

Mathematics Department Colloquium

Organizer: Vaughan Jones

Thursday, 4:10–5:00pm, 60 Evans

March 8 **Chris Jones**, UNC-Chapel Hill, MSRI

*Boundary Value Problems for Elliptic PDEs and the Morse Index
Theorem in Multi-Dimensions*

A symplectic view of linearized elliptic problems leads naturally to the formulation of an appropriate Maslov Index. This is well-known in one space dimension and is generalized here to domains in higher space dimensions. The result is a Morse Index type theorem that applies on bounded domains with any prescribed (symplectic) boundary conditions.