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FAKULTÄT FÜR MATHEMATIK  
Dekan Univ.-Prof. Dr. Christian Krattenthaler

Einladung zur öffentlichen Defensio von

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Thema der Dissertation:

**New residually amenable groups, permanence  
properties, and metric approximations**

Abstract:

Residually amenable groups arise as a common generalisation of amenable and residually finite groups. These two classes of groups are deeply rooted in modern group theory and connect it with many other branches of mathematics. Recently, residually amenable groups attracted considerable attention for their relation to soficity, a notion introduced in 1999 by Gromov to tackle Gottschalk's surjunctivity conjecture in dynamical systems.

In my thesis I embarked on a systematic study of residual amenability, on the one hand focusing on the structural properties of the class of residually amenable groups, and on the other analysing a quantitative description of residual amenability and studying its connection with soficity. I will give an overview of my results, focusing on each of the above-mentioned directions of research for residual amenability, and from these results several interesting examples of groups that are (or are not) residually amenable will be constructed.

Prüfungssenat:

Univ.-Prof. Dr. Josef Hofbauer (Vorsitz)  
(Universität Wien)

Univ.-Prof. Goulmira Arzhantseva, PhD  
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Prof. Dr. Tullio Ceccherini-Silberstein  
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(Universität Lancaster, GB)

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