Call for Contributions

1. Inform the Chair: with the title of your contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=SIGNAL+2025+Special
Please select Track Preference as **MIRACLE**
3. Note: *For 2025, all events will be held in a hybrid mode: on site or virtual choices (live, prerecorded videos, voiced presentation slides, and .pdf slides). We hope for better times allowing us to return to the traditional on site scientific events. However, we are ready to adapt any which way the conditions dictate.*

Special track

MIRACLE: Medical Imaging, Recognition, and Computational Learning Engines

Chair
Assoc Prof. Dr. Atreyee Sinha, Edgewood College, Madison, Wisconsin, USA
asinha@edgewood.edu

Co-Chair
Assoc. Prof. Dr. Sugata Banerji, Lake Forest College, Illinois, USA
banerji@lakeforest.edu

along with

SIGNAL 2025 The Tenth International Conference on Advances in Signal, Image and Video Processing
https://www.iaria.org/conferences2025/SIGNAL25.html
March 9 - 13, 2025 - Lisbon, Portugal

The field of medical informatics and medical imaging has rapidly advanced with the integration of signal, image, and video processing technologies. These innovations are transforming the diagnosis, prognosis, treatment, and management of diseases. We cordially invite you to participate in the special track MIRACLE: Medical Imaging, Recognition, and Computational Learning Engines which aims to bring together researchers, practitioners, and healthcare professionals to discuss the latest advances, challenges, and future trends in this interdisciplinary area.

The special track provides an ideal platform to present and discuss insights, innovations, and cutting-edge research in the field of medical informatics and medical imaging. We invite original research papers, review articles, and case studies that explore novel methodologies, algorithms, systems, and applications at the intersection of medical imaging and informatics. We encourage you to submit both long and short papers and idea papers. In addition, we look forward to demos and posters on current solutions being developed in academia or collaborations with industry. Contributions that demonstrate successful integration of image processing, machine learning, data science, and informatics in the healthcare domain are especially encouraged.

Prospective authors are invited to submit original papers on topics including, but not limited to

Medical Image Processing
- Image acquisition, enhancement, segmentation, and classification.
- Image reconstruction and fusion techniques.
- 3D/4D imaging, medical video processing.
- Multimodal imaging systems (e.g., CT, MRI, PET, ultrasound).

AI and Machine Learning in Medical Imaging
- Deep learning models for diagnosis and prognosis.
- Computer-aided detection/diagnosis (CAD).
- Predictive modeling and precision medicine.
- Explainable AI (XAI) in medical imaging.

Medical Informatics
- Electronic health records (EHR) and patient data management.
- Big data analytics for healthcare.
- Health information systems and interoperability.
- Privacy and security in medical data sharing.

Medical Signal Processing
- Bio-signal processing (e.g., ECG, EEG, EMG).
- Real-time signal processing in wearable and portable devices.
- Telemedicine and remote monitoring technologies.

Applications in Healthcare
- Medical imaging for oncology, neurology, cardiology, and other fields.
- Robotics in surgery and rehabilitation.
- Personalized healthcare and telemedicine solutions.
- Virtual and augmented reality in medical imaging.

Contribution Types
- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Important Deadlines
Inform the Chair or Coordinator: As soon as you decide to contribute
       Submission: Jan 18, 2025
       Notification: Feb 7, 2025
       Registration: Feb 20, 2025
       Camera-ready: Feb 20, 2025
Note: The submission deadline is somewhat flexible, providing arrangements are made ahead of time with the chairs.

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the Open Access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=SIGNAL+2025+Special

Please select Track Preference as **MIRACLE**

Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

Contacts
Chairs
Atreyee Sinha, asinha@edgewood.edu
Sugata Banerji, banerji@lakeforest.edu
Logistics (Steve McGuire): steve@iaria.org