KURT GÖDEL RESEARCH CENTER FOR MATHEMATICAL LOGIC

UNIVERSITÄT WIEN

1090 WIEN, WÄHRINGER STRASSE 25

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INVITATION

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RADO'S CONJECTURE, AN ALTERNATIVE TO FORCING AXIOMS?

Abstract:

Rado's Conjecture (RC) in the formulation of Todorcevic is the statement that every tree T that is not decomposable into countably many antichains contains a subtree of cardinality $\aleph_1$ with the same property. Todorcevic has shown the consistency of this statement relative to the consistency of the existence of a strongly compact cardinal.

Todorcevic also showed that RC implies the Singular Cardinal Hypothesis, a strong form of Chang's Conjecture, the continuum is at most $\aleph_2$, the negation of $\square(\theta)$ for every regular $\theta \geq \omega_2$, etc. These implications are very similar to the ones obtained from traditional forcing axioms such as MM or PFA. However, RC is incompatible even with $MA(\aleph_1)$.

In this talk we will take the opportunity to give an overview of our results with different coauthors obtained in the last few years together with recent ones, involving RC, certain weak square principles and instances of tree properties. These new implications seem to continue suggesting that RC is a good alternative to forcing axioms. We will discuss to which extent this may hold true and where we can find some limitations. We will end the talk with some open problems and possible new directions.

THURSDAY, MAY 4, 2017
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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