BI-CO MATHEMATICS COLLOQUIUM

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"Real Analytic Functions and their Role in Differential Geometry, Mathematical Physics, and Topology"

Monday, September 19, 2016

Talk at 4:00 – Park 338
Tea at 3:30 – Park 355, Math Lounge

Abstract:
We shall review some intriguing but not well-known properties of real analytic functions on Euclidean space due to the Polish mathematician, Stanislaw Lojasiewicz (1926-2002), together their applications to solving certain kinds of ordinary differential equations, called gradient flow equations. We will then discuss extensions of Lojasiewicz's ideas from finite to infinite dimensions, due initially to Leon Simon (1983), subsequently many others, and most recently the speaker and Manos Maridakis. We conclude with a survey of applications to differential geometry, mathematical physics, and topology.

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