

Preface

Multimodal Interfaces represents an emerging interdisciplinary research direction and has become one of the frontiers in Computer Science. Multimodal interfaces aim at efficient, convenient and natural interaction and communication between computers (in their broadest sense) and human users. They will ultimately enable users to interact with computers using their everyday skills.

These proceedings include the papers accepted for presentation at the Third International Conference on Multimodal Interfaces (ICMI 2000) held in Beijing, China on 14–16 October 2000. The papers were selected from 172 contributions submitted worldwide. Each paper was allocated for review to three members of the Program Committee, which consisted of more than 40 leading researchers in the field. Final decisions of 38 oral papers and 48 poster papers were made based on the reviewers' comments and the desire for a balance of topics. The decision to have a single track conference led to a competitive selection process and it is very likely that some good submissions are not included in this volume. The papers collected here cover a wide range of topics such as affective and perceptual computing, interfaces for wearable and mobile computing, gestures and sign languages, face and facial expression analysis, multilingual interfaces, virtual and augmented reality, speech and handwriting, multimodal integration and application systems. They represent some of the latest progress in multimodal interfaces research.

We wish to thank all the authors for submitting their work to ICMI 2000, the members of the Program Committee for reviewing a large number of papers under a tight schedule, and the members of the Organizing Committee for making things happen as planned. We are grateful to the Chinese National 863-306 Steering Committee, the National Natural Science Foundation of China and the National Laboratory of Pattern Recognition of the CAS Institute of Automation for financial support.

August 2000

Tieniu Tan
Yuanchun Shi
Wen Gao

General Co-Chairs

Wen Gao (CAS Institute of Computing Technology, China)
A. Waibel (CMU, USA)

Program Committee Co-Chairs

Tieniu Tan (CAS Institute of Automation, China)
S. Oviatt (Oregon Grad. Institute of Science and Technology, USA)
K. Yamamoto (Gifu University, Japan)

Program Committee:

Keiichi Abe (Shizuoka University, Japan)
N. Ahuja (UIUC, USA)
S. Akamatsu (ATR, Japan)
Elisabeth Andre (DFKI, Germany)
Norm Badler (University of Pennsylvania, USA)
H. Bunke (University of Bern, Switzerland)
Ruth Campbell (University College London, UK)
P.C. Ching (Chinese University of Hong Kong, China)
Phil Cohen (OGI, USA)
James L. Crowley (I.N.P.G, France)
Trevor Darrell (MIT, USA)
Myron Flickner (IBM-Almaden, USA)
Rob Jacob (Tufts University, USA)
J. Kittler (Univ. of Surrey, UK)
H. Koshimizu (Chukyo University, Japan)
Jim Larson (Intel, USA)
S.-W. Lee (Korea University, Korea)
Bo Li (Beijing University of Aeronautics and Astronautics, China)
G. Lorette (IRISA, France)
Hanqing Lu (CAS Institute of Automation, China)
Tom MacTavish (Motorola, USA)
Dominic Massaro (University of California at Santa Cruz, USA)
Steve J. Maybank (University of Reading, UK)
Rosalind W. Picard (MIT, USA)
Steve Shafer (Microsoft Research, USA)
Paul M. Sharkey (University of Reading, UK)
Rajeev Sharma (Penn State University, USA)
Yuanchun Shi (Tsinghua University, China)
H. Shum (Microsoft Research, China)
Kentaro Toyama (Microsoft Research, USA)
Matthew Turk (Microsoft, USA)

Geoff West (Curtin University of Technology, Australia)
 Bo Xu (CAS Institute of Automation, China)
 Yangsheng Xu (Chinese University of Hong Kong, China)
 Jie Yang (CMU, USA)
 B.Z. Yuan (Northern Jiaotong University, China)
 Pong Chi Yuen (Hong Kong Baptist University, China)
 Shumin Zhai (IBM-Almaden, USA)

Organizing Committee:

Bo Li, Co-chair (Beijing University of Aeronautics and Astronautics, China)
 Yuanchun Shi, Co-chair (Tsinghua University, China)
 Mengqi Zhou, Co-chair (CIE, China)
 Bing Zhou (Beijing University of Aeronautics and Astronautics, China)
 Cailian Miao (CAS Institute of Automation, China)
 Changhao Jiang (Tsinghua University, China)
 Hao Yang (CAS Institute of Automation, China)
 Wei Li (Beijing University of Aeronautics and Astronautics, China)
 Yan Ma (CAS Institute of Automation, China)
 Yanni Wang (CAS Institute of Automation, China)
 Yuchun Fang (CAS Institute of Automation, China)
 Yujie Song (CAS Institute of Automation, China)
 Zhiyi Chen (CAS Institute of Automation, China)

Sponsors and Organizers:

Chinese National 863-306 Steering Committee
 Natural Science Foundation of China
 National Laboratory of Pattern Recognition at CAS Institute of Automation
 China Computer Federation
 Beijing University of Aeronautics and Astronautics
 Tsinghua University
 IEEE, Beijing Section
 Association for Computing Machinery

International Steering Committee:

A. Waibel (CMU, USA)
 Qingyun Shi (Peking University, China)
 Seong-whan Lee (Korea University, Korea)
 Victor Zue (MIT, USA)
 Wen Gao (CAS Institute of Computing Technology, China)
 Yuan Y. Tang (Hong Kong Baptist University, China)