

Analysis Seminar Thursday April 20, 2017

Speaker Andy Raich

Title: *Closed range of the Cauchy-Riemann operator on domains in \mathbb{C}^n*

Abstract: This talk is test run for my plenary address at the Spring Western Sectional AMS Meeting in Pullman, Washington. In this talk, I will discuss solvability of the Cauchy-Riemann, or $\bar{\partial}$, equation on domains in \mathbb{C}^n . I will talk about applications of the $\bar{\partial}$ -problem and the reasons for the differences between solving the equation in one and several variables and the usefulness of working in L^2 (vs. the more classical spaces, e.g., C^∞). Solvability in several variables depends greatly on the geometry of the boundary of the domain, and I will conclude the talk with a discussion of most general geometric conditions that are known to imply solvability in L^2 on $(0, q)$ -forms, and, time permitting, L^2 -Sobolev spaces.