BCL 2023

Edition IV

Tapan K Gandhi

Associate Professor,
Department of Electrical Engineering
IIT Delhi, India
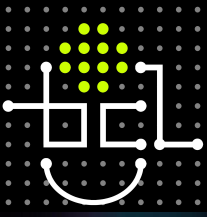
9 Jan | 09:00 - 10:00

Listening to the Brain: Advancing Science & Serving Humanity

Abstract: The fields of neuroscience and artificial intelligence (AI) have a long and intertwined history. In more recent times, however, communication and collaboration between the two fields has become less commonplace. Understanding how the brain works is considered to be one of the greatest frontiers in modern science and technology. Research in this area is driven not only by curiosity, but also the possibility of making a profound impact on the real world. By advancing our knowledge about the brain, we can help the many millions of people who suffer from neurological disorders, and also realize the promise of artificial intelligence. In my talk, I will highlight some of our work that we have undertaken at the intersection of Neuroscience and AI in last few years. Through our work, I will demonstrate how humanitarian research will help in advancement of fundamental science that has huge societal impact and in the same time will inspire in building intelligent machines for future applications.

Brief Bio: Dr Tapan K Gandhi is currently working as Associate Professor in the Dept. of Electrical Engineering, Cadence Chair Professor of AI and Automation, Joint Faculty in School of AI, IIT Delhi and adjunct faculty in the school of AI and data science, IIT Jodhpur, Fellow of IETE and INAE. He is also research affiliate to MIT, USA. He received his Ph.D. fellowship from (MIT, USA) and obtained his Ph.D. in Biomedical Engineering from IIT Delhi.
Following his Ph.D., he has spent couple of years as postdoctoral research scientist at MIT, USA. Dr Gandhi was also awarded an INSPIRE Faculty in the engineering & technology category of the Department of Science & Technology, Govt. of India. During this 5 years tenure, he is awarded as the excellent INSPIRE Faculty by DST, Govt. of India. His research expertise spans from Computational Neuroscience, Brain imaging, Assistive Technology, Biomedical Instrumentation, machine learning, Cognitive Computing to Artificial intelligence.
He has published papers in top ranking journals like Nature, PNAS, Current Biology, PloS Biology, IEEE Transactions. He has more than 180 publications in International journals and conference proceedings.

BCL 2023

Edition IV

He has received many awards in India (including one from Ex-President of India, Dr Kalam) and abroad for his academic excellence and groundbreaking research. His research work is not only published in top-notch journals but also appeared in many popular presses including TIME magazine, the Boston Globe, the New York Times, MIT News, Harvard News, Wall street Journal and also in the SCIENCE Magazine. Dr Gandhi's work was selected as cover page in Science Magazine in 2015. He has delivered many invited talks in National and International Universities like MGH, Harvard University, Yale University, MIT, Copenhagen University, University of Groningen. He is one of the international member in European Union joint projects on Vision Sciences and collaborator in many international projects.

He has four patents and three technologies transfer to Ministry of Social Justice, Govt. of India. He is serving as expert member (Task Force) in various research committees in Govt. of India, UNESCO as well as reviewers in many journals like IEEE, Elsevier, and Springer etc. He has also received Platinum Jubilee YOUNG SCIENTIST award 2015 by National Academy of Science in INDIA and GYTI 2019 Award. He is elected Fellow of National Academy of Engineering (FNAE). Presently he is the Chairperson of Project Prakash charitable Trust, that helps in Restoration of Vision and providing education to visually impaireds in India.