle life's bigger challenges.

The true power of contemporary education comes from merging AI with teachers, rather than choosing between them. While AI offers teachers analytical insights about each student's progress, it is the educator who turns that data into effective teaching strategies. AI can signal which students require assistance, but it is the teacher who builds personal relationships, inspires and supports them through their educational journey.

Picture a situation where artificial intelligence detects a group of students having difficulty with algebra. Rather than just producing worksheets, the teacher steps in to clarify the concepts in an engaging way—maybe through storytelling or by linking the material to real-world scenarios to boost understanding. While AI guarantees precision, the teacher provides motivation. Together, they cultivate a learning atmosphere that is both intellectually challenging and deeply human.

Teachers have the unique ability to see beyond the data, to understand the nuances of each student's journey and to light the spark that turns curiosity into lifelong enthusiasm. They create environments where students feel valued and empowered to explore their interests and push their boundaries. This connection fosters a love for learning that technology alone cannot replicate.

Albert Einstein once remarked, **"It is the supreme art of the teacher to awaken joy in creative expression and knowledge."** AI can organise and present information, but only teachers can ignite a passion for learning.

A Vision for the Future

The future of education resides not solely with AI, nor exclusively with teachers, but in a collaborative effort where technology enhances the abilities of educators and educators uplift their students. AI plays a crucial role in ensuring every student progresses academically, while teachers focus on nurturing students emotionally.

Data lacks depth without dreams and dreams cannot flourish without knowledge. By merging the analytical capabilities of AI with the motivational influence of teachers, education can become more inclusive, personalised and effective than ever before.

Together, they form an educational ecosystem that is dynamic and adaptive, ready to meet the diverse needs of every learner. This harmonious blend of technology and human touch can lead to unprecedented levels of student engagement and achievement.

John Dewey, a renowned educational reformer, once said, **"Education is not preparation for life; education is life itself."** For education to truly embody life, it requires both intelligence and inspiration, incorporating both AI and teachers.

Faith, Belief and Inner Satisfaction: The Quiet Power That Shapes Humanity

Mr Pankaj Belwariar

In a world focused on metrics and milestones, faith often plays a quiet but important role in supporting resilience and motivation. While it may not always rely on logic or evidence, it does not require proof or measurable results. Yet, it provides a meaningful sense of fulfilment and stability. One can say that faith is the invisible thread that binds tradition to identity, ritual to meaning and the individual to the infinite.

The Sacred Symbolism of Ritual

Across cultures and centuries,

human beings have turned to symbols such as idols, shrines and sacred texts not merely as objects of worship, but as mirrors of their values. The act of offering flowers, lighting lamps, keeping fasts, or seeking darshan is thus not just religious, but emotional, psychological and deeply personal. These rituals surpass superstition and reflect connections that are often larger than oneself. They offer rhythm to life, grounding to the soul and a sense of belonging to a tradition that transcends time. Whether it's the serenity of a temple, the solemnity of a mosque, the grace of a church, or the humility of a gurdwara, each space becomes a sanctuary for reflection, gratitude and renewal.

Work as Worship: A Modern Ritual

For many, faith takes a different form. It is not expressed through incense or offerings, but through commitment to work. Their rituals are deadlines, their devotion is discipline and their altar is the workplace. This belief that work itself is worship channels the same energy of reverence and purpose. Such individuals find satisfaction not in ceremonial acts but in contribution, excellence and loyalty. Their faith is in effort and their fulfilment comes from impact.

Both paths, ritualistic and professional, are valid expressions of belief. What matters is not the form, but the feeling, not the method, but the meaning.

The Transformative Power of Faith

Across cultures, a range of factors, including tradition, upbringing and belief systems, help shape how individuals relate to others and respond to challenges. These influences often foster values like humility, compassion, responsibility and a shared sense of identity. Such principles continue to play a role in how communities navigate adversity, define success and maintain social cohesion.

The Inner Light

In the end, faith is not about proving anything to the world. It is about feeling something within — a quiet joy, a deep peace, a sense of alignment. Whether through prayer or performance, ritual or responsibility, faith gives life its emotional architecture. It is the inner light that makes us not just successful, but soulful. Not just efficient, but empathetic. It is the inner light that guides us beyond material success, making us not just successful but soulful. It teaches us to go beyond mere efficiency, nurturing empathy in our actions. It reminds us that being human is not enough; we must also be humane, allowing our values and compassion to shape the way we live and connect with others.

