WS03 Imaging and Functional Neurosurgery Workshop
Monday, June 24, 2019

This course provides a theoretical framework for translational applications of functional neuroimaging for Stereotactic & Functional Neurosurgery specifically diffusion magnetic resonance imaging (MRI), functional MRI, nuclear medicine imaging. The hands-on component allows participants to practice steps involved in integration of diffusion MRI for stereotactic targeting: preprocessing, co-registration and tract visualization. At the end of this course, participants will become familiar with the role of functional neuroimaging in improving stereotactic targeting and learn its potential pitfalls.

08:00 - 12:00

Coordinator: Vibhor Krishna (USA)
Chair: Mojgan Hodaie (Canada)
Chair: Vibhor Krishna (USA)

08:00  Introduction
Invited Speaker: Mojgan Hodaie (Canada)

08:15  Principles underlying DTI and its accuracy – “Tracks and Traps”
Invited Speaker: Jessica Barrios-Martinez (USA)

08:35  DTI based VIM targeting
Invited Speaker: Vibhor Krishna (USA)

08:55  Improving targeting accuracy- atlases in image registration
Invited Speaker: Stephan Chabardes (France)

09:15  Post-operative imaging after lesioning and DBS
Invited Speaker: Ashwin Viswanathan (USA)

09:35  Structural MRI sequences to improve targeting in DBS
Invited Speaker: Tejas Sankar (Canada)

09:50  Hands-On Integration
Invited Speaker: Vibhor Krishna (USA)

10:25  Break

10:55  fMRI and resting-state fMRI - Paradigms, accuracy and clinical application
Invited Speaker: Dario Englot (USA)

11:15  MRI and Nuclear Medicine imaging in movement disorders
Invited Speaker: David Eidelberg (USA)

11:35  MRI and Nuclear Medicine imaging in Epilepsy and Memory dysfunction
Invited Speaker: Effie Kapsalaki (Greece)

11:55  Closing remarks
Invited Speaker: Vibhor Krishna (USA)