

# SIAM Knights Conference

## May 17<sup>th</sup>, 2019

The conference will be held in room 318  
Mathematical Sciences Building (MSB)  
University of Central Florida, Orlando

SIAM Knights is the student chapter of  
Society for Industrial and Applied  
Mathematics (SIAM) at the University of  
Central Florida.

The student chapter is proudly hosting this  
inaugural student conference to provide  
invaluable opportunities to develop  
networks with faculty members outside of  
the classroom, share ideas and research  
with people with similar interests, learn  
about career options, and develop  
leadership skill.

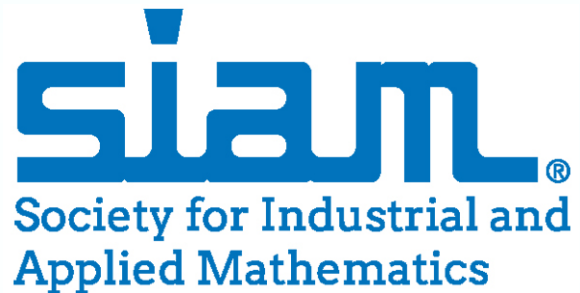
The theme of the inaugural conference is on  
mathematical biology and modeling. The  
conference features two keynote lectures  
given by one senior faculty and one junior  
faculty, and consists of seven student talks.

### Student Organizers:

- *Nazar Emirov*
- *Rasika Rajapakshage*
- *Poroshat Yazdanbakhshghahyazi*

### Faculty Advisors:

- *Joseph Brennan*
- *Zhisheng Shuai*



### Keynote Speakers:

*Pauline van den Driessche*  
Department of Mathematics and Statistics  
University of Victoria, Canada

*Chinwendu Enyioha*  
Department of Electrical and Computer Engineering  
University of Central Florida

### Student Speakers:

- *Christopher Botelho*
- *Henry Chang*
- *Mangalagama Dewasurendra*
- *Arielle Gaudiello*
- *Rasika Rajapakshage*
- *Jesse Randall*
- *Poroshat Yazdanbakhshghahyazi*

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### Schedule:

9:00 am - 9:05 am	Welcoming remarks
9:05 am - 10:00 am	<b>Pauline van den Driessche</b> <i>Discrete-Time Infectious Disease Models</i>
10:30 am - 11:00 am	<b>Arielle Gaudiello</b> <i>Impact of Asymmetric Movement on the Spatial Spread of an Infectious Disease</i>
11:00 am - 11:30 am	<b>Mangalagama Dewasurendra</b> <i>Optimal Semi-Analytical Method to Solve Nonlinear Differential Equations Arising in Epidemiology</i>
11:30 am - 12:00 pm	<b>Jesse Randall</b> <i>Rigorous Analysis of an Edge-Based Network Disease Model</i>
12:00 pm - 1:30 pm	Lunch Break
1:30 pm - 2:30 pm	<b>Chinwendu Enyioha</b> <i>Distributed Control of Spreading Processes in General Networks</i>
3:00 pm - 3:30 pm	<b>Henry Chang</b> <i>Modeling Disease Immunity Dynamics</i>
3:30 pm - 4:00 pm	<b>Christopher Botelho</b> <i>Modeling Disease Impact of Vibrio-Phage Interactions</i>
4:00 pm - 4:30 pm	<b>Rasika Rajapakshage</b> <i>Clustering in Statistical Ill-Posed Linear Inverse Problems</i>
4:30 pm - 5:00 pm	<b>Poroshat Yazdanbakhshghahyazi</b> <i>Further Applications of Target Reproduction Numbers</i>
5:00 pm - 5:10 pm	Photo & concluding remarks
6:30 pm	Dinner