



Association for  
Computing Machinery

*Advancing Computing as a Science & Profession*

# SIGAda 2007



**ACM Annual International Conference  
on the Ada Programming Language**  
(including NIST Static Analysis Summit II and HIBACHI Workshop)

**Hyatt Fair Lakes Hotel, Fairfax, Virginia USA**  
**November 4-9, 2007**

**sponsored by ACM Special Interest Group on Ada (ACM SIGAda)**  
**in cooperation with SIGAPP, SIGCAS, SIGCSE, SIGPLAN, SIGSOFT,**  
**Ada-Europe, and the Ada Resource Association**

## Table of Contents

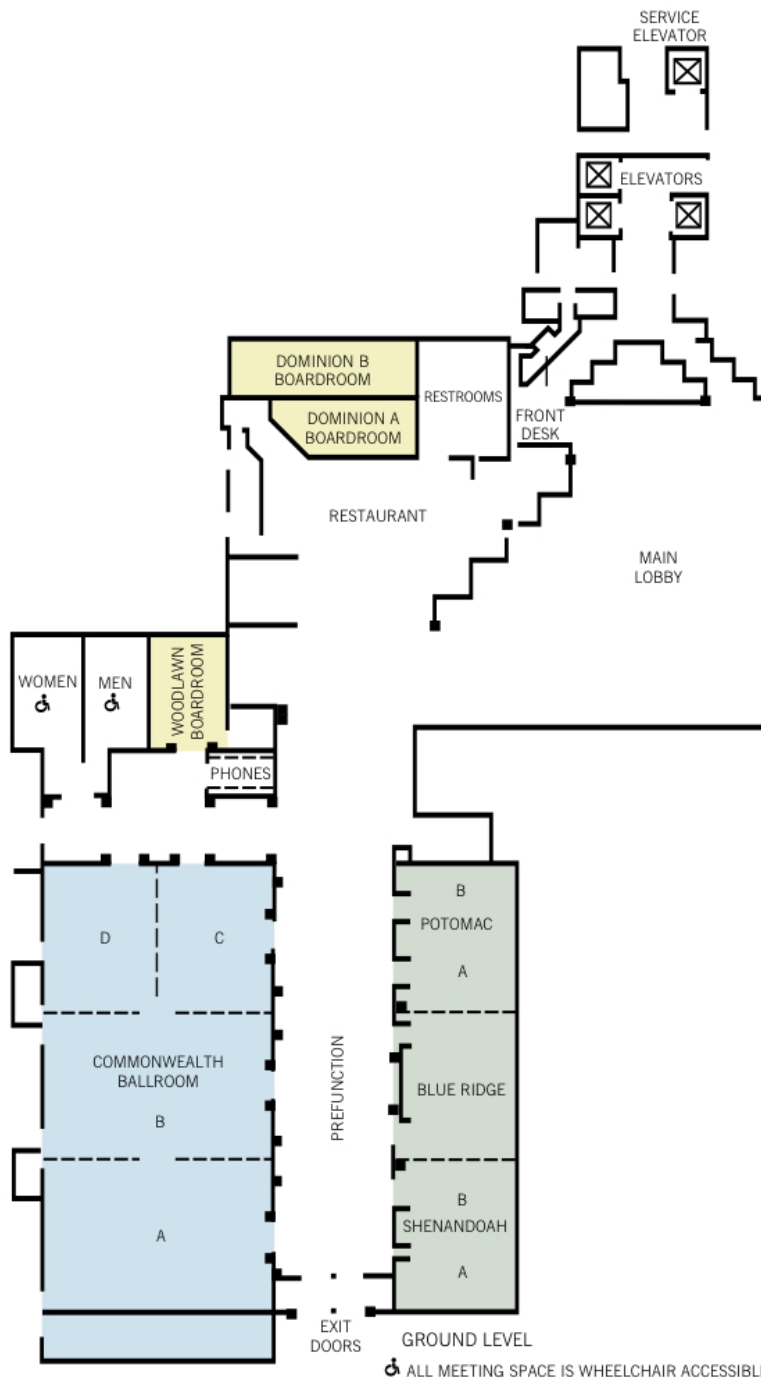
➤ Map of the Conference Hotel -----	3
➤ Tutorial Schedule -----	5
➤ Conference Schedule -----	6
➤ Workshops and Birds of a Feather Sessions -----	7
➤ Keynote Speakers -----	8
➤ Special Cultural Presentation -----	9
➤ Acknowledgements -----	15
➤ Corporate Sponsors -----	16

