



University of
Science & Technology

Mathematics and Statistics Colloquium

Friday, January 26, 4:00 – 5:15 pm
G5 Rolla Building

♣Refreshments at 4:00 followed by the lecture at 4:15♣



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Generalized ODEs: an overview and new trends

Abstract: In 1957, Jaroslav Kurzweil introduced in the literature a class of integral equations called *generalized ordinary differential equations* in order to investigate results on continuous dependence of solutions with respect to parameters. However, recent works have shown that these equations encompass several types of equations, such as impulsive equations, functional dynamic equations on time scales, measure functional differential equations, measure neutral functional differential equations, among others. In this talk, we provide a basic overview of generalized differential equations and present some recent results and new trends in this area.

Biographical Sketch: Jaqueline Godoy Mesquita completed her PhD in Mathematics in 2012 at the University of São Paulo and the Academy of Sciences of Czech Republic in Prague. She had two post-doctorate positions, one at the Universidad de Santiago de Chile-USACH and the other one at University of São Paulo-USP. She held the position of Assistant Professor at University of São Paulo-USP (2013-2015) and is currently Assistant Professor at University of Brasília-UnB since 2015. She is Affiliated Member of the Brazilian Academy of Sciences (2018-2022) and Regional Secretary of the Brazilian Mathematical Society (2017-2019). She is member of the editorial board of the "Journal of Mathematics and Statistics" and "Advances in Dynamical Systems and Applications". She has participated in the 5th Heidelberg Laureate Forum 2017, in Heidelberg, Germany and was selected to be an Oberwolfach Leibniz Fellow during 2018. She has published 17 articles since 2011, delivered more than 60 lectures in conferences/seminars in Brazil and several other countries. She coordinated 7 research projects. She has won the International Bernd-Aulbach Prize for Students, awarded by the International Society of Difference Equations. Her field of interests includes functional differential equations, impulsive differential equations, generalized ordinary differential equations, and dynamic equations on time scales.