

GENERALIZED SINE FUNCTIONS AND MULTISCALE GEOMETRIC DESCRIPTIONS OF MEASURES

My joint work with Gilad Lerman bridges the gap between some theory quantifying geometric properties of certain measures on \mathbb{R}^n and the computational techniques needed to apply this theory to real world data sets, specifically to solve a data clustering problem known as the *hybrid linear modeling problem*. This talk will give a brief introduction to a specific type of multiscale geometric description, and outline its relation to a high-dimensional analogue of the ordinary sine function called the *polar sine*.

The ideas are very simple and should be accessible to anyone knowing what the words measure, infimum, and integral mean.