ACM SIGAda's Annual International Conference:

SIGAda
Thunderbird Hotel
Bloomington, MN USA
30 September - 4 October, 2001

Sponsored by ACM's Special Interest Group on the Ada Programming Language,
In Cooperation With
SIGAPP, SIGCAS, SIGCSE, SIGPLAN, and SIGSOFT and Ada-Europe
Hosted by Twin Cities SIGAda Chapter

Advance Program
Tutorials
Workshops
Conference Program
Registration Form

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Special Keynote Presentations with:

Dr. Robert Dewar
Ada Core Technologies

Prof. Martin Carlisle
U.S. Air Force Academy

S. Tucker Taft
AverCom Corporation

Ada Enters the 21st Century
SIGAda 2001 is your only opportunity in the U.S. this year to learn the latest developments about Ada and related technologies, from the world's leading Ada practitioners, researchers, and educators. One of the highlights of the conference will be a focus on what is in store for the next version of the language standard - find out late-breaking news on the features that are being considered, and how they will affect your use of the language. Other topics on the refereed conference program include experience reports from Ada developers and educators, new findings from the research community, and an analysis of Ada and Java for real-time programming. Supplementing the program will be a selection of exciting tutorials on Ada-related subjects, an exhibit area where you can find the latest products from vendors, and several workshops on technologies relevant to Ada. Continuing an initiative of SIGAda's Education Working Group, the conference is making a special outreach effort to involve students and educators.

Since its inception, Ada has been successful in systems where reliability is essential. Its application domains include aeronautics, air traffic control, aerospace, simulation, shipping, railway systems, communications, and many others. It is used in environments ranging from bareboard embedded devices to large-scale distributed real-time systems, and in multi-language software interfacing with C, C++, Fortran, and Java. Ada is used both in the U.S. and abroad, for both government and commercial systems, and is taught at colleges and universities where software engineering is an important focus. Whether you are from industry, government, or academia, if you are interested in where Ada is today and where it is going,

SIGAda 2001 is a conference that you need to attend.

Attend SIGAda 2001 to discover:
- the late-breaking news on the features that are being considered for the next version of Ada, and how they will affect your use of the language.
SIGAda 2001 TUTORIAL PROGRAM

Sunday Full-Day Tutorials (9:00am - 5:30pm)

SF1: Introduction to Ada and Object-Oriented Programming
David Cook, Les Dupaix & Eugene Bingue
This tutorial is designed for those who have some familiarity with a programming language, but who are new to Ada. In the morning, we will discuss the basics of programming in Ada, to include typing, packages, syntax rules, and other Ada programming constructs. In the afternoon, we will cover the concepts of object-oriented programming, and show how object-oriented design can easily be implemented using Ada. Simple Ada programs will be constructed during the class, and the attendees will also see how to use various Ada programming environments and tools that can be downloaded for free over the web.

SF2: Web Application Development – Using Ada and JGNAT to develop web applications using JDBC, JSP (JavaServer Pages), Java Beans, and Java servlet technology
Terry Westley
In “Web Application Development,” we will survey several techniques for using Ada to build dynamic, data-rich web sites. We will then focus on learning to use Ada and JGNAT to develop web applications using JDBC, JSP (JavaServer Pages), Java Beans, and Java servlet technology.

This tutorial is best suited for those who can already build a static web page with HTML, can program in Ada, and wish to use JGNAT to take advantage of a growing set of open source tools built around Java technology for building web applications. These tools include the Apache web server, Tomcat servlet engine, MySQL database, JDBC, and JUnit. All of these technologies will be used to build a web application and will be demonstrated on a Windows XP computer as part of the tutorial.