## Conference at a Glance

<b>Sunday, November 4th</b>		
9:00 am – 5:30 pm	Tutorials (see page 5)	Virginia Suites
<b>Monday, November 5th</b>		
9:00 am – 5:30 pm	Tutorials (see page 5)	Commonwealth C & D
7:00 pm – 10:00 pm	SIGAda Extended Executive Committee (EEC) Meeting (open to all)	Commonwealth CD
<b>Tuesday, November 6th</b>		
9:00 am – 5:30 pm	Conference Program (see page 6)	Commonwealth AB
10:30 am – 4:00 pm	Vendor Exhibits	Virginia Suites
7:00 pm – 10:00 pm	Reception and Cultural Presentation	Commonwealth ABCD
<b>Wednesday, November 7th</b>		
9:00 am – 5:40 pm	Conference Program (see page 6)	Commonwealth AB
10:30 am – 2:00 pm	Vendor Exhibits	Virginia Suites
7:00 pm – 10:00 pm	GNAT Birds of a Feather session (see page 7), Hibachi Workshop (see page 7), or other BoFs	Commonwealth C & D
<b>Thursday, November 8th</b>		
9:00 am – 11:00 am	Conference Program (see page 7)	Commonwealth BCD
12:30 pm – 5:30 pm	NIST Static Analysis Summit II (see page 7)	Commonwealth BCD
<b>Friday, November 9<sup>th</sup></b>		
8:30 am – 12:30 pm	NIST Static Analysis Summit II (see page 7)	Commonwealth BCD

# Conference Center and Meeting Room Map

**Hyatt Fair Lakes Hotel**  
**12777 Fair Lakes Circle**  
**Fairfax, VA 22033**  
**Tel: +1 703 818 1234 Fax: +1 703 653 6190**



**NOTE: Potomac, Blue Ridge, and Shenandoah are collectively called Virginia Suites**

# Welcome to SIGAda 2007 from the SIGAda, Conference, and Program Committee Chairs

Welcome to the 2007 Annual International Conference of ACM's Special Interest Group on Ada (SIGAda), being held in Fairfax, Virginia, USA, near the Nation's Capital, Washington, DC.

We offer you a conference featuring a **top-quality technical program** focused on important **strengths of Ada**: distributed, real-time, and embedded systems. The visions of these systems reflected in Ada's original requirements in the 1970s have expanded in almost unimaginable ways with Ada 95 and Ada 2005 implementations, and continue to be objects of envy by those in the programming language community who understand what the strengths of a language bring to implementers in terms of **efficiency, reliability, and effectiveness**.

Software challenges remain dominant in these domains with rapid hardware advances. Most other languages fail to meet the needs identified as far back as the 1978 Steelman, being able at best to do only 3/4 of the needed functions while Ada performs over 95%. Ada's track record of reliability, efficiency, robustness and all-around success is unparalleled at solving real-time and/or distributed system challenges. Ada is used in space/satellite systems, most modern jetliner avionics, high-speed ground transportation systems, and battle automation systems. As such, it is an important part of the world's economies and defenses.

**Three days of technical papers, keynotes, and invited presentations** will report how these successes are achieved and where remaining issues are leading. We are fortunate to have **leaders in the software engineering community** to provide keynote addresses to set the tone for our conference. Beyond the formal conference of selected papers and presentations, SIGAda 2007 also offers **workshops and tutorials** with the same duality of on-theme and complementary topics. SIGAda's tutorials provide full-day or half-days on selected topics to **enhance one's professional development**. SIGAda's workshops allow those working the same issues to share with each other and leverage everyone's accomplishments; workshop products are "delivered" to the community.

The broad offerings of **career-enhancing tutorials** include basic Ada 2005 introductions for software engineers new to Ada, intermediate and advanced Ada topics for practitioners striving to expand their Ada expertise, and several language-independent technology topics. These topics are often coupled with Ada technology because only Ada's full and complete definition allows one to indicate what is expected, and to show that it can be achieved.

