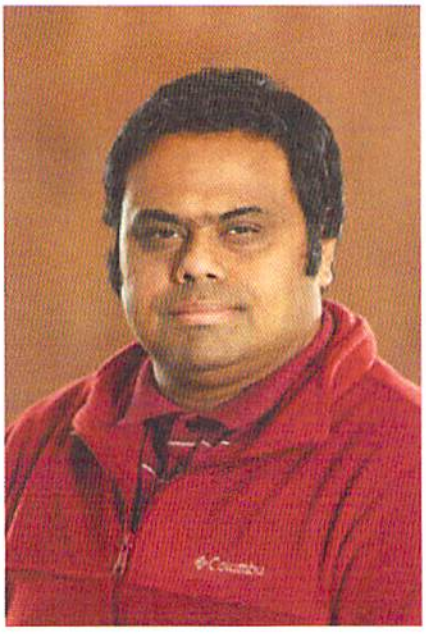
Department of Mathematics
University of Notre Dame

Debraj Chakrabarti - Central Michigan University

PDE, COMPLEX ANALYSIS AND DIFFERENTIAL GEOMETRY SEMINAR



Guest Speaker: Debraj Chakrabarti
Central Michigan University

Date: Tuesday, October 29, 2019
Time: 11:00 AM
Location: 258 Hurley Hall

Lecture Title:
L^p-Bergman spaces on Reinhardt domains

Abstract

We consider the problem of characterizing the dual of the Bergman space $A^p(\Omega)$ of a general Reinhardt domain Ω in $\mathbb{C}^n$. In the case of the unit disc, this problem was solved by Zaharjuta and Iudovic in the 1960's and then generalized to balls, strongly pseudoconvex domains, convex domains of finite type etc. In these cases, it is known that the dual of $A^p(\Omega)$ can be naturally identified with $A^q(\Omega)$, where q is the index conjugate to p. We show that the situation is very different for general Reinhardt domains, and give a few examples where some positive statements can be made. This is joint work with Luke Edholm and Jeff McNeal.