

IS&T/SPIE 20th Annual Symposium

Electronic Imaging

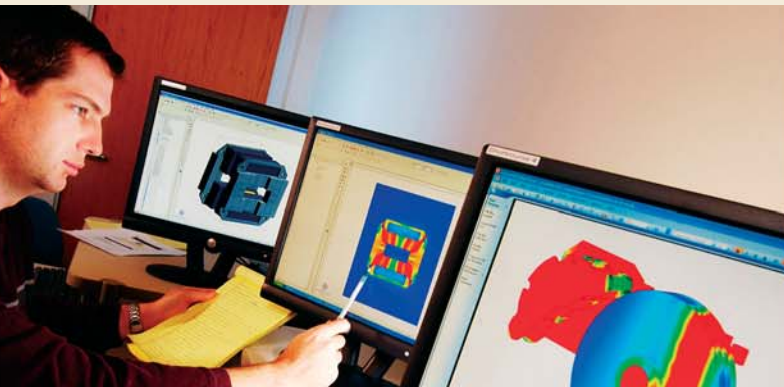
Science and Technology

26-31 January 2008

San Jose Marriott and San Jose Convention Center
San Jose, California USA

Call for Papers

PRESENT YOUR RESEARCH — TAKE A STEP TOWARDS YOUR NEXT PATENT



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Connecting minds. Advancing light.

- ▶ 3D Imaging, Interaction, and Measurement
- ▶ Imaging, Visualization, and Perception
- ▶ Image Processing
- ▶ Digital Imaging Sensors and Applications
- ▶ Multimedia Processing and Applications
- ▶ Visual Communications and Image Processing

Stereoscopic Displays and Applications XIX

28-30* January 2008 • San Jose Convention Center • San Jose, California, USA

Call for Papers

Conference Chairs: **Andrew J. Woods**, Curtin Univ. of Technology (Australia); **Nicolas S. Holliman**, Univ. of Durham (United Kingdom); **John Merritt**, The Merritt Group.

Program Committee: **Neil A. Dodgson**, Univ. of Cambridge (United Kingdom); **Gregg E. Favalora**, Actuality Systems, Inc.; **Janusz Konrad**, Boston Univ.; **Shojiro Nagata**, Japan 3D Forum/InterVision (Japan); **Steven L. Smith**, IN3D Inc.; **Vivian K. Walworth**, Jasper Associates; **Michael A. Weissman**, TrueVision Systems.

Post-Meeting Proceedings Due Dates:

Abstract (500 words) Due: **16 July 2007**
Final Summary (200 words): **19 November 2007**
Manuscript Due: **7 January 2008**

This conference focuses on recent advances in stereoscopic imaging, including 3D display hardware, computer software, algorithms, digital techniques, and applications illustrating the user-interface issues or cost/benefit trade-offs of stereoscopic 3D displays. In both real-world and computer-generated imaging applications, stereoscopic 3D display technologies can enhance the user's ability to perceive objects in their correct spatial locations, to move through display space easily, and to manipulate objects efficiently and accurately. The conference's parallel focus on human factors issues and applications requirements is intended to guide future display system development and task-based evaluation of 3D technologies. The conference brings together practitioners and researchers from industry and academia to facilitate an exchange of current information on stereoscopic 3D techniques and applications. Hardware demonstrations of 3D technologies and applications are strongly encouraged at the conference demonstration session. Facilities for large-screen stereoscopic projection (both still and video) will be available and presenters are encouraged to make full use of these during their presentation.

Papers are solicited for, but not limited to, the following topics:

Applications of stereoscopic displays:

We are especially interested in novel applications and in user trials of existing applications. Application areas include scientific visualization, medical imaging, teleoperation, telepresence, industrial inspection, communications, entertainment, broadcast/cable TV, training, CAD/CAM, molecular modeling, and advertising.

Advances in stereoscopic display technologies:

- autostereoscopic displays, super and high-density multiview displays, volumetric displays, mobile 3D displays, stereoscopic projection, and other 3D displays.
- methods for recording, playback, transmission, and processing of stereoscopic video.
- stereoscopic computer graphics and stereoscopic gaming.

Stereoscopic 3D digital cinema

including production, presentation and case studies

Digital stereoscopic imaging:

- stereoscopic and multi-view computer graphics
- image processing and compression of stereoscopic imagery
- stereoscopic image synthesis: 2D to 3D conversion, depth map generation, and multi-viewpoint generation
- transmission standards supporting digital stereoscopic images
- software and hardware issues for computer display of stereoscopic images

3D image acquisition and generation techniques:

- single- and multi-lens camera systems
- motion parallax, volume projection, graphical construction, stereoscopic computer graphics, computational photography, and other stereoscopic image generation techniques
- guidelines for stereoscopic content development

Design and development of stereoscopic display systems

for teleoperation, telerobotics, telepresence, telesurgery, and augmented reality

Human factors issues in stereoscopic display systems:

- task performance comparisons between stereoscopic and non-stereoscopic displays
- side-benefits of stereoscopic display techniques
- evaluation methodologies (e.g., depth-acuity measurement) and task-performance testing
- benefits for processing and compression of stereoscopic images

User-interface issues in stereoscopic display system design

- perceptual and cognitive guidelines for stereoscopic displays
- 3D remote manipulation and control of viewpoint
- ortho-stereo, hyper-stereo, and the geometry of 3D perceptual space

Standards for stereoscopic imaging.

