Monday, April 14	
Tuesday, April 15	**Graduate Student Seminar** 11:00am – 12:00pm, McLeod Hall 459 Speakers: Ayako Carter and Eric Montoya Topic: Graphs and Free Groups **MATH 1150 Meeting** 12:40pm – 1:20pm, McLeod Hall 459
Wednesday, April 16	**Peer Mentor Meeting** 12:30pm – 1:20pm, McLeod Hall 400 **Analysis Reading Seminar** 2:30pm – 3:20pm, McLeod Hall 459 Speaker: Martin Kimondo Title: Hypercyclic Differentiation Operators, Part 2 **Peer Mentor Meetings** 3:30pm – 4:20pm, McLeod Hall 459, 238 & 302 **Advisory Committee** 3:30pm – 4:30pm, McLeod Hall 400
Thursday, April 17	
Friday, April 18	**Colloquium** 3:45pm – 5:00pm, McLeod Hall 459 Speaker: M. Gabriela Sava, BGSU ASOR Department Title: Machine learning in the Emergency Department when the class of interest adapts to system congestion

ABSTRACT

Colloquium

Title: Machine learning in the Emergency Department when the class of interest adapts to system congestion

Abstract:
Diabetic screening of Emergency Department (ED)/Urgent Care (UC) patients can proactively improve health outcomes, but it is uneconomic to screen all such patients. Physicians divide patients into three groups: those who should be screened, those who do not require screening, and those who might be screened if resources to do so are available. We present a data-driven analytical approach, using near-time electronic health record data and clinical predictors, that could assist physicians with the yes/no diabetes screening decision. The approach is capable of selecting the most appropriate statistical model as resource availability and the patient's historical frequency of utilization change over time. Our findings show that when testing resources are more constrained, the approach's predictive accuracy is greater for frequent ED/UC users and decreases with patient visit frequency. Conversely, when testing resources are more available, the approach's predictive accuracy decreases as patient visit frequency increases. Overall, the models are much better at identifying patients who do not need screening thus helping to use resources efficiently. For clinical implementation, the proposed data-driven predictive approach would be one component embedded in the ED/UC workflow, capable of personalizing the care path for individuals at-risk for diabetes or who have been diagnosed with diabetes.