

OCT and Workshop	About	Event
<p>OCT</p> <p>Optical coherence tomography (OCT) is a method for imaging biological tissue. The medical imaging received a boost with the advent of this new technology. It is a very recently demonstrated optical interferometric technique, the most sensitive optical imaging modality for non-invasive investigative medical imaging in vivo. Besides the use of IR light for imaging, its uniqueness is that the axial resolution is independent of the transverse resolution. The axial resolution for OCT is determined not by the “numerical aperture” of the imaging optics but by the “coherence length” of the incident light. This technology has been particularly promising for ophthalmology. However, many other domains of medical science also see OCT as a potential diagnostic tool.</p> <p><u>SAMEER, Mumbai & VIT, Vellore have jointly developed an OCT prototype under a sponsored project by DST.</u></p> <p>This workshop aims to enable the audience to understand the basic principles of OCT for beginners and also to debate and discuss the latest technologies. This workshop is structured to discuss the latest advances in OCT towards design, development and prototyping and to bring together experts from research, science, medicine and industry on a single platform for the benefit of participants. The sessions are organized so that workshop participants have a better understanding of the latest developments in the following areas:</p> <ul style="list-style-type: none"> Design and Development of OCT System Clinical Applications of OCT: <ul style="list-style-type: none"> <input type="checkbox"/> Ophthalmology <input type="checkbox"/> Cardiology <input type="checkbox"/> Gastroenterology <input type="checkbox"/> Dermatology <input type="checkbox"/> Dentistry Future Technology of OCT Panel Discussion on “Road Ahead for OCT in Healthcare” <div>  <div> <p>Convenor</p> <p>Dr. Roshan Makkar, Scientist, SAMEER-Mumbai</p> <p>oct.healthcare2021@gmail.com</p> </div> </div>	<p>SAMEER</p> <p>Society for Applied Microwave Electronics Engineering and Research (SAMEER) is an autonomous R & D institute under the Ministry of Electronics & Information Technology (MeitY), Government of India with a broad mandate to undertake Applied R & D work in the areas of RF/ Microwave Engineering. SAMEER headquarters at Mumbai is pursuing research and development in the field of photonics, Medical Electronics (LINAC), Radar based instrumentation, Atmospheric Remote sensing & Meteorology, RF & Microwave systems and components, Navigational electronics etc. Many of its R&D outputs and spin-offs have found applications and acceptance in industry. Centre for Electromagnetics, Chennai specializes in EMI/C, Antennas, 5G and other Communications systems and Thermal packaging. The millimeter waves center at SAMEER, Kolkata has developed millimeter wave devices and systems for classified applications. The High Power Microwave Tubes Centre at Guwahati is developing microwave tubes and other high power components. The newly developed Centre for E3 at Vizag has MIL grade EMI/C and High-power Electromagnetic pulse applications.</p> <p>https://www.sameer.gov.in/</p> <p>VIT</p> <p>Vellore Institute of Technology was founded in 1984 as Vellore Engineering College by Dr. G. Viswanathan, a former Parliamentarian and Minister in the Tamil Nadu government. It was conferred the status of Deemed to be University in 2001 by MHRD, Govt. of India. VIT was established with the aim of providing a qualitative higher education which will be at par with international standards dedicated to provide excellence in teaching, research and service. It also provides an opportunity for students and faculty exchange programs with international universities to encourage joint research collaborations for mutual benefit. The campus has a cosmopolitan atmosphere with students from all parts of the globe.</p> <p>https://vit.ac.in/</p> <p>IIT-Hyderabad</p> <p>Indian Institute of Technology Hyderabad (IIT-H) is one of the eight new IITs established by the Government of India in 2008. In a short span of 12 years, the institute has gained its position amongst top-ranked institutions and currently boasts of 242 full-time faculties, 3,491 students (20% women), and nearly 200 state-of-the-art laboratories, and five research and entrepreneurship centers. The institute has a strong research focus with approx. Rs. 575 crore of sanctioned research funding with Ph.D. scholars accounting for about 30% of total student strength. IITH has to its credit more than ~6000 research publications, 195 patent disclosures, 1440 sponsored/consultancy projects, and about 50 startups. The Department of BME@ IIT Hyderabad is where the boundaries between disciplines fade for defining excellence in research and education. The primary mission of the department is to foster interdisciplinary work of the highest quality by bringing together a broad spectrum of faculty expertise under a single umbrella to focus on research in Biomedical engineering. By converging the engineering expertise in analytical and experimental methods to biological and medical sciences, we aim at unveiling the unseen in biology and innovations in technology that can be translated to clinical healthcare. The department has research groups working in cutting edge research areas of Biomedical instrumentation, Biomedical Imaging, Biosensors and Point of Care Devices, regenerative medicine and nanomedicine</p> <p>https://www.iith.ac.in/</p>	<p>SAMEER-Mumbai jointly with VIT- Vellore and IIT-Hyderabad announces a</p> <p>DST Sponsored Online Workshop</p> <p>on</p> <p><u>OPTICAL COHERENCE TOMOGRAPHY</u></p> <p><u>(OCT)</u></p> <p><u>FOR HEALTHCARE</u></p> <p>October 09, 2021</p> <p>Jointly Organized by</p> <p>SAMEER, Mumbai Vellore Institute of Technology, Vellore Indian Institute of Technology, Hyderabad</p> <p>Sponsored by</p> <p>Department of Science and Technology, New Delhi</p> <div>       </div> <p>https://dst.gov.in/ https://www.photonicsociety.org/</p>

