School of Molecular Sciences
Arizona State University

SMS Fall 2021 Seminar Series

Friday Sept 24 | 2:30pm | Virtual*

Data-driven approaches for modeling and analysis in Biophysics and Biochemistry

Single molecule experiments enable the experimentalists to monitor the dynamical processes at the molecular level. In the meantime, the acquired experimental data is subject to the instrumental noises and other random events that are happening during the experimental time course. Therefore, the addition of these processes to single molecule dynamics requires highly customized formulations for the modeling and the analysis of the acquired experimental data.

Furthermore, unknown model parameters and conformational states of the molecule lead difficult model selection problems.

In this talk, I will introduce these challenges and provide approaches to solve these problems within Bayesian non-parametric paradigm.

Zeliha Kilic, PhD

Bioinformatics Research Scientist, St. Jude Children's Research Hospital

Dr. Kilic is a Bioinformatics Research Scientist at the Single-Molecule Imaging Center in the Department of Structural Biology at St. Jude Children's Research Hospital. She pursued her PhD in Mathematics at the University of North Carolina, Chapel Hill in 2018 and completed her undergraduate studies at Marmara University in Istanbul.

In 2018, she moved on her postdoctoral research fellow position at the Pressé Lab in the Center for Biological Physics, Arizona State University, where her research focus shifted towards biophysics and more specifically to the analysis of single molecule experimental data.

**ZOOM: https://asu.zoom.us/j/87081218152*