

Guest Lecture on “Neurotechnology and Neurorehabilitation” 29th Jan 2020

Abstract

Neurotechnology refers to a broad range of application of engineering tools to monitor and address neurological and psychiatric disorders. At the neuroTech lab at the Indian Institute of Technology, Hyderabad, we focus on three aspects of neurotechnology, viz., neuroimaging, neuromodulation and intra-operative neuromonitoring (IONM). Firstly, neuroimaging involves using mathematical tools to combine electrophysiology data with anatomical images to produce informative maps of cortical activations. Secondly, IONM, which refers to mapping of brain activity to assess the functioning of the brain during surgeries to enhance outcomes and reduce complications. I will explain our work in building real-time computational tools to analyze the deep brain electrophysiology data to improve targeting during DBS surgeries. Thirdly, I will briefly explain our current work, in the use of neuromodulation and neuroimaging strategies to improve neuro-rehabilitation of stroke patients through gamified therapy.

Speaker Introduction

Dr. Kousik Sarathy Sridharan is currently Assistant Professor at the Dept. of Biomedical engg at the Indian Institute of Technology, Hyderabad, India. He obtained his PhD degree in Neuroscience from Aarhus University, Aarhus, Denmark. His PhD work involved using electrophysiological techniques to assess mechanisms of treatments offered to Parkinson’s disease patients. He also held an adjunct position of an intra-operative neuromonitoring engineer at the Dept. of Neurosurgery, Aarhus University Hospital. Prior to his PhD he had a research stint at the Dept. of Functional and Restorative Neurosurgery at the Universitätsklinikum Tübingen, Tübingen, Germany where he co-ordinated and worked on multi-center projects funded by the Federal German government. He has a Master of Science in Biomedical engineering from Linköping University, Linköping, Sweden and a Bachelor of Technology in Electronics and Instrumentation Engineering from SASTRA University, Thanjavur, Tamil Nadu, India.

GUEST LECTURE ON 29th Jan 2020 - SESSION SCHEDULE

SESSION	SPEAKERS	TIME
Inauguration and prayer song		10:30AM - 10:40AM
Key note Address	Principal	10:40AM -10:50AM
Key note Address	Dr. Koushik Sarathy Sridharan	10:50AM -11:00AM
Tea Break		11:00AM -11:10AM
Guest Lecture by the speaker of the day		11:10AM -12:20PM
Vote of Thanks	Dr. H. Sujana (HOD)	12:20PM -12:30PM
Lunch Break		12:30PM -1:30PM
Project Ideation		1:30PM -3:30PM

Expenditures

S.No	Expenditures	Amount
1	Honorarium	Rs 5000/-
2	Banners	Rs700/-
3	Brochures	Rs300/-
4	Memento	Rs400/-
5	Transportation	Rs3000/-
6	Snacks & Lunch	Rs600/-
Total		Rs10000/-

List of Participants Attended

S.No	Branch	Year	No of Participants
1	BME	II year	28
2	BME	III year	19
3	BME	IV years	18
4	ATL(ECE,CSE,Civil,Mech,PHE)		19
Total			84

Guest Lecture Photos





Project Ideation



