



Systems for Integrated Computation and Deduction

The CALCULEMUS IHP Training Network
HPRN-CT-2000-00102

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USAAR Node Report



- Scientific Topics
- Networking
- Training
- Researchers In and Out

Scientific Topics



- Task 1.1/2.3 **Proof Planning** (in Ω MEGA) and the **Agent-based suggestion mechanism** Ω ANTS to integrate Computations into Deduction Systems
 - Task 1.1 **Mathematical representation** in Formal Systems
- Task 1.2/3.4 MathWeb and MathWeb-SB as a means for the **integration of mathematical service systems at the system layer**
- Task 3.1 OMDoc and MBase as a means for the **formalization, communication and maintenance of mathematical documents**
- Task 3.2 Support of **formal methods** approaches by networks of mathematical service systems; investigation of **potential industrial-strength applications**
- Task 3.3/3.5 Different **case studies**; applications in **maths education** (ACTIVE-MATH, DIALOG)

Networking: System Devel.



- MathWeb-SB (see also talk of Jürgen Zimmer)
 - installed at:
USAAR, UBIR, UGE, UED, CMU, . . . , *Warwick, London*
 - integrates:
 - > 20 heterogeneous mathematical service systems
- the Ω MEGA proof planner is employed at
USAAR and UBIR
joint work with UED and TUE
- OMDOC and MBASE meanwhile employed in various systems
joint work with UWB

Networking and Training



General Activities

- Coordination of Network
- Organisation of Calculemus Autumn School (jointly with UKA)
- Midterm Review Meeting, general Organisation and Coordination

Training Activities

- Training by courses, talks and individual supervision
- DFKI and its industrial partners for training
- organisation/participation in special tutorials and workshops:
CIAO, CALCULEMUS-Monet, Ω MEGA-THEOREMA, Ω MEGA-UBIR
- involvement in internships of
 - Corrado Giromini and Jürgen Zimmer (organised by UED)
 - Andreas Meier

USAAR In and Out



In

from

- Andrew Adams Reading, UK
- Corrado Giromini UGE, I
- Pasquale de Lucia UGE, I
- Markus Moschner Vienna, A
- Silvio Ranise UGE& Nancy
- (Simon Colton) UED
- (Mateja Jamnik) UBIR

Out

to

- Jürgen Zimmer UGE, UED
- Martin Pollet UBIR
- Andreas Meier UBIR
- (Malte Hübner) UED
- (Myself) UBIR, UED