



Jonathan Hauenstein

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Dr. Hauenstein earned his PhD at the University of Notre Dame in 2009. Dr. Hauenstein currently resides as a professor and the associate chair in the Department of Applied and Computational Mathematics and Statistics at the University of Notre Dame. His research areas include applications of numerical algebraic geometry, numerical analysis, partial differential equations and parallel computing.

For more information please see mathstats.uncg.edu/events/computational-mathematics/ or contact Yi Zhang at y_zhang7@uncg.edu



Spring 2020

Helen Barton Lecture Series

Computational Mathematics

Title: Numerical methods for solving polynomial equations

Nonlinear polynomial equations have been solved for several millennia such as those documented on Babylonian clay tablets involving the relationship between perimeter and area of rectangles. The Abel-Ruffini theorem and the development of Galois theory two centuries ago showed that solutions to most systems of polynomial equations could not be expressed in terms of radicals necessitating development of numerical computational methods to approximate solutions. This talk will explore various numerical methods for computing and analyzing solutions to systems of polynomial equations, collectively called numerical algebraic geometry. Some recent results for polynomial systems arising in science and engineering applications along with current computational challenges associated with solving polynomial systems will be discussed.

Wednesday, February 19, 2020
Reception · Petty 116 · 3:30 – 4:00 PM
Lecture · Petty 136 · 4:00 – 5:00 PM