Sivan Leviyang* (sr286@georgetown.edu), Georgetown University, Department of Mathematics and Statistics, Washington, DC. The Effects of Heavy Tailed Offspring Distributions on Viral Infection Dynamics and Evolution.

During infection, viral particles enter cells and produce offspring viral particles that can go on to infect other cells. Over the past decade, it has become increasingly clear that for many viruses the offspring distribution of an infected cell is strongly skewed and likely best modeled by a heavy tailed distribution. Most current models of viral dynamics and evolution do not account for this phenomena. I will present a model of HIV dynamics demonstrating the effect of heavy tailed offspring size on viral population genetics. (Received July 28, 2018)