

Sharif NEURO Event



نوروهمی

(نشست هفتم)

زمان: ۴ شنبه ۱۷ بهمن ساعت ۱۰:۰۰

مکان: دانشگاه صنعتی شریف، دانشکده برق، سالن کهربا
ارائه دهنده: دکتر زهرا شیر، پژوهشگاه رویان

Optogenetic Tools for Studying the Healthy and Diseased Brain

Zahra Shiri, Royan Institute

Abstract

Traditional methods of controlling cell activity include electrical stimulations which allow temporal precision but lack cell specificity, and pharmacological and genetic manipulations which can be cell specific but lack temporal precision and are sometimes irreversible. Optogenetics is a relatively new method that combines optics and genetics to control the activity of cells, especially neurons, with spatio-temporal precision. The technique has been applied in a wide range of studies and continues to unravel the brain one cell at a time.

Bio

Dr. Zahra Shiri obtained her BSc degree in Cell and Molecular Biology from Concordia University (Canada) in 2012. She then fast-tracked to obtain her PhD in 2017 in the field of Neuroscience from McGill University (Canada). Her research included studies on epileptic brain using the optogenetic technique to investigate cellular mechanisms of seizure generation in-vitro and in vivo, which led to several publications in high impact journals. She is currently a postdoctoral fellow at Royan Institute and is working on implementing the optogenetic technique in studies of cerebral organoids.

Sharif Neuro Event is a biweekly gathering organized by a group of faculty from the EE and CE departments of Sharif University. Each event consists of an invited seminar, a student presentation, or a discussion forum. Information about public seminars and presentations will be disseminated to interested members of Sharif University. For receiving information about the events, please email your name and departmental affiliation to: mahdikiani@ee.sharif.edu