

1146-35-241

**Rachidi B Salako\***, salako.7@osu.edu. *Transition fronts of a system of parabolic-elliptic Keller-Segel chemotaxis model with logistic source.*

In this talk, we consider a system of parabolic-elliptic equations, with a general time dependent reaction term, describing the oriented movements of some mobile species in response to some chemical gradients. The notion of transition fronts connecting the unstable state  $(u, v) \equiv (0, 0)$  and the unique stable positive and space homogeneous entire solution  $(u^*(t), v^*(t))$  for such system will be discussed. Under some assumptions on the parameters range, we established the existence of transition fronts with least mean  $\underline{c}$  for every  $\underline{c}$  greater than some positive quantity  $\underline{c}^*$ , and that there is no such solution with least mean less than  $\underline{c}^*$ . In particular, when the logistic reaction function is time periodic, we prove the existence and non-existence of periodic-traveling wave solutions for the parabolic-elliptic chemotaxis model under consideration. The results presented in this talk are part of some results obtained in a joint work with Prof. W. Shen. (Received January 23, 2019)