Greg Bryan – Colloquium – March 04, 2021
Columbia University

Title: **Blowing hot and cold: the physics of multiphase gas in the cosmos**

Abstract: The universe is full of hot and cold gas in close proximity, a situation which can be observed in a wide range of astronomical systems, from fast winds driven out of galaxies to cold clouds falling into the atmospheres of X-ray clusters. The interaction between these hot and cold phases remains poorly understood, despite its importance for determining how galaxies form and evolve. Drawing on a range of numerical simulations on many scales, as well as ideas from terrestrial combustion, I discuss new ideas that are shedding light on the turbulent interaction between the phases.