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## OPTIMAL CONTROL AND FULLY NONLINEAR EQUATIONS FOR INTEGRAL DIFFUSIONS

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### **Abstract.**

I will present a unified regularity theory, developed in collaboration with Luis Silvestre, for fractional integral operators (by unified we mean that it reaches the second order case with uniform estimates), that involves the appropriate versions of the Alexandrov, Backelman, Pucci theorem, the Krylov Safanov Harnack inequality and the corresponding regularity of the Hamilton Jacobi Bellman equations.

## ENERGY DISSIPATIVE COLLISIONAL KINETIC MODELS IN CONNECTION TO MULTIPLICATIVELY INTERACTIVE STOCHASTIC PROCESSES

Irene Gamba

University of Texas at Austin,

Department of Mathematics

**Date:** Monday, July 9, 2007

**Time:**

Caffarelli's seminar: 14:00-15:00

Coffee break: 15:00-15:30

Gamba's seminar: 15:30-16:30.

**Place:** IMBM Seminar Room, Bogazici University