

# Human Vision and Electronic Imaging IX (EI08)

Part of IS&T/SPIE's International Symposium on Electronic Imaging 2004  
18-22 January 2004 • San Jose Marriott and San Jose Convention Center • San Jose, California, USA

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The goal of this conference is to explore the role of human vision, perception, and cognition in the design, analysis, and use of computer-based image and data systems. Over the years, it has brought together researchers from a wide variety of disciplines, from all over the world, for a rich and lively exchange of ideas. This dialogue is based on the growing understanding that the human observer is a fundamental key to the advancement of image systems, and that advances in these systems and applications stimulate new research into the vision, perception, and cognition of the human observer. Papers are welcome on basic and applied research in:

- 1) Human perception and cognition
  - models and experimental research
  - psychophysical, neurophysiological, and computational approaches
  - fundamental contributions in spatial, temporal, and color vision
  - fundamental contributions in auditory, haptic, and chemical senses
  - multimodal perception (e.g., visual/auditory interactions)
  - attention, memory, and learning
  - pattern recognition, visual organization, object perception
- 2) Color perception and its applications
  - computational and perceptual models of color vision
  - spatial/temporal/color interactions
  - perceptual approaches to device-independent color
  - effective use of color
- 3) Psychophysical evaluation of image and multimedia quality
  - perceptual and cognitive evaluation of image and video quality
  - perceptual metrics for compression and rendering
  - audio-visual interactions
- 4) Human vision-based algorithms for:
  - still image and video compression
  - image enhancement and restoration
  - image halftoning and rendering
  - computer graphics and animation
- 5) Image analysis and perception
  - image semantics, segmentation, and representation
  - perception of shape, texture, and color features
  - perceptual approaches to multimedia retrieval for digital libraries
  - perceptual image and video similarity metrics
  - visually-intuitive navigation through large databases
  - human vision-based approaches to face, gesture, and gait recognition
- 6) Perceptual issues in visualization and virtual reality
  - interactive exploration of data
  - visual cues for data mining
  - perceptual scaling and visual organization
  - incorporating intelligence into interactive systems
- 7) Art, aesthetics, and emotion in electronic imaging systems
  - exploiting perception in art
  - emotion and aesthetics in human-computer interfaces
- 8) Perceptual approaches in life sciences and medical imaging
  - perceptual features for data representation and analysis
  - image rendering and visualization
  - diagnostically-lossless medical image compression.

**Abstract Due Date: 23 June 2003**  
**Manuscript Due Date: 22 December 2003**  
**Final Summary Due Date: 17 November 2003**

For more information on this and other related conferences, please see [www.electronicimaging.org](http://www.electronicimaging.org)

## Submission of Abstracts for IS&T/SPIE's Electronic Imaging 2004: Science and Technology

Abstract Due Date: 23 June 2003

Manuscript Due Date: 22 December 2003

Final Summary Due Date: 17 November 2003

**ALL DUE DATES MUST BE STRICTLY OBSERVED**

### **IMPORTANT!**

**Submissions imply the intent of at least one author to register, attend the symposium, present the paper (either orally or in poster format), and submit a full-length manuscript for publication in the conference Proceedings.**

All authors (including invited or solicited speakers), program committee members, and session chairs are responsible for registering and paying the reduced author, session chair, program committee registration fee. (Current **IS&T** or **SPIE Members** receive a discount on the registration fee.)

### **Instructions for Submitting Abstracts via Web**

You are **STRONGLY ENCOURAGED** to submit abstracts using the "submit an abstract" link at:

[www.electronicimaging.org](http://www.electronicimaging.org)

**Submitting directly on the Web ensures that your abstract will be immediately accessible by the conference chair for review through the MySPIE author/chair web site.**

Please note! When submitting your abstract you must provide contact information for all authors, summarize your paper, and identify the **contact author** who will receive correspondence about the submission and who must submit the manuscript and all revisions. Please have this information available before you begin the submission process.

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If you do not have web access, you may E-MAIL each abstract separately to: [abstracts@spie.org](mailto:abstracts@spie.org) in ASCII text (not encoded) format. There will be a time delay for abstracts submitted via e-mail as they will not be immediately processed for chair review.

**IMPORTANT!** To ensure proper processing of your abstract, the SUBJECT line must include only:

**SUBJECT: EI08, ROGOWITZ, PAPPAS**

**Your abstract submission must include all of the following:**

- 1. PAPER TITLE**
- 2. AUTHORS** (principal author first) For each author: First (given) name (initials not acceptable), Last (family) name, Affiliation, Mailing address, Telephone, Fax, and Email address.
- 3. PRESENTATION PREFERENCE** "Oral Presentation" or "Poster Presentation."
- 4. PRINCIPAL AUTHOR'S BIOGRAPHY** Approximately 50 words.
- 5. ABSTRACT TEXT** Approximately 500 words.
- 6. KEYWORDS** Maximum of five keywords.

### **Final Summary**

Accepted authors will receive instructions for the 200-word final summary. The final summaries will be published and available at the meeting.

### **Conditions of Acceptance**

- Authors are expected to secure funding for registration fees, travel, and accommodations, independent of IS&T/SPIE, through their sponsoring organizations before submitting abstracts.
- Only original material should be submitted.
- Commercial papers, papers with no new research/development content, and papers where supporting data or a technical description cannot be given for proprietary reasons will not be accepted for presentation in this symposium.
- Abstracts should contain enough detail to clearly convey the approach and the results of the research.
- Government and company clearance to present and publish should be final at the time of submittal. Authors are required to warrant to SPIE/IS&T in advance of publication of the Proceedings that all necessary permissions and clearances have been obtained, and that submitting authors are authorized to transfer copyright of the paper to SPIE/IS&T.

### **Review, Notification, Program Placement**

- To ensure a high-quality conference, all abstracts and Proceedings manuscripts will be reviewed by the Conference Chair/Editor for technical merit and suitability of content. Conference Chair/Editors may require manuscript revision before approving publication, and reserve the right to reject for presentation or publication any paper that does not meet content or presentation expectations. SPIE/IS&T's decision on whether to accept a presentation or publish a manuscript is final.
- Applicants will be notified of abstract acceptance by mail no later than 27 October 2003. Early notification of acceptance will be placed on the Web the week of 29 September 2003 at [www.electronicimaging.org](http://www.electronicimaging.org)
- Final placement in an oral or poster session is subject to the Chairs' discretion. Instructions for oral and poster presentations will be included in your author kit. All oral and poster presentations are included in the *Proceedings*, and require presentation at the meeting and submission of a manuscript.

### **Proceedings**

- These conferences will result in full-manuscript Chairs/Editor-reviewed volumes published in the *Proceedings*.
- Correctly formatted, ready-to-print manuscripts submitted in English are required for all accepted oral and poster presentations. Electronic submissions are recommended, and result in higher quality reproduction. Submission must be provided in PostScript created with a printer driver compatible with SPIE's online Electronic Manuscript Submission system. Instructions are included in the author kit and from the "Author Info" link at the conference website.
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- Papers published are indexed in leading scientific databases including INSPEC, Ei Compendex, Chemical Abstracts, International Aerospace Abstracts, Index to Scientific and Technical Proceedings and NASA Astrophysical Data System.
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- **Papers not presented at the meeting will not be published in the conference Proceedings**, except in the case of exceptional circumstances at the discretion of IS&T, SPIE, and the Conference Chairs/Editors.