

1999 Bar Ilan Symposium on the Foundations of Artificial Intelligence

Martin Charles Golumbic

The Sixth Bar Ilan Symposium on the Foundations of Artificial Intelligence (BISFAI-99) was held on 23 to 25 June 1999 in Ramat Gan, Israel. This year's theme was bridging theory and practice: theory-based practical implementations and commercial applications. In keeping with this theme, part of the symposium focused on demonstrations of unique and innovative AI applications. There were 24 half-hour contributed talks and the following four 1-hour invited lectures:

Reid Simmons (Carnegie Mellon University) presented "Creating Reliable Autonomous Systems," which featured monitoring and error recovery and formal verification techniques for intelligent systems. The use of these techniques was illustrated with examples from XAVIER, an indoor mobile robot, and the National Aeronautic and Space Administration's recently completed remote-agent experiment on the DS1 spacecraft.

Leo Joskowicz (Hebrew University) presented "Finding and Correcting Bugs in Mechanical Designs," which presented an overview of a new method for analyzing mechanical systems, identifying the three main types of bugs (kinematic, dynamic, and tolerancing) and describing new algorithms for computation and visualization. The approach was illustrated on the gearshift mechanism of an automatic car transmission.

"Trading Semantic Transparency for Behavioral Robustness in Robotic Agents" was the title of the invited lecture by Stanley J. Rosenschein (Stanford University), which was followed by several contributed papers on agents. Nachum Dershowitz (Tel Aviv University) presented "The Power of

Simplification: A Survey on Rewriting in Theorem Proving," which was the introduction to a half-day session on nonmonotonic reasoning.

The symposium committee included Symposium Chair Martin Charles Golumbic, Bar-Ilan University, and Program Cochairs Leora Morgenstern (IBM T. J. Watson Research Center) and Solomon Eyal Shimony (Ben-Gurion University). The full list of talks, abstracts, and web proceedings can be found at www.cs.biu.ac.il/~bisfai.

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The Bar Ilan Symposia on the Foundations of Artificial Intelligence are a series of research meetings held in Israel every two years. I report here on the sixth meeting, held in June 1999.

Intelligence, NDS Technologies Israel, and the Israeli Ministry of Science.

Martin Charles Golumbic is professor of computer science and algorithmic discrete mathematics at Bar-Ilan University and has been the chairman of several national and international symposia. His research is on combinatorics and algorithms interacting with real-world problems in computer science and AI. He is the editor in chief of the series *Annals of Mathematics and Artificial Intelligence* and an editor of *Constraints* and *Discrete Applied Mathematics*. His e-mail address is golumbic@cs.biu.ac.il.

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