

Einladung

Würzburger Mathematisches Kolloquium

Julius-Maximilians-Universität Würzburg • Institut für Mathematik

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in diesem Semester Giovanni-Prodi-Gastprofessor

Amenability: from Groups to Operator Algebras

Dienstag, 25. April 2023 • 14:15 Uhr

Seminarraum SE41 • Forschungsbau (Emil-Fischer-Straße 41, 97074 Würzburg)

Der Vortrag wird auch Zoom-Meeting übertragen: go.uni-wue.de/ifmcolloquium-zoom

Abstract. In this talk we are going to give an overview of amenability when applied to groups and their actions on operator algebras.

Amenability of groups has its origin in the works of John von Neumann and relation to the Banach Tarski Paradox, stating that the sphere can be divided into pieces and reassembled together (via rotations and translations) to form other two identical spheres. This works because the group $SO(3)$ contains a copy of the free group on two generators, and this has a paradoxal decomposition, leading to non-amenability. Indeed, amenable groups are exactly those that do not admit paradoxal decompositions.

There are many different ways to characterize amenability of groups. The most basic description (which is the original definition of von Neumann) is in terms of invariant measures: a group is amenable if and only if admits a finitely additive measure that is invariant under translations.

Amenability can also be viewed as an approximation property, and can be extended to several other contexts, like operator algebras, where it is usually also called nuclearity.

In this lecture we are going to explain how to extend the notion of amenability to incorporate actions of groups on operator algebras. As for groups, there are several different characterizations of amenable actions, and we intend to explain some of these and how it relates to nuclearity of operator algebras.



<https://www.mathematik.uni-wuerzburg.de/de/aktuelles/kolloquium>



Alle sind herzlich eingeladen.

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