



Delhi-NCR Chapter
Indian Academy of Neurosciences



Virtual Workshop
on

“Brain Imaging and Mapping Protocols for Humans”

July 2021

PROGRAMME



Organized by

Departments of Physiology and Biochemistry
All India Institute of Medical Sciences
Ansari Nagar, New Delhi 110029, India

Day 1 Saturday 3rd July 2021

Inauguration

13:45 – 14:00 hrs

Workshop I: MR Imaging
14:00 – 17:00 hrs onwards

Technical Lecture

14:00 – 14:30 hrs

MRI Methods for Neuroimaging

Dr N R Jagannathan

14:40 – 15:20 hrs

MR & Functional imaging in
neurodegenerative disorders

Dr Senthil S Kumaran

Virtual Demonstration (15:20 – 17:00 hrs)

MRI and fMRI: data acquisition and processing

Dr Senthil S Kumaran, Mr Pankaj, Dr. Priyanka Bhat

Day 2 Saturday 10th July 2021
Workshop II: MR Spectroscopy

Technical Lecture

14:00-15:00 hrs

MR Spectroscopy: a Powerful Non-Invasive
Technology for Early Diagnostic Biomarker
Detection

Dr Pravat Mandal

15:00 – 15:40 hrs

Spectroscopy in Parkinson's disease

Dr Senthil S Kumaran

Virtual Demonstration (15:40 – 17:00 hrs)

MRI and MRS in small animals

Dr Senthil S Kumaran, Mr Himanshu, Ms. Nisha Chauhan

Day 3 Saturday 17th July 2021
Workshop III

Technical Lecture (14:00-14:30 hrs)

fNIRS: Principle and Application in
Neurosciences

Dr Rohit Verma

Virtual Demonstration (14:30 – 17:00 hrs)

Functional Near Infrared Spectroscopy: What, Why, When and
How?

Dr K P Kochhar

14:30 hrs fNIRS: Principle and Application in Neurosciences

Dr K P Kochhar, Dr Rohit Verma

15:00 hrs fNIRS recording, application of optodes, setting of COBI
software, linking with wireless physiological monitoring and
visual tracking

Dr Ashelsh Patil, Dr Sunil, Ms Shweta Sharma, Ms Rinku

	<p>15:30 hrs fNIRS protocols in breath regulation, glaucoma, ADHD, Parkinson's disease, Cochlear implant, Kidney transplant, Fibromyalgia, Stroke Dr Sunil, Ms Shweta Sharma, Ms Rinku</p> <p>16:00 hrs Data analysis using MATLAB and other software Dr. K P Kochhar, Dr Rohit Verma, Dr Ashlesh Patil</p>
<p>Day 4 Saturday 24th July 2021 Workshop IV</p>	
<p>Technical Lecture (14:00-14:30 hrs)</p> <p>Why Physiologists Need to Move on to Translational MEG Research? Dr Manjari Tripathi</p>	<p>Virtual Demonstration (14:30 – 17:00 hrs)</p> <p>QEEG: A Tool to Assess Cortical Activity Dr Prashant T Tayade</p> <p>14:30 hrs Introduction to QEEG Pre-processing and Analysis Dr Prashant T Tayade</p> <p>15:00 hrs Application of 128 electrode net & use of photogrammetry system for electrode placement, EEG acquisition Ms Naba Saini and Mr Ankit Gurjar</p> <p>15:30 hrs EEG pre-processing & Independent Component Analysis Ms Chaithanya Leon and Ms. Naba Sami</p> <p>16:00 hrs Source Analysis Dr. Sunaina Soni and Ms. Chaithanya Leon</p>
<p>Day 5 Saturday 31st July 2021 Workshop V</p>	
<p>Technical Lecture (14:00-15:00 hrs)</p> <p>rTMS and its application in Neuropsychiatry and Neurological conditions Dr Nand Kumar</p> <p>Neuromodulation in Pediatric Neurology Dr Shefali Gulati</p>	<p>Virtual Demonstration (15:00 – 17:00 hrs)</p> <p>TMS: Non-invasive Technique for Computing Cortical Excitability and Brain Mapping Dr Suman Jain</p> <p>15:00hrs Introduction to TMS paradigms Dr Suman Jain</p> <p>15:15hrs Preparation of patient, placement of electrodes and TMS coil</p> <p>15:30hrs Procedure for recording single pulse parameters & analysis</p> <p>15:45hrs Recording of paired pulse parameters (SICI, ICF, LICI, IHI)</p> <p>16:00hrs Protocol for mapping of brain and conduction velocity Ms Aliya Mufti, Ms Gunjan Sharma, Ms Deeksha Patel, Dr Ajay Tomar, Dr Reena Chittora, Mr Sanjeev</p> <p>16:15hrs Paired associative stimulation method and interpretation</p> <p>16: 40hrs Neural Navigation protocol and analysis Dr Kaviraja Udupa</p>