

Micro/Nano Biomedical Imaging Devices

The emergence of minimally invasive diagnostics and therapeutics in modern high-tech medicine has generated an unmet demand in miniaturized biomedical devices. There exist a definite need for clinical diagnostic and treatment instruments that are based on micro and nanotechnologies. In the past decade, micromachining technology and nanomaterials are making big impacts in many fields, especially in the field of biomedical engineering. The small size and low mass provided by micro/nanodevices make medical instruments portable, power efficient, and, in many cases, more effective. This talk will focus on the current development of the state-of-the-art miniaturized X-ray CT machines, and ultrasound imaging devices.



Biography

John T. W. Yeow received the B.A.Sc. degree in electrical and computer engineering, and M.A.Sc. and PhD. degrees in mechanical and industrial engineering from the University of Toronto, Toronto, ON, Canada. He is currently a Professor in the Department of Systems Design Engineering at University of Waterloo, Waterloo, ON, Canada. His current research interests are in the field of developing miniaturized biomedical instruments. He is a recipient of the Professional Engineering Ontario Young Engineer Medal, Professional Engineering Ontario Engineering Excellence Award, Natural Science & Engineering Research Canada Innovation Challenge Award, Douglas R. Colton's Medal of Research Excellence, Micralyne Microsystems Design Award, Ontario Ministry of Research and Innovation's Early Researcher Award, and University of Toronto Alumni Association 7T6 Early Career Award. He is a Canada Research Chair in Micro/Nanodevices. He is the Editor-in-Chief of the IEEE Nanotechnology Magazine, an Associate Editor of the IEEE Transactions of Nanotechnology, and a member of the Editorial Board of Scientific Reports (Nature Publishing Group). He is a Fellow of the Engineering Institute of Canada, and a Member of College of New Scholars, Artists and Scientists of the Royal Society of Canada. He is also a 2017 IEEE Nanotechnology Technical Council Distinguished Lecturer.