Households Shift from Banks to Markets: A New Financial Landscape

Dr Mruntunjaya Sahoo

Over the past decade, Indian households have altered the way they save and invest. Once heavily reliant on fixed and savings deposits, they are now moving steadily toward equities, mutual funds and sovereign gold bonds. The surge in monthly SIP inflows and the doubling of demat accounts highlight this growing preference for market-linked instruments over traditional bank deposits.

better placed, while many PSBs face a narrowing gap between loans and deposits. Their compulsory investment in low-yielding government securities further limits flexibility.

The Reserve Bank of India has maintained a steady monetary policy stance, preferring caution amid global uncertainties and inflationary risks. Liquidity has been managed through tools like VRRR auctions and open market operations. Thus far, the structural issue of deposit disintermediation requires more than short-term interventions.

Several measures could help. PSBs need to rethink deposit offerings; market-linked or inflation-indexed schemes could make them more competitive. Partnerships with fintech can create hybrid products that combine safety with better returns. At the policy level, incentives to promote long-term savings, particularly for rural households and senior citizens, may help retain deposit flows.

India's financial system has recently been at an inflexion point. Market-led savings signal a more mature and confident household sector, but banking stability remains vital for credit growth and economic health. In a fast-evolving financial landscape, striking a balance between empowering savers and ensuring resilient banks will be key to sustaining this transformation.

GST Overhaul Sparks Economic Revival: India Embraces Two-Tier Tax for Inclusive Growth

Dr Manish Kumar

India's economic landscape is poised for a transformational shift as the GST Council's landmark decision to implement a simplified two-tier tax structure promises to unleash unprecedented economic momentum. The GST Council has dismantled the complex four-slab structure, consolidating indirect taxation into a streamlined framework comprising 5% and 18% rates, supplemented by a punitive 40% levy on luxury and sin goods. The reform, effective September 22, 2025, marks a strategic departure from revenue maximisation toward consumption stimulation, with the government voluntarily sacrificing ₹48,000 crore in immediate fiscal receipts to unleash long-term economic momentum. The consumer impact manifests across multiple dimensions of daily expenditure, delivering immediate tangible benefits through reduced prices on essential goods categories.

Personal care items, including hair oil, shampoo, toothpaste and toilet soap, have migrated from 18% to 5% GST, reducing costs for routine purchases that constitute significant portions of household budgets. Dairy products such as butter, ghee and cheese have moved from 12% to 5%, while ultra-high temperature milk, chenna and paneer now attract zero GST. Food items, including pre-packaged namkeens, bhujia, mixtures, pasta, instant noodles, chocolates and cornflakes, have been repositioned from 12% or 18% to 5%, delivering substantial savings on packaged foods that form an increasing component of Indian dietary patterns. The GST Council's comprehensive restructuring encompasses an extensive range of products across diverse categories, demonstrating the reform's breadth and impact on consumer welfare. In the healthcare sector, individual health and life insurance policies now attract zero GST, reduced from 18%, while over 30 cancer drugs have been exempted entirely. This restructuring addresses long-standing concerns about tax complexity, cascading effects and the regressive nature of India's indirect tax burden, particularly on essential goods consumed by lower and middle-income households.

The economic implications of these reforms operate on fundamental principles of price elasticity of demand, where reduced tax rates translate directly into lower consumer prices, thereby stimulating demand across multiple sectors. When the GST on fast-moving consumer goods (FMCG) falls by one percentage point, consumption rises by approximately 0.23%. This modest elasticity reflects the

relatively inelastic nature of essential staples and household items, as consumers continue to purchase similar quantities even when price changes are small. By contrast, consumer durable items such as air conditioners, televisions, motorcycles and small cars exhibit far higher elasticity. Analysis of demand patterns indicates that moving from a 28% to an 18% GST rate can trigger a 15–25% increase in purchases of these goods. This reflects how discretionary spending on higher-value items is highly sensitive to price; a substantial tax cut translates into a meaningful drop in the out-of-pocket cost, encouraging households to accelerate or expand their purchases.

