

# The Seventh International Conference on Intelligent User Interfaces (IUI-2003)

*David Leake*

■ The Seventh International Conference on Intelligent User Interfaces (IUI-2003) was held 12–15 January 2003 in Miami Beach, Florida. The conference brought together researchers and practitioners to report on outstanding research and applications, examine emerging work, and delineate new avenues for intelligent user interfaces.

Intelligent user interfaces (IUIs) mediate between user and system to increase the ease and effectiveness of user-system interactions. Research in IUIs draws on areas such as AI and human-computer interaction to study methods for supporting varied users for a wide range of tasks, task environments, platforms, and interaction paradigms. The Intelligent User Interfaces Conference is the annual meeting of the IUI community and the principal international forum for reporting research and development in this area. IUI-2003, the seventh IUI conference, was held in Miami Beach, Florida, from 12 to 15 January 2003.

A special theme at this year's con-

ference was interfaces whose focus goes beyond rational “intelligence” to address psychological concerns such as emotion, personality, and motivation. The conference received an all-time record number of submissions, covering a wide range of areas and approaches. Oral presentation sessions were organized into seven major topics: (1) adaptive and collaborative interfaces, (2) affective interfaces, (3) agent-based interfaces, (4) knowledge acquisition and visualization, (5) model-based interface design, (6) multimodal input, and (7) natural language interfaces.

The conference program included three invited talks, each reflecting a different direction for developing the intelligent interfaces of the future. In “What Users Want,” Daniel Weld, the University of Washington, discussed the tension between interfaces that adapt automatically and their users’ need for stability to maintain an accurate mental model, predict system behavior, and feel in control. Weld presented principles for addressing this tension, described algorithms for mining user action traces, and proposed the algorithms’ role in dynamically transforming interfaces. Hi-

roshi Ishii, the Massachusetts Institute of Technology MediaLab, presented “Tangible Bits: Designing the Seamless Interface between People, Bits, and Atoms,” a vision of how to give physical form to digital information to take advantage of multimodal human senses and interaction skills. His presentation was illustrated with examples of projects aimed at realizing this vision by enabling interactions with graspable objects, augmented surfaces, and “ambient media” involving light and sound. Allen Gorin, AT&T Research, presented “Semantic Information Processing of Spoken Language in HOW MAY I HELP YOU?” His talk described a new generation of voice-based user interfaces. Unlike menu-driven systems, in which the user must conform to the menu and respond to narrow questions, the deployed “HOW MAY I HELP YOU?” system enables the users to drive the interaction by saying what they want, and the system understands and adapts to what the user says. The approach is based on algorithms that learn to extract meaning from speech and exploit salient information for robust, speaker-independent processing.

The conference opened with two tutorials, “Intelligent User Interfaces: An Introduction” by Mark Maybury of MITRE and “Recommender Systems: Interfaces and Technology” by John Riedl and Joseph Konstan of the University of Minnesota. An evening poster-demonstration session gave attendees the opportunity to interact with more than 30 live systems and to see emerging research. Discussions and demonstrations continued long after the official end of the session, with the last participants departing only when the room was closed.

IUI-2002 started a new tradition for the conference, an invited panel from a major IUI center presenting an in-depth look at their projects. The panel “A Life without Friction: Tales from the InfoLab,” chaired by Kristian Hammond and Larry Birnbaum, discussed and demonstrated a spectrum of projects from the Intelligent Information Laboratory of Northwestern University, all of them serving the goal of bridging the gap

# ICINCO 2004

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**25 - 28 August 2004, Setúbal - Portugal**

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## **Keynote Speakers**

**Kevin Warwick, University of Reading, U.K.**  
**Albert Cheng, University of Houston, Texas, U.S.A.**  
**Wolfgang Arndt, Fachhochschule Konstanz, Germany**  
**Nuno Martins, M.I.T., U.S.A.**  
**Kurosh Madani, Université Paris 12, France**  
**Rosalind Picard, M.I.T., U.S.A.**

**Full Paper Submission: 15th February 2004**

between human information needs and the ability of machines to meet them. The conference's closing panel, "XML: The Lingua Franca of IUIs?," chaired by Angel Puerta of RedWhale Software, examined the role of standardization of interoperation and data interchange in the IUI software industry.

IUI-2003 was chaired by David Leake, Indiana University. Lewis Johnson, the USC Information Sciences Institute, and Elisabeth Andre, the University of Augsburg, were the program cochairs, and John Domingue, the Open University, was the poster and demonstrations chair. The conference was sponsored by the Association of Computing Machin-

ery SIGART and SIGCHI, in cooperation with the American Association for Artificial Intelligence and BCS-HCI, with support from the Mitsubishi Electric Research Laboratories, Microsoft Research, RedWhale Software, IBM Research, Lucent Technologies, and The HSBC Group.

The ocean-side setting, sun, and January weather in the 70s made IUI-2003 as pleasant as it was productive. IUI-2004, to be held 13 to 16 January 2004 on the island of Madeira, promises a comparable setting and marks the first time the conference will be held in Europe. Full IUI-2004 information and online access to the proceedings of previous IUI confer-

ences are available at [www.iuiconf.org](http://www.iuiconf.org).



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