SF3: CORBA 3 and CORBA for Embedded Systems
S. Ron Oliver
The morning session will be an overview of CORBA 3 with emphasis on changes from CORBA 2. The attendee need have no prior knowledge of CORBA. The session will begin with a brief introduction to Distributed Computing, in general, including fundamentals of Concurrent and Real Time systems, and of Computer Networks. Thus, the attendee need not be highly experienced in these subjects. However, treatment of this introductory background material will necessarily be limited, so some familiarity with it will be useful. Most of the morning session will include discussions of the Interface Definition Language (IDL), Client programs, Object (server) programs, CORBA Services, CORBA Facilities, and the CORBA Component Model (CCM).

The afternoon session will focus on more advanced features of CORBA 3, primarily Minimum CORBA and Real Time CORBA. This session will be of particular interest to those who might wish to use CORBA for Embedded Systems. It will begin with a brief introduction to Embedded Systems and an overview of advanced CORBA features that could not be covered in the morning session.

Most of the afternoon will be devoted to Minimum CORBA and RT CORBA, introducing these standards by way of a detailed example. All examples will be based on the highly successful TopGraph ‘X product, ORBada, and the Ada95 programming language.

Monday Full-Day Tutorials (8:30am - 5:00pm)

MF1: Practical Experiences of Safety-Critical Ada Technologies
Peter Amey & Rod Chapman
This tutorial will cover the following topics:
What is high-integrity software? What is safety-critical software? What is the difference?
- not just a question of being "more careful", special techniques are needed
- problem of showing fitness for purpose before deployment
- difficulty of demonstrating ultra-reliability by testing alone

Reliable programming in standard languages
- deficiencies of programming languages
- superficial attractiveness of special-purpose languages
- safe use of standard languages, such as MISRA-C, HRG Report, and SPARK

Standards and Projects, such as:
- Standards Overview
- DO178B and the Lockheed C130J
- Def Stan 00-55 and SHOLIS
- ITSEC E6 ("common criteria") and Mondex

Compilers
- Validation versus service history
- Desirable properties

Runtime systems
- "Small" runtimes (e.g. C-SMART, MARK)
- Ravenscar profile
- GNORT

Object Code Verification
- Why is it needed?
- The "no surprises" rule
- OCV approaches

Conclusions

Thursday, October 4, 10:00 am

ISO/IEC JTC1/SC22 WG9 Ada Rapporteur Group (ARG) is in the process of defining the next generation of the Ada Language, which is expected to be an approved standard in the year 2005. A panel will provide a status update on the process and provide some insight as to the language features and their rationale that might be included in the next generation of Ada.
**MA1: Tasking in Ada**  
David Cook

In most languages, writing potentially parallel code is very difficult – hard to implement and hard to test. Tasking, a construct of Ada, allows developers to design and code parallelism with great ease. This tutorial is targeted at developers who want to understand how Ada tasking works, and see how to build Ada tasks. Knowledge of basic Ada syntax is all that is required. There will be multiple examples of Ada code showing how to correctly design and code Ada tasks.

**MA2: Ada 95 – the language for everybody, not just Ada programmers. Lessons learned teaching Ada**  
Salih Yurtass

Programs are written as statements, blocks, procedures but software systems are designed and stored as units: both, compilation and library; either user defined or built-in. This tutorial will emphasize the need and understanding for a new teaching and learning approach in Ada-like languages, i.e., programming languages for large-scale software development.

Library, package/task/procedure with spec and body separation as separate compilation units with generic instantiation will be understood not as a complexity, but simplicity to achieve good quality in software systems; quality added by exceptions will be presented. Type extension and hierarchical reuse and maintainability will be discussed as OO aspects of Ada-95 should be understood and practiced as software development tools not algorithmic and data structure implementation features.

tutorial scheme -

- programming is searching and sorting with I/O.
- programming is decomposition and composition by procedures/functions and packages separated as spec and body.
- programming is generic reusable components by extension.
- programming is safe and reliable by exceptions
- programming is distributed and parallel by tasks

**MP2: A Comparison of the Concurrency and Real-Time Features in Ada, Java, and POSIX**  
Ben Brosigol

Unlike sequential programming, the debate over whose programming language support was largely settled in the Structured Programming revolution of the early 1970s, concurrency and especially real-time programming remain subjects that elicit considerable controversy. Different languages have taken different approaches; some languages ignore the matter, believing that these topics are more in the realm of an operating system or real-time kernel.

