

APPLIED MATHEMATICS COLLOQUIUM

Date: Wednesday, December 2, 2015

Time: 2:30 – 3:30 p.m.

Location: Middlesex College Room 204

The Entropy Production Paradox

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Abstract:

The diffusion and wave equations are iconic symbols of irreversible and reversible processes (i.e. “not undoable” and “undoable” respectively). These physical properties are reflected in their intrinsic mathematical structures. But what happens if one finds a way to smoothly bridge the gap between these dichotomous extremes? With fractional calculus you can! Many strange things emerge, not the least of which is “the entropy production paradox,” which works contrary to fundamental intuitions.