



# 17<sup>th</sup> Front Range Applied Mathematics (FRAM) Student Conference

**UNIVERSITY OF COLORADO - DENVER**

**SATURDAY, MARCH 13<sup>TH</sup>, 2021**

**SPONSORS: THE SIAM STUDENT CHAPTERS AT**

**University of Colorado: Boulder, Colorado Springs and Denver campuses**

**Colorado State University, Colorado School of Mines, MSU Denver, Colorado College, U. Wyoming**

The Front Range SIAM Student Chapters are sponsoring the 17<sup>th</sup> Annual Applied Mathematics Regional Student Conference. This event allows students from all universities along the Front Range to learn about new developments in Applied Mathematics and promotes interest in the field. The conference is open to both undergraduate and graduate students.

## Registration Information

Due to COVID restrictions this year, the conference will take place in a virtual format, via Zoom. There is no registration fee, but participants are still required to register in advance, in order to access the live sessions via Zoom. For more information and to register, please visit the website: <http://framsc.org>.

## Call for Presentations

There will be 20-minute student presentations. An industry panel will take place during lunchtime. A special MCM/ICM session will also be organized. Please send abstracts in LaTeX (.tex) or plain text (.txt) format to [FRAMSC.abstracts@gmail.com](mailto:FRAMSC.abstracts@gmail.com). For more info, please check the conference website or contact the organizers.

**Abstract submission deadline is Friday, March 5, 2021!**

## Contact Information

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## Plenary Speaker

**Dr. Nancy Rodriguez**

Applied Math, CU Boulder



## What can calculus tell us about life?

In this talk I will discuss how we can use calculus to gain insight into complex social, ecological, and biological phenomena. We will see how we can use the framework of partial differential equations to encompass many types of phenomena when we are interested in studying global structures, such as the dynamics of a population versus an individual. We will look at applications in urban crime, social outburst of activity, territory formations in ecology. We explore various important mathematical questions from the point of view of the applications and discuss the limitation of our framework.

About the speaker: Dr. Nancy Rodriguez is Assistant Professor at CU Boulder Applied Math Department. Her research focuses on nonlinear partial differential equations (PDEs), in particular those with applications to urban crime, segregation, biological aggregation, chemotaxis, and ecology. She is interested in the mathematical modeling and the use of numerical and mathematical analysis to shed light into social, biological and ecological systems. You may learn more about Dr. Rodriguez at <https://www.colorado.edu/amath/nancy-rodriguez>.



For more information, visit the conference website:

<http://framsc.org>