GST restructuring brings immediate consumer benefits by lowering prices on essentials, boosting disposable income and enhancing purchasing power—especially for lower and middle-income groups. This triggers a cycle of higher spending, business expansion, job creation and faster growth. Consumers gain directly from affordability, while industries benefit from corrected cost distortions. Notably, cutting cement GST from 28% to 18% reduces construction costs by ₹25–30 per bag, delivering a major boost to housing and infrastructure.

Similarly, lower taxes on industrial inputs and capital goods will reduce manufacturing costs across sectors. Export competitiveness receives a substantial boost as the cascading effect of taxes gets eliminated throughout the production value chain. For sectors like textiles, handicrafts and leather goods that are export-intensive and MSME-driven, the rate reductions provide crucial relief that enhances their ability to compete globally. This is particularly significant as Indian exporters face headwinds from potential US tariffs, making domestic cost reduction essential for maintaining market share. The GST Council's decision to eliminate complex multi-tier structures addresses a longstanding concern of foreign investors who struggled with compliance complexities and unpredictable tax implications across different states and product categories. The unified two-tier approach creates clarity that facilitates investment decisions and operational planning for global companies considering India as a manufacturing destination. The GST reforms embody classic Keynesian economic theory, where government intervention through tax reduction stimulates aggregate demand. Research demonstrates that every rupee of reduced tax burden generates additional economic activity worth 2-3 rupees through the multiplier effect.

The reform enhances capital utilisation by removing cascading levies and inverted duties, freeing working capital for investments in machinery, technology and production expansion. Lower input costs allow industries from textiles to automotive to boost capacity. At the same time, GST's unified framework creates a single national market, letting producers reach consumers across India without complex state-level taxes—broadening market access and lowering costs for regional firms.

GST enables distant market reach—like Rajasthan's handicrafts in Bengal or Kerala's agrifood in northern states—while reduced rates on essentials and durables make goods more affordable across incomes. Its September 22 rollout, aligned with Navratri, amplifies impact during peak shopping season. Businesses are easing the transition by absorbing costs, tweaking pack sizes or issuing credit notes, ensuring consumer savings without disrupting pricing or inventories.

The GST Council's reforms go beyond tax policy—they reflect an economic philosophy of growth through simplification, affordability and competitiveness. By boosting disposable income, exports and sectoral demand while controlling inflation, they create a powerful push for India's consumption-led economic revival. This bold taxation reform shows how practical, theory-driven policies can unlock the true potential of the world's largest democracy.

Role of EEG in HCI (Human-Computer Interaction)

Dr Banee Bandana Das

Biometrics in HCI focus on enhancing interaction between humans and machines using unique physiological or behavioural characteristics. Traditional biometric traits have several disadvantages compared to EEG-based biometrics. They are more susceptible to forgery and adversaries can exploit various techniques to bypass them.

Moreover, many traditional biometric traits—such as facial features or fingerprints—can change with age, reducing their reliability for long-term identification. In contrast, EEG signals remain consistent over time and are less influenced by ageing, making them a unique and robust biometric trait. EEG can be used as a unimodal system or integrated into multimodal systems, providing a strong and secure mechanism to counter identity forgery.

EEG (Brainwaves) – Cognitive load detection, mental commands

EEG Biometrics for Various Applications

EEG-based biometrics use brainwave patterns, which are unique to individuals, for identity verification and interaction.

Key Applications:

Authentication & Identification: Use of brainwave patterns as biometric signatures, Resistance to spoofing compared to fingerprints or facial recognition.

Mental State Monitoring: Stress, fatigue or focus detection, Useful in aviation, surgery or e-learning environments.

Brain-Computer Interfaces (BCIs): Control of devices (e.g., wheelchairs, drones) using brain signals, Neuroprosthetics and communication tools for disabled individuals.

Neurosecurity: Cognitive passwords or "pass-thoughts", Brainwave-based cryptographic key generation.

Healthcare & Rehabilitation: Monitoring of neurological disorders, Neurofeedback therapy.

Gaming & Virtual Reality: Immersive VR experiences using cognitive engagement.
Biometric security includes physical and digital security systems. Biometrics can also be used in Soldier Identification, Access Control in Military Facilities, Border Security, Combat Readiness Monitoring and Weapon Lock Systems.

