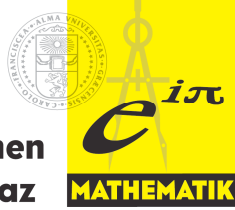


**Institut für Mathematik  
und Wissenschaftliches Rechnen  
Karl-Franzens-Universität Graz**



Prof. Chiu-Yen Kao

Department of Mathematics  
The Ohio State University

## **Shape Optimization on Elliptic Eigenvalue Problems**

Time:

Thursday, 19. March 09, 15:30

Place:

Room SR 11.34

Institute of Mathematics and Scientific Computing  
Heinrichstrasse 36, University of Graz

Abstract:

Identification or optimization of shapes arises in many science and engineering applications. In this talk, we focus on the optimal shape design related to elliptic eigenvalue problems. Specific applications for identifying structures of vibrating systems and photonic crystals, optimization of quality factor of an acoustic resonator, and determining the optimal spatial arrangement of favorable and unfavorable regions for a species to survive will be discussed.

M. Hintermüller