Department of Computer Science
Research Focus
„Intelligent Formal Systems"

TECHNISCHE
UNIVERSITÄT
DRESDEN

Colloquium

Within the seminar of the Research Focus, the Ph.D. programme „Specification of discrete processes and systems of processes by operational models and logics" presents a talk by

Prof. Dragan Masulovic
University of Novi Sad

about

Clones and Dualities'"

Abstract:

General duality theory is capable of describing various well-known dualities (for example Stone's and Priestley's, among others) between categories of algebras and topological structures. The classes of algebras under consideration are quasi-varieties generated by some finite algebra P (the class of algebras embeddable into powers of P). By this theory, not every quasi-variety admits a natural duality. Therefore, to leverage the power of duality, we need to characterize those finitely generated quasi-varieties that admit a natural duality. Is this characterization possible? Is it decidable for a finite algebra P whether the quasi-variety generated by P admits a natural duality? This second question is known as the natural duality problem.

In this talk we shall review some recent results (due to M. Maroti) that try to prove that the problem is decidable. The divide-and-conquer approach using Rosenberg's characterization of maximal clones is the key tool. It turns out that in three of the six classes of maximal clones the problem is decidable.

Date: June 8th, 2004
Place and time: Hörsaalzentrum 401, 1.15 pm

All interested persons are invited to attend!

Prof. Dr.-Ing. habil. Heiko Vogler