

## **Preface**

### **Intelligent Systems, Machine Learning and Data-Driven Innovations for Real-World Applications**

The rapid advancement of intelligent systems, machine learning, and data-driven technologies is transforming the way we address complex real-world challenges across industries and society. From healthcare and agriculture to cybersecurity, smart cities, and sustainable development, these technologies are enabling innovative solutions that enhance efficiency, decision-making, and quality of life.

This collection of research papers presented at ISSF 2026 reflects the growing importance of intelligent computing and data-driven innovation in solving practical problems. The contributions in this volume showcase cutting-edge research in artificial intelligence, machine learning, deep learning, Internet of Things, cybersecurity, predictive analytics, and intelligent automation. These works highlight novel methodologies, practical implementations, and interdisciplinary approaches designed to address contemporary challenges.

The selected papers demonstrate the diverse applications of intelligent systems, including healthcare analytics, smart infrastructure, financial fraud detection, environmental monitoring, autonomous systems, and advanced decision support systems. Together, they emphasize the role of emerging technologies in building resilient, efficient, and sustainable solutions for real-world needs.

We hope that this compilation will serve as a valuable resource for researchers, academicians, industry professionals, and students, fostering collaboration and inspiring further innovations in intelligent systems and data-driven technologies.

## **Foreword**

Researchers across the world work in mission mode to find solutions to problems, for lesser problems mean a better life for humans, a happy society and a peaceful world. Why is this an endless activity? There are newer problems that keep emerging due to changes that happen, and quite frequently the solutions themselves result in the creation of newer problems. Also, there is no one solution that is a panacea for all problems, and we find a need to come up with bespoke solutions, often based on target population, geography and many other conditions and variables.

With the evolution in hardware and with GPUs and high capacity computing systems, machine intelligence has become affordable, ushering in a new dimension to find solutions to the several challenges that we face. It is an exciting time to be a researcher, where the machine-driven approach has made it easier to overcome many conventional challenges, right from high volume data acquisition to processing. Along with the core issue of addressing the functional requirements, there are many allied challenges that have to be addressed to make the solutions safe, reliable, affordable, efficient, fail-safe, explainable and replicable. A good solution that does not have built-in safety, or which violates some ethical principles is not something that will succeed.

The International Conference on Intelligent Systems for a Sustainable Future (ISSF 2026) was conceptualized to bring the brightest researchers from across the world on a common platform to discuss, debate and deliberate on the various facets of Research and Development. In these very interesting times of rapid change in technology and the frenzied pace at which AI is evolving, there is a need to keep ourselves up-to-date on the state-of-the-art. The conference provided a bird's-eye view of the current trends in multiple tracks of specialization, from Artificial Intelligence & Machine Learning, to Smart Infrastructure & IoT, Robotics & Automation, Data Analytics & Intelligent Computing, Smart Manufacturing & Industry 4.0, Security & Ethical Systems, and Sustainable & Green Technologies. Each one of these tracks are significant and impactful. Several pre-conference workshops focused on the above tracks were held in the run-up to the main event.

Plenty of research papers and presentations brought out the significant achievements that we have made, and also threw light on the way forward, providing a variety of paths for young researchers to pursue their work. The best of the research papers have been compiled in this publication, to document the rich findings presented during the conference. Any avid researcher will find it useful to commence his/her journey from here. I congratulate the organizing committee of the International Conference on Intelligent Systems for a Sustainable Future (ISSF 2026) for their meticulous work in compiling this compendium of accepted research papers, after due review and corrections. The publishing partners deserve our appreciation for helping with the standardization of the entire process, thereby ensuring that the proceedings are professionally produced, indexed in recognized databases, and made available to the larger global research community.

**Prof R Vasanth Kumar Metha**  
**Pro Vice Chancellor**  
**SCSVMV**

## **International Conference on Intelligent Systems for a Sustainable Future (ISSF 2026)**

The Organizing Committee of ISSF 2026 – International Conference on Intelligent Systems for a Sustainable Future expresses its sincere gratitude to all those who contributed to the successful organization of this conference.

We humbly acknowledge the divine blessings of His Holiness Pujyasri Sri Sankara Vijayendra Saraswathi Shankaracharya Swamiji and Pujyasri Sri Satya Chandrasekharendra Saraswathi Shankaracharya Swamiji of Kanchi Kamakoti Peetam, whose inspiration and guidance continue to motivate us in promoting academic excellence and research for societal development. His Holiness's blessings have been a constant source of strength in organizing this international conference.

We extend our heartfelt thanks to the Hon'ble Vice-Chancellor, Pro Vice-Chancellor, and Registrar of Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (SCSVMV), Enathur, Kanchipuram, for their valuable guidance, encouragement, and administrative support in organizing this conference successfully.

We gratefully acknowledge the valuable support of the Conference Chair, Advisory Committee Members, and Technical Program Committee for their expert guidance, insightful suggestions, and continuous support throughout the planning and execution of ISSF 2026.

