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Room 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

# Joint Geometric Analysis Seminar

(Part of MIST program)

## *Parabolic Rectifiability of the Brakke Flow*

*Dr. Myles Workman*  
*National Taiwan Normal University*

### *Abstract*

The goal of this talk is to motivate the study of the Brakke flow as that of a Radon measure over the space-time-Grassmann product, along with the study of its associated weight measure in the space-time product.

First we will discuss how, given a Brakke flow there exists such a canonical space-time-Grassmann measure, and how this measure characterises the flow. Moreover we will show that important geometric properties along the flow, the mean curvature vector, the density, and the tangent map, are all measurable with respect to the canonical space-time weight measure for the flow.

Secondly, we will prove that the support of this space-time weight measure (which can be thought of as the space-time track of the flow), is parabolically rectifiable. An immediate consequence of this is the existence almost everywhere of static planar tangent flows, and the almost everywhere equality of various densities for the flow, i.e. Gausssian density, parabolic density, and the density of time slices.

This is all joint work with Y.T. Liu.

Date: May 27, 2026 (Wednesday)

Time: 10:00am-11:00am

Venue: LSB 222

*All are Welcome*