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SIMIODE A SYSTEMIC INITIATIVE FOR MODELING INVESTIGATIONS & OPPORTUNITIES WITH DIFFERENTIAL EQUATIONS

FOR IMMEDIATE RELEASE

National Science Foundation workshop in teaching differential equations with modeling

Cornwall NY USA, 27 July 2018

SIMIODE - Systemic Initiative for Modeling Investigations and Opportunities with Differential Equations, a non-profit 501(c)3 organization, with funding from the National Science Foundation, sponsored a week-long workshop on using modeling in teaching differential equations, a pivotal STEM course in the undergraduate curriculum.

Eric Stachura, Department of Mathematics, Kennesaw State University, Marietta, GA, USA was one of 20 faculty selected from around the country to participate in this workshop held at Manhattan College, Riverdale NY, 22-28 July 2018.

SIMIODE is a National Science Foundation funded effort in support of a learning community at www.simiode.org with resources for teaching differential equations through modeling and real-world situations. SIMIODE advocates and supports an inductive approach to learning differential equations through context with the use of Modeling Scenarios.

Participants engaged in learning new activities for teaching using realistic situations through presentations and team teaching experiences in applying mathematics to such areas as biology, chemistry, economics, and engineering. Topics included using m&m candies to simulate death and immigration in populations, modeling chemical reactions, determining how animals detect predators and their reaction efforts, modeling shock absorbers, and studying epidemics.

MINDE -- Model INstructors in Differential Equations Workshop was a Practitioner Workshop for faculty to participate in a challenging and invigorating faculty development opportunity to enhance their teaching of undergraduate differential equations in a modeling-first approach. Those selected to participate actively engaged to enable them to incorporate curricular materials and pedagogies using modeling to motivate learning differential equations in context with their students after the workshop.

Participants will return to their home institutions and incorporate applications to motivate student learning, share what they experienced with colleagues, speak at professional meetings about using real-world situations to motivate the study of mathematics, and publish articles about their classroom experience using a modeling approach.

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