

Advanced Global Communications Technologies for Astronomy II (AS12)

Part of SPIE's International Symposium on Astronomical Telescopes and Instrumentation
22–28 August 2002 • Hilton Waikoloa Village Hotel • Waikoloa, Hawaii

Conference Chair: **Robert I. Kibrick**, UCO/Lick Observatory

Program Committee: **Timothy S. Axelrod**, Mt. Stromlo and Siding Springs Observatory (Australia); **Albert Conrad**, W.M. Keck Observatory; **Gareth Hunt**, National Radio Astronomy Observatory; **Jim Kennedy**, Gemini 8-m Telescopes Project; **Mauro Pucillo**, Osservatorio Astronomico di Trieste (Italy); **Pui Hin H. Rhoads**, Univ. of Hawaii/Manoa; **Iain A. Steele**, Liverpool John Moores Univ. (UK); **Anders Wallander**, European Southern Observatory (Chile)

Advances in communications and network technologies stimulate new modes of astronomical research collaboration and provide both new possibilities and challenges for the operation of ground-based observatories. The next generation internet will provide astronomers with high-bandwidth connectivity between their respective universities and research centers, and create demands to extend similar connectivity to major telescope sites. Extending high-bandwidth links to such remote locations poses significant technical, economic, and political challenges that require innovative solutions.

This conference will focus on topics related to the use of high-bandwidth internets and intranets to facilitate collaborative astronomical research and remote operation of telescopes and associated instrumentation. The aim of this conference is to bring together both astronomers and experts in communications and networking technology to discuss current developments and future plans and directions.

Papers relevant to these topics are solicited in (but not limited to) the following areas:

Remote Operation of Telescopes and Instrumentation

- remote observing
- remote engineering and technical support
- remote access to robotic telescopes
- data archiving to home institutions
- software and data distribution to remote facilities

- remotely accessible observation planning tools
- video conferencing
- public education and outreach

Collaborative Astronomical Research

- simultaneous remote observing from multiple sites
- collaborative distributed interactive analysis of large data sets
- rapid real time multisite distribution of large data sets
- collaborative interactive design of telescopes and instruments
- video conferencing

Innovative Applications and Case Studies of Specific Technologies or Protocols

- communications satellite channels
- inverse multiplexing technologies
- video conferencing technologies
- multicast protocols
- virtual private networks or other secure networking technologies
- real-time VLBI
- real-time coordination between space and ground-based observations

Overviews and Case Studies of Relevant Technical Issues

- network security
- network reliability
- quality of service
- congestion control mechanisms
- performance metrics and monitoring issues
- routing management and related policy issues

Abstract Due Date: 28 January 2002
Manuscript Due Date: 29 July 2002

Submission of Abstracts for Astronomical Telescopes and Instrumentation symposium

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Submissions imply the intent of at least one author to register, attend the symposium, and present the paper (either orally or in poster format).

Your abstract must include all of the following:

1. **SUBMIT TO:** AS12, KIBRICK
2. **SUBMIT EACH ABSTRACT TO ONE CONFERENCE**
ONLY Advanced Global Communications
Technologies for Astronomy II (AS12)
3. **ABSTRACT TITLE**
4. **AUTHOR LISTING** (principal author first)
For each author: First (given) name (initials not acceptable), Last (family) name, Affiliation, Mailing address, Telephone, Fax, and Email address.
5. **PRESENTATION**
Indicate your preference for "Oral Presentation" or "Poster Presentation." Final placement is subject to chairs' discretion.
6. **BRIEF BIOGRAPHY** (principal/presenting author)
Approximately 50 words.
7. **ABSTRACT TEXT**
Approximately 250 words.
8. **KEYWORDS**
List a maximum of five keywords.

Conditions of Acceptance

- **Authors are expected to secure registration fees and travel and accommodation funding, independent of SPIE, through their sponsoring organizations before submitting abstracts.**
- Only original material should be submitted.
- Commercial papers, descriptions of papers with no 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 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 .
- Applicants will be notified of acceptance by mail no later than 3 June 2002. Early notification of acceptance will be placed on the SPIE Web site the week of 29 April 2002 at www.spie.org/info/as

Paper Review

To ensure a high-quality conference, all abstracts and Proceedings of SPIE 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's decision on whether to publish manuscripts is final.

Instructions for Submitting Abstracts

All authors are STRONGLY ENCOURAGED to submit their abstracts by the due date using the "submit an abstract" link on the Web at:

www.spie.org/infolas

Using this method of submission ensures that your abstract will be immediately accessible to the conference chair for review. Using other methods of submission (listed below) will delay the processing of your abstract.

- or E-MAIL each abstract separately to: abstracts@spie.org in ASCII text (not encoded) format. IMPORTANT: to ensure receipt and proper processing of your abstract, the Subject line must include only the following:
SUBJECT: AS12, KIBRICK
- or MAIL your abstract to:
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- or FAX one copy to SPIE at 360/647-1445 (send each abstract separately).

Oral or Poster Presentation

Instructions for Oral and Poster presentations will be included in your author kit. All Oral and Poster presentations are included in the *Proceedings of SPIE* and require a manuscript.

Proceedings of SPIE

These conferences will result in full-manuscript Chair/Editor-reviewed volumes published in the Proceedings of SPIE. Correctly formatted, ready-to-print manuscripts are required from all accepted authors. Electronic submissions are highly preferred, and result in higher quality reproduction. Submission must be made in PostScript created with a printer driver compatible with SPIE's online Electronic Manuscript Submission system. Manuscripts must be submitted in English by 29 July 2002. Authors are required to transfer copyright of the manuscript to SPIE or to provide a suitable publication license. Papers published are indexed in leading scientific databases including INSPEC, Compendex Plus, Physics Abstracts, Chemical Abstracts, International Aerospace Abstracts, and Index to Scientific and Technical Proceedings.

Publishing Policy

Manuscript due dates must be strictly observed. Late manuscripts may not be published in the Proceedings of SPIE, whether the conference volume will be published before or after the meeting. The objective of this policy is to better serve the conference participants as well as the technical community at large, by enabling timely publication of the Proceedings. **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 SPIE and the Conference Chair/Editors.

Participant Registration Fee

Authors, coauthors, program committee members, and session chairs are expected to register and pay the conference registration fee. If you are a current **SPIE Member** you will enjoy an additional discount on your symposium registration fee and on educational short courses.