**Title:** Measuring and modeling jet drops from bursting bubbles.

**Abstract:** When a bubble bursts at an interface, the capillary waves create an intriguing cusp, which is responsible for an upward jet that can break into droplets. This jet drop phenomena has been studied for over 60 years and is relevant to a variety of topics including the transport of respiratory pathogens and cloud-forming marine aerosols. Yet, several fundamental questions remain, including the physics that sets the size and number of the smallest jet droplets. This talk explores the dynamics of jet drop formation through a combination of experiments and theory. Microfluidic experiments, dynamic similitude, and numerical simulations collectively reveal a mechanism in which viscous stresses – both before and after the jet forms – sets the size and number of these microscopic droplets.

**Bio:** James Bird is an Associate Professor in the Department of Mechanical Engineering at Boston University. He received his B.S. from Brown University and his Ph.D. from Harvard University, after which he completed an NSF postdoctoral fellowship at MIT. His research focuses on interfacial fluid dynamics with an emphasis on the dynamics of drops and bubbles. He is the recipient of a Fulbright Fellowship (2003), an NSF CAREER award (2014), and an ONR YIP award (2016), and his work has been featured in popular press outlets including the New York Times, BBC, and PBS Nova.