

# Using Connectivity Imaging to Guide Therapeutic Brain Stimulation

## **Organizer:**

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Worldwide there has been tremendous recent investment into understanding and imaging brain connectivity. The hope is that this human connectome data will translate into improved treatments for brain disease. One area in which this goal is closest to being realized is the field of therapeutic brain stimulation. Both invasive (e.g. deep brain stimulation) and noninvasive (e.g. transcranial magnetic stimulation) forms of brain stimulation propagate through anatomical connections to impact distributed brain networks. In this symposium, we will show how brain connectivity data is being used to understand the effects of therapeutic brain stimulation, predict therapeutic response, inform stimulation targets, and motivate new therapeutic approaches to neurological and psychiatric disease.

## **Network Targets of Invasive and Noninvasive Brain Stimulation Therapies**

*Michael Fox, Department of Neurology, Harvard University, Beth Israel Deaconess Medical Center, Boston, MA, United States*

## **The circuits that underlie DBS targets for psychiatric disease**

*Suzanne Haber, Department of Pharmacology and Physiology, University of Rochester Medical Center, Rochester, NY, United States*

## **7 Tesla MRI for Neuromodulation Applications**

*Noam Harel, Departments of Radiology and Neurosurgery, University of Minnesota, Minneapolis, MN, United States*

## **Brain Connectivity in the Operating Room**

*Nadar Pouratian, Department of Neurosurgery, University of California Los Angeles School of Medicine, Los Angeles, CA, United States*