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

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about

"Neural Symbolic Integration—Constructive Approaches"

Abstract: The field of neural-symbolic integration has received much attention recently. While with propositional paradigms, the integration of symbolic knowledge with connectionist systems (also called artificial neural networks) has already resulted in applicable systems, the theoretical foundations for the first-order case are currently being laid and first perspectives for real implementations are emerging. Two important components of the neural-symbolic learning cycle are representation, i.e. encoding symbolic knowledge into connectionist systems, and training, i.e. adjusting these connectionist systems according to information observed in other ways. These components are the focus of this thesis. Extending previous results, a practically feasible way is presented to approximate and embed the semantic operator of covered logic programs in a real-valued domain, and connectionist architectures suitable for representing this particular form of symbolic knowledge are developed and evaluated along with appropriate training methods.

Date:	31.01.2006
Place and time:	Hans-Grundig-Str., Room: GRU 151, 1.15 pm

All interested persons are invited to attend!

Prof. Dr.-Ing. habil. Heiko Vogler