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FAKULTÄT FÜR MATHEMATIK  
Dekan:  
Univ.-Prof. Dr. Harald Rindler

Einladung zur öffentlichen Defensio von

**Mag. Giorgio Laguzzi**

Thema der Dissertation:

## **Arboreal Forcing Notions and Regularity Properties of the Real Line**

Abstract:

The paper is centered around the study of regularity properties of the real line. The notion of regularity is presented in a rather general way, using arboreal forcings. In particular, we focus on questions concerning the separation of different regularity properties. More precisely, in some cases, given  $\mathbb{P}; \mathbb{Q}$  arboreal forcings, we construct a model where all sets of reals are  $\mathbb{P}$ -measurable and a non- $\mathbb{Q}$ -measurable set exists. A similar work is done for statements concerning the 2nd level of projective hierarchy. Finally, we also deal with questions about measure and category for the generalized Cantor space  $2^K$ , for  $K$  uncountable. In particular, we introduce a new notion of measure on such a space, which allows us to define the corresponding notion of measurability and the related uncountable random forcing.

Prüfungssenat:

Univ. Prof. Dr. Andreas Čap (Vorsitz)  
(Universität Wien)

o. Univ. Prof. Dr. Sy-David Friedman  
(Universität Wien)

ao. Univ. Prof. Dr. Martin Goldstern  
(Technische Universität Wien)

Prof. Dr. Alessandro Andretta  
(Università di Torino)

**Zeit:** Montag, 04. Juni 2012, 9:00 Uhr

**Ort:** Kurt Gödel Research Center for Mathematical Logic, Währinger Strasse 25, A-1090 Wien, Seminarraum (O2.101)