



KURT GÖDEL RESEARCH CENTER FOR
MATHEMATICAL LOGIC

UNIVERSITÄT WIEN

1090 WIEN, WÄHRINGER STRASSE 25

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



INVITATION

MICHAL GARLÍK
(Czech Academy of Sciences)

BOUNDED ARITHMETIC AND RESTRICTED REDUCED
PRODUCTS

Abstract:

We present a construction of models of bounded arithmetic that yields nonelementary extensions but does not introduce new lengths. The construction has the form of a restricted reduced product. As an application we show that under the assumption of the existence of a one-way permutation g hard against polynomial-size circuits, two similar-looking bounded arithmetic theories, $strictR_2^1(g)$ and $R_2^1(g)$, are in fact distinct. In particular, if such a permutation is definable by a term in the language of R_2^1 , then $strictR_2^1$ is weaker than R_2^1 . We discuss some strengthenings of this result.

THURSDAY, JANUARY 26, 2017

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

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

GÖDEL RESEARCH CENTER

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