Join us in understanding how these topics mutually support the disciplined development and evolution of serious, high quality software systems. Finally, we hope SIGAda 2007 provides you an outstanding opportunity for **rewarding affiliation with colleagues in industry, academia, and government** — discussions "in the hall," informal meal-time meetings, and even during the more relaxed moments we make for socializing. These associations can be as valuable as the technical program at professional conferences, and often extend the experience after you return home.

We take this opportunity to thank our Corporate Sponsors. **Platinum**: Lockheed Martin, AdaCore, and OC Systems; **Gold**: Praxis and Northrop Grumman; **Silver**: Telelogic, Genco, Artisan Software, and Ellidiss; **Basic**: Aonix, Integrated Computer Solutions, DDC-I, and Lattix.

## **ACM SIGAda Chair**



**John W. McCormick**  
University of Northern Iowa  
Dept. of Computer Science  
mccormick@cs.uni.edu

## **Conference Chair**



**Alok Srivastava**  
Northrop Grumman Corporation  
Air Traffic Control Systems Development  
Alok.Srivastava@AUATAC.Com

## **Program Chair**



**Leemon C. Baird III**  
US Air Force Academy  
Dept. of Computer Science  
leemon.baird@usafa.af.mil

# Tutorial Schedule

Sunday, November 4		
	Shenandoah/Blue Ridge Room	Potomac Room
8:00 am – 9:00 am	Continental Breakfast	
9:00 – 10:30 am	<b>SA2: Languages for Safety-Critical Software: Issues and Assessment</b> <i>Ben Brosgol, AdaCore</i>	<b>SA1: Introducing the Best of Ada</b> <i>John G.P. Barnes, John Barnes Informatics</i>
10:30 am – 11:00 am	Morning Break	
11:00 am – 12:30 pm	<b>SA2: Languages for Safety-Critical Software: Issues and Assessment</b>	<b>SA1: Introducing the Best of Ada</b>
12:30 pm – 2:00 pm	Mid-day Break	
2:00 – 3:30 pm	<b>SP1: Introducing the Best of Ada 2005</b> <i>John G.P. Barnes, John Barnes Informatics</i>	<b>SP2: Exposing Ada Web Services Using a Service-Oriented Architecture (SOA)</b> <i>Ricky E. Sward, The MITRE Corporation</i>
3:30 pm – 4:00 pm	Afternoon Break	
4:00 – 5:30 pm	<b>SP1: Introducing the Best of Ada 2005</b>	<b>SP2: Exposing Ada Web Services Using a Service-Oriented Architecture (SOA)</b>
Monday, November 5		
	Commonwealth CD	Potomac Room
8:00 am – 9:00 am	Continental Breakfast	
9:00 – 10:30 am	<b>MF1: Security by Construction</b> <i>Roderick Chapman, Praxis Critical Systems Ltd.</i>	<b>MA1: Real-time and Parallel Processing in Ada</b> <i>John McCormick, University of Northern Iowa</i>
10:30 am – 11:00 am	Morning Break	
11:00 am – 12:30 pm	<b>MF1: Security by Construction</b>	<b>MA1: Real-time and Parallel Processing in Ada</b>
12:30 pm – 2:00 pm	Mid-day Break	
2:00 – 3:30 pm	<b>MF1: Security by Construction</b>	<b>MP1: Real Time Scheduling Theory and Its Use with Ada</b> <i>Frank Singhoff, University of Brest, France</i>
3:30 pm – 4:00 pm	Afternoon Break	
4:00 – 5:30 pm	<b>MF1: Security by Construction</b>	<b>MP1: Real Time Scheduling Theory and Its Use with Ada</b>

**Registration opens at 8:00am each day in the Meeting Hallway Foyer.**

# Conference Schedule

## Monday, November 5

7:00 pm - 10:00 pm	<b>SIGAda Extended Executive Committee Meeting (open to all)</b> <i>John McCormick, SIGAda Chair (University of Northern Iowa)</i>
--------------------	---

