



University of  
Science & Technology

# Mathematics and Statistics Colloquium

Friday, December 7, 4:00 – 5:15 pm  
G5 Rolla Building

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



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## Dichotomies for time-varying systems

**Abstract:** This talk will present a state-of-the-art survey for the concept of dichotomy for linear time-varying systems. In the qualitative theory of time-varying systems, the notions of dichotomy and the more general concept of trichotomy play a vital role. For the deterministic case, uniform and non-uniform approaches for both invertible and non-invertible systems are presented. Also, for stochastic systems, the problem of  $H_2$  filtering in the case when the Lyapunov operator is dichotomic is pointed out.

**Biographical Sketch:** Ioan-Lucian Popa obtained his PhD in 2012 from West University of Timișoara, Romania. From 2013 to 2017, Dr. Popa was Assistant Professor at "1 Decembrie 1918" University of Alba Iulia. Since 2017, Dr. Popa is Senior Lecturer at the same university. His research interests are in system and control theory.