Seminar Series
Research Frontiers in Biomathematics

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Fall Calendar 2020
- 10/1 Lucas Bottcher
- 10/8 Ni Zhao
- 10/15 Hua Zhou
- 10/22 Andy Dahl
- 10/29 Daniel Tward
- 11/5 Kit Curtius
- 11/12 Olivia Angelin-Bonnet
- 11/19 Harold Pimentel
- 12/3 Jasmine Foo
- 12/10 Alex Brummer

Thursday Dec. 3rd, 2020 | 4 - 5pm
Join Zoom Meeting
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Meeting ID: 530 499 6473

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Understanding the role of phenotypic switching in cancer drug resistance

Abstract
Recent findings suggest that cancer cells can acquire transient resistant phenotypes via epigenetic modifications and other non-genetic mechanisms. Although these resistant phenotypes are eventually relinquished by individual cells, they can temporarily ‘save’ the tumor from extinction and enable the emergence of more permanent resistance mechanisms. These observations have generated interest in the potential of epigenetic therapies for long-term tumor control or eradication. In this talk, I will discuss some mathematical models for exploring how phenotypic switching at the single-cell level affects resistance evolution in cancer. As an example, we will explore the role of MGMT promoter methylation in driving resistance to temozolomide in glioblastoma.

Ref.1  Ref.2

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To meet with the guest speaker contact the organizer Mary E. Sehl msehl@mednet.ucla.edu