



SIGAda 2007



The Annual International Conference on the Ada Programming Language

4 - 8 November 2007, Washington, DC, USA



Washington DC & Udvar-Hazy Space Museum (close to the conference venue)



Conference Hotel, Hyatt Fair Lakes, Fairfax, VA 22033 (USA)

Keynote Speeches

Keynote Speech by Jeff O'Leary of US Federal Aviation Administration Federal Aviation Administration (FAA) and Ada

The FAA depends upon large, complex and highly available software systems to manage the vast commercial and civil aviation network and to carry out the agency's mission of ensuring high capacity, efficient and extremely safe air travel for the flying public. Ada has become a strategic technology in developing and sustaining systems that require high availability and high reliability. The FAA Air Traffic Organization's (ATO) major vast initiative, the En-Route Automation Modernization (ERAM) program goes a long way to reintegrating many disparate system components into a modern composite architecture. He will discuss past Ada based systems that FAA fielded, the current major ERAM effort, and also where FAA is going in the future with the Next Generation Air Transportation System (NGATS).

**Other Keynote Speeches also on Safety, Security, and High Reliability Systems
with emphasis on Cyber Security and Fault Tolerant Architectures**

<http://www.sigada.org/conf/sigada2007/>

ACM SIGAda Annual International Conference
Software Development for Safety, Security, and High Reliability Systems
4 - 8 November 2007, Washington, DC, USA

Sponsored by ACM SIGAda
www.acm.org/sigada/conf/sigada2007

Constructing high reliability software is an engineering challenge that can now be met in many domains. The application of software engineering methods, tools, and languages interrelate to make the challenge easier or more difficult. This conference focuses on safety, security and high reliability systems and the issues related to their development. Topics such as applied software engineering principles, conforming to specific safety or security standards, testing philosophies, programming language selection, etc. will be discussed. The conference will gather industrial experts, educators, software engineers, and researchers interested in developing, analyzing, and certifying reliable, cost-effective software. Technical or theoretical papers as well as experience reports with a focus on, or comparison with, Ada are solicited. Possible topics include but are not limited to:

- Safety, security and high integrity development issues
- Language selection for a high reliability system: Ada, C, C++, Java, C#, or others
- Use of high reliability subsets or dialects: Java HIP, MISRA C, Ravenscar, SPARK, etc.
- High reliability standards and their issues: DO-178B, EIC 61508, FDA, SAE, CC, EAL, etc
- Process and quality metrics
- Analysis, Testing, and Validation
- Use of ASIS for new Ada tool development
- Mixed-language development
- Quality Assurance
- Performance analysis
- High reliability software engineering education
- High reliability development experience reports
- Real-time networking/quality of service guarantees
- Fault tolerance and recovery
- Distributed system load balancing
- Static and dynamic code analysis
- Debugging complex systems
- Integrating COTS software components
- System Architecture & Design
- Information Assurance in the age of terrorism
- Use of new Ada 2005 features/capabilities
- Ada products evaluated per Common Criteria, Protection Profiles or Security

Besides the Keynote Addresses, the conference will present

- **Technical Articles** significant results in research, practice, or education.
- **Experience Reports** timely results on the application of Ada and related technologies to the design and implementation of applications.
- **Workshops** the focused work sessions, which provide a forum for knowledgeable professionals to explore issues, exchange views, and perhaps produce a report on a particular subject.
- **Panel Sessions** a group of experts on a particular topic will present their views and then exchange views with each other and the audience.
- **Tutorials** on a broad spectrum of topics relevant to Ada, and those enabling technologies which make the engineering of Ada applications more effective.
- **Exhibits** vendors displaying products/services to support development and maintenance of Highly Reliable, Safe and Secure Systems.

The SIGAda 2007 Program Committee is:

Program Chair,	Dr. Leemon C. Baird III	leemon.baird@usafa.af.mil
Tutorials Chair,	Dr. David Cook	dcook@aegistg.com
Workshops Chair,	Dr. Bill Thomas	BThomas@MITRE.Org
Exhibits Chair,	Dr. Ron Oliver	SROliver@CSC.CalPoly.Edu
Academic Liaison,	Dr. Michael Feldman	MFeldman@GWU.Edu
Conference Chair,	Dr. Alok Srivastava	Alok.Srivastava@auatac.com

See the SIGAda 2007 Home Page for further details on the conference:

<http://www.acm.org/sigada/conf/sigada2007>