

# The SUMO Speaker Series for Undergraduates

Thursday, May 1

4:15-5:05, Room 380C

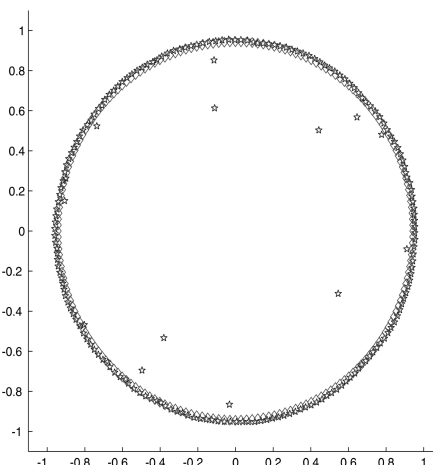
*(Food Provided)*

## Is Every Partial Differential Equation Solvable?

And what does this have to do with large matrices?

**Professor Andras Vasy**

$$J_n = \begin{pmatrix} 0 & 1 & 0 & 0 & \cdots \\ 0 & 0 & 1 & 0 & \cdots \\ \vdots & \vdots & \ddots & & \\ 0 & \cdots & & 0 & 1 \\ 0 & \cdots & & 0 & 0 \end{pmatrix}$$



### Abstract

It was somewhat of a shock in the 1950s Hans Lewy gave an example of a linear PDE with non-singular coefficients which did not have solutions in any neighborhood of any point. I will explain what is behind Lewy's example, and relate it to estimates for inverses of large non-self-adjoint matrices.

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