Department of Computer Science
Research Focus
„Intelligent Formal Systems“

TECHNISCHE
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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

“Categorical Logic and Invariants of Computations”

Abstract: Hoare logic is a standard formal tool to reason about behaviour of programs. Other types of systems require specialised logics such as Hennesy-Milner logic suitable for reasoning about labelled transition systems. Many other logics that mimic the Hennesy-Milner logic have been proposed and thoroughly investigated. However, all such logics are tailored to a specific type of systems. In this talk we would like to propose a very abstract way to reason about a large class of computation models which includes but is not limited to labelled transition systems and Turing machines. We shall propose a fibration over the category of computation models the structure of which will produce a logic suitable for expressing invariant properties of systems in the category. We shall show that a certain subcategory of well-behaved systems has the pleasant property that each system is uniquely determied by its invariants.

Date:	November 30th, 2004
Place and time:	Department of Computer Science, Room: 151, 1.15 pm

All interested persons are invited to attend!

Prof. Dr.-Ing. habil. Heiko Vogler