CoNNectiONS

The Newsletter of the IEEE Neural Networks Council

Who *are* these people? See *VRAIS '93*, p. 5

Conference Preview:

IEEE WORLD CONGRESS ON COMPUTATIONAL INTELLIGENCE
June 26-July 2, 1994
Walt Disney World Dolphin Hotel
Orlando Florida

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Communications Society
Computer Society
Control Systems Society
Engineering in Medicine & Biology Soc.
Industrial Electronics Society
Industry Applications Society
Information Theory Society

Lasers and Electro-Optics Society
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Conference Reports

VRAIS 1993

The first IEEE Virtual Reality Annual International Symposium was held in Seattle Washington from September 18 through 22. This conference was sponsored by the Virtual Reality Technical Committee of the IEEE Neural Networks Council, in cooperation with the SPIE, the International Society for Optical Engineering, the IEEE Industrial Electronics Society, Lasers and Electro Optics Society, Robotics and Automation Society, Information Theory Society, Oceanic Engineering Society, Signal Processing Society, and the IEEE Seattle Section.

The conference was a big success, with a total of 477 registered attendees representing over 18 countries—nearly twice the expected attendance. Thanks are due to the efforts of Publicity Chair Rich Donnelly of the SPIE, Press Relations Chair Alden Jones of the University of Washington, and the rest of the Organizing Committee.

The two days of tutorials that preceded the technical conference were organized by Blake Hannaford of the University of Washington. Almost every class was packed to capacity and sold out to standing room only crowds. The general comment from tutorial-goers was "give me more"! This is a rapidly changing field that has yet to completely define itself. The tutorial sessions offered topics that ranged from introductory to advanced, covering subjects such as

head-mounted displays, force reflecting feedback, animation, vision phenomena, acoustic displays, and applications.

The opening ceremony was held the evening of the second day of tutorials. It featured Tom Furness of the Human Interface Technology Laboratories at the University of Washington, a pioneer in this field and the general chair, speaking on the past and future of virtual reality. Also on the stage that night was the Organization Chair Bob Marks of the University of Washington, the Program Cochairs, Michitaka Hirose of the University of Tokyo, General Chair Thomas Caudell of the University of New Mexico, and the General Chair of the next VRAIS conference, David Mizell of Boeing Computer Services. This conference will be held in North Carolina in March of 1995.

The technical sessions were held during the next three days of the conference. A 400 page proceedings, distributed at registration, contained seventy-two high quality technical papers from all over the world. These papers were selected through a review process involving the fifty members of the Program Committee. In addition, the conference sold out of the Video Proceedings, a collection of video shorts showing the state of research in virtual reality at several research institutions around the world.

Each day started out with a plenary session, where experts in the field reported on the state-of-the-art in virtual reality technology. The plenary speakers included Scott Fisher of Telepresence Research, Myron Kruger of Artificial Reality Corp., Roy Latham of CGSD Corp, Warren Robinett of the University of North Carolina, Creve Maples of Sandia National Laboratories, Michitaka Hirose of the University of Tokyo, Larry Stark of the University of California, Berkeley, and Jannick Rolland of the University of North Carolina.

Following each plenary session in the morning, the technical sessions broke up into two parallel tracks. Sessions covered topics such as body sensing, sensory transducers, sensory feedback, human factors, graphics, teleoperation, software systems, and even neural networks. Speakers were given generous half-hour time slots for their talks, which usually

Cover Photo: **Michitaka Hirose, VRAIS 1993 Program Co-Chair; David Mizell, 1994 General Chair; Robert J. Marks II, 1993 Organization Chair, Thomas P. Caudell (wearing VR glasses), 1993 Program Co-Chair, and Thomas A Furness III 1993 General Chair**

**IEEE NEURAL NETWORKS COUNCIL
NNC-SPONSORED CONFERENCES
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**NNC Forum: Virtual Reality and Persons with Disabilities
San Francisco
June 8-10, 1994**

**World Congress on Computational Intelligence
IEEE International Conference on Neural Networks
FUZZ-IEEE
IEEE International Symposium on Evolutionary Computation
June 26-July2, 1994
Walt Disney World
Orlando Florida**

1995 and Beyond...

**Virtual Reality Annual International Symposium
March 11-16 95 (Note Date Change)
Research Triangle Park, North Carolina**

**FUZZ-IEEE (with IFES)
Yokohama Japan, March 1995**

**Int'l Conf on Neural Networks
IEEE Conf. on Evolutionary Programming
Perth, Australia, October 1995**

**ICNN, Washington DC, March 1995
FUZZ-IEEE New Orleans, September 1996**

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allowed time for questions and discussion. Speakers made frequent use of video tapes to illustrate their work.

The next two evenings were set aside for panels. David Mizell of Boeing Computer Society organized the Industry Panel, with representatives from Lockheed, Caterpillar, Ford, General Electric, and of course Boeing. The following night Y. T. Chien of the National Science Foundation organized the Government Panel, with representatives of Advanced Research Projects Agency, Dept. of Transportation/US Coast Guard, NASA Ames Research Center, and DoE Sandia National Laboratories. These panels helped focus the attendees on the realities of applications of this technology, and provided a glimpse of where government funding might be going over the next few years.

A small vendors exhibit was available to attendees during the five days of the conference, organized by Exhibits Chair Chris Esposito of Boeing Computer Services. People had an opportunity to talk first hand with the makers of virtual reality equipment and software, and see some demonstrations of their latest systems.

The conference was managed by Steve Marlin and Nomi Feldman of Meeting Management in Irvine California, and by Finance Chair Dmitry Kaplan of Siemens-Quantum Corp of Issaquah, Washington. Their creativity and resourcefulness made this a very smooth running conference, considering nearly twice as many people attended as was planned.

I would like to thank the 1993 IEEE-VRAIS Organizing and Program Committees, and all of the people who worked hard to make the venture a success. It is the goal of the Virtual Reality Technical Committee to make this conference THE conference in the field. I believe we have made a good start!

—Thomas P. Caudell, Chair
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