Mathematical Biology Seminar
Wednesday, February 24, 2021
Speaker: Dr. Keisha Cook, Tulane

Title: Single Particle Tracking with Applications to Lysosome Transport

Time: 9am
Zoom Link:
https://ucmerced.zoom.us/j/98050375649
Passcode: 172069

Abstract:
Live cell imaging and single particle tracking techniques have become increasingly popular amongst the mathematical biology community. We study endocytosis, the cellular internalization and transport of bioparticles. This transport is carried out in membrane-bound vesicles through the use of motor proteins. Lysosomes, known for endocytosis, phagocytic destruction, and autophagy, move about the cell along microtubules. Single particle tracking methods utilize stochastic models to simulate intracellular transport and give rise to rigorous analysis of the resulting properties, specifically related to transitioning between inactive to active states. This confidence in the stochastic modeling of particle tracking is useful not only for particle-containing lysosomes, but also broad questions of cellular transport studied with single particle tracking.

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Full Seminar Schedule: https://appliedmath.ucmerced.edu/node/52

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