In this article, we mainly discussed the use of EEG signals for identifying individuals. Various machine learning models can be employed for this purpose. Algorithms such as Convolutional Neural Networks (CNNs), Long Short-Term Memory networks (LSTMs) and Autoencoders can be used to improve the system's performance in accurately recognising individuals based on their EEG data.

Eight Years of GST: From Midnight Launch to Next-Gen Reform

Dr Nagalakshmi

On July 1, 2017, India introduced the Goods and Services Tax (GST), presenting it as a "Good and Simple Tax." Eight years later, as the 56th meeting of the GST Council approves a new round of "Next-Gen GST Reforms", it is time to reflect on what we have accomplished, what obstacles we need to overcome and what lessons we can learn to help shape this transformative tax system in the future.

From Fragmentation to Integration

India's indirect tax system was complex before the implementation of the GST. The lack of a unified input tax credit system resulted in double taxation, raising consumer prices. As states imposed various VAT rates and other taxes, like the entry tax, costs went up. Businesses had to abide by a number of regulations pertaining to audits, fines and returns. GST formalised and stimulated India's economic integration by combining 17 taxes and 13 cesses.

GST by the Numbers

Taxpayer base: 5 lakh (2017) → 1.51 crore (2025)

Gross collections FY 2024–25: ₹22.08 lakh crore

Average monthly collections: ₹2.04 lakh crore (up from ₹82,000 crore in 2017–18)

Simplification as the New Mantra

If the first phase of GST was about stabilising, the second phase is about simplifying. The current reform establishes two slabs: 5% and 18%, replacing four earlier slabs.

Essential items such as food, household goods, school supplies and life-saving pharmaceuticals are either **excluded or subject to 5% tax. Two-wheelers, compact**

automobiles, TVs and air conditioners are taxed at 18% instead of 28%.
Luxury and "sin goods" such as tobacco, pan masala, yachts and high-end cars now attract a 40% GST.

Balancing Growth with Relief
GST 2025 also represents a balancing act: decreasing consumer costs while promoting industry growth.

Housing sector: Tax on cement decreased from 28% to 18%, while the tax on bricks, marble and bamboo products is5%.
Farmer relief: Tractors, harvesters, drip irrigation and bio-pesticides are now taxed at only 5%.
Industry support: Corrected inverted duty arrangements in textiles and fertilisers to improve competitiveness.

These reforms could lead to more affordable housing, sustainable agriculture and increased domestic manufacturing.

Social Protection through Taxation
The following revisions show the alignment of GST with the social protection goals of the Government-

33 life-saving medications and diagnostic kits have 0% GST.
5% GST applies to Ayurvedic, Unani and homoeopathic medications.
Exemption for life and health insurance premiums.

Tax policy, once viewed as a fiscal tool, is increasingly being used to promote welfare.
In a country where medical expenditures are driving millions into debt, these actions effectively alleviate household pressures and promote universal health coverage.

Federalism and Consensus

GST is based on cooperative federalism, where the Centre and the States unanimously approved the 2025 reforms. The GST Council has historically operated by consensus, even in the face of disputes over compensating cess.

Challenges Ahead
Despite the focus on simplification, issues persist, including
Ensuring faster refunds and smoother digital compliance.
Managing revenue risks throughout the shift to two slabs.
Reducing reliance on hefty "sin taxes" to maintain stability.
Modernising GST for e-commerce and digital services.

A Work in Progress

Eight years after its introduction, GST has evolved from complexity to simplification and from scepticism to acceptance. A key lesson is brought home by the most recent reforms: tax structures need to change in tandem with economic growth.

GST 2025 is about finding a balance between revenue, growth and social protection; it's not just about rates. Designed for relief, simplification and inclusive growth, the 2025 GST reforms seek to strengthen both ease of living and ease of doing business. If properly executed, the midnight promise of a "Good and Simple Tax" may eventually be realised when GST becomes a useful tool for inclusive prosperity.

Security or Power: What Matters Most in the Current Era of IoT?

