

UCSD NANOENGINEERING/CHEMICAL ENGINEERING
Hybrid **SEMINAR SERIES**

Wednesday, November 16th, 2022
Seminar Presentation: 11:30am - 12:00pm
SME room 248



“Spatio-temporal modeling in neuroscience through interpretable machine learning”

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Abstract: In the past decade, research in machine learning has been exceedingly focused on the development of models with remarkably high predictive capabilities for both spatial and temporal datasets. Specifically, models based on deep learning principles have shown promise within domains such as neuroscience and healthcare. However, the non-linearity and the huge number of parameters in these models have made them difficult to interpret for domain experts. In this talk, I will discuss the importance of interpretable machine learning for scientific discovery in the context of multiple computational basic and clinical neuroscience studies with a focus on spatial and temporal datasets.

Biosketch: Dr. Reza Abbasi-Asl is an Assistant Professor in the Department of Neurology and the Department of Bioengineering and Therapeutic Sciences at UCSF and a core member at UCSF Neuroscape labs. He is a Weill Neurohub Investigator and serves as the director of Data Analytics and Visualization at the Weill Institute for Neurosciences at UCSF. He received his PhD and MSc in Electrical Engineering and Computer Sciences at UC Berkeley in 2018. His research lab investigates the role of interpretable machine learning in understanding brain functions and its related disorders. His research is supported through one RF1 award from NIH/NIMH, two Weill Neurohub awards, two Sandler Program for Breakthrough Biomedical Research awards, and one NIH R03 subaward. Dr. Abbasi-Asl is the recipient of the Eli Jury Award from UC Berkeley, Department of Electrical Engineering and Computer Sciences in 2018, the May J. Koshland Fund in Memory of H.A. Jastro Award from UC Berkeley Graduate Division in 2016, the Excellence Award in Biomedical Engineering from Sharif University of Technology in 2013, and the Excellence Award in Electrical Engineering from Tehran Polytechnic in 2010.