Ermanno Lanconelli
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will speak on

“Potato Kugel” in Riemannian and Sub-Riemannian Settings

ABSTRACT: In the paper Potato kugel, the authors Aharonov, Shiffer, and Zalcman gave an affirmative answer to the following question: Let $P$ be a solid, homogeneous, compact, connected “potato” in space which gravitationally attracts each point outside of it as its mass were concentrated at a point $x_0$. Must be $P$ a ball centered at $x_0$? As a byproduct of this answer they obtain a harmonic characterization of the Euclidean balls, i.e., the inverse property with respect to the domain of the Gauss Mean Value Theorem for harmonic functions.

In this lecture we describe several extensions of the previous results, both in Riemannian and in sub-Riemannian settings.

Monday, 26 September 2011
Lecture at 4:00 PM
Coffee, tea, and refreshments from 3:30-5:00 PM
Room 617, Wachman Building
Department of Mathematics