

SPEAKER:

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TITLE:

Multi-phase free boundary problems for harmonic measure

ABSTRACT:

Harmonic measure is a canonical probability measure associated to any domain in space that is carried by the boundary of the domain. It is now known that there is a strong connection between the analytic regularity of the harmonic measure and the geometric regularity of the boundary of the domain. In this talk, I will describe some new results about the geometry of the singular set in two-phase and multi-phase free boundary problems for harmonic measure on NTA configurations. This is joint work M. Engelstein and T. Toro (two-phase problems) and M. Akman (multi-phase problems).