

# THE ALBERT LEON WHITEMAN MEMORIAL MATHEMATICS LECTURES

April 28 and 29, 2026



Photographed by Rod Searcey

## Ravi Vakil Stanford University

Ravi Vakil, President of the American Mathematical Society, is the Robert Grimmett Professor of Mathematics at Stanford University, where he has been on the faculty since 2001 following postdoctoral appointments at Princeton and MIT. An algebraic geometer with broad and influential contributions spanning enumerative geometry, topology, and classical algebraic geometry, he is known for results such as “Murphy’s Law” and the geometric Littlewood–Richardson rule. His impact extends well beyond research to teaching and service: he is an inaugural AMS Fellow and recipient of the AMS Centennial Fellowship (2001), an Alfred P. Sloan Research Fellowship, an NSF CAREER grant, the Stanford Dean’s Award for Distinguished Teaching (2004–2005), the Abel Prize Science Lecture (2013), and the Chauvenet Prize (2014). He has also contributed to broader mathematical infrastructure as a cofounder of MathOverflow and a founding trustee of Proof School.

## How AI might accelerate mathematics discovery: a realist's guide

Tuesday, April 28, 2026  
Montgomery Ross Fisher (MRF)

Time: 3:00-4:00 pm: Reception – Gabilan Courtyard

Time: 4:00-5:30 pm: LECTURE – MRF 340

**Abstract:** There has been a great deal of exaggeration and sloppy thinking in the public discussion of the impact on AI on mathematics. The most interesting and subtle question is to understand the actual current frontier --- what sorts of problems are on the cusp of becoming tractable, and where should we focus our energies next? Now is the time for rapid experimentation, to better understand the new landscape. I will discuss two such types of experiments --- of seeing how models can be used systematically by mathematicians to accelerate mathematical discovery in new fields, and how and why to formalize mathematics in much more complicated domains than before.



Montgomery Ross Fisher

## Topology from Algebraic Geometry

Wednesday, April 29, 2026  
Kaprielian Hall (KAP)

3:00-3:30 pm: Departmental Tea – KAP 410

3:30-4:30 pm: LECTURE – KAP 414

**Abstract:** One of the magical parts of being a mathematician is seeing how different fields of mathematics are intertwined. Sometimes a surprising fact in one field comes from an insight in another. I will give some examples of the philosophy that when geometry comes from algebra or arithmetic, the topology can be unexpectedly constrained, which lets you prove results by “cutting and pasting”. I will conclude by trying to indicate how Bott periodicity (which I won’t assume you understand) is a fact about algebra, not analysis.

I will discuss work of a number of mathematicians, including Melanie Matchett Wood, Aaron Landesman, Hannah Larson, Jim Bryan, and more. (This talk is intended as a survey for a broad audience.)



Kaprielian Hall