Mathematical biology & Theoretical Biophysics

Research emphasis:
Dr Nguyen develops mathematical models that help reveal the underlying mechanisms of biological systems or processes. Her models are intended to complement experimental studies and provide a quantitative framework for understanding emergent properties. The models are also used to test the effect of perturbing biological systems -- thereby aiding in biomedical decision making (e.g., choosing effective therapeutic intervention strategies).

Applications: Mathematical models
- Stem cell differentiation
- Immune response to infectious diseases
- Biochemical pathways (e.g., signaling pathways)

Research Strengths:
- Integration of biological concepts/knowledge into predictive mathematical models
- Communication in interdisciplinary environments

Selected Publications:


