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4th IEEE International Conference on Sensors and Related Networks

Special Focus on Digital Healthcare

SENNET 2025

24 - 27, July 2025 - Hybrid Mode

PreConference Lecture

AI in Postoperative Care



Dr. Prabha Srinivasagam

Post-Doctoral Research Fellow,
Mayo Clinic,
Florida, USA

Date & Time: 26.03.2025 (Wednesday), 09:00 AM

Meeting Link: <https://meet.google.com/smy-bmgt-nen>

Dr. Prabha Srinivasagam is an accomplished researcher and expert in Artificial Intelligence (AI), Machine Learning (ML), and Biomedical Engineering, with over 15 years of experience in academia and research. She holds a Ph.D. in Biomedical Engineering from Anna University, India, and has made significant contributions to AI-driven healthcare solutions, medical imaging, and clinical decision support systems. Currently, Dr. Prabha serves as a Postdoctoral Research Fellow at the Mayo Clinic, Florida, USA, where she is pioneering the development of Retrieval-Augmented Generation (RAG) solutions for plastic surgery applications. Her work focuses on enhancing patient care through AI-powered Virtual Assistants and Clinical Decision Support Systems (CDSS), enabling data-driven recommendations for surgeons and improved post-operative patient engagement. Dr. Prabha has an extensive publication record, with research articles in leading journals such as the Journal of Clinical Medicine and Bioengineering. She has also been an invited reviewer for IEEE, Elsevier, and Springer journals, contributing to the advancement of AI in healthcare. A passionate educator and mentor, Dr. Prabha has guided research in Alzheimer's diagnosis, schizophrenia analysis, and breast cancer detection using AI-driven imaging techniques. Her expertise spans deep learning, signal processing, medical imaging, and computational neuroscience, making her a sought-after speaker at international conferences and workshops.

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PreConference Lecture

Cybersecurity in Healthcare



Shri. Sangar Subramaniam

Cybersecurity Specialist,
GE Healthcare,
London, United Kingdom.

Date & Time: 02.04.2025 (Wednesday), 11:45 AM

Meeting Link: <https://meet.google.com/sxp-vwp-xia>

Sangar Subramaniam is a seasoned technology professional with ten years of experience in building software and protecting it from security breaches. He is currently employed with GE Healthcare in London, UK, as a cybersecurity specialist. His broad expertise covers a wide range of technologies, such as AI in cybersecurity, cloud computing, and system architecture. He actively volunteers with the ISACA London Chapter for Academic Relations and Research, an organization that supports the professional development of scholars and university students and working professionals. At Northumbria University in the UK, he earned an MSc in cybersecurity. He submitted two designed patents globally and has a portfolio of three IEEE-published articles, demonstrating his active participation in research. He also mentors' university students and early career professionals to pursue their dreams in the Information Security field.

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4th IEEE International Conference on Sensors and Related Networks Special Focus on Digital Healthcare SENNET 2025

24 - 27, July 2025 - Hybrid Mode

PreConference Lecture

Self-Powered Devices Based on Triboelectrification



Dr. Zong-Hong Lin

Professor and Department Vice Chair

Department of Biomedical Engineering, National Taiwan University

Date & Time: 03.04.2025 (Thursday), 11:00 AM
Venue : TT312

Dr. Zong-Hong Lin received his PhD from the National Taiwan University (NTU) in 2009 and continued with his postdoctoral research at the NTU and the Georgia Tech during the years of 2010-2014. He has published more than 170 SCI papers (sum of the times cited: 17909, h-index: 65), as well as received recognition for his research contribution, such as CHEN-YUNG Chair Professor (2023) of NTU, Academic Excellence Award-College of Engineering of NTU (2023), Fellow of the Royal Society of Chemistry (2022), Outstanding Research Award of the Taiwan National Science and Technology Council (NSTC) (2023), Future Tech Award of the Taiwan NSTC (2021, 2022, 2023 and 2024), Ta-You Wu Memorial Award of the Taiwan NSTC (2021), Young Scholar Fellowship of the Taiwan NSTC (2020), IEEE-NANOMED New Innovator Award (2019) and Young Investigator Award of the NTHU (2018). His research interests include: micro- and nano-materials/generators for bioelectrical stimulation applications, self-powered (bio)chemical sensors, biomedical diagnostic devices, wearable healthcare electronics and remote intelligent monitoring platform.

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4th IEEE International Conference on Sensors and Related Networks Special Focus on Digital Healthcare

SENNET 2025

24 - 27, July 2025 - Hybrid Mode

PreConference Lecture

Multimodal Brain Sensing for Pediatric Neurorecovery



Arun Karumattu Manattu, PhD

Scientist II

Pediatric Neuromodulation Laboratory, Waisman Center
1500 Highland Ave, Madison, WI 53705
University of Wisconsin-Madison

Date & Time: 15-04-2025 (Tuesday), 08:00AM

Meeting Link: <https://meet.google.com/ezc-xvqn-hnv>

Dr. Arun Manattu is a biomedical engineer and neuroscientist with a strong background in multimodal neuroimaging and pediatric neurorehabilitation. Currently a Scientist II at the Pediatric Neuromodulatory Lab, Waisman Center, University of Wisconsin-Madison, his research focuses on understanding brain development and recovery in children with perinatal stroke, cerebral palsy, and epilepsy. He has extensive experience in techniques such as fNIRS, fMRI, dMRI, and transcranial magnetic stimulation (TMS), and leads projects integrating these modalities to investigate neural plasticity and functional reorganization. Dr. Manattu has authored several peer-reviewed publications, delivered invited talks at national and international forums, and has served in leadership roles within IEEE EMBS. His work bridges engineering, neuroscience, and clinical practice to drive innovation in neurodevelopmental research.

