

attention and performance in computational vision

may 15, 2004, prague, czech republic

call for papers

Recently, cognitive psychology has discovered attention mechanisms to play a key role in object recognition and scene interpretation, resulting in innovative computational attention architectures modelling human perception. The development of enabling technologies such as video surveillance systems, miniaturised mobile sensors, and ambient intelligence systems involves the real-time analysis of enormous quantities of data. Knowledge has to be applied about what needs to be attended to, and when, and what to do in a meaningful sequence, in correspondence with visual feedback. Concurrently, the fundamental need for cognitive vision methodologies has been broadly recognised. Methods on attention and control are mandatory to render computer vision systems more robust.

This workshop will provide an interdisciplinary forum to present and communicate methodologies and concepts from computer vision, cognitive psychology, autonomous systems research and neuroscience with respect to theory and application of visual attention. We expect investigations to focus on computational models of attention, to outline relevant objectives for performance comparison, to document and to investigate promising application domains, and to discuss it with reference to other aspects of cognitive vision. However, contributions to computational models of visual attention - machine or human perception based - must be the central theme of successful submissions.

Topics of interest include, but are not limited to, the following:

techniques:

- Computational architectures
- Learning for attention
- Control of vision processes
- Decision making in vision
- Attention in object recognition
- Biological motivated attention
- Information fusion
- Perceptual organisation

applications:

- Video analysis
- Nomadic computing
- Surveillance
- Medical computer vision
- Industrial inspection
- Mobile Mapping
- Robotics
- Remote sensing

organizing committee

- Lucas Paletta (Joanneum Research, Austria)
- John K. Tsotsos (York University, Canada)
- Erich Rome (Fraunhofer AIS, Germany)
- Glyn W. Humphreys (University of Birmingham, UK)
-

program committee

- Minoru Asada (Osaka University, Japan)
- Leonardo Chelazzi (University of Verona, Italy)
- James J. Clark (McGill University, Canada)
- Bruce A. Draper (University of Colorado, USA)
- Robert B. Fisher (University of Edinburgh, UK)
- Horst-Michael Gross (TU Ilmenau, Germany)
- Fred Hamker (University of Münster, Germany)
- John M. Henderson (Michigan State University, USA)
- Laurent Itti (University of Southern California, USA)
- Christof Koch (California Inst. of Technology, USA)
- Bastian Leibe (ETH Zurich, Switzerland)
- Michael Lindenbaum (Technion, Israel)
- Bärbel Mertsching (Univ. of Paderborn, Germany)
- Sajit Rao (University of Genova, Italy)
- Antonio Torralba (MIT, USA)
- Nikos Paragios (ENPC Paris, France)
- Jeremy Wolfe (Harvard University, USA)
- Hezy Yeshurun (Tel-Aviv University, Israel)

program

The program will consist of 2 invited talks, oral presentations, and a poster session. All contributions will be published in the workshop proceedings and on CD-ROM.

- Invited speakers: John K. Tsotsos (York University, Canada)
- Gustavo Deco (University Pompeu Fabra, Barcelona, Spain)
 -

important dates

Paper submission
January 31, 2004

Acceptance notification
March 15, 2004

Final paper due
April 16, 2004

Workshop day
May 15, 2004