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. Johan van Benthem
Institute for Logic, Language and Computation (ILLC)
University of Amsterdam
The Netherlands

about

"Logic meets Game Theory: On the dynamic-epistemic fine-structure of strategic equilibria"

Abstract: Logic and game theory have many natural points of contact in contemporary research. In particular, epistemic logics of knowledge have been used to analyze rationality of players, 'locking' them into Nash equilibria or other solution concepts. This talk focuses on game-theoretic solution procedures as such, and shows how to analyze them in a dynamic-epistemic logic of communicative action. Solving games then becomes like solving epistemic puzzles like 'Muddy Children'. As we will see, the more general technical background for these procedures lies in some recent fixed-point logics of computation.

References

[1] Johan van Benthem. Logic and games. Lecture Notes, available online: `http://staff.science.uva.nl/Teaching/`, 1999–2004.

[2] Johan van Benthem. Games in dynamic epistemic logic. In G. Bonanno and W. van der Hoek, editors, *Proceedings LOFT-4, Torino*, volume 53 of *Bulletin of Economic Research*, 2001.

[3] Johan van Benthem. Rational dynamics and epistemic logic in games. Technical Report PP-2002-26, ILLC Amsterdam, 2002. Invited lecture, "Logic, Games & Social Choice", University of Siena 2003.

Date:	12.10.2004
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