Visit the SD&A conference website for more information:

www.stereoscopic.org

Critical Dates

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*Please Note: 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.

Submit your abstract today!
www.electronicimaging.org

Abstract Submission

1. By submitting an abstract, I agree to the following conditions:

- An author or coauthor (including keynote, invited, and solicited speakers) will register at the reduced author registration rate, attend the meeting, and make the presentation as scheduled. (Current IS&T and SPIE Members receive an additional discount on the registration fee.)
- Authors and coauthors attending the meeting will obtain funding for their registration fees, travel, and accommodations, independent of IS&T/SPIE, through their sponsoring organizations before submitting abstracts.
- All clearances, including government and company clearance, have been obtained to present and publish. If you are a DoD contractor, allow at least 60 days for clearance.
- IS&T/SPIE are authorized to circulate your abstract to conference committee members for review and selection purposes.
- Accepted abstracts may be published in printed and web programs promoting the conference. Please see individual conference Call for Papers for abstract length requirements.
- A full-length manuscript (8-12 pages) for any accepted oral or poster presentation will be submitted for publication in the Digital Library and conference Proceedings.

2. Prepare to submit:

- Have all contact information (full names, affiliations, addresses, phone numbers, and emails) for your coauthors ready.
- Only original material should be submitted.
- Abstracts should contain enough detail to clearly convey the approach and the results of the research.
- 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 conference.

3. Submit your abstract using the "submit an abstract" link at:

<http://electronicimaging.org>

You will be prompted to sign in to the MySPIE system. If you have a MySPIE account, sign in using your username and password. First-time users of MySPIE can create a new account by clicking on the [create new account link](#).

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. IS&T/SPIE's decision on whether to accept a presentation or publish a manuscript is final.
- Applicants will be notified of abstract acceptance and sent manuscript instructions by e-mail no later than 23 September 2007.
- Final placement in an oral or poster session is subject to the Chairs' discretion. Instructions for oral and poster presentations will be sent to you by e-mail.

Proceedings and Digital Library

- Full-manuscripts will be Chair/Editor-reviewed and published in the Proceedings and in the IS&T and SPIE Digital Libraries.
- Manuscript instructions will be e-mailed to the contact author and are also available from the "Author Info" link on the conference website.
- Authors must be authorized to transfer copyright of the manuscript to IS&T/SPIE, or provide a suitable publication license.
- Only papers presented at the conference and received according to publication guidelines and timelines will be published in the conference Proceedings and Digital Library.
- Published papers are indexed in leading scientific databases including INSPEC, Ei Compendex, Chemical Abstracts, International Aerospace Abstracts, ISI Index to Scientific and Technical Proceedings, and NASA Astrophysical Data System, and are searchable in the Digital Library. Full manuscripts are available to Digital Library subscribers.

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Attend the Conference

- Present a paper and participate in the conference
- Receive feedback from your peers
- Hear the latest research
- Network with your colleagues.

Publish Your Work

- Publish your work—fast. Your work will appear online 2 to 4 weeks after the meeting
- Contribute to and gain visibility in the most extensive resource available for optics and photonics content—nearly 235,000 journal articles and proceedings manuscripts
- Proceedings are referenced in leading scientific databases and indexes
- SPIE Digital Library has the highest number of citations for patent applications in optics and photonics.

General Information

Registration

Registration fees for conferences and short courses, a registration form, and technical and general information for Electronic Imaging 2008 will be available in the Advance Technical Program. Participant Registration Fee Authors and coauthors are accorded a reduced symposium registration fee.

Advance Technical Program

Available in November 2007.

The comprehensive Advance Technical Program for this symposium will list conferences, paper titles, and authors in order of presentation; education program schedule, including course descriptions and instructor biographies; an outline of all planned special events; and information detailing the hotel reservations process. All those who submit an abstract will receive a copy, or contact SPIE or IS&T to request a copy.

Hotel Accommodations

Information concerning hotel reservations, as well as a hotel reservation form, will be included in the Advance Technical Program available in November 2007.

Exhibit at Electronic Imaging 2008

Exhibit your products and services at the only West Coast venue for the full range of imaging components, devices, and systems. Electronic Imaging 2008 will attract, in one location, the world's leading scientists, researchers, product and process design engineers, product developers, and system integrators.

Companies interested in exhibiting at this symposium may contact Donna Smith at IS&T, +1 703 642 9090; +1 703 642 9094 (fax); dsmith@imaging.org.

Demonstration Session at Electronic Imaging 2008

EI2008 will once again feature this highly-successful, interactive, hands-on program. The EI Demonstration session allows authors and others to showcase their programs, products, and wares to all EI attendees during an evening session, held in conjunction with the Poster Session. Details on how to participate will be included in the Advance Program available in November 2007.