

1164-35-25

**Padi Fuster Aguilera\*** (rfustera@tulane.edu), 6823 St. Charles Ave, New Orleans, LA 70118, and **Vincent R Martinez** and **Kyle K Zhao**. *A PDE model for chemotaxis with logarithmic sensitivity and logistic growth.*

In this talk, we present recent results on the asymptotic behavior for a repulsive chemotaxis model with logarithmic sensitivity and logistic growth. Our main result is the global well-posedness of strong solutions for large initial data with Neumann boundary conditions and, moreover, the asymptotic behavior for both the population density and chemical concentration which converge to constant states. We additionally prove that the vanishing chemical diffusivity limit holds in this regime. Lastly, we will provide numerical simulations that demonstrate a separation of scales phenomenon. (Received December 29, 2020)