Workshop Technical Program

Time	Event	Speaker	
9:30am to 10:30 am	Inaugural session		Welcome address by Dr. Sulabha Ranade, DG, SAMEER Address by Guest Speakers
10:30am to 11:15 am	Clinicians view of Optical Coherence Tomography		Padma Shri Prof. Dr. Sundaram Natarajan, Aditya Eye Hospital, Wadala, Mumbai
	Technical Session 1: Engineering an OCT Chair: Prof. Arulmozhivarma, Dean Academic Research, VIT , Vellore		
Chair: prof. arulmozhivarma, VUI	Optical Coherence Tomography of Biological Tissues: Current Perspectives & Future Challenges		Dr K. Divakar Rao, Scientist, BARC - Vizag
11:45am to 12:15pm	Design and Development of OCT system	 	Dr. Roshan Makkar, SAMEER & Dr. Balamurugan, VIT, Vellore
12:15pm to 12:45pm	OCT Assisted with Computational Techniques(ML/CNN) for the Classification of Cancerous and Non-cancerous Tissues and Some New Applications and Innovations in OCT		Prof. D.S Mehta, Dept of Physics, IIT-Delhi
12:45pm to 13:15pm	Gastro Intestinal application of OCT		Prof. Renu John, IIT-Hyderabad
13:15pm to 2:00pm	<u>Lunch Break</u>		
	Technical Session 2: Industries for Technology Transfer Chair: Shri S.S. Prasad, Program Director(R &D), SAMEER		
2:00pm to 2:30pm	Commercialising technology developed in Universities: Advantages and challenges		Dr. Anand Sivaraman, M/s Remedios Innovative Solutions
2:30pm to 3:00pm	Industry Perspective		Mr. Kannan U. V. ,M/s Appasamy Associates
3:00pm to 3:30pm	Future applications of OCT		Dr Ravikiran, Tishya Medical Devices, Bangalore
	Technical Session 3: Clinical Aspects of OCT Chair: Prof. Dr. Radha P. Munje, IGGMCH, Nagpur		
3:30pm to 4:00pm	Clinical applications of OCT in Ophthalmology		Dr. Manavi Sindal, Senior Consultant, Vitreo-Retinal Services, Aravind Eye Hospital, Puducherry
4:00pm to 4:30pm	Lightning the Heart		Dr. Viji Samuel Thomson, Interventional Cardiologist, Salalah Heart Centre, Muscat
4:30pm to 5:15pm	<u>Panel Discussion on “Road Ahead for OCT in Healthcare”</u>		
5:15pm to 5:30pm	Vote of Thanks	Dr. Roshan Makkar, Convenor	