Dr Saswat Kumar Ram

In the evolving landscape of the Internet of Things (IoT), the trade-off between power efficiency and security has become increasingly significant. Due to the limited capacity of fixed batteries, the longevity and reliability of IoT sensor nodes are often compromised. Any loss of information in IoT systems can lead to incorrect decision-making and unintended actuation—consequences that can be critical in real-time applications.
Energy harvesting has emerged as a promising solution to address power constraints. It involves collecting energy from ambient sources such as solar, thermal, vibrational, or RF energy. However, storing this harvested energy efficiently remains a challenge. Rechargeable batteries and supercapacitors are among the most viable energy storage solutions currently available to bridge the power gap.

To ensure optimal energy conversion and utilisation, a robust power conditioning circuit is essential. These circuits help extract maximum power from variable natural sources, which are often influenced by changing environmental conditions.

As energy harvesting systems become more integrated and intelligent, security also becomes paramount. Energy harvesting circuits must be safeguarded from potential threats and adversarial attacks. On-chip security solutions, such as Physically Unclonable Functions (PUFs), offer promising protection mechanisms by leveraging unique, hardware-level identifiers that are nearly impossible to replicate.

In the pursuit of monolithic integration in integrated circuits, inductor-free power management techniques are being increasingly preferred to reduce form factor and enhance compatibility. Charge pumps, particularly reconfigurable charge pumps, have become popular choices for on-chip voltage boosting due to their compact size and improved energy efficiency.

To further optimise power extraction, a variety of Maximum Power Point Tracking (MPPT) techniques are employed based on the specific characteristics of the energy source and application requirements.

Given the exponential growth of IoT applications—from smart homes to industrial automation—it is no longer a choice but a necessity to implement secure and efficient energy harvesting systems for IoT end-node devices. Balancing power management with robust security measures is the key to enabling reliable, scalable and sustainable IoT deployments in the current era.

Entrepreneurial Education: Unlocking Sustainable Futures for the Youth

Dr Satchindananda Tripathy

Entrepreneurship is no longer about simply starting a business—it's about starting a movement. Around the globe, young people are looking for more than profit; they are looking for purpose. They want to create ventures that generate wealth while tackling climate change, inequality and social challenges head-on. The bridge between this aspiration and reality.

Entrepreneurial education is reimagined for sustainability.

The New Face of Entrepreneurship

Entrepreneurship was equated with disruption, competition and financial gain for decades. But the 21st century has rewritten the rulebook. The world's most urgent problems—from plastic pollution to unemployment—cannot be solved with old models. Instead, they demand a new kind of entrepreneur who understands that sustainability is not a side project but the core of long-term success.

Today's youth are uniquely positioned to lead this transformation. They are digital natives, socially conscious and unafraid to challenge the status quo. But passion without direction often fades. This is where entrepreneurial education plays its most powerful role—channeling youthful energy into ventures that endure and uplift.

Three Principles for Educating Sustainable Entrepreneurs

Teach Purpose First, Profit Second:

Youth must learn that ventures thrive when they solve real social or environmental challenges.

Embed Real-World Impact:

Use projects, case studies and partnerships that allow students to design for the UN SDGs, not just for markets.

Build Resilience & Adaptability:

Equip young entrepreneurs with tools to pivot, scale responsibly and confidently navigate uncertainty.

What Entrepreneurial Education Must Look Like

To cultivate sustainable entrepreneurs, education must go beyond teaching how to draft a business plan or pitch to investors. It must foster mindsets, skills and values that prepare young people to thrive in uncertain, complex environments.

A redefined entrepreneurial education should emphasise:

Systems Thinking – Connecting business decisions, the environment and society.

Purpose-Driven Innovation – Designing solutions where

profit and impact reinforce each other.

Resilience & Adaptability – Building ventures that can withstand disruption and crises.

Impact Literacy – Measuring success not just by revenue, but by positive social and ecological outcomes.

Imagine classrooms where students co-create circular economy startups. During these hackathons, the challenge is achieving the UN Sustainable Development Goals (SDGs) or mentorship programmes where industry leaders guide youth in balancing ethics with enterprise. That is the future entrepreneurial education must build.

Real-World Inspiration: Youth Driving Change

The good news:- It's already happening. Around the globe, youth-led ventures are proving that sustainability and profitability go hand in hand.

Too Good to Go (Europe): A food-rescue app that saves millions of surplus meals, turning waste into a scalable business opportunity.

Phool (India): A startup that upcycles temple floral waste into eco-friendly products, reducing pollution while creating dignified jobs for marginalised women.

