Analysis Seminar

Title: Brownian Blancmange and Wobbly Integrals

Speaker: Andrew Smith

Date: Tue 21st October 2025 at 3:00PM

Location: E0.32 (beside Pi restaurant)

Abstract: Brownian Blancmange is a set of four continuous but nowhere-differentiable functions with finite non-zero quadratic variation.

The Wobbly Integral is a variant of the Riemann-Stieltjes integral. By weakening Riemann-Stieltjes' convergence criterion, Wobbly Integration extends to Brownian Blancmange, although familiar operations such as integration-by-parts require additional wobble terms. Numerical verification is straightforward.

Wobbly Integrals involving Brownian Blancmange satisfy identities usually associated with Itô's calculus of Brownian motion, but without the use of probabilities in their construction.

https://ucd-ie.zoom.us/j/65956035542

https://ucd-ie.zoom.us/j/65956035542