



**KURT GÖDEL RESEARCH CENTER FOR  
MATHEMATICAL LOGIC**

UNIVERSITÄT WIEN

1090 WIEN, WÄHRINGER STRASSE 25

**O.UNIV.-PROF. DR. SY-DAVID FRIEDMAN**



INVITATION

**BARNABÁS FARKAS  
(KGRC)**

**TOWERS IN BOREL FILTERS**

Abstract:

In a joint work with J. Brendle and J. Verner we studied which ultrafilters and which Borel filters can contain a tower, that is, a  $\subseteq^*$ -decreasing sequence in the filter without a pseudointersection in  $[\omega]^\omega$ .

First, I will give a short survey on the following result: The statement “every ultrafilter contains a tower” is independent from ZFC.

Then my talk will be focused mainly on Borel filters and on some selected results concerning possible logical implications between (i) the existence of towers in certain classical Borel filters, (ii) inequalities between cardinal invariants of these filters, and (iii) the existence of a peculiar object, a large  $\mathcal{F}$ -Luzin set, that is, a family  $\mathcal{X} \subseteq [\omega]^\omega$  of cardinality  $\geq \omega_2$  such that  $\{X \in \mathcal{X} : X \not\subseteq^* F\}$  is countable(!) for every  $F \in \mathcal{F}$  (where  $\mathcal{F}$  is a filter).

**THURSDAY, NOVEMBER 19, 2015**

Tea at 3:30 p.m. in the meeting room (room 104)

Talk at 4:00 p.m. in the seminar room (room 101)

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