Green Tiger (Bangladesh): A youth-driven venture producing affordable electric two-wheelers, offering clean mobility in fast-growing cities.

These examples show how entrepreneurial education and ambition can spark global solutions from local challenges.

Ecosystems that Empower

Education alone is not enough. Youth-led sustainable entrepreneurship thrives when supported by ecosystems of trust and opportunity. Governments, universities, incubators and private enterprises must come together to provide access to funding, mentorship and platforms for collaboration. We need accelerators dedicated to green and inclusive businesses, policy frameworks that reward impact-driven ventures and recognition for young entrepreneurs who place people and the planet at the heart of profit. When ecosystems align with youth ambition, the results can be transformative.

A Call to Action

The youth community is the largest reservoir of entrepreneurial potential in history. But to unlock it, we must invest in education that doesn't just teach entrepreneurship—it teaches sustainable entrepreneurship. This is not about sacrificing growth for goodwill but redefining growth itself.

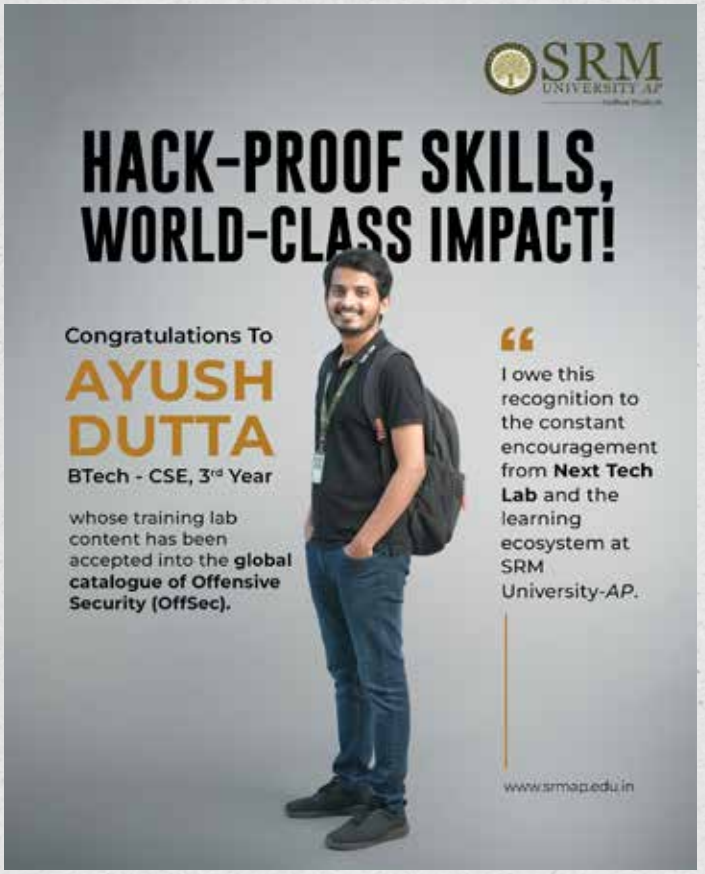
As we step into a future shaped by uncertainty and urgency, the entrepreneurs who will stand out are those who create businesses that outlast trends and uplift societies. Entrepreneurial education has the power to shape this future. It can turn youthful ideas into resilient ventures and movements that change the world.

After all, the most incredible legacy of education is not just knowledge—it's impact. The most significant effect of entrepreneurial education will be a generation of youth who refuse to choose between profit and purpose because they know the future depends on both.

STUDENT ACHIEVEMENT

Anamika A, MBA student (2023-25 Batch), has won Gold in Heptathlon at the 64th National Interstate Competition, Chennai

Nathaliea E Mariea, MBA student (2023-25 Batch), has won Bronze Medal in the 4x400m Relay at the 64th National Interstate Competition, Chennai



Every big achievement begins with curiosity and the right support. **Ayush Dutta**, a 3rd-year BTech-CSE student, has been recognised for his work on a world stage in cybersecurity.

His training lab content was accepted into the global catalogue of Offensive Security (OffSec), reflecting the spirit of learning and innovation that defines our student community.

