

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Jameson Cahill**

(*New Mexico State University*)

报告题目:

**Complete translation invariant
measurements**

邀请人: 许志强 研究员

报告时间: **2019年6月5日 (周三)**

下午 15:30-16:30

报告地点: **数学院南楼七层**

702 教室

Abstract:

In image and audio signal classification, a major problem is to build stable representations that are invariant under rigid motions and, more generally, to small diffeomorphisms. Translation invariant representations of signals in C^n are of particular importance. The existence of such representations is intimately related to classical invariant theory, inverse problems in compressed sensing and deep learning. We construct low dimensional representations of signals that are invariant under finite unitary group actions, as a special case we establish the existence of low-dimensional set of measurements which separates the orbits of any cyclic group action, of which translation is one example. Furthermore our map is Lipschitz with respect to the natural metric on the space of orbits. Our construction is closely related to methods use in phase retrieval, so we will give an overview of these methods.

欢迎大家参加！