Modeling population dynamics and dispersal

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PDE models from mathematical physics are established well and widely accepted. Mathematicians are mostly focused on the analysis and do not question about the validity of the models. However, the situation for mathematical biology is quite different due to the complexity and variations in biological phenomena. There are increasing amount of data, information, and needs for proper theory for them. Many ODE and PDE models for biological phenomena appear every year. In such a situation mathematicians should question about their validity and understand the modeling process. In this talk we will discuss about mathematical models related population dynamics and migration strategy. We will discuss some of doable problems if time allows.