Third Workshop on Automated Reasoning: Bridging the Gap between Theory and Practice

University of Sussex, Brighton

Monday 1st April

9.45 Welcome
Invited talk: **Jean-Francois Puget** (ILOG)
"Constraint Programming as a tool for Automated Reasoning"

11.00 tea/coffee

11.30 Panel: "Bridging the gap between Industry, Academia, and Government"
Chaired by **Chris Preist** (Hewlett-Packard Labs)

1.00 Lunch

2.30 Demonstration of automated reasoning systems
Helen Lowe (Napier University), **Andreas Schöter** (Edinburgh University), **Michael Schroeder** (Universidade Nova de Lisboa)

3.30 tea/coffee

4.00 Panel: "Implementing Temporal Reasoning"
Chaired by **Michael Fisher** (Manchester Metropolitan University)

5.30 Close of first day.

AISB-members may wish to note that the Annual General Meeting of the society will be held in room C133 at 6pm.

Tuesday 2nd April

9.30 Invited talk: **Howard Barringer** (Manchester University)

10.45 Poster session (continues over coffee until 11.30)
Helen Lowe (Napier University), **Silvio Ranise** (University of Genoa), **Marco Roveri** (University of Genoa), **Emmanuel Zarpas** (ENST, Paris)

11.00 tea/coffee

11.30 Panel: "Usability of Automated Reasoning Systems"
Chaired by **Helen Lowe** (Napier University)

1.00 Lunch

2.00 Open Forum
Chaired by **Ian Gent** (Strathclyde University)

3.30 Close.

Discussion Sessions

Bridging the Gap between Industry, Academia, and Government

Chaired by **Chris Preist** (Hewlett-Packard Labs) with panel members **Alan Bundy** (Edinburgh University), **Chris Price** (University of Wales, Aberystwyth) and **Jean-Francois Puget** (ILOG)

Academia, industry and governmental organisations have different needs from research, and different criteria as to what successful research is. Because of this, engaging in joint ventures which bridge this gap is not easy, and requires careful maqnagement if the expectations of the different parties are to be met.

In this panel, the members will give some thoughts on how to carry out such collaborative research projects, based on their experiences. We will look at the different expectations and needs of different kinds of organisation, the pitfalls that these can lead to, and possible ways to avoid or overcome such problems.

Implementing Temporal Reasoning

Chaired by **Michael Fisher** (Manchester Metropolitan University) with panel members **Clare Dixon** (Manchester Metropolitan University), **Rob Johnson** (Manchester Metropolitan University), **Fabio Massacci** (Cambridge University), and **André Trudel** (Acadia University)

Temporal logics play an increasingly important role not only in the specification and verification of concurrent and distributed systems, but also in knowledge representation and declarative programming, particularly within artificial intelligence. However, the temporal logics commonly used are inherently complex, ensuring that temporal reasoning systems are frequently expensive in terms of both time and space. Consequently, much current research is involved with refining temporal reasoning mechanisms in order to avoid this expense in all but the worst cases. This panel is concerned with not only these refined methods, but also with a discussion relating to improved temporal logics that admit relatively efficient proof without drastically reducing their applicability.

Usability of Automated Reasoning Systems

Chaired by **Helen Lowe** (Napier University) with panel members **Stuart Aitken** (Glasgow University), **Nick Merriam** (York University) and **Judith Underwood** (Edinburgh University)

For automated reasoning systems to be useful in practice, they must of course be *usable*. This panel will address the question of how usable systems are currently, and how we can make them more so. Issues to be addressed include: the capabilities of present AR systems to actually do the things people want; the orientation problem in semi-automated systems; and the prospects of usable formal methods tools in our lifetimes.

Open Forum

Chaired by **Ian Gent** (Strathclyde University)

Other panel sessions at this workshop have taken a top down approach to stimulating a discussion, starting with a subject to provide a focus. This session provides a forum for bottom up discussion stimulated simply by what participants want to talk about. This might be further discussion of any points raised at the workshop, of points not otherwise raised at the workshop, or general discussion. To wind up the session we will discuss the success or otherwise of this workshop and plans for future workshops.

Workshop participants are encouraged to contact the session chair to suggest topics for discussion, especially general issues of concern to them that will not otherwise be discussed at the workshop.