



KURT GÖDEL RESEARCH CENTER FOR
MATHEMATICAL LOGIC

UNIVERSITÄT WIEN

1090 WIEN, WÄHRINGER STRASSE 25

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



INVITATION

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THE TREE PROPERTY AND THE CONTINUUM FUNCTION
BELOW \aleph_ω

Abstract:

We say that a regular cardinal $\kappa \geq \omega$ has the tree property if there are no κ -Aronszajn trees. It is known that if $2^\omega = \omega_1$, there are ω_2 -Aronszajn trees; thus the tree property at ω_2 implies the negation of CH (and analogously for larger cardinals). All the usual forcings for the tree property at ω_2 , such as the Mitchell forcing or the Sacks forcing, give $2^\omega = \omega_2$. We show that the “gap two” is no consequence of the tree property: indeed, we show that – starting with infinitely many weakly compact cardinals – the tree property can hold at every even cardinal below \aleph_ω and the continuum function below \aleph_ω can be arbitrary (such that $2^{\omega_{2n}} \geq \omega_{2n+2}, n < \omega$). We prove a similar result for the weak tree property as well (κ has the weak tree property if there are no special κ -Aronszajn trees).

This work is joint with S. Stejskalova.

THURSDAY, APRIL 7, 2016

Tea at 3:30pm in the KGRC meeting room (room 104)

Talk at 4:00pm in the KGRC lecture room (room 101)

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