Analysis Seminar Thursday February 14, 2013

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Title: The failing of exact regularity of the Bergman projector on the worm domain.

Abstract: In a seminal paper [1] D.Barrett proved that the Bergman projector P associated to the worm domain of Diederich-Fornaess does not map the Sobolev space W^k in itself when k is bigger than a certain quantity related to the geometry of the worm, that is the projector P is not exactly regular on the worm domain. I will illustrate some of the ideas that Barrett used to obtain this important result.

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[1]Barrett, David E. *Behavior of the Bergman projection on the Diederich-Fornæss worm.* Acta Math. 168 (1992), no. 1-2, 1–10.