



Association for
Computing Machinery

SIGAda 2008 Advance Program
ACM Special Interest Group
on the Ada Programming Language
Annual International Conference
University Place Hotel & Conference Center
Portland, Oregon, USA
October 26-30, 2008



Portland, with Mt. Hood (11,249 feet or 3,429 m)

2008 is an important double anniversary: the Ada 83 Standard was adopted 25 years ago, and the Steelman Report, which gave rise to Ada, was published 30 years ago.

Special Anniversary Keynote Addresses

These exciting speakers are all among our pioneers, having been continuously involved with Ada for at least 25 years.



From Strawman to Ada 2005: a Socio-Technical Retrospective

Dr. Benjamin Brosgol *Senior Technical Staff, AdaCore*

Dr. Brosgol led the Intermetrics "Red" language candidate team in the 1970s, participated in the design of both Ada 83 and Ada 95, and was editor of the Safety and Security Annex of the Ada 95 standard. Under Sun Microsystems' Java Community Process Dr. Brosgol was a member of the Expert Group for JSR-001 (Real-Time Specification for Java, or "RTSJ"), and he is currently a member of the Expert Groups for JSR-282 (RTSJ v1.1) and JSR-302 (Safety-Critical Java Technology).



30 Years after Steelman, Does DoD Still Have a Software Crisis?

Dr. Joyce Tokar *President, Pyrrhus Software*

From 1981-84 Dr. Tokar was responsible for the development of the Gensoft (Western Digital) Ada system. Over the past 20 years, she has been working in the area of mission and safety critical, real-time, and embedded software systems. She is currently active in the area of secure software system development tools and environments, and leads a team in the analysis and evolution of the system of systems software for the US Department of Defense Future Combat System (FCS).



The Ada Paradox(es)

Dr. Jean-Pierre Rosen *President, ADALOG*

Dr. Rosen was a designer of the Ada/Ed system at NYU in the 1980s. After working as a Professor at ENST in France, he formed ADALOG, a training, consultancy, and software development company. Dr. Rosen is Chairman of the AFNOR (French standardization body) group for Ada, and a member of the ARG (Ada Rapporteur Group), the expert group in charge of maintenance and evolution of the language. He was a member of the expert team who controlled the development of the validation suite for Ada 95.

**FOR UP-TO-THE-MINUTE TUTORIAL AND SPONSOR/EXHIBIT INFORMATION
AND ONLINE REGISTRATION
VISIT <http://www.sigada.org/conf/sigada2008> TODAY!**

ACM SIGAda Annual International Conference

Summary Conference Schedule

Sunday-Monday, October 26-27

Full and Half-Day Tutorials
(see website for details)

Introduction to Ada

Michael Feldman (The George Washington University (ret.))

Languages for Safety-Critical Software: Issues and Assessment

Benjamin Brosgol (AdaCore)

Ada for Real-Time and Parallel Processing

John McCormick (University of Northern Iowa)

Ada for Web Server Development

Ricky E. Sward, The MITRE Corporation

Tuesday, October 28

9:00-10:30 am **Greetings from SIGAda and Conference Officers**

Keynote Address:

From Strawman to Ada 2005:

a Socio-Technical Retrospective

Dr. Benjamin Brosgol

(Senior Technical Staff, AdaCore)

10:30 - 11:00am **Morning Break - Exhibits Open**

11:00 am-12:30 pm **Dynamic Analysis of Ada Programs for Comprehension and Quality Measurement**

Elaheh Safari-Sharifabadi and Constantinos

Constantinides (Concordia University)

re-ADA: Reliable Ada-based Descriptive Architecture for C4ISR via a Quantitative Interoperating Model

Sheldon X. Liang, Lyle A. Reibling and John Betts

(Azusa Pacific University)

Sponsor Presentation(s)

12:30 – 2:00pm **Mid-day Break and Exhibits**

2:00-3:30 pm **A Buffer Stream Container Class with Selectable Implementation Using Ada 2005**

Brad Moore

Real-Time Synchronization on Distributed Architecture with Ada 2005

Jim Ras (University of Houston)

Sponsor Presentation(s)

3:30 – 4:00 pm **Afternoon Break & Exhibits**

4:00-5:30 pm **A Multi-Language Service-Oriented Architecture Using an Enterprise Service Bus**

Ricky E. Sward and Kelly J. Whitacre

(The MITRE Corporation)

Ada and Software Engineering Education: One Professor's Experiences

John McCormick (University of Northern Iowa)

Sponsor Presentation(s)

Evening Activities (7:00pm - 10:00pm)

Conference Reception

Wednesday, October 29

9:00-10:30am **Announcements**

Keynote Address:

30 Years after Steelman: Does DoD Still Have a Software Crisis?

Dr. Joyce Tokar

(President, Pyrrhus Software)

10:30 – 11:00am **Morning Break and Exhibits**

11:00 am-12:30 pm **Implementing the Extended Return Statement for Ada 2005**

Tucker Taft (SofCheck, Inc.)

Removing Backward Go-To Statements from Ada Programs

W. Douglas Maurer

(The George Washington University)

Sponsor Presentation(s)

12:30 - 2:00pm **Mid-day Break and Exhibits**

pm3:30-2:00- **Distributed Status Monitoring and Control using Remote Buffers and Ada 2005**

Brad Moore

Anima: A Language for Real-Time Embedded Software Development

Steven Doran

A Distributed, Multi-Language Architecture for Large Unmanned Ground Vehicles

Cynthia Cicalese, Richard Weatherly, Joel Sherrill,

Robert Bolling, Kevin Forbes, Robert Grabowski,

Keven Ring, and David Seidel

(The MITRE Corporation)

3:30 – 4:00 pm **Afternoon Break**

4:00-5:30 pm **Workshop:**

GNAT: User experiences with Ada 2005 and desires for the future: Ada 2015

Greg Gicca (AdaCore)

Evening Activities (7:00pm - 10:00pm)

Birds-of-a-Feather (BoF) Sessions TBA

Thursday, October 30

9:00-10:30 am **Announcements**

Ada Europe 2009 Presentation

ACM SIGAda 2009 Presentation

SIGAda Awards

Keynote Address:

The Ada Paradox(es)

Dr. Jean-Pierre Rosen

(President, ADALOG)

Closing Remarks

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CONFERENCE VENUE & HOTEL

University Place Hotel and Conference Center
310 SW Lincoln St., Portland, Oregon 97201 (USA)
+1.866.845.4647 (Toll-Free Phone from USA/Canada Only) or
+1.503.221.0140 (Direct Toll Phone Worldwide).



The SIGAda 2008 Conference will be held at the University Place Hotel and Conference Center in Portland, Oregon. Portland is the attractive, livable "City of Roses" in the Pacific Northwest. The weather in October is usually cool and often beautiful. University Place is a modern and reasonably-priced hotel owned by Portland State University, located within walking distance of the central business district, the lively riverfront area, and the campus.

We have arranged special rates starting at \$99 per night (double or king-size beds, plus 12.5% city tax) for the conference attendees. A block of rooms has been set aside and will be available only until October 5, 2008, after which room availability and rate in the Conference hotel cannot be guaranteed, so don't delay. Call the hotel; our event code is SIGAda 2008.

EXHIBITORS

SIGAda 2008 will include vendor participation, featuring presentations on their products and services. For specific information, please visit the website or contact an Exhibits Co-Chair, **S. Ron Oliver**, caress Corporation, SRoliver@caresscorp.com, or **Greg Gicca**, AdaCore, gicca@adacore.com.

GRANTS TO EDUCATORS

As in past years, SIGAda is offering grants to educators to attend the conference. Grants cover the registration and tutorial fees; travel funds are not available. Details on the grant program are available from **Prof. Michael B. Feldman** mfeldman@gwu.edu or from the conference website. Applications must be sent by e-mail, no later than October 1, 2008. On-Line Registration using information provided with grants must be completed by October 22, 2008.

WORKSHOPS / BOFS

Focused workshops are important in shaping Ada technology to better meet the needs of the Ada community. Workshops are free for those registered for the conference. Workshop descriptions are listed on the SIGAda 2008 Home Page. Additional workshops or Birds-of-a-Feather (BoF) sessions are welcome. Workshops have a focused objective and result in a report to be published in *ACM Ada Letters*. BoFs are informal discussion groups. If you would like to propose a Workshop or BoF, please contact the Workshops Chair, **Bill Thomas**, BThomas@MITRE.Org

CONFERENCE TEAM

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