

Speaker: Bonnie Berger

Title: Compressive genomics: leveraging the geometry of biological data

Abstract:

Researchers around the globe are gathering biomedical information at a massive scale. We develop algorithms to compress this data that enable computation on the reduced representation. In this talk, I will discuss how we can leverage the low-dimensional true structure of biological data manifolds in order to build useable compact geometric summaries of this data. I will highlight our latest work on single-cell transcriptomic datasets, that enables an unprecedented scale of data to be effectively pooled from individuals and institutions across nations to enable novel life-saving discoveries.