

Title: Computational Audiovisual Scene Synthesis: Merging the Physical and Data Worlds

Speaker: Dr. Parag K. Mittal,
CEO @ The Garden in the Machine, Inc.
CTO @ Mogeess, Hypersurfaces, Ltd.

Time/Venue: January 4th 3:30pm, 2019. EEG 301, Department of Electrical Engg., I.I.T. Bombay

Abstract:

How do we represent our ongoing audiovisual perception of the world? What do these representations explain or not explain, and could they ever be modeled by computers? In the last 15 years, I have endeavored to understand these basic questions through numerous studies in psychology (experimental cognition and eye-tracking), neuroscience (EEG and fMRI), computational modeling (Computer Vision, AI, and ML), and arts practices (film, installation artwork, and augmented reality). This talk will cover some basic strides towards this understanding, describe my interdisciplinary approach, and conclude with my most recent investigation within Mogeess, Hypersurfaces, Ltd., a company focusing on how to merge the data and physical worlds through AI models of vibration.

Short Bio:

Based in Los Angeles, CA, Parag K. Mittal (US) is an interdisciplinary researcher publishing in fields of applied machine and deep learning, digital signal processing, cognitive sciences, and neurosciences. He currently focuses his time as CTO of Mogeess, Hypersurface, an AI company focusing on human computer interaction. His arts practice which encompasses film and installation artwork has also been exhibited internationally including the Prix Ars Electronica, Walt Disney Concert Hall, ACM Multimedia, Victoria & Albert Museum, London's Science Museum, Oberhausen Short Film Festival, and the British Film Institute, and featured in press including BBC, NYTimes, FastCompany, and others. He has also taught worldwide including at the University of Edinburgh, Goldsmiths, University of London, Dartmouth College, and California Institute of the Arts in both Undergraduate and Graduate levels in primarily applied computing courses focusing on computer vision, signal processing, algorithmic sound, and machine learning. His online course, "Creative Applications of Deep Learning" made in partnership with Google and Nvidia on Deep Learning has also received critical praise numerous years running for being one of the top Machine Learning courses in the world.