

## **Prof. Kai-Uwe Kuehnberger**

Prof. Kai-Uwe Kuehnberger held a SICSA Distinguished Visitor fellowship in October, 2009. The purposes of the SICSA visiting fellowship were

(a) educational (lectures to students and academics); and (b) academic (establish links between SICSA universities and the Institute of Cognitive Science University of Osnabrück). The visit was highly successful, and achieved the following:

### (i) Activities in St Andrews:

The SICSA visitor gave a School Colloquium talk "Aspects of Adaptivity and Learning in Cognitive Architectures" (October 13th, 2009) open to students and staff.

There were many discussions with members of Computational Logic Group in St Andrews: especially: Dr Roy Dyckhoff and Dr Ekaterina Komendantskaya.

The collaboration will continue with Dr Komendantskaya's visit to Osnabrueck in April 2010.

### (ii) Activities in Glasgow:

Talk "Retrieving and Adapting Semantic Information from Heterogeneous (Textual) Data"; Seminar of the Information Retrieval Group, University of Glasgow (October 12th, 2009) Many discussions with researchers of the IR Group in Glasgow: Prof. Mounia Lalmas, Prof. Keith van Rijsbergen, Dr. Ingo Frommholz, Dr. Benjamin Piwowarski etc.

### (iii) Activities in Edinburgh:

Talk "Cognitively Inspired Approaches for Hard Problems in Artificial Intelligence"; CISA Seminar, School of Informatics, University of Edinburgh (October 21st, 2009).

Several discussions with many researchers of the School of Informatics: Prof. Alan Bundy, Prof. Mark Steedman, Prof. emeritus Rod Burstall, Dr. Markus Guhe, Dr. Alison Pease, Dr. Alan Smaill etc.

(iv) Attendance and participation in talks, presentations, and informal discussions in all universities, e.g. attendance of Pieter Seuren's talk on "From Logical Intuitions to Natural Logic" in Edinburgh (October 15th, 2009), Stephen Read's philosophy seminar in St Andrews, many informal discussions during lunch time etc.

### (v) Useful links established and activities initiated by the visit (results):

Collaboration with the Center for Intelligent Systems and their Applications (Edinburgh) resulting in the submitted paper "Mathematical Reasoning with Higher-Order Anti-Unification" (Guhe, Pease, Smaill, Schmidt, Gust, Kuehnberger, Krumnack) for CogSci'10 in Portland, Oregon (currently under review). Furthermore, we are currently writing an extended version of this paper for a journal publication. The two groups established in the meantime weekly Skype conversations and are trying to apply for joint research projects in the nearer future. The first step into this direction will be an application for the funding of workshops (currently in preparation).

The visit made it possible to initiate the writing of an invited full-length survey article by Mark Steedman (Edinburgh) for the Elsevier Journal Cognitive Systems Research (Kuehnberger is the survey editor of this journal). It is expected that the paper will be finished 2010.

The Osnabrueck group intends to integrate ideas from geometric models similar to the ones developed by van Rijsbergen (Glasgow) for their analogy engine in the future.