
MATHAV MURUGAN, The University of British Columbia
Harnack inequalities and conformal walk dimension

Harnack inequalities have proved to be a powerful tool in PDE (regularity estimates), geometry (geometric flows) and probability (heat kernel estimates). The notion of conformal walk dimension clarifies the relationship between elliptic and parabolic Harnack inequalities. I will explain its definition and its universal value. We will also discuss related results on the stability of Harnack inequalities. This talk is based on joint works with Martin Barlow, Zhen-Qing Chen and Naotaka Kajino.