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PreConference Lecture

Photoacoustic Tomography for Medical Imaging



Dr. Rusha Patra

Assistant Professor,
Department of Electronics and Communication Engineering,
IIIT Guwahati.

Date & Time: 26-04-2025 (Saturday), 11:00AM

Meeting Link: <https://tinyurl.com/y44bpb6a>

Dr. Rusha Patra is an Assistant Professor at the Department of Electronics and Communication Engineering, IIIT Guwahati. She completed her BE in Electrical Engineering from Jadavpur University and MTech in medical imaging and image analysis from IIT Kharagpur. She received her Ph.D from the Department of Electrical Engineering, IIT Kharagpur in the area of optical imaging. Dr. Patra has almost 10 years of research and development experience in the broad domain of image processing, biomedical imaging, medical image analysis, machine learning etc. She has published more than 20 research papers in International Journals and Conferences including prestigious publications in IEEE, SPIE, OSA, etc. Her main research focuses on tomographic image reconstruction and image analysis for various applications like healthcare, agriculture and so on.

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PreConference Lecture

IoT enabled Sensors for real-time monitoring



Dr. Bidhan Pramanick

Assistant Professor,
School of Electrical Sciences,
Indian Institute of Technology (IIT) Goa

Date & Time: 08-05-2025 (Thursday), 12:00PM

Meeting Link: <https://meet.google.com/ttf-mobe-hbo>

Dr. Bidhan Pramanick is an Assistant Professor in the School of Electrical Sciences at the Indian Institute of Technology (IIT) Goa. With over 18 years of research experience, Dr. Pramanick specializes in developing MEMS sensors for diverse applications spanning space exploration, healthcare monitoring, and energy harvesting. He has authored over 75 publications in reputed international journals and conference proceedings, along with 3 books, 5 book chapters, and holds a patent in the field. He has worked more than 2 years as Assistant Professor in Indian Institute of Space Science and Technology, India after the completion of his Ph.D. He joined Tecnologico de Monterrey, Mexico as Profesor Postdoc in January 2015 in collaboration with University of California, Irvine, CA, USA and worked for 2 years. His current research interests include MEMS based drug delivery and Carbon MEMS/NEMS especially Glassy Carbon-based bio-sensors. Dr. Pramanick was a recipient of the CSIR SRF Fellowship (India) for his Doctoral Programme and Awarded with CONACYT Candidate level by Science and Technology department, Mexico (2016).

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Advantages and Challenges in Perovskite Solar cells



Dr. Ganapathy V

Scientist, Centre for Solar Energy Materials,
International Advanced Research Centre for Powder Metallurgy and New
Materials (ARCI)
Hyderabad, India.

Date & Time: 13-05-2025 (Tuesday), 11:00AM

Meeting Link: <https://meet.google.com/ujt-abaq-ttg>

Dr. Ganapathy V has been a Scientist at the ARCI, Hyderabad, India, since April 2015. He is a recipient of the DST-INSPIRE Faculty and SERB Research Scientist awards. He received his Ph.D. from Pohang University of Science and Technology (POSTECH), South Korea, and worked as a Postdoctoral Researcher at Sungkyunkwan University, South Korea. His current research interests include large-scale semiconductor material synthesis, photovoltaics, and conducting ink developments for optoelectronic devices. He has over 18 years of research experience in various semiconductor devices and renewable energy applications. He has been part of seven sponsored projects worth more than ₹5 crores as PI and Co-PI. He has 5 filed patents and 1 international granted patent. He has published 6 book chapters and 67 international publications with an average impact factor above 7.0 and citations above 2497, with an h-index of 26.

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Abdominal MRI in children: Techniques and key challenges



Dr. Anandh Kilpattu Ramniharan

Associate Staff Scientist in the Imaging Research Centre,
The Department of Radiology,
Cincinnati, Ohio, United States.

