



## Biomedical Image Computing and Informatics Seminar

### **“Translational potential of medical imaging in neurodegenerative diseases and psychiatric disorders”**

**Duygu Tosun-Turgut, PhD**

Co-Director, Center for Imaging of Neurodegenerative Diseases (CIND)

Associate Professor

UCSF Department of Radiology and Biomedical Imaging

**Smilow Rubenstein Auditorium & Commons**

3400 Civic Center Blvd.

**Thursday, May 9, 2019 at 1pm**

**\*\*Pizza lunch at 12:45pm\*\***

#### ***Abstract***

Neuroimaging methods are important tools for assessing and monitoring brain changes associated with progressive neurodegenerative conditions. Often neuroimaging techniques are helpful if not essential for differential diagnosis of various syndromes. With advanced MRI techniques and PET tracers for proteinopathies, recent multimodality neuroimaging studies provide a wealth of in vivo information about pathology associated with the various degenerative and psychiatric syndromes. The talk will focus on key findings from neuroimaging studies in neurodegenerative disorders, including Alzheimer's disease and prodromal stages, Parkinson's disease, and late life depression, as well as the potential for neuroimaging to provide useful information for personalized prediction of treatment response and in drug discovery.

#### ***Bio***

Duygu Tosun, PhD, is an Associate Professor in the Department of Radiology and Biomedical Imaging at the University of California, San Francisco and Co-Director of the Center for Imaging of Neurodegenerative Diseases (CIND) at the San Francisco Veterans Affairs Medical Center. The research of Dr. Tosun is in the field of neuroimaging in aging and neurodegenerative diseases. The goal of Dr. Tosun's research program is to apply advanced imaging technology to identify multi-disciplinary and multi-modality biomarkers to detect the pathophysiological progression of neuropathologies before they cause irreversible damage to the brain. She aims to develop validated imaging markers, potentially providing a means of monitoring the efficacy and regional specificity of drug therapy for neurodegenerative diseases. This will have a broad use in early diagnosis, facilitating initiation of prevention strategies in those at risk, and boost the power of drug therapy trials by selecting those at greatest risk of neurodegenerative diseases. Dr. Tosun's research program has been funded by the National Institutes of Health, California Department of Public Health, Alzheimer's Association, and Michael J Fox Foundation.