This tutorial identifies the issues that underlie concurrency and real-time programming and describes how they are addressed by Java, Ada, and Posix. It will cover thread/task lifetime properties (creation, termination), mutual exclusion, coordination / communication, asynchrony, dealing with time, and scheduling, with a focus on real-time requirements such as management of priority inversion. Some common examples (e.g. bounded buffers, periodic activities) will be used to illustrate the different approaches, which will be compared with respect to software engineering support (readability, reliability), predictability and performance. The Java approach will presented in terms of the two current proposed real-time extensions: the Real-Time Specification for Java (from the Sun-sponsored Real-Time for Java Expert Group) and the Real-Time Core Extensions (from the J- Consortium). The main emphasis will be on uniprocessor systems.
### Workshop:
Creating a Symbiotic Relationship between XML and Ada

### TUTORIAL PROGRAM

#### Full-Day Tutorials (9:00am - 5:30pm)
- **SF1:** Introduction to Ada and Object-Oriented Programming  
  *David Cook, Les Dupax & Eugene Bingue*
- **SF2:** Web Application Development - Using Ada and JGNAT to develop web applications using JDBC, JSP (JavaServer Pages), Java Beans, and Java servlet technology  
  *Terry Westley*
- **SF3:** CORBA 3 and CORBA for Embedded Systems  
  *S. Ron Oliver*

**6:30 - 10:00pm**  
Workshop: Ada Semantic Interface Specification (ASIS)

### Sunday, September 30

### Monday, October 1

#### Full-Day Tutorials (8:30am - 5:00pm)
- **MF1:** Practical Experiences of Safety-Critical Ada Technologies  
  *Peter Amey & Rod Chapman (Praxis Critical Systems)*

#### Morning Tutorials (8:30am - 12:00 Noon)
- **MA1:** Tasking in Ada  
  *David Cook*
- **MA2:** Ada 95 – the language for everybody, not just Ada programmers. Lessons learned teaching Ada  
  *Salih Yurtass*

#### Afternoon Tutorials (1:30pm - 5:00pm)
- **MP1:** Exceptions  
  *Cerrie Colket*
- **MP2:** A Comparison of the Concurrency and Real-Time Features in Ada, Java, and POSIX  
  *Ben Brosiol*

**5:30 - 7:00pm**  
Local SIGAda Representatives' Dinner  
(Open to all Ada Society Representatives)

**7:00 - 11:00pm**  
SIGAda Extended Executive Committee Meeting  
(Open to all)

### Tuesday, October 2

#### 9:00 - 10:30am
- Greetings from SIGAda Chair & Vice Chair for Meetings and Conferences
- Introduction of Conference Officers and SIGAda Officers

**10:30 - 11:00am** Mid-morning Break - Exhibits Open

**11:00am - 12:30pm**
- Languages for Systems not Software  
  *Peter Amey (Praxis Critical Systems)*
- Real-Time Convergence of Ada and Java  
  *Ben Brosiol (Ada Core Technologies) & Brian Dobbing (Praxis Critical Systems)*

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

**2:00 - 3:30 pm**
- Ada 95 Bindings for the NCSA Hierarchical Data Format Libraries  
  *Bruce Barkstrom (NASA Langley Research Center)*
- Automating Software Module Testing for FAA Certification  
  *Usha Santhanam (Boeing)*
- Implementing a Product-Line Based Architecture based on Ada  
  *Joel Sherrill, Jennifer Averett, & Glenn Humphrey (On-Line Applications Research Corporation)*
- Ship System 2000, a Stable Architecture under Continuous Evolution  
  *Björn Källberg & Rei Stråhle (SaabTech Systems)*

