

16TH ANNUAL WOMEN IN MATHEMATICS DAY

# JEAN E. RUBIN MEMORIAL LECTURE

TUESDAY, NOVEMBER 12, 2024 - 3:00 PM MATH 175

Refreshments at 1:45- 2:15 p.m. in the Math Common Room (MATH 304)



## ELLIPTIC CURVES AND ARITHMETIC

### *SUJATHA RAMDORAI*

*Is an algebraic number theorist known for her work on Iwasawa theory. She is a professor of mathematics and Canada Research Chair at University of British Columbia, Canada.*

**Abstract:** The study of Elliptic Curves occur in different areas of Mathematics, and the most striking feature is related to studying Elliptic curves over number fields. This has led to some deep conjectures in Arithmetic, and the Birch-Swinnerton Dyer conjecture is one of them. Iwasawa theory provides the tools as well as the philosophy for positing such a conjecture. This talk will cover these aspects as well the Iwasawa theory of elliptic curves over the cyclotomic and anti-cyclotomic  $Z_p$ -extensions.

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