



# 5th International Symposium on Wearable Computers

ETH Zurich  
October 8 and 9, 2001

## Conference Schedule

### Monday, October 8

---

**08:00** Conference Registration – Main Hall

**09:00** Welcome and Keynote Address – AudiMax

**Perceptive processing by brain-like analog VLSI circuits**  
Rodney J. Douglas (Neuroinformatics, ETH Zurich)

**ETH World**  
Gerhard Schmitt (Vice president ETH)

**10:10** Break

**10:30** Session I: Input/Output Devices – AudiMax  
(Chair: Bruce Thomas)

**Design of a Wearable Tactile Display**  
Francine Gemperle, Nathan Ota, Daniel P. Siewiorek (Carnegie Mellon University)

**A Method of Key Input with Two Mice**  
Satoshi Nakamura, Masahiko Tsukamoto, Shojiro Nishio (Osaka University)

**GestureWrist and GesturePad: Unobtrusive Wearable Interaction Devices**  
Jun Rekimoto (Sony CSL)

**12:00** Presentation of Exhibitors – Main Hall

**13:00** Conference Lunch – F-Floor

**14:00 Session II: Creation – AudiMax**  
(Chair: Paul Lukowicz)

**Tinmith-Metro: New Outdoor Techniques for Creating City Models with an Augmented Reality Computer**

Wayne Piekarski, Bruce Thomas (University of South Australia)

**Authoring of Physical Models Using Mobile Computers**

Yohan Baillot, Dennis Brown, Simon Julier (Advanced Information Technology Division Naval Research Laboratory)

**The Witnessential Net**

Steve Mann, Robert Guerra (University of Toronto, EXISTech Corp.)

**Networked Wearable Musical Instruments Will Bring a New Musical Culture**

Kazushi Nishimoto, Tadao Maekawa, Yukio Tada, Kenji Mase, Ryohei Nakatsu (Japan Advanced Institute of Science and Technology, ATR Media Integration & Communications Research Laboratories)

**16:00 Break**

**16:30 Inside/Outside Session – AudiMax**  
(Chair: Jacqueline Otten)

**On Wearables and Fashion**

Birgit Richard, Brigitte Neitzel (University of Frankfurt, Siemens-Nixdorf)

**17:30 Demonstrations and Posters – Main Hall**

**Demonstrations:**

**Wearable Technology for Multisensory Expressive Gesture Applications**

Rita Paradiso, Danilo De Rossi, Piero Orsini (Smartex - Prato Italy, Interdipartimental Research Center - University of Pisa, Unita Operativa Neurologia - Ospedale Cisanello Pisa)

**Ward In Hand Project**

Eva Coscia (TXT e-solutions, Genova Italy)

**A Prototype Wearable Body Temperature Regulation Garment**

Andy Wolfenden (Design for Life Centre - Brunel University)

**Agent Augmented Real World Space**

Tom Sephton (California State University)

**Lightglove: Wrist-Worn Virtual Typing and Pointing**

Bruce Howard, Susie Howard (Lightglove - LLC)

**18:30 Performance – Main Hall**

FastFood (Munich)

**19:00 Dinner Party – Dozentenfoyer**

## Tuesday, October 9

---

### 08:30 **Session III: User Evaluations – AudiMax** (Chair: Chandra Narayanaswami)

#### **Mobile Capture for Wearable Computer Usability Testing**

Kent Lyons, Thad Starner (Georgia Institute of Technology)

#### **A System for Evaluating Augmented Reality User Interfaces in Wearable Computers**

Riku Suomela, Juha Lehtikainen, Ilkka Salminen (Nokia Research Center)

#### **Real Situations of Wearable Computers used for Video Conferencing - and Implications for Terminal and Network Design**

Bjørn Hestnes, Svein Heiestad, Peter Brooks, Lasse Drageset (Telenor R&D, Hitec O)

#### **User Evaluations to Guide the Design of an Extended Personal Service Environment for Mobile Services**

Margit Biemans, Herma van Kranenburg, Marc Lankhorst (Telematica Instituut)

### 10:30 **Break**

### 11:00 **Inside/Outside Session – AudiMax** (Chair: Jacqueline Otten)

#### **The other Side: Ecological Aspects**

Christiane Woehler (Life-Cycle-Design)

### 12:00 **Conference Lunch – F-Floor**

### 13:00 **Session IV: Location and Context Awareness – AudiMax** (Chair: Andy Ward)

#### **A Panorama-based Method of Personal Positioning and Orientation and its Real-Time Applications for Wearable Computers**

Masakatsu Kurogi, Takeshi Kurata, Katsuhiko Sakaue (National Institute of Advanced Industrial Science and Technology (AIST))

#### **Real-time Analysis of Data from Many Sensors with Neural Networks**

Kristof Van Laerhoven, Kofi Aidoo, Steven Lowette (Starlab Research)

#### **Incremental Motion-Based Location Recognition**

Seon-Woo Lee, Kenji Mase (ATR Media Integration & Communications Research Laboratories)

### 14:30 **Break**

**15:00 Gadget Show – AudiMax**

**16:00 Session V: System Design – AudiMax**  
**(Chair: Dan Siewiorek)**

**Energy Trade-offs in the IBM Wristwatch Computer**

Noboru Kamijoh, Tadanobu Inoue, C. Michael Olsen, Mandayam Raghunath,  
Chandra Narayanaswami (IBM Research Division)

**Wearable Computers as Packet Transport Mechanisms in Highly-Partitioned  
Ad-Hoc Networks**

James Davis, Andrew Fagg, Brian Levine (University of Massachusetts)

**Drishti: An Integrated Navigation System for Visually Impaired and Disabled**

Sumi Helal, Steven Moore, Balaji Ramachandran (University of Florida)

**17:45 Technical Committee Meeting – AudiMax**