Sai Charan Batchu, a final-year B.Tech CSE (AI/ML) won the Best Performance Award at the 71st International Student Conferences, Inc. (ISC 71), held in collaboration with Expo 2025 Osaka,(Japan). Representing both India and SRM AP, Sai Charan worked alongside students from the USA, Japan, and Indonesia on the theme “The Future of Community and Mobility.”

Team APX Nova has advanced to the final round of the Amaravati Quantum Valley Hackathon 2025. Led by **Aditya Dutt** (Team Leader), along with teammates **Rajveer Singh Khanduja, Yuva Sanakara Naga Sri Sai, Siba Sundar Panda, Vishakha Bhandari, and Khushi Dixit** — all B.Tech CSE, 4th Year (2022-26)— the team bagged certificates and a cash prize of ₹10,000.

PLACEMENT HIGHLIGHTS

Kotipalli Khyathi Devi, BTech CSE, secured a remarkable package of ₹46.37 LPA with Amazon, the highest of this placement season! This milestone reflects not just individual brilliance but also the world-class learning ecosystem at SRM University-AP that nurtures ambition and transforms potential into success.

SRM AP IN MEDIA

Concept of gravitational waves introduced

The Hindu Bureau
VIJAYAWADA

Students listened in rapt attention as a scientist from the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, Shivaraj Kandhasamy explained how gravity shapes the fabric of spacetime and introduced them to the concept of gravitational waves. He was speaking at "Phy-Spark 3.0: Stars, Scopes and Spacetime", organised by SRM University-AP on its campus on Sunday as an outreach initiative for school students drawn from Geetanjali School, Kunchana, K.V. School, Nallapadu and Vijetha School in Guntur.

Mr. Kandasamy walked the students through the historic Michelson-Morley experiment, the design and functioning of the Laser Interferometer Gravitational-Wave Observatory (LIGO), and the challenges of detecting such incredibly faint signals.

SRM-AP introduces astrophysics to school students

HANS NEWS SERVICE
NEERUKONDA (GUNTUR DISTRICT)

SRM-AP hosted 'Phy-Spark 3.0: Stars, Scopes and Spacetime' on campus, as an outreach initiative for school students. A combination of lectures, experiments, demonstrations, and interactive sessions took place throughout the day-long programme introducing young students to the exciting fields of physics and astrophysics. About 120 students from Geethanjali School, Kunchanapalli, KV School, Nallapadu and Vijetha School, Guntur participated in the programme.

Dr Shivaraj Kandhasamy, renowned scientist from the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune

Dr Shivaraj Kandhasamy, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, addressing the students at SRM-AP on Saturday

spoke on the detection of gravitational waves by LIGO. He explained how gravity shapes the fabric of spacetime and introduced the concept of gravitational waves. He walked through the historic Michelson-Morley experiment, the design and functioning of the Laser Interferometer Gravitational-Wave Observatory (LIGO), and the challenges of detecting such incredibly faint signals.

Dr Gangireddy Salla, Dr Ashmita Das, and Dr Krishna Prasad Maity from the Department of Physics delivered academic sessions on several intriguing topics such as 'Telescope: Fundamentals and Designs', Binary Star Systems and General Theory of Relativity. The lectures were followed by a lab visit and live demonstrations of telescopes, binary star experiment using LED bulbs, Michelson interferometer.

Through Phy-Spark 3.0, SRM-AP made complex concepts in physics and astrophysics accessible to school students.

The event was coordinated by Dr Pramib Mandal, Dr Gangireddy Salla and Dr Soumyajyoti Biswas of SRM AP.

SRM-AP honours 10 faculty members with excellence awards

Members of SRM AP leadership felicitating Prof V Chandrasekhar during Teachers' Day celebration in Neerukonda

HANS NEWS SERVICE
NEERUKONDA (GUNTUR)

AT the Teachers' Day celebration at SRM-AP, Prof V Chandrasekhar of Tata Institute of Fundamental Research, Hyderabad, delivered a key speech. He emphasised the profound impact educators have on their students' lives, citing the remarkable story of Acharya Prafulla Chandra Ray, a renowned scientist who was inspired to pursue chemistry by a dedicated teacher.

The event honored faculty members for their contributions to teaching, research, and the university's growth. High-ranking officials from the SRM Group attended, including Prof D Narayana Rao and Prof VSRao, along with the Pro Vice-Chancellor Prof Ch Satish Kumar.

