

Invited Keynote Talk:

Just in Case - Reflective Case Based Reasoning

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Abstract

Long-lived Case-Based Reasoning systems in particular may need to respond to task and environmental changes by updating their own reasoning processes, as well as domain knowledge. To do so requires reflective reasoning, that is, meta-reasoning by a case-based system about its own internal reasoning mechanisms. As part of this process, case-based reasoner maintenance has long been recognized in research in practice as a major issue, and has most often been embodied in maintaining the case-base as a knowledge container, or case-base maintenance. Some researchers have studied maintenance within other individual knowledge containers (e.g., for similarity or adaptation knowledge). Comparatively little research, however, has studied the larger, holistic picture of how different knowledge containers interact over a system's life cycle as part of the overall reasoning and maintenance processes. And as we progress in the age of "Big Data," the context for many of these issues has altered significantly. This presentation will present new perspectives and challenges in reflective Case-Based Reasoning.

Short Bio

Dr. David Wilson is an Associate Professor in the Department of Software and Information Systems at The University of North Carolina at Charlotte. His research centers on the development of intelligent software systems to bridge the gaps between human information needs and the computational resources available to meet them. It involves the coordination of intelligent systems techniques (Case-Based Reasoning, Machine Learning, etc.) with geographic, multimedia, database, internet, and communications systems in order to elicit, enhance, apply, and present relevant task-based knowledge. Dr. Wilson has ongoing research projects in Health Informatics, Meta-Reasoning, Creativity Support, Semantics for Geographic Information, Recommender System Robustness, and Group Based Recommendation.