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Argumentation in AI

Monday afternoon, 16th August, 2010, Room 6.1.36

Argumentation has become a core study in AI with applications found in areas such as practical reasoning, negotiation in multiagent systems, non-monotonic logics, etc. A significant focus of research over the last decade has concentrated on computational questions such as formal representations for argumentation settings, proposals aimed at defining concepts of collection of acceptable arguments together with associated algorithmic issues. A common basis found in much of this work being the concept of abstract argumentation frameworks (AFs).

This tutorial has three main aims:
- To provide a basic introduction to argumentation in AI, including traditional application domains.
- Focusing on abstract argumentation frameworks, to review the established properties and concepts of interest within these.
- To offer a detailed overview of recent work that builds on abstract argumentation frameworks, which will include discussion of recent novel proposals for argumentation semantics, together with the development of approaches to "preferences between arguments" and the nature of argument interactions. Short bio

Paul Dunne is a professor of Computer Science at the University of Liverpool where he has been a member of the Dept. of Computer Science since 1985. His current research focuses on algorithmic and complexity aspects of argumentation with particular reference to semantics and developments of Dung's abstract argumentation frameworks, a field in which he has published extensively over the last decade.