Call for Technical Contributions – SIGAda 2010

**ACM Annual International Conference
on Ada and Related Technologies:**
Engineering Safe, Secure, and Reliable Software

Fairfax, Virginia (Washington DC Area), USA
October 24-28, 2010

Submission Deadline: June 25, 2010
Sponsored by ACM SIGAda
http://www.acm.org/sigada/conf/sigada2010

SUMMARY: Reliability, safety, and security are among the most critical requirements of contemporary software. The application of software engineering methods, tools, and languages all interrelate to affect how and whether these requirements are met.

Such software is in operation in many application domains. Much has been accomplished in recent years, but much remains to be done. Our tools, methods, and languages must be continually refined; our management process must remain focused on the importance of reliability, safety, and security; our educational institutions must fully integrate these concerns into their curricula.

The conference will gather industrial and government experts, educators, software engineers, and researchers interested in developing, analyzing, and certifying reliable, safe, long-lived, secure software. We are soliciting technical papers and experience reports with a focus on, or comparison with, Ada.

We are especially interested in experience in integrating these concepts into the instructional process at all levels.

POSSIBLE TOPICS INCLUDE BUT ARE NOT LIMITED TO:

- Challenges for developing reliable, safe, long-lived, secure software
- Transitioning to Ada 2005
- Ada and SPARK in the classroom and student laboratory
- Language selection for highly reliable systems
- Mixed-language development
- Use of high reliability subsets or profiles such as MISRA C, Ravenscar, SPARK
- High-reliability standards and their conformance to DO-178B and preparing for DO-178C
- Software process and quality metrics
- System of Systems
- Real-time networking/quality of service guarantees
- Real-Time Parallel Processing
- Analysis, testing, and validation
- Use of ASIS for new Ada tool development
- High-reliability development experience reports
- Static and dynamic analysis of code
- Integrating COTS software components
- System Architecture & Design
- Information Assurance
- Ada products certified against Common Criteria / Common Evaluation Methodology
- Distributed systems
- Fault tolerance and recovery
- Performance analysis
- Implementing Service Oriented Architecture
- Embedded Hard Real-Time Systems

KINDS OF TECHNICAL CONTRIBUTIONS:

TECHNICAL ARTICLES present significant results in research, practice, or education. Articles are typically 10-20 pages in length. These papers will be double-blind refereed and published in the Conference Proceedings and in ACM Ada Letters. The Proceedings will be entered into the widely-consulted ACM Digital Library accessible online to university campuses, ACM's 80,000 members, and the software community.

EXTENDED ABSTRACTS discuss current work for which early submission of a full paper may be premature. If your abstract is accepted, you will be expected to produce a full paper, which will appear in the proceedings. Extended abstracts will be double-blind refereed. In 5 pages or less, clearly state the work's contribution, its relationship with previous work by you and others (with bibliographic references), results to date, and future directions.

EXPERIENCE REPORTS present timely results on the application of Ada and related technologies. Submit a 1-2 page description of the project and the key points of interest of project experiences. Descriptions will be published in the final program or proceedings, but a paper will not be required.

PANEL SESSIONS gather a group of experts on a particular topic who present their views and then exchange views with each other and the audience. Panel proposals should be 1-2 pages in length, identifying the topic, coordinator, and potential panelists.

INDUSTRIAL PRESENTATIONS Authors of industrial presentations are invited to submit a short overview (at least 1 page in size) of the proposed presentation to the Industrial Committee Chair by August 1st 2010. The authors of selected presentations shall prepare a final short abstract and submit it to the Committee Chair by October 1st[h], 2010, aiming at a 20-minute talk. The authors of accepted presentations will be invited to submit corresponding articles for publication in the ACM Ada Letters.

WORKSHOPS are focused work sessions, which provide a forum for knowledgeable professionals to explore issues, exchange views, and perhaps produce a report on a particular subject. A list of planned workshops and requirements for participation will be published in the Advance Program. Workshop proposals, up to 5 pages in length, will be selected by the Program Committee based on their applicability to the conference and potential for attracting participants.

TUTORIALS offer the flexibility to address a broad spectrum of topics relevant to Ada, and those enabling technologies which make the engineering of Ada applications more effective. Submissions will be evaluated based on relevance, suitability for presentation in tutorial format, and presenter's expertise. Tutorial proposals should include the expected level of experience of participants, an abstract or outline, the qualifications of the instructor(s), and the length of the tutorial (half-day or full-day). Tutorial presenters receive complimentary registration to the other tutorials and the conference.

HOW TO SUBMIT: Send contributions by **June 25, 2010**, in Word, PDF, or text format as follows:

Technical Articles, Extended Abstracts, Experience Reports, and Panel Session Proposals to: Program Chair, Lt. Col. Jeff Boleng (Jeff.Boleng@usafa.edu)
Tutorial Proposals to: Tutorials Chair, Dr. Robert Pettit (RPettit@gmu.edu)
Industrial Presentations Proposals to: Industrial Committee Chair, Prof. Liz Adams (adamses@cs.jmu.edu)

FURTHER INFORMATION:

CONFERENCE GRANTS FOR EDUCATORS: The ACM SIGAda Conference Grants program is designed to help educators introduce, strengthen, and expand the use of Ada and related technologies in school, college, and university curricula. The Conference welcomes a grant application from anyone whose goals meet this description. The benefits include full conference registration with proceedings and registration costs for 2 days of conference tutorials/workshops. Partial travel funding is also available from AdaCore to faculty and students from GNAT Academic Program member institutions, which can be combined with conference grants. For more details visit the conference web site or contact Prof. Michael B. Feldman (mfeldman@gwu.edu)

OUTSTANDING STUDENT PAPER AWARD: An award will be given to the student author(s) of the paper selected by the program committee as the outstanding student contribution to the conference.

SPONSORS AND EXHIBITORS: Please contact Greg Gicca (Gicca@AdaCore.com) and Kristen Ferretti (kef@ocsystems.com) for information about becoming a sponsor and/or exhibitor at SIGAda 2010.

IMPORTANT INFORMATION FOR NON-US SUBMITTERS: International registrants should be particularly aware and careful about visa requirements, and should plan travel well in advance. Visit the conference website for detailed information pertaining to visas.

ANY QUESTIONS?:

Please submit your questions to Conference Chair Alok Srivastava (alok.srivastava@auatac.com) or Local Arrangements Co-Chairs Avtar Dhaliwal (avtar_dhaliwal@gencosystems.com) and Florence Gubanc (fgg@ocsystems.com).