



Summer School on Medical Imaging (SuSMI - 2025)

<https://sites.google.com/iiitdm.ac.in/susmi/home>

June 16-20, 2025

About IIITDM Kancheepuram

Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram is a Centre of Excellence for technical education and research established in 2007 by the Ministry of Education, Government of India. To pursue design and manufacturing-oriented engineering education and research and for promoting the competitive advantage of Indian products in global markets. The Institute is presently offering UG, PG, and Ph.D. programs in Computer Engineering, Electronics and Communication Engineering, and Mechanical Engineering. More details at www.iiitdm.ac.in

About SuSMI

A medical imaging summer school offers professionals, researchers, and students a great opportunity to learn about the latest developments in this rapidly evolving field. Typically, it encompasses subjects including clinical imaging procedures, machine learning applications, image processing algorithms, and image capture techniques. Through practical practice with cutting-edge tools and software, participants develop both theoretical understanding and practical abilities. These programs frequently encourage multidisciplinary learning through expert lectures, interactive seminars, and group projects. A medical imaging summer school equips participants to support healthcare innovation and research by tackling practical issues in medical diagnosis and treatment planning.

Topics to be covered

- **Foundations of Medical Imaging:** Basics of image formation and acquisition, Physics and principles behind imaging modalities: X-ray, CT, MRI, Ultrasound, PET, and SPECT, Overview of radiology and its clinical applications.
- **Image Processing and Analysis:** Preprocessing techniques: noise reduction, filtering, and contrast enhancement, Image segmentation, classification and registration methods.
- **Advanced Techniques and Trends:** Machine learning and deep learning in medical imaging, 3D and 4D imaging, Multi-modal imaging
- **Applications in Medicine:** Imaging in oncology: tumor detection and staging, Cardiovascular imaging: heart and blood vessel analysis, Neurological imaging, etc.
- **Hands-On Sessions:** Practical sessions with imaging software (e.g., MATLAB, Python libraries, or proprietary tools), Case studies and problem-solving using real-world datasets, Demonstration of AI-based diagnostic tools.
- **Emerging Technologies:** Hybrid imaging systems and wearable imaging devices, Applications of augmented reality (AR) and virtual reality (VR) in imaging, Role of quantum computing and nanotechnology in future imaging.
- **Ethical and Regulatory Aspects**

- Dr. Appina Balasubramanyam IIT Indore
- Prof. Masilamani V, IIITDM Kancheepuram
- Dr. Varun P Gopi, NIT Trichy
- Mr Sabarivel R, Regulatory Affairs Executive, Morulaa HealthTech Pvt. Lt
- Dr. Tejendra Dixit, IIITDM Kancheepuram
- Dr. Gowri A, IIITDM Kancheepuram

Speakers

- Prof. Sivarama Krishnan, IIT Madras
- Dr. Poonam Pandey, Knowledge Engineer - Data Discovery and Enrichment Expert Elsevier
- Dr. Srinivasan Kannan, Senior architect and System Engineer, GE Healthcare
- Mr Ajay Kumar Reddy Poreddy, SSN
- Mr Balakrishna T, Amritha Univ and more

Registration Fee

Category	Fee in INR (Including GST)
Students	2000
Faculty	3000
Industry	3000

- The registration covers all technical session, evening sessions, hands-on training, course material, Lab visit.
- Lecture slides and other reference materials will be shared with the registered candidates.
- Certificates will be provided to those participants who will attend all the five days programs.
- Who can apply: Regular UG (B.E/B.Tech) students, PG-level (MTech/M.E./M.Sc) students, Ph.D scholar pursuing their degree from University / Institution within India, Faculty, and industry members in relevant fields.
- Accommodation: The in-campus accommodation can be provided based on the availability in the hostel. Please visit the School Website to know more about accomodation.

Use link: <https://forms.gle/y8brTedNqwbHu7t5A> Or scan the given QR code

For payment participants can click the link and select category as SuSMI 2025 .

for registration

<https://www.onlinesbi.sbi/sbicollect/icollecthome.htm?corpID=634626>

Following are the steps wise procedure: <https://www.onlinesbi.sbi/sbicollect/> (SBI e collect-Educational Institute- Tamilnadu-IIITDM Educational Event-STTP (Name of event)- Category (Faculty/Student/Industrialist)-pay

How to Register?



Facilitators and Contact details:

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Associate Professor

Dr. Uttam Pal
Assistant Professor

Dr. Gowri A
Assistant Professor

Dr. Tejendra Dixit
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