



IST: Future & Emerging technologies

Bionics

Bio-inspired Information technologies



Draft Agenda

Day 1: June 19, 2001

9h00-9h45 Opening session

Welcome by Tamás Roska (SZTAKI), Chairman

- Simon Bensasson (FET head of Unit)
- Rick Adrion (EIA division, NSF)
- Remi Ronchaud (ERCIM, EU/NSF co-ordinator)

9h45-12h15 Session A - Sensing, interfaces, and sensors

Chair: R. Norman, Reporter: S.Picaud

Presenters: Bessant, Engel, Grattarola, Picaud, Van Hulle,

- Bioelectronic, biomechanical and biochemical sensing, as well as brain imaging
- Electronic, mechanical, thermal, chemical and other interfaces to living tissues
- Content and context dependent sensing and sensors, Plasticity

12h15-12h45 Session Conclusion Discussion

Lunch

14h00-17h00 Session B -Human-machine interaction with autonomous sensors - prostheses

Chair: R. Eckmiller, Reporter: R. Tetzlaff

Presenters: Kipke, Lehnertz, Rousche, Tetzlaff, Dörfner

- Vision, hearing, tactile and other prostheses
- Implanted alarm devices and acting mechanisms
- Human interactive command without keyboard

- Human aspects

17h00-17h30 Session conclusion discussion

17h30-18h00 Day 1 Conclusion discussion

Day 2: June 20, 2001

9h00-12h00 Session C - Bio Systems

Chair: J. Hámori, Reporter: Moschovakis

Presenters: Moschovakis, Fortuna, Gál, Dittmar, Roska

- Motor Control
- Sensor-motor integration
- Integrated sensing-processing-acting and learning devices and technologies
- Ethical issues

12h00-12h30 Session conclusion discussion

Lunch

14h00-17h00 Session D - Bionic devices

Chair: F. Werblin, Reporter: J. Xu

Presenters: Francescini, Indiveri, Rodríguez-Vázquez, Toumazou, Xu, Scribner

- Representation of real-world stimuli in biological systems
- Complex systems – Bio-inspired/ neuromorphic, spatial-temporal computing models with possible programmability
- VLSI implementations and Bionic Eye, Ear, Nose, Skin and other bionic devices

17h00-17h30 Session conclusion discussion

17h30-18h00 Day 2 Conclusion discussion

19h30 Social Diner, courtesy of ERCIM: “Le foyer”, 29, rue de la science –1040 Brussels
tel: 296 35 56

Day 3 : June 21, 2001

9h00-12h00 Session E - Assessment of Near Future Directions

Chair: T. Roska and F. Werblin

The main conclusions of Sessions A-D will be assessed and discussed to provide the final results of the workshop (final report), which are meant to serve as a basis for future programs and collaboration between the EU and the NSF. These results will also be circulated in the scientific community for discussion and comments

12h00-13h00 Round Table (T. Roska Chairman)

- Simon Bensasson (European Commission)
- Rick Adrion (National Science foundation)
- Jean-Eric Pin (ERCIM)
- Pekka Karp (European Commission)

13h00 End of the Workshop