DATE: Tuesday, August 18\textsuperscript{th}, 2009

TIME: 1:30pm

PLACE: Padelford C-36

SPEAKER: Artur Nicolau, Universitat Autnoma de Barcelona

TITLE: Differentiability of Functions in the Zygmund Class

ABSTRACT:

The Zygmund class is a natural substitute for the Lipschitz class in several different settings. The Weierstrass nowhere differentiable functions lie in the Zygmund class and have unbounded divided differences at almost every point. However, N. Makarov has proved that the set of points where a function in the Zygmund class on the real line has bounded divided differences, always has Hausdorff dimension one. The main purpose of the talk is to discuss the situation in higher dimensions.