Lecture Series on Spherical Varieties by Prof. Stéphanie Cupit-Foutou

Department of Mathematics and Statistics

Indian Institute of Technology Kanpur

Title:

Geometries and representation theory centered around spherical varieties

Dates: September 19, 26, and 30 2024

October 3, 18 and 24 2024

Time: 11:30 AM (IST)

Venue: FB-567

(Seminar Room, Faculty Building)

Abstract

Spherical varieties form a wide and important class of projective complex manifolds and more generally on algebraic varieties. Spherical varieties are algebraic varieties with high symmetry; they encompass toric varieties, flag varieties and symmetric spaces. The widespread interest in these objects is mainly due to their high interdisciplinary in diverse branches of geometry (algebraic, Kähler, symplectic), representation theory, harmonic analysis and number theory.

I shall start my series of lectures with some basic material on geometric representation theory. Thereafter, I will introduce spherical varieties in great generality and proceed with discussing some nice classes of spherical varieties with the audience.

About the Speaker

Stéphanie Cupit-Foutou is a professor at the Ruhr University of Bochum. She earned her doctorate from the University of Strasbourg under the supervision of Prof. Peter Littlemann, with a thesis on the classification of two-orbit varieties. She works in algebraic and complex analytic geometry, Lie theory, and the theory of spherical varieties.