Paper Submission

Authors are encouraged to submit high-quality, original work that has neither appeared in, nor is under consideration by, other journals. All open submissions will be peer reviewed subject to the standards of the journal. Manuscripts based on previously published conference papers must be extended substantially.

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Important Dates

- Paper submission deadline: November 14, 2011
- Final Manuscript: March 12, 2012
- Estimated Online Publication: Summer 2012

Special Issue Call for Papers

Human Computer Interaction

Guest Editors

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Background

Human motion analysis has been an active research topic in computer vision in the last period with a wide range of possible applications. Interacting with electronic devices is the application that receives lot of attention lately driven by the advent of new gesture-based gaming controllers such as Wii, Sony EyeToy/ Move, and Xbox Kinect. Natural human computer interaction is becoming a part of the mainstream games and consumer electronics. Directly addressing this new trend, the objective of the special issue is to gather high-quality contributions describing leading-edge research in human-computer interaction with special attention for the practical issues of designing real-world human-computer interaction systems and with a focus on real-time vision aspects pertinent to the developing of new generation natural user interfaces.

Topics

Papers describing high-quality original research in various areas of computer vision and human-computer interaction are welcome. In the light of recent introduction of natural user interfaces as part of various consumer products, the intention is have the special focus on practical issues of designing human-computer interaction systems. Therefore, considering the following topics is particularly encouraged:

- Robustness:
  - vision algorithms robust to light, occlusions, view point, etc.
  - increasing robustness by combining different sensors (e.g. multiple cameras, depth, infrared, inertial, audio)
  - evaluation and comparison of various algorithms and systems

- Real-time implementation:
  - efficient algorithms and implementation
  - implementation on embedded platforms: field programmable gate arrays (FPGAs), programmable digital signal processors (DSPs), graphics processing units (GPUs), and various kinds of heterogeneous multiprocessor devices, etc.
  - performance analysis and comparison (e.g. latency, system power consumption, wireless and other device communication issues)

- Other practical issues:
  - automatic adaptation to the user and environment (e.g. on-line learning, auto calibration)
  - design, performance analysis and comparison of human-computer interaction systems (Wizard of Oz and real-system human-computer interaction user studies)
  - novel applications
  - standardization