

Matrix Computations and Scientific Computing Seminar

Organizer: J. Demmel and M. Gu

Wednesday, 12:00–1:00 pm, 380 Soda Hall

Nov 16 **Daive Martizzi**, UC Berkeley

Studying cosmic structure formation with computational methods

In this talk I will show how the use of numerical simulations has greatly aided the study of cosmic structure formation: galaxies, groups of galaxies, galaxy clusters. I will provide motivation for the use of numerical methods in astrophysics and cosmology and describe state-of-the-art techniques used by numerical astrophysicists to solve challenging problems. Finally, I will discuss the key results achieved in the field of numerical cosmology, as well as the current physical and computational challenges that the numerical cosmology community is facing.