

Colloquium

University of Notre Dame
Department of Mathematics

Debraj Chakrabarti - University of Central Michigan

Speaker: Debraj Chakrabarti

University of Central Michigan

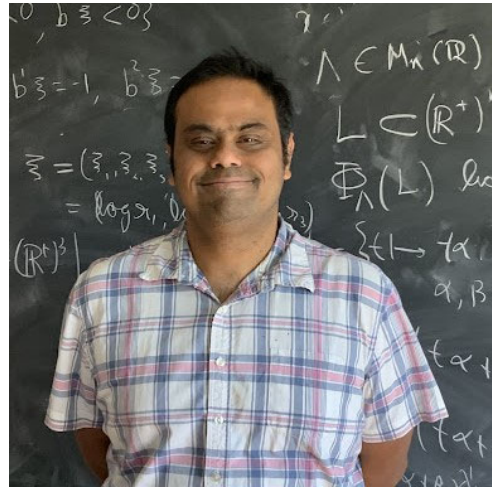
Will give a lecture entitled

Convexity conditions and function theory

Date: Wednesday, May 1, 2024

Time: 4:00 PM

Location: 129 Hayes-Healy Bldg



Departmental Tea: Tea in Room 257 (lounge in Hurley Hall) at 3:30 p.m.

Zoom URL: <https://notredame.zoom.us/j/99986867672?pwd=Z2NJRIZwL0dTR0Nxbk50NEIHK0dNdz09>

Abstract:

Global geometric properties of a space determine what kinds of functions live on it. Complex convexity properties such as pseudoconvexity play a crucial role in the construction and properties of holomorphic functions and other analytic objects, especially in several variables. After introducing classical complex convexity conditions, we discuss partial convexity conditions, which lead to the vanishing of Dolbeault cohomology in specified degrees. At the end, we will introduce some new geometric conditions that allow us to prove the vanishing of Dolbeault cohomology in domains in complex manifolds. This is ongoing joint work with Phil Harrington and Andy Raich of the University of Arkansas.