Department of Mathematics and Statistics
# Indian Institute of Technology Kanpur

In the celebration of 100th birth anniversary of Harish-Chandra

A Short course on
Representations of affine and current Lie algebras
by Prof. Vyjayanthi Chari

Objective

Representation theory of current algebras and affine Kac-Moody algebras plays a significant role in both Mathematics and Physics. The goal of these lectures is to provide an overview of recent developments in the representation theory of current algebras and their connection with the representation theory of affine Lie algebras.
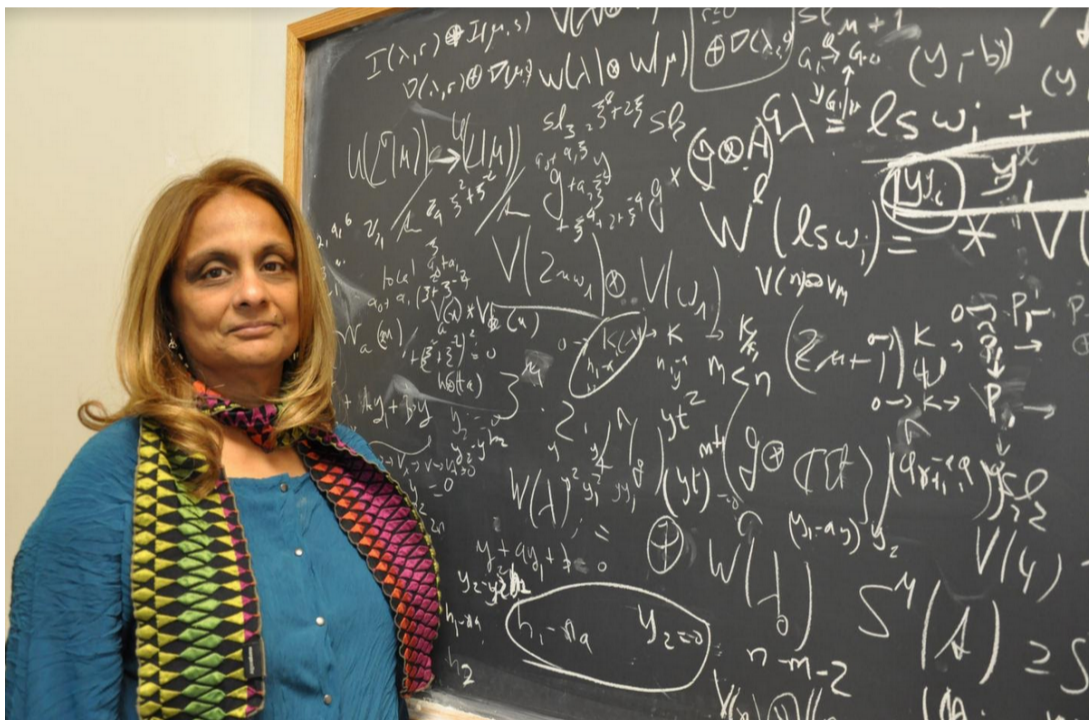
About the Speaker

Prof. Vyjayanthi Chari is a distinguished Professor and F. Burton Jones Endowed Chair at University of California, Riverside USA. She is one of the leading experts in the area of representation theory and quantum algebra. Prof. Chari received her doctoral degree from University of Mumbai in 1988, and joined TIFR Mumbai as a fellow. She moved to University of California, Riverside in 1991. She is a Fellow of the American Mathematical Society and Infosys Visiting Chair Professor at Indian Institute of Science, Bangalore.

Lecture 1

In this lecture, we shall briefly recall the basic definitions, recall some well-known results in the subject, and compare them with other well-known situations in representation theory.

Lecture 2

In this lecture, we shall go into more detail and explain the connections with Demazure modules, character formulae, and Macdonald polynomials.

Lecture 3

In this lecture, we shall discuss a Bernstein-Gelfand-type result in our setting and conclude with a discussion on possible further directions in the subject.

Schedule & Venue

Date: September 18, 19, 20 2023

Time: 11:00 AM - 12:00 PM (IST)

Venue: FB 567, Department of Mathematics & Statistics

Each lecture will be followed by discussion at 4 p.m.