

# Topology, Arithmetic, & Dynamics Seminar

Families of Unitary Representations and Kazhdan's  
Property (T)

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Associated to each finite-dimensional unitary representation of a discrete group  $G$ , one has an associated bundle over the classifying space  $BG$ , and continuous families of representations produce families of bundles.

In this talk, I'll discuss the following basic question about this construction: if the representations in a (connected) family are all isomorphic to one another, is the associated family of bundles completely determined by the isomorphism class of the representation? After explaining some cases in which this question can be settled in the affirmative by elementary means, I'll explain some progress on the question for property (T) groups. Surprisingly, these results rely on the multiplicative structure of infinite loop spaces built from representation spaces.

Date: **Friday, February 10, 2017**

Time: **2:30-3:20 pm**

Place: **4106 Exploratory Hall**

For special accommodations, please contact Sean Lawton via email at [slawton3@gmu.edu](mailto:slawton3@gmu.edu).