

# 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.

