

Ushering a new era in cancer visualization through multidisciplinary approaches

Early detection and treatment of cancer is an ever-evolving field that has grown into a multi-disciplinary effort. From cellular and molecular biology to enhanced imaging techniques, early detection, therapy, and monitoring of cancer has once again taken center stage in research. The continued enhancements and improvements have the potential for success in the very near future and will likely emerge from the culmination of effort from researchers across all areas of science and engineering.

The special track “Multidisciplinary approaches to visualization of cancer” provides a unique opportunity to showcase such efforts across areas of research brought together under the common goal of beating cancer. We are seeking high quality, high impact, original research papers on such multidisciplinary efforts that could benefit from computer based approaches. The special track offers the opportunity to bring together unlikely partners in this global need. Topics include but are not limited to:

- In vivo imaging techniques
- In vitro analysis
- Fast image acquisition
- Rapid high-throughput analysis (detection, treatment and monitoring)
- Micro- and Nano- approaches
- Cellular and Molecular pathways
- Biomedical imaging and computer-based techniques
- Clinical and translational techniques

Paper submission guidelines

Please follow the general conference paper submission guidelines that can be found here: [Call for Papers](#)

Papers:

Expecting 3-5 papers per track with 1 session per track.

Special Track Chairs:

Smitha Rao, Michigan Technological University

Marina Tanasova, Michigan Technological University

ST chair biographies:

Smitha Rao: Assistant Professor in Biomedical Engineering, Michigan Technological University
Smitha Rao received her M.S and Ph.D degrees from University of Texas at Arlington in Electrical Engineering in 2004 and 2009 respectively with a focus on biomedical engineering. She pursued her research interest as a principal scientist in a start-up company from 2010-2012. In 2012, she returned to academia as a faculty associate-research managing a laboratory, extending her research and gaining teaching experience. She is currently an assistant professor in the department of Biomedical Engineering at Michigan Technological University, Houghton, MI. Her research focuses on inter-disciplinary areas including MEMS, microfluidics, tissue engineering, nanofibers and nanoparticles with application in cancer studies, scaffolds, sensors and implantable devices.

Marina Tanasova: Assistant Professor in Chemistry, Michigan Technological University
Marina Tanasova received her B.S and M.Sc in Chemistry and Organic Chemistry respectively from the Georgian Tehcnological University, Rep. of Georgia. She received her PhD from Michigan State University following which she was a post-doctoral associate at University of Minnesota and at ETH Zurich, Switzerland. Her research focuses on developing molecular probes and biochemical assay for identifying and understanding links between impaired biological mechanisms and cancer. Her work relies on chemical biology to understand molecular interactions that control cellular equilibrium and use synthetic organic chemistry to produce small molecules to monitor and adjust impaired biochemical processes. The application of her work is in synthesis of molecular probes for evaluating substrate selection by carbohydrate transporters, development of platforms for tumor imaging and drug delivery and design and synthesis of bioreductively-activated DNA repair inhibitors.