Date & Time: 12-07-2025 (Saturday), 4:00PM

Meeting Link: <https://meet.google.com/wah-jsik-fqp>

Dr. Anandh. K. R. is presently working as a Associate Staff Scientist in the Imaging Research Center, Department of Radiology, Cincinnati Children's Hospital Medical Center, Cincinnati (CCHMC, the #1 Hospital for children in the United States) since August 2022. He is closely working with MR Physicists, Pediatric clinicians, and Radiologists towards developing accelerated MRI acquisition methods to rapidly scan awake pediatric population. Before moving to Cincinnati, he was working for the University of Alabama at Birmingham along with a Neurologist in the Epilepsy division and helping him in the post processing of high-resolution MR images. Particularly, he and his PI are actively investigating the role of hippocampal dentation and its influence in the memory performance of healthy controls and epileptic patients. Prior to UAB, he was working for Philips Healthcare India Limited as MR R&D consultant for 19 months at Fortis Memorial Research Institute, Gurugram, where he was working on T1 perfusion imaging in Glioma grading. Dr. Anandh obtained his Ph.D. from Anna University in the year 2016. His current area of research interest includes T1-perfusion imaging for breast cancer diagnosis, glioma grading, quantifying hippocampal dentation in epilepsy patients, and developing accelerated MRI acquisition methods. He has authored/co-authored 16 peer-reviewed journals and 20 international conferences. He is also collaborating with researchers from IIT Madras, IIT-Delhi, IIT-BHU and VIT Vellore.

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Exploring Brain Dynamics: Detecting Emotion and Impulsivity for Digital Health



Dr. Himanshu Kumar
Postdoctoral Research Fellow,
Cleveland Clinic,
USA

Date & Time: 17-07-2025 (Thursday), 8:00PM

Meeting Link: <https://meet.google.com/vwt-crkj-sbn>

Dr. Himanshu Kumar is currently a Postdoctoral Fellow at the Cleveland Clinic, USA, where he works at the intersection of neuroscience, biomedical engineering, and machine learning, with a primary focus on epilepsy research using stereo-electroencephalography (SEEG). He earned his Ph.D. in Biomedical Engineering from IIT Madras, where his dissertation focused on the analysis and classification of EEG signals for emotion recognition using audio-visual stimuli. His doctoral research integrated traditional signal processing techniques with advanced machine learning methods, including explainable AI, to decode emotional states from EEG dynamics. Dr. Kumar holds an Integrated B. Tech-M. Tech degree in Biomedical Engineering from IIIT Allahabad, where he was honoured with a medal for academic excellence. He has received prestigious international fellowships, including the DAAD Bi-national Research Fellowship and the Advanced Research Opportunities Program (AROP) at RWTH Aachen University, Germany. During his time there, he contributed to research on EEG microstates, trait impulsivity, and functional brain networks using EEG and fMRI. Dr. Kumar has published in several high-impact international journals and has presented his work at major global conferences. With expertise in EEG/SEEG analysis, brain connectivity, nonlinear signal dynamics, multimodal data fusion, and AI-driven diagnostics, he is dedicated to developing advanced analytical tools for digital brain health and clinical neuroscience.

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Recent Advancements in Biosignal Processing and Analysis



Dr. Mohamed Yacin Sikkandar, PhD

Associate Professor of Biosignal-Processing, Department of Biomedical
Equipment Technology,
College of Applied Medical Sciences,
Majmaah University, Al Majmaah,
Saudi Arabia

Date & Time: 21-07-2025 (Monday), 11:00AM

Meeting Link: <https://meet.google.com/yha-xqhr-xqt>

Dr. Mohamed Yacin Sikkandar holds a PhD in Biomedical Engineering from IIT Madras and has over 25 years of academic and research experience. Since joining Majmaah University, Saudi Arabia, he has contributed significantly to curriculum development for both Bachelor's and Master's programs in Biomedical Engineering. He is actively involved in accreditation processes including NCAAA and ABET. A Chartered Engineer and certified BLS Provider, he has published over 80 journal articles and presented internationally. His research focuses on signal and image analysis for early disease diagnosis. He is a member of IEEE, ASME, IE (India), and ISAM, and continues to advance in academia and research.

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Recent advances and continued challenges in Wearable Sensors



Dr. Rutuja Bhusari

(VIT Alumni, M. Tech Sensor Systems (2015))

Material Scientist,
Munich, Bavaria, Germany.

Date & Time: 22-07-2025 (Tuesday), 02:00PM

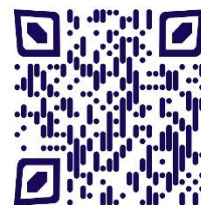
Meeting Link: <https://meet.google.com/tsk-ofdi-eho>

Dr. Rutuja Bhusari is a materials scientist whose work bridges the realms of nanomaterials, sensor technology, and sustainable innovation. With a foundation in electronics engineering and a PhD in Physics from the University of Luxembourg, she brings over six years of research experience to her current role as Junior R&T Associate at the Luxembourg Institute of Science and Technology. Her expertise spans nanoparticle synthesis, material characterization, and MEMS-based sensor design, with a particular focus on copper foil adhesion mechanisms and gas sensing technologies.

Rutuja's contributions include a patented ZnO-CuO nanostructure process and multiple peer-reviewed publications in advanced materials science. She is proficient in MATLAB, LabView, and Mountains software, and applies her programming knowledge in C/C++ and Python to experimental design and data analysis. Known for her collaborative spirit and science communication efforts, she has been featured in media campaigns like Women in Science 2024 and has earned accolades such as a gold medal in her M.Tech program and recognition at LIST's PhD Day. Her research interests reflect a commitment to interdisciplinary innovation, with growing engagement in healthcare applications and bio-based materials.

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