

**Department of Mathematics and Statistics Colloquium**

# **Automated Floating-Point Program Analysis**

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**Abstract:** Floating-point computation is ubiquitous in scientific computing, but rounding error can compromise the results of extended calculations. This talk will provide an overview of various techniques for analyzing floating-point computation, with a focus on techniques that can inform a programmer's decisions about the use of floating-point arithmetic. This work forms the basis of ongoing efforts to develop mixed-precision versions of high-performance scientific programs and increase programmer awareness of mathematical issues during software development.

**Monday, February 9 at 3:45 in Roop 103**  
**refreshments at 3:30**