Calculemus Autumn School

Trip Report

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Objectives and School Aims

- **Bring together experts from the research field of Computer Algebra and Deduction Systems.**
- **Give young researchers a perspective on the state-of-the-art in symbolic computation and symbolic reasoning**
- **Disseminate advanced scientific knowledge on the integration of computer algebra systems and deduction systems**
- **Foster contacts between the research communities of computer algebra, deduction, maths education, and industry**
- **Train participants both theoretically as well as experimentally on selected topics and tools**

Presentations

Deduction	
Introduction	Siekmann/Benzmüller
Partiality in Deduction	Manfred Kerber
Proof Planning (λClam, XBarnacle)	Alan Bundy
Type Theory (Coq)	Herman Geuvers
Inka/VSE	Hutter/Stephan
Nuprl	Christoph Kreitz
Isabelle	Tobias Nipkow
Mizar	Bylinski (Trybulec)

Computer Algebra	
Overview	Jacques Calmet
Theory Exploration	Buchberger
Theorema	Wolfgang Windsteiger
Systems of Polynomials	James Davenport

Others	
Learning Environments	
(ActiveMath)	Erica Melis

Integration	
Decision Procedures $\mapsto$ Deduction Systems	Alessandro Armando
Proof $\leftrightarrow$ Group Theory (Gap)	Arjeh Cohen
Formal Methods $\leftrightarrow$ Modelchecking (NuSMV)	Fausto Giunchiglia
Maple $\longleftarrow$ PVS	Tom Kelsey
OpenMath	Olga Caprotti
MathWeb, MBase, and OMDoc	Michael Kohlhase
Omega	Volker Sorge/Andreas Meier