

February 21, 2024
MRB1 Seminar Room (First Floor)
Refreshments served at 12:15 p.m.
Lecture 1:00 - 2:00 p.m.



Distinguished Lecture in Mathematical and Computational Biology
Mathematics Colloquium

UCR Interdisciplinary Center for Quantitative Modeling in Biology



Stacey D. Finley, Ph.D.

Nichole A. and Thuan Q. Pham Professor and
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Engineering and Materials Science, and Quantitative
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Dr. Finley was awarded Leah Edelstein-Keshet Prize from the Society of Mathematical Biology and elected in 2021 Fellow of American Institute for Biological and Medical Engineering and in 2022 Fellow of the Biomedical Engineering Society

Exploring the Tumor-Immune Ecosystem Using Computational Modeling

My research group works in the area of mathematical oncology, where we use mathematical models to decipher the complex networks of reactions inside of cancer cells and interactions between cells. We have combined detailed, mechanistic and data-driven modeling to study these networks and predict ways to control tumor growth. Our recent work is aimed at predicting metabolism and signaling in the tumor microenvironment. In this talk, I will present our recent work aimed at predicting signaling-mediated interactions between tumor and immune cells using agent-based models. Our models generate novel mechanistic insight into cell behavior and predict the effects of strategies aimed at inhibiting tumor growth. We have also developed methods of calibrating the models to tumor image data to generate reliable predictive frameworks.

<https://ucr.zoom.us/j/95069692875>