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

**4:00 - 5:30 pm**
- Reengineering an Ada95-programmed Command and Control Information System by Using UML  
  *Heinz Faßbender (Research Institute for Communication, Information Processing, and Ergonomics)*
- Electronic Maneuvering Board and Dead Reckoning  
  *Trace Decisions Aid for the Officer of the Deck*  
  *Kenneth L. Ehresman & Joey L. Frantzen (U.S. Navy)*

**5:00 pm** Adjourn

**6:30 - 9:00pm** Dinner/Presentation Meeting - Don’t Miss Out on this Presentation on Hardware Virtual machines for High-Level Languages

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For more detailed information, select "Tutorials" from www.acm.org/sigada/conf/sigada2001/
### Wednesday, October 3

<table>
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<th>Event</th>
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<td>9:00-10:30</td>
<td>Announcements</td>
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<td></td>
<td>SIGAda Awards</td>
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<td></td>
<td>Keynote Address: Confessions of an Academic Ada Zealot, Martin Carisle (United States Air Force Academy)</td>
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<tr>
<td>10:30-11:00</td>
<td>Mid-morning Break and Exhibits</td>
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<tr>
<td>11:00-12:30</td>
<td>Parallel Tracks</td>
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<td>Teaching Computer Science with Robotics Using Ada/Mindstorms</td>
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<td>Barry S. Fagin, Laurence D. Merkle, &amp; Thomas W. Eggers (U.S. Air Force Academy)</td>
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<td>Barry S. Fagin, Laurence D. Merkle, &amp; Thomas W. Eggers (U.S. Air Force Academy)</td>
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<td>Using Ada in a Compiler Construction Course</td>
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<td>S. Tucker Taft (AverCom Corporation - A Titan Company)</td>
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<tr>
<td>12:30-2:00</td>
<td>Mid-day Break and Exhibits</td>
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<td>2:00-3:30</td>
<td>Keynote Address: Fixing Software Before It Breaks,</td>
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<td></td>
<td>S. Tucker Taft (AverCom Corporation - A Titan Company)</td>
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<tr>
<td>3:30-4:00</td>
<td>Afternoon Break</td>
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<tr>
<td>4:00-5:30</td>
<td>Parallel Tracks</td>
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<td>Dynamic Analysis for Locating Product Features in Ada Code</td>
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<td>Laura White &amp; Norman Wilde (University of West Florida)</td>
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<td>Detecting Concurrently Executing Pairs of Statements using an</td>
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<td>Adapted MHP Algorithm</td>
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<td>Zhengqiang Chen (Southeast University), Baowen Xu (Wuhan University), &amp; Huiming Yu (North Carolina A&amp;T State University)</td>
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<tr>
<td>6:30-10:00</td>
<td>Workshop: Comparison of Concurrency in Java, C++, and Ada</td>
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<td></td>
<td>Birds-Of-a-Feather (BOF) sessions (contact Workshops Chair to propose a BOF)</td>
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For more detailed information on Workshops and BOFs, visit: [www.acm.org/sigada/conf/sigada2001/](http://www.acm.org/sigada/conf/sigada2001/)

### Thursday, October 4

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:00-9:45</td>
<td>Experience Report: Architecture-based Software Development on the Crusader Program</td>
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<td>Scott Edgerton (United Defense, L.P.)</td>
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<td>9:45 - 10:00</td>
<td>Short Break</td>
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<tr>
<td>10:00-12:00</td>
<td>Panel: The Making of ISO/IEC 8652: Ada 2005</td>
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<td>Panel Chair: Erhard Flederer, University of Stuttgart (President of Ada Europe and Past Chair of WG9 ARG)</td>
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<td>Panelists: Joyce Tokar, DDC-I (Head of Delegation, ANSI Technical Advisory Group)</td>
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<td>Randy Brukard, RR Software (WG9 ARG Editor)</td>
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<td>Pascal Leroy, Rational Software Corporation (Chair of WG9 ARG)</td>
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<td></td>
<td>S. Tucker Taft, AverCom Corporation - A Titan Company (Chief Designer of Ada95)</td>
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<tr>
<td>12:00 Noon</td>
<td>Closing Comments</td>
</tr>
</tbody>
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#### Gaining Software Reliability and Efficiency Through the Use of a Hardware Virtual Machine for High-Level Languages

