UNIVERSITY OF RHODE ISLAND

Department of Mathematics
and Applied Mathematical Sciences

Applied Mathematics and Scientific Computing Seminar

Location: Lippitt Hall 205

Time: Monday, October 16, 2023, 1:00pm

(refreshments at 12:55 p.m.)

Green, Brown, Einstein, and how they merged Differential Equations and Probability

by **Dr. Jonathan Chávez Casillas**

Department of Mathematics and Applied Mathematical Sciences, URI

Abstract: During this talk we will venture into the entrance of what once was a century-long uncharted territory between two major research areas in Mathematics: Partial Differential Equations (PDE) and Probability. This talk will start right off where a standard MTH 243 (Multivariate Calculus) finishes and will build on such foundation trying to connect two worlds that existed by themselves since the early 19th century, although the establishment of a solid bridge between the two of them required the work of many geniuses and 150 years. Previous knowledge in either PDE or Probability is not required, but having a good understanding of MTH 243 and having seen the basic formulas of MTH 451 (Introduction to Probability) would be ideal, but not required if your faith in the speaker is high. Further, if time allows, some connections on how the material from MTH 441 (Introduction to PDEs) and MTH 572 (Numerical PDEs) connects to the talk will be also presented.

Prerequisites: MTH 243 (Multivariate Calculus)