TEMPLE UNIVERSITY

Department of Mathematics

Analysis Seminar

Room 617 Wachman Hall

Monday, November 18, 2013, 2:40 p.m.

Density functional theory and Donsker-Varadhan

by Omar Hijab

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At the basis of much of computational chemistry and physics is density functional theory, as initiated by the Hohenberg-Kohn theorem. The theorem states that, when nuclei are fixed, nuclear potentials are determined by one-electron densities. We recast and derive this result within the context of the principal eigenvalue of Markov semigroups.