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Kolloquium Logik und Sprachtheorie
Dr. Reinhard Kahle

Tübingen, den 3. Januar 2000

Vortragsankündigung

Prof. Janos Makowsky

Haifa / Zürich

Finding zeros of multivariate polynomials*

Zeit: Dienstag, den 11. Januar 2000, 18 c.t.

Ort: Sand 13, Raum 107.

Abstract:

In this talk we study questions related to polynomials over the reals $\mathbb{R}$. These questions are important in computational geometry but found also applications in geometrical constraint databases. We are looking for combinatorial properties of the tuples of indices of the variables which appear as non-vanishing monomials. We suggest that if this is considered as a hypergraph, then its tree width allows us to solve many questions about the polynomials in polynomial time or, equivalently, that the tree width k makes it parametrically tractable. Allthough both the problem and its solution do not mention logic, our analysis relies on the fact that many of these problems are expressible in Meta-finite Monadic Second Order Logic.

(Joint work with K. Meer, RWTH Aachen)

`http://www-ls.informatik.uni-tuebingen.de/logik/Kolloquium/index.html`

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[*] Der Vortrag ist auf deutsch.