

Allegheny Mountain



Colloquium



Speaker: Dr. Kuei-Nuan Lin
(Penn State Greater Allegheny)

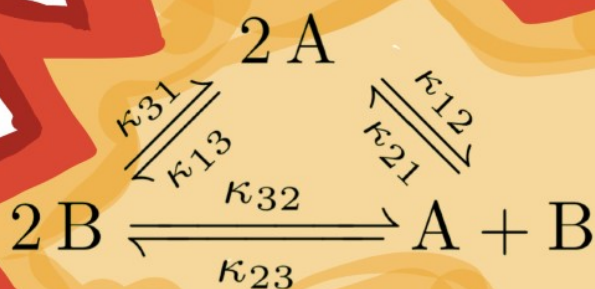
Date: 13 September 2021, 4PM–5PM

Zoom link: <https://bit.ly/2Y5k9MT>

Title: Blow Up Chemical Reaction Networks

Abstract:

In this talk, I would explain what is a toric dynamical system associated to a chemical reaction network. In the study of chemical reaction networks, the toric methods introduced by Gatermann were formalized by Craciun, Dickenstein, Shiu and Sturmfels in the paper “Toric Dynamical Systems” in 2009. We then define the blow up algebras associated to ideals. Finally, we explore the relation between blow up algebras and chemical reaction networks. This is joint work with David Cox and Gabriel Sosa. This talk will be accessible for students having backgrounds of linear algebra, calculus III, and differential equations.



$$Y = \begin{pmatrix} 2 & 1 & 0 \\ 0 & 1 & 2 \end{pmatrix}$$