## Tuesday, November 6

9:00 - 10:30 am	<b>Greetings from SIGAda and Conference Officers</b> <b>Keynote Address:</b> <b>Wanted: Software with Assurance Built-in</b> <i>Joe Jarzombek, National Cyber Security Division U.S. Department of Homeland Security</i>
-----------------	---

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

11:00am - 12:30 pm	<b>Using Mathematics To Improve Ada Compiled Code, Part 2: The Proof</b> <i>W. Douglas Maurer (George Washington Univ.)</i> <b>Generic Discrete Event Simulations using DEGAS: Application to Logic Design and Digital Signal Processing</b> <i>Paul Pukite &amp; Luke Ludwig (BAE Systems)</i> <b>Sponsor Presentation: AdaCore</b>
--------------------	--

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

2:00 - 3:30 pm	<b>AADL Modeling and Analysis of Hierarchical Schedulers</b> <i>Frank Singhoff &amp; Alain Plantec (University of Brest, France)</i> <b>Verified Component-based Software in SPARK: Experimental Results for a Missile Guidance System</b> <i>Kung-Kiu Lau &amp; Zheng Wang (University of Manchester, UK)</i> <b>Sponsor Presentation: Lockheed Martin</b>
----------------	---

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

4:00 - 5:25pm	<b>Parallel Evolution of Game Evaluation Functions in Ada</b> <i>Tyler B. Hallmark and Eugene K. Ressler (US Military Academy)</i> <b>Using Ada in a Service-Oriented Architecture</b> <i>Ricky E. Sward (MITRE Corporation)</i> <b>Sponsor Presentation: Northrop Grumman</b>
---------------	--

**Tuesday Evening Activities (7:00pm - 10:00pm)**  
**Reception and Cultural Presentation**

## Wednesday, November 7

9:00- 10:30am	<b>Announcements</b> <b>SIGAda Awards</b> <b>Keynote Address:</b> <b>The Federal Aviation Administration and Ada</b> <i>Jeff O'Leary</i> <i>Air Traffic Control Systems Development</i> <i>U.S. Federal Aviation Administration</i>
---------------	---

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

11:00 - 12:25pm	<b>Timing Neural Networks in C and Ada</b> <i>Martin C. Carlisle &amp; Leemon C Baird III (US Air Force Academy)</i> <b>Using SPARK for a Beginner's Course on Reasoning about Imperative Programs</b> <i>Kung-Kiu Lau (University of Manchester, UK)</i> <b>Sponsor Presentation: Praxis</b>
-----------------	---

12:25 - 2:00pm **Mid-day Break and Exhibits**

2:00 - 3:40pm	<b>Multi-Core + Multi-Tasking = Multi-Opportunity</b> <i>Karl A. Nyberg (Grebyn Corporation)</i> <b>The Ada Compiler as a Static Analysis Tool</b> <i>Robert Dewar (AdaCore)</i> <b>Sponsor Presentations: Artisan, Telelogic</b>
---------------	---

3:40 – 4:00 pm **Afternoon Break**

4:00 - 5:40pm	<b>Assessment of String Tests Strategy for an En-Route Air Traffic Control System</b> <i>Jeff O'Leary (US Federal Aviation Administration); Denise S. Beidleman, Fred Woodard &amp; Alok Srivastava (Northrop Grumman)</i> <b>Towards a Demonstrably Correct Ada Compiler</b> <i>Chris Nettleton (XGC Software, London); Wilson Ifill, Colin Marsh (AWE plc, Aldermaston, UK)</i> <b>Sponsor Presentation: Genco Systems, Ellidis</b>
---------------	---

5:40 – 7:00 pm **Evening Break**

7:00 - 10:00 pm	<b>GNAT BoF: Where Would You Like to See GNAT Go?</b> <i>Robert Dewar (AdaCore)</i> <b>Hibachi: the Eclipse Ada Development Toolset</b> <i>Tom Grosman (Aonix)</i> <b>To schedule other BoFs, contact Bill Thomas</b>
-----------------	---

## Thursday, November 8

9:00- 10:30am	<b>Announcements</b> <b>Keynote Address:</b> <b>Correctness by Construction:</b> <b>Putting Engineering (back) into Software</b> <i>Roderick Chapman, Safety and Security-Critical Systems, Praxis High Integrity Systems, Ltd</i>
---------------	--

