XIAMEN UNIVERSITY MALAYSIA
厦門大學馬來西亞分校

Research Talk - XMUM

When do groups recognize coordinates?

April 28, 2025 (Monday), 3:30–4:30 pm Room A4#104

Kyle Gannon

Assistant Professor

Beijing International Center for Mathematical Research

Peking University.

Research interests: Model Theory and beyond.

Speaker Introduction

Dr. Kyle Gannon is a model theorist at the Beijing International Center for Mathematical Research (BICMR) at Peking University. Dr. Kyle Gannon received his PhD at the University of Notre Dame in 2020. He was a Hedrick Assistant Adjunct Professor under the direction of Artem Chernikov at UCLA from 2020-2023. Now, Dr. Kyle Gannon is an assistant professor at BICMR.

Abstract

Suppose that $\mathcal{G}$ is a class of groups and J is an infinite index set. Let $(G_j)j \in J$ be an indexed family of groups from $\mathcal{G}$, possibly with repetitions. Then one can easily construct automorphisms of the product of G_j with $j \in J$ by permuting indices (with isomorphic projections) and considering automorphism of each coordinate individually. However, the natural question then arises: when does every automorphism of the product of G_j with $j \in J$ essentially decompose into the form described above? In general, we are interested in when classes of groups have such property with respect to all (reduced) products. Using model theoretic methods, one can show that certain natural families of groups have such property and that a total characterization is quite complicated. This is joint work with Ilijas Farah and Pierre Touchard.