Why Your Next CPU Should Provide Hardware Support for Multitasking and Multiple Virtual Machines

David S. Hardin
Chief Technology Officer, aJile Systems, Inc.

Tuesday, October 2, 2001, 6:30p.m.

The ample transistor budgets of modern silicon fabrication present CPU designers with a number of options as to how best to spend their budgets. A design alternative is to devote silicon resources to directly support current software development practice, such as multitasking and threading, compilation to virtual machine code, object-oriented method dispatch and field access, safe mobile code execution, etc. In this talk, we will describe one such CPU design, the aJile Systems SJ-100, and show how it efficiently supports modern software engineering practice, including hardware support for objects, tasks/threads, and Java bytecode execution, as well as multiple processes brickwalled in space and time. We will particularly demonstrate how such an architecture provides advantages for the Java and Ada95 developer, through the use of JGNAT from ACT.

This presentation is a dinner meeting co-hosted by several Twin Cities computer oriented organizations. All conference registrants receive a complementary ticket to the dinner and presentation. Additional tickets are $30 prior to 15 Sept 2001 and $40 (space available) thereafter. Your ticket also gains you admission to the exhibits for SIGAda 2001. You may purchase your ticket online through the SIGAda 2001 conference registration site, or may see a representative from any of the co-hosting organizations.

For more up-to-date information, visit our conference website: [www.acm.org/sigada/conf/sigada2001](http://www.acm.org/sigada/conf/sigada2001)
SIGAda 2001 will include vendor participation, featuring presentations on their products and services. For specific information, please contact the Exhibits Chair: Hal Hart, +1-310-764-6880, E-mail: Hal.Hart@acm.org or see:

www.acm.org/sigada/conf/sigada2001/exhibits/

CONFERENCE VENUE

We are very pleased to hold the SIGAda 2001 Conference at the Thunderbird Hotel & Convention Center. Additional information on the Thunderbird can be found on the Conference Website: www.acm.org/sigada/conf/sigada2001/

CONFERENCE HOTEL

The Thunderbird Hotel is located in Bloomington Minnesota within walking distance of the Mall of America. Information on the hotel is available on the Conference Website: www.acm.org/sigada/conf/sigada2001/

Note: The Thunderbird Hotel provides free shuttle between the hotel, the airport, and the Mall of America.

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

E-mail: mfeldman@seas.gwu.edu or see: www.acm.org/sigada/conf/sigada2001/

Applications are due by e-mail no later than September 7, 2001.

Faculty members are encouraged to bring the Student Work-Grant opportunity below to the attention of their best Ada students.

STUDENT WORK-GRANTS & DAILY NEWSLETTER

SIGAda 2001 will feature a daily newsletter Ada's Window on the World (Ada-WOW), mixing interviews with key people, session summaries, and previews of next-day activities with local color, general computing thought pieces, and relevant world news briefs in an informal, fun format. A limited number of student grants are available to staff Ada-WOW. Work involves full participation in conference activities, writing some of the articles, and production editing for some; an estimated 2-3 hours of newspaper work nightly will be required, Monday - Wednesday (Sunday, too, for those who arrive by then). Benefits include free lodging (2 or more per room) and free conference & tutorial registration. A room with computer production facilities will be provided.

Interested students should contact Ann Brandon at abrandon@sover.net

WORKