



Association for  
Computing Machinery

*Advancing Computing as a Science & Profession*

## Advance Program

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

**Magnolia Hotel  
Denver, Colorado 80202 (USA)  
November 6-10, 2011**



**Sponsored by the ACM Special Interest Group on the Ada Programming Language (SIGAda)**  
in cooperation with Ada-Europe, Ada Resource Association, and ACM Special Interest Groups on Embedded  
Systems, Programming Languages, Computers and Society, and Computer Science Education

## Featured Speakers and Session Leaders



### **Everything I Know I Learned from Ada**

**Grady Booch, IBM Fellow  
(Chief Scientist for Software Engineering,  
IBM Research)**

*Presentation via Second Life*



### **Why I Came Back To Ada**

**Martin Carlisle, Ph.D.  
(US Air Force Academy)**



### **Software Safety, and Related Language Considerations**

**Jim Rogers (MEI Technologies, Inc.)**



### **How to Make Ada go "Viral"**

**JP Rosen  
(AdaLog)**

**Corporate Sponsors – Platinum**



**Corporate Sponsors – Silver**



See <http://www.sigada.org/conf/sigada2011>  
For latest tutorial, program, and exhibit information and on-line registration

# ACM SIGAda Annual International Conference, November 6-10, 2011

## Summary Conference Schedule

PRE-CONFERENCE TUTORIALS Sunday, November 6	
<b>Introduction to Ada (SF1 - Full Day)</b> <i>Michael Feldman (George Washington Univ. retired)</i> <b>How to measure and optimize reliable embedded software (SA1 - Morning)</b> <i>Ian Broster(Rapita Systems)</i> <b>Service-Oriented Architecture (SOA) Concepts and Implementations (SA2 - Morning)</b> <i>Ricky Sward (MITRE Corp) and Jeff Boleng (USAF Academy)</i> <b>DO-178C: The Next Avionics Safety Standard (SP1 - Afternoon)</b> <i>Ben Brosgol (AdaCore)</i> <b>Improving the Quality of Ada Software with Range Analysis (SP2 - Afternoon)</b> <i>Jay Abraham (The Mathworks, Inc.)</i>	
PRE-CONFERENCE TUTORIALS Monday, November 7	
<b>Building Embedded Real-Time Applications (MF1 - Full Day)</b> <i>John McCormick (Univ. of Northern Iowa) and Frank Singhoff (Univ. of Brest)</i> <b>Experimenting with ParaSail – Parallel Specification and Implementation Language (MA1 - Morning)</b> <i>Tucker Taft (SofCheck)</i> <b>Ada Coding Standards (MP1 - Afternoon)</b> <i>J-P Rosen (AdaLog)</i>	

TECHNICAL PROGRAM Tuesday, November 8	
9 – 10:30 am	<b>Greetings from SIGAda and Conference Officers</b>  <b>Keynote Address:</b> <b>Everything I Know I Learned from Ada</b> <i>Grady Booch (IBM Fellow, Chief Scientist for Software Engineering, IBM Research)</i> <b>Via Second Life Broadcast</b>
10:30 – 11:00 am Morning Break - Exhibits Open	
11 – 12:30 pm	<b>A Parallel Programming Model for Ada</b> <i>Hazem Ali and Luís Miguel Pinho (CISTER Research Centre, Polytechnic Institute of Porto, Portugal)</i> <b>Stack Safe Parallel Recursion with Paraffin</b> <i>Brad Moore (General Dynamics, Canada)</i> <b>AdaCore Sponsor Presentation</b>
12:30 – 2:00 pm Mid-day Break and Exhibits	
2 – 4:00 pm	<b>Panel: How to Make Ada go "Viral"</b> <i>JP Rosen (AdaLog), Tucker Taft (SofCheck), Brad Moore (GD Canada)</i> <b>Ellidiss Sponsor Presentation</b>
4:00 – 4:30 pm Afternoon Exhibits	
4:30 – 5:30	<b>Birds of a feather: ParaSail</b>
Tuesday Evening Reception (7:00pm - 10:00pm)	

