

1172-28-3

**Palle Jorgensen\*** (palle-jorgensen@uiowa.edu), 708 Park Rd, 708, Iowa City, IA 52246, and  
**Feng Tian.** *Kernel analysis for fractals.*

The main purpose of the talk is to address certain inverse problems which arise in applications of kernel methods to problems in analysis of fractals and in Discrete and Continuous Dynamical Systems. We stress connections to neighboring areas, e.g., discrete sampling, associated boundaries, and statistical optimization. Problems for the Drury-Arveson kernel are included as illustration. Our other examples and applications include graph networks of resistors, reversible transition processes, boundary theory, and learning models, especially Manifold Learning. (Received June 23, 2021)