Report on visit of Prof Peter Kemper, SICSA Distinguished Fellow

Peter Kemper visited from 15th - 30th March 2010. He was based in the Informatics Forum but also visited the University of Strathclyde and the Centre for Systems Biology at Edinburgh and had discussions with a variety of researchers about his Traviando tool.Traviando is a suite of tools and techniques for analysing and abstracting the traces produced by stochastic simulation models. It has many valuable applications in debugging and interpreting the results from simulation models. One license for the tool is now held by the LFCS within the School of Informatics at Edinburgh. This has been generously donated by Prof Kemper at no charge.

During his visit Prof Kemper primarily interacted with members of the PEPA group in Edinburgh, working on an integration of the Traviando tool and the Bio-PEPA Eclipse Plug-in. This provides a novel set of analysis techniques to Bio-PEPA models, and allows Traviando to be applied to system biology models in a straightforward way, something which was not previously possible. During the visit Prof Kemper was able to provide guidance on the implementation of the interface between the two tools. Moreover discussions with Prof Kemper lead to the development of a novel analysis approach, based on invariant detection being developed for Bio-PEPA. Both these strands of work went extremely well. One paper, based on the link between the two tools, and showing the enhanced analysis capabilities that it brings, is already in preparation and will be submitted shortly. A second paper, on the novel analysis technique require more theoretical development but should result in a submission later in the year.

Additionally Prof Kemper gave two talks during his short visit. One was the invited talk at a SICSA workshop organised by the Modelling and Abstraction theme on Probabilistic Modelling, Model Checking and Planning on 17th March. This event was attended by approximately 20 researchers from five universities. In particular, this workshop gave Prof Kemper an opportunity for discussions with Gethin Norman, who is a recent SICSA appointment at the University of Glasgow. They have a shared interest in model checking, although through quite different techniques. Dr Norman was very interested in the work presented in the talk and further interaction with Prof Kemper is planned for the future. The second talk was a seminar at the University of Edinburgh on 19th March which was also widely advertised within Informatics at Edinburgh and SICSA.

Prof Kemper also has an interest in mobile applications being used as a vehicle to teach undergraduates about the realities of software development. He was able to take advantage of local experience in the School of Informatics in mobile application development, and undergraduate courses in software development, and had several meetings with colleagues in Informatics to discuss these issues.