We sincerely thank the Editors, Reviewers, Session Chairs, and Session Managers for their dedicated efforts in organizing technical sessions, reviewing submitted manuscripts, and maintaining the academic quality of the conference proceedings.

We also extend our appreciation to all authors, researchers, academicians, and industry participants from various institutions for their enthusiastic participation and valuable contributions.

Special thanks are extended to the Organizing Committee Members, Faculty, Staff, and Student Volunteers whose tireless efforts ensured the smooth conduct of the conference.

Finally, we thank all collaborators, and participants for their cooperation and support in making ISSF 2026 a grand success.

Organizing Committee

ISSF 2026

International Conference on Intelligent Systems for a Sustainable Future

Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya

Enathur, Kanchipuram – 631561

Tamil Nadu, India

## Important Dates:

- Paper Submission Deadline: **Feb 10<sup>th</sup>, 2026**
- Notification of Acceptance: **Feb 20<sup>th</sup>, 2026**
- Camera-Ready Paper Submission: **Mar 2<sup>nd</sup>, 2026**
- Conference Dates: **Mar 12<sup>th</sup> & 13<sup>th</sup>, 2026**

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# श्रीचन्द्रशेखरेन्द्रसरस्वतीविश्वमहाविद्यालय: Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya

(Deemed to be University u/s of UGC act 1956)  
Accredited with "A" grade by NAAC

Enathur, Kanchipuram – 631561. Tamil Nadu, India



*Organizes*

## International conference on Intelligent Systems for a Sustainable Future (ISSF - 2026)

March 12<sup>th</sup> & 13<sup>th</sup>, 2026

[www.kanchiuniv.ac.in](http://www.kanchiuniv.ac.in)

## About the University

The Viswa Mahavidyalaya was established in 1993 with the benign blessings of Their Holiness Pujyasri Jayendra Saraswathi Shankaracharya Swamiji and Pujyasri Shankra Vijayendra Saraswathi Shankaracharya Swamiji. It was formed under the aegis of Sri Kanchi Kamakoti Peetam Charitable Trust and located in a sprawling complex of 50 acres at Enathur, at a distance of about 4 Kilometres from Kanchipuram.

The University has a unique focus on integrating traditional knowledge with modern scientific practices with a global outlook.

## About the Conference

The International Conference on **Smart and Intelligent Systems for a Sustainable and Digital Future (SISSD-2026)** will unite researchers, academicians, industry professionals, and students worldwide to share ideas and present advancements in intelligent technologies. It aims to promote interdisciplinary collaboration and provide a platform for discussing innovations that drive sustainability and digital transformation, creating opportunities for global knowledge exchange and showcasing cutting-edge solutions for a smarter, more sustainable future.

## Conference Themes

- Artificial Intelligence and Machine Learning
- Intelligent Systems for Industry and Society
- Smart Infrastructure and IoT
- Data Analytics and Intelligent Computing
- Robotics and Automation
- Sustainable and Green Technologies
- Security and Ethical Aspects of Intelligent Systems
- Intelligent and Secure Communication Systems
- Smart Manufacturing and Industry 4.0

## Registration Details

Please fill the Registration form and the fee can be paid online (NEFT/IMPS) to the mentioned account.

Category	Indian Participants		Foreign Participants	
	Presentation	Publication	Presentation	Publication
Students / Research Scholars		₹8000		USD 150
Faculty / Academicians	₹2000	₹10000	USD 100	USD 200
Industry Delegates		₹12000		USD 250

Participants from outside India may present their papers in online mode.

Account name: **M/S.SCSVMV** (OTHER FEE A/C)  
Account number: **190401001720**  
Bank Name: **ICICI Bank**  
IFSC code: **ICIC0001904**  
Branch: **Enathur Branch**

## Call for Papers

Original research articles are invited for submission in the following Emerging Technologies: (But not Limited to)

- Explainable Artificial Intelligence
- Federated and Reinforcement Learning
- Intelligent Healthcare Systems
- Smart Cities Infrastructure
- Digital Twin Technology
- 5G and IoT Integration
- Cloud-Edge Computing
- Human-Robot Collaboration
- Renewable Energy Systems
- Sustainable Manufacturing
- Blockchain and Cybersecurity
- Ethical AI Frameworks
- Autonomous Vehicle Systems
- Predictive Data Analytics
- Smart Sensor Networks
- Green Energy Technologies
- Advanced Robotics Design
- Industrial Automation Systems
- Drone Technology, AR/VR
- Smart Structural Monitoring
- Green Building Design
- Smart Grid Systems
- Energy Storage Technologies

## Submission Guidelines

- Paper length: **4-6 pages**
- Submission link (CMT):  
<https://cmt3.research.microsoft.com/ISSF2026>

For updates, please follow the website:

<https://www.kanchiuniv.ac.in/issf2026>