TECHNICAL PROGRAM Wednesday, November 9	
9:- 10:30 am	<b>SIGAda Awards</b> <b>Keynote Address: Why I Came Back to Ada</b> <i>Martin Carlisle (US Air Force Academy)</i>
10:30 – 11:00 am Morning Break and Exhibits	
11 am – 12:30 pm	<b>Software Vulnerabilities Precluded by SPARK</b> <i>Paul E. Black, PhD and Chris E. Dupilka (NIST and US DoD) - F. David Jones and Joyce L. Tokar, PhD (Pyrrhus Software)</i> <b>Enhancing SPARK's Contract Checking Facilities Using Symbolic Execution</b> <i>John Hatcliff, Jason Belt, and Robby Robby (Kansas State Univ.)</i> <b>LDRA Sponsor Presentation</b>
12:30 – 2:00 pm Mid-day Break and Exhibits	
2 – 4:00 pm	<b>An Ada Design Pattern Recognition Tool for AADL Performance Analysis</b> <i>V. Gaudel, F. Singhoff, A. Plantec, and S. Rubini (Univ. of Brest, France) - P. Dissaux and J. Legrand (Ellidiss Software)</i> <b>Improving the Quality of Ada Software with Range Analysis</b> <i>Jay Abraham, Christian Bard, Jeff Chapple, Patrick Munier, and Cyril Preve (The Mathworks, Inc.)</i> <b>Making the Non-executable ACATS Tests Executable</b> <i>Dan Eilers, (Irvine Compiler Corp.) and Tero Koskinen</i>
4:00 – 4:30 pm Afternoon Break	
4:30 – 5:30	<b>Birds of a Feather: GNAT</b>
5:30 – 7:00 pm Dinner Break	
7:00 – 11:00	<b>Workshops</b>

TECHNICAL PROGRAM Thursday, November 10	
9 – 10:15am	<b>Conference Best Paper Awards</b>  <b>Invited Talk: Software Safety, and Related Language Considerations</b> <i>Jim Rogers (MEI Technologies, Inc.)</i>
10:15 – 10:30 am Morning Break	
10:30 – 12 noon	<b>Towards Ada 2012, An Interim Report</b> <i>John Barnes (John Barnes Informatics)</i> <b>Ada-Europe 2012 Announcement</b> <b>ACM SIGAda 2012 Announcement</b>  <b>Closing Remarks</b>

## SIGAda 2011 Venue and Hotel

### Magnolia Hotel

818 17th Street

Denver, Colorado 80202 (USA)

Phone: 1- 888-915-1110 (US/Canada) or 1-303-607-9000

Fax: 1-303-607-0101



The SIGAda 2011 Conference will be held at the Magnolia Hotel in downtown Denver, Colorado. The hotel is convenient to Denver International Airport, and walking distance to lower downtown and the Denver stadiums, entertainment, and the Colorado capital buildings.

The hotel has reserved a block of rooms for the SIGAda 2011 conference. The conference rate is \$140 for single or double occupancy rooms, which includes complimentary wireless internet, complimentary breakfast, and a complimentary evening reception. Overnight valet parking is available for \$26 per night. All reservations must be guaranteed by credit card. Reservations must be received by October 8, 2011. See conference website for further details.

## SPONSORS/EXHIBITORS

SIGAda 2011 will include vendor participation, featuring presentations on their products and services during main sessions. For specific information, please contact the Exhibits Chair, **Greg Gicca**, [gicca@adacore.com](mailto: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; members of the GNAT Academic Program may be eligible for travel funds from AdaCore. Apply by e-mail, no later than October 10, 2011. Grant program details are available from the conference website or **Prof. Michael B. Feldman**, [mfeldman@gwu.edu](mailto:mfeldman@gwu.edu)

## WORKSHOPS/BIRDS-OF-A-FEATHER

Focused workshops are important in shaping Ada technology to better meet the needs of the Ada community. Workshops result in a report to be published in *ACM Ada Letters*. Workshop descriptions are listed at the SIGAda 2011 website. Birds-of-a-Feather sessions are informal discussion groups. Additional workshop or Birds-of-a-Feather (BoF) proposals are welcome; please contact the Workshops Chair, **Bill Thomas**, [BThomas@MITRE.Org](mailto:BThomas@MITRE.Org)

## CONFERENCE TEAM

### *Conference Chair*

**Ricky E. Sward**

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### *Program Chair*

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### *SIGAda and Conference Treasurer*

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**John McCormick**

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### *SIGAda Vice Chair, Meetings and Conferences*

**Alok Srivastava**

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## SIGAda 2011 Advance Program



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#### ***Why You Should Attend***

Learn about the enhancements Ada2012 is bringing including the “Programming by Contract” features. Ada software is powering Boeing's 787; Europe's high-speed trains; the National Ignition Facility that will lead to new breakthroughs in power generation, astrophysics, materials science and many other scientific disciplines; space systems; U.S. and international air traffic control systems; the New York subway; and numerous military and commercial systems in which software reliability, safety, and security are paramount.

As computers and software are becoming ubiquitous across all aspects of our lives, software reliability is of utmost importance. The Ada language is designed for, and has proven itself across multiple safety and security industries.

***Don't miss this chance to bring yourself up to date on Ada!***

## ADVANCE PROGRAM

**Register early  
and join SIGAda —  
you can SAVE up to**

**\$720**

**Visit the conference website!**

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