10:30 -  
11:00 am

<b>Ada Europe 2008 Conference Announcement</b> <i>Erhard Ploedereder (Ada-Europe VIP)</i> <b>SIGAda 2008 Conference Announcement</b> <i>Michael Feldman</i> <i>(SIGAda 2008 Conference Chair)</i> <b>Closing Comments</b>
--

## Workshops and Birds of a Feather Sessions

### Wednesday, November 7, 7:00 pm - 10:00 pm

#### **GNAT BoF: Where Would You Like To See GNAT Go? (7:00 pm - 8:30 pm)**

*Robert Dewar (AdaCore)*

This BOF will discuss future directions for the GNAT technology, including both the GAP and Pro versions. We at AdaCore will give some of our thoughts on interesting future possibilities, but mostly we would like to hear from the user community, so we see this session as an open discussion of interesting ideas for the future. This is a chance for you to say what you want, and have your ideas discussed!

#### **Workshop: Hibachi - the Eclipse Ada Development Toolset (8:30 pm - 10:00 pm)**

*Tom Grosman (Hibachi project lead, Aonix)*

Hibachi is an open source, extensible, vendor-neutral Eclipse Ada IDE under development by AdaCore, Aonix, DDC-I and CohesionForce with the contribution of other members of the Ada community. Hibachi has been approved by the Eclipse Management Organization and graduated from the project proposal phase by demonstrating that the project is of value and has a viable developer/tester/user community.

The Hibachi workshop will include a presentation of the Eclipse philosophy, framework, community, ecosystem and tooling capabilities. Demos of current Hibachi features and other interesting Eclipse functionality will be followed by discussions of Hibachi's status, and future direction. The result of these discussions will serve as input to the ongoing Hibachi project development and release plan.

### Thursday, Nov. 8, 12:30 pm - 5:30 pm and Friday, Nov. 9, 8:30 am - 12:30 pm

#### **Workshop: NIST Static Analysis Summit II**

*Paul Black, Chair (National Institute of Standards and Technology)*

The Software Assurance Metrics And Tool Evaluation (SAMATE) project is leading in (a) developing tests for software evaluation tools, (b) measuring the effectiveness of tools, and (c) identifying gaps in tools and methods. Source code security analyzers to find weakness and potential problems are quite capable and developing quickly. Yet, developers, auditors, and examiners could use far more. The problem is to clearly define the biggest obstacles to these urgently needed capabilities and try to identify feasible engineering and research approaches to overcoming them. Questions to be considered include embedded systems, binaries, obfuscation, formal pattern languages, higher level functions, and integration with other tools.

The first day is paper presentations and a panel session, followed by guided discussion and a new technology demonstration fair. The second day has some additional paper presentations, another panel, and two sessions of guided discussion.



## Keynote Speakers

**Tuesday, November 6th 9:30 am to 10:30 am**

### **Wanted: Software with Assurance Built In**

*Joe Jarzombek*



Mr. Jarzombek is the Director for Software Assurance in the Department of Homeland Security (DHS) National Cyber Security Division. He leads government interagency efforts with industry, academia, and standards organizations to shift the security paradigm away from patch management by addressing security needs in work force education and training, research and development (especially diagnostic tools), and development and acquisition practices. After retiring from the U.S. Air Force as a Lt. Col. in program management, Mr. Jarzombek worked in the cyber security industry as vice president for product and process engineering. He later served in two software-related positions within the Office of the Secretary of Defense prior to accepting his current position. As a Project Management Professional, Mr. Jarzombek has spoken extensively on measurement, software assurance, and acquisition topics. He encourages further review of DHS-sponsored software assurance efforts via the Build Security In website.

**Wednesday, November 7th 9:30 am to 10:30 am**

### **Federal Aviation Administration (FAA) and Ada**

*Jeff O'Leary*



Mr. O'Leary is the Software Development and Acquisition Lead for the En Route and Oceanic Air Traffic Control Systems for the FAA. He has more than 23 years of experience in software development, systems acquisition and deployment of large mission critical high availability command and control systems. He spearheaded the on time software development of several large complex Air Traffic Control Systems including the Display System (DS), User Requested Evaluation Tool (URET) and the En-Route Automation Modernization (ERAM). Now providing the leadership in the deployment of ERAM, he is also preparing for the forthcoming ambitious development of Next Generation Air Transportation System (NextGen). He has a Bachelor of Science from Michigan State University and Masters in Computer Systems Management from University College, University of Maryland.

**Thursday, November 8th 9:30 am to 10:30 am**

### **Correctness by Construction: Putting Engineering (back) into Software**

*Rod Chapman*



Dr. Chapman is is a Principal Engineer with Praxis High Integrity Systems Ltd., specializing in the design and implementation of safety and security-critical systems. In addition to SPARK, Rod has been the key contributor to many of Praxis' major projects such as SHOLIS, MULTOS CA, Tokeneer and Software verification tools. He received a MEng in Computer Systems and Software Engineering and a DPhil in Computer Science from the University of York, England, in 1991 and 1995 respectively. He is a chartered engineer and a Fellow of the British Computer Society.

***Join SIGAda today!  
Membership applications are available.***



## Reception and Special Cultural Presentation

The SIGAda 2007 Conference reception on Tuesday evening, November 6th, will feature dinner followed by a special program of Asian Indian Cultural Dances and Instrumental performances.

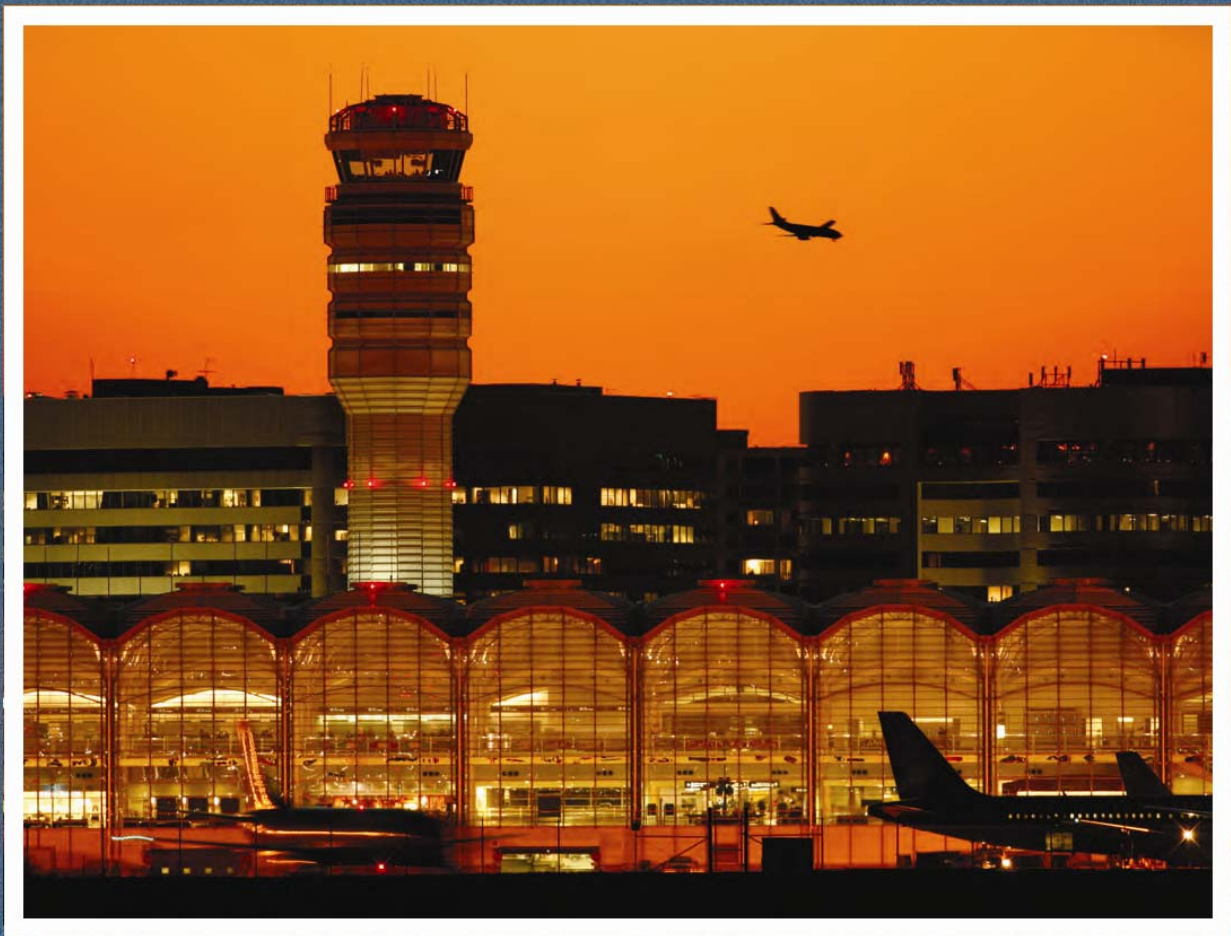


**Ms. Srabanti Roy** is trained in Kathak and Bharatnatyam Indian Classical Dances by renowned Indian Gurus. She has her own dance school – Roomjhoom Nrityalaya in Fairfax, VA. She has choreographed and participated in numerous solo/group performances in prestigious venues in India and US including at the Kennedy Center in the presence of former First Lady, Mrs. Hillary Clinton, the National Cherry Blossom Festivals, International Children’s Festivals in Wolf Trap, etc. Beside her passion for dance, her full-time profession as an Electrical Engineer at Orbital Sciences Corp involves programming embedded systems for digital hardware used in space systems. She has masters in Electrical Engineering from George Mason University, Fairfax, VA.

**Dr. Suman Sharma** a Sitar instrument player is trained by great Indian Maestros. She has been very active in the US Indian Classical arena, teaching Indian musical instruments and giving lectures, demonstrations and seminars in schools and universities. She has also participated in several Washington DC folk art and music festivals, and performed for Public Television and for the prestigious Kennedy Center for Performing Arts in Washington DC. She will be accompanied by **Daniel Prabhakar** on Tabla, **Saumya Vats** on Sitar, **Zoe Slepian** on Sitar and **Nauman Ahmad** on Tanpura.



**Ms. Tanu Shrivastav** has been trained for over 12 years in Kathak, a classical form of Indian dance, under the able guidance of famous gurus of Lucknow Gharana (Group). She teaches Kathak at the India International School, South Riding Center, Virginia. She has participated and won in many intercollegiate choreography competitions in Delhi University. "Nav Rasas," a choreography organized by her, was highly acclaimed. She has performed at various cultural gatherings and has been actively involved in organizing cultural programs for the Indian community.



Whose technologies help guide  
60% of the world's  
commercial air traffic?

Lockheed Martin. Yes. Lockheed Martin.

[www.lockheedmartin.com](http://www.lockheedmartin.com)

**LOCKHEED MARTIN**   
*We never forget who we're working for™*



# **When Lives Depend on Safe and Secure Software**

AdaCore and GNAT Pro Deliver Proven Ada Solutions



[www.adacore.com](http://www.adacore.com)

**AdaCore**  
The GNAT Pro Company

# Faster, Better AND Cheaper

Until now you had to  
choose two of the three.

With PowerAda plus RootCause,

**you can get all three!**

**PowerAda**  
plus  
**ROOTCAUSE**<sup>®</sup>  
POWERED BY APROBE

9990 Fairfax Boulevard, Suite 270

Fairfax, Virginia 22030

703-359-8160

[www.ocsystems.com](http://www.ocsystems.com)



# SPARK



Nothing else comes close...

- The only language and toolset solely designed for high-assurance software.
- Continuous static prevention and detection of defects.
- Reduced repetition and risk in testing.
- Fully compliant with high-assurance software process and standards at the highest assurance levels.
- Trusted by customers, developers and regulators.

For more information, please contact:

**North America**

Pyrrhus Software  
Tel: +1 (480) 951 1019  
[www.pyrrhusoft.com](http://www.pyrrhusoft.com)  
[info@pyrrhusoft.com](mailto:info@pyrrhusoft.com)

**Rest of the World**

Praxis High Integrity Systems Limited  
Tel: +44 (0)1225 823829  
[www.sparkada.com](http://www.sparkada.com)  
[sparkinfo@praxis-his.com](mailto:sparkinfo@praxis-his.com)

Praxis is proud to be one of the Gold Sponsors of SigAda

**Proud Corporate Sponsor**

***NORTHROP GRUMMAN***

DEFINING THE FUTURE

***Embracing Ada to Make a Difference.***

***Reliable. Safe. Secure.***



# Genco Systems

Achieving Excellence Through Technology



We are an expert IV&V organization with extensive experience in working with different federal agencies with a variety of development environments, languages and application sizes.

We help our clients in saving cost, improving product quality, reducing risks and delivering projects on time as per schedule.

We guarantee to provide superior service and a favorable rate of return on your investment.

We are currently providing IV&V on FAA's ERAM system.



gencosystems.com  
(703) 934-4690

**Telelogic**



## ARTiSAN Studio®

Complex, Mission-critical Systems Modelling  
for Systems & Software Engineering

- UML2.1, OMG SysML
- Automatic code synchronizers for Ada 83, Ada 95, SPARK Ada
- Customizable code generation templates
- Integration with requirements management tools including DOORS
- Multi-user model repository

For more information or  
product evaluations contact:  
[info@artisansw.com](mailto:info@artisansw.com)

Toll Free: +1-888-800-1416  
Web: [www.artisansw.com](http://www.artisansw.com)



★ ★ **Ellidiss**  
Software  
TNI Europe Limited



Software Lifecycle Support ♦ Project Management  
Reverse Engineering ♦ Software Modeling  
C/C++ ♦ ADA 95 ♦ AADL ♦ UML 2.0 ♦ HRT-HOOD

Ellidiss Software offer fully integrated, cost effective software modeling solutions, for the full life cycle of a project. Utilising the latest model based technologies, supporting UML 2.0, OOD and AADL standards.

Our toolsets are flexible enough to be easily integrated into existing development systems, with proven legacy code import and round trip engineering facilities

Ellidiss Software (TNI Europe Limited)  
Mountbatten Court, Worrall Street, Congleton, Cheshire. CW12 1DT. UK  
Tel: +44 (0)1260 291449 • [www.ellidiss.com](http://www.ellidiss.com)



## Acknowledgements

### A Hearty "Thank You!" to the Conference Committee

<b>Conference Chair</b>	<b>Program Chair</b>	<b>Exhibits Chair</b>
Alok Srivastava (Northrop Grumman)	Leemon C. Baird III (US Air Force Academy)	S. Ron Oliver (caress Corporation)
<b>Publicity Chair</b>	<b>Treasurer</b>	<b>Tutorials Chair</b>
Michael Feldman (George Washington University)	Martin C. Carlisle (US Air Force Academy)	David A. Cook (AEgis Technologies Group, Inc.)
<b>Workshops Chair</b>	<b>Proceedings Chair</b>	<b>Webmaster</b>
Bill Thomas (The MITRE Corporation)	Clyde Roby (Institute for Defense Analyses)	Clyde Roby (Institute for Defense Analyses)
<b>Registration Chair</b>	<b>Local Arrangements Co-Chair</b>	<b>Local Arrangements Co-Chair</b>
Thomas A. Panfil (US Department of Defense)	Kristen Ferretti (OC Systems, Inc.)	Ron Price (Consultant)
<b>SIGAda Chair</b>	<b>SIGAda Vice Chair for Meetings &amp; Conferences</b>	<b>Academic Community Liaison</b>
John W. McCormick (University of Northern Iowa)	Ricky E. Sward (The MITRE Corporation)	Michael Feldman (George Washington University)

### Many Thanks to the Program Committee

Leemon C. Baird III – Chairman (US Air Force Academy)	Bill Bahn (University of Colorado at Colorado Springs)	Wayne Brown (US Air Force Academy)
Martin C. Carlisle (US Air Force Academy)	David A. Cook (AEgis Technologies Group, Inc.)	David Gabello (Global Analytic IT Services)
Steve Hadfield (US Air Force Academy)	Mance Harmon (BlueWave Security, Inc.)	Don Kraft (Louisiana State University)
Jean-Pierre Rosen (Adalog, France)	Ricky E. Sward (The MITRE Corporation)	Scott Teel (Teelsoft Consulting)

## Corporate Sponsors

### Platinum



### Gold



### Silver