In his address, Prof. Satish Kumar addressed the widespread concern that AI could replace teachers. He asserted that while AI is advancing, it can never replicate the deep, transformative impact of a human educator. He used the analogy of a mother's cooking, which a restaurant meal can never match, to highlight the irreplaceable 'love and transformation' teachers provide.

The ceremony also included the presentation of several awards to outstanding faculty members for their excellence in teaching and research, including the University Outstanding Faculty Awards 2025 and the Prof VS Rao Foundation – Prof HP Tiwari Best Faculty Award 2025 to Dr Anirban Ghosh. Long-serving faculty members and popular teachers were also recognized, underscoring the university's commitment to academic excellence.

SRM-AP hosts environmental sustainability expo

HANS NEWS SERVICE
AMARAVATI

THE Department of Environmental Science and Engineering, SRM University-AP, organised the third edition of the Environmental Sustainability Exhibition (ESE 3.0), showcasing innovations in environmental protection and sustainable technologies.

The event was inaugurated by Dr Satish Kumar, Vice-Chancellor (I/C), who stressed that sustainability is a responsibility towards future generations and highlighted India's commitment to the UN Sustainable Development Goals and the Paris Climate Agreement.

P Akhila and V Yagneswari (Aditya University) receiving the first prize at SRM-AP

This year's edition saw 155 participants from across India presenting 60 exhibits, including posters, demos, and oral presentations. The first prize went to Team P Akhila and V Yagneswari (Aditya University), followed by SR University, Warangal, and SRR & CVR Govt Degree College, Vijayawada.

SRM AP IN MEDIA

SRM University-AP Hosts Global Social Entrepreneurship & CSR Summit 2025

SRM University-AP, through its Centre for Social Entrepreneurship, successfully hosted the Global Social Entrepreneurship & CSR Summit 2025 on August 30, 2025. The day-long summit brought together eminent leaders, innovators, and change-makers to deliberate on the transformative role of CSR & social entrepreneurship in building sustainable communities. The context to the grand summit was set by Prof. Sidharth Tripathy, Director-Entrepreneurship & Innovation of SRM-AP as he highlighted that this summit is going to redefine the language of social impact from 'beneficiaries' to 'venture builders', from 'compliance' to 'conscience' led CSR' and from 'nice-to-do social projects' to 'need-to-do systemic movements. The summit featured four high-impact panel discussions addressing key themes in the field of social innovation and inclusive development.

7 SRM-AP professors ranked among world's top 2% scientists

Hans News Service
Amaravati

SEVEN faculty members of SRM University-AP have been ranked among the world's top two percent scientists for 2023, a prestigious list published by Elsevier and compiled by Stanford University. The recognition highlights the university's growing global research footprint and academic excellence.

The honoured faculty includes Dr Rangabhashiyam Selvasembian, Associate Professor & Head, Department of Environmental Science and Engineering – Earth & Environmental Sciences; Dr Karthik Rajendran, Associate Professor, Department of Environmental Science and Engineering – Enabling & Strategic Technologies; Dr Randhir Kumar, Assistant Professor, Department of Computer Science and Engineering – Information & Communication Technologies; Dr Kshira Sagar Sahoo, Assistant Professor, Department of Computer Science and Engineering – Information & Communication Technologies; Dr Vinod Kumar Etacheri, Associate Professor of Practice, Centre for Interdisciplinary Research – Enabling & Strategic Technologies; Dr Prabhujit Mohapatra, Assistant Professor, Department of Computer Science and Engineering – Information & Communication Technologies; and Dr Pintu Bhunia, Assistant Professor, Department of Mathematics – Functional Analysis & Operator Theory.

The professors who received the recognition

Among them, the first four scientists will also receive a cash award of Rs 50,000 each in recognition of their achievement.

Congratulating the faculty at a felicitation ceremony, Prof Ch Satish Kumar, Vice-Chancellor (I/C) said: "This recognition is a proud moment for SRM University-AP and validates the world-class research culture we nurture. Our faculty's global impact not only advances scientific knowledge but also inspires students to innovate fearlessly and contribute to society."

Issac Samala Gerard, Director-HR, praised the faculty for their achievements and encouraged them to continue raising the bar, strengthening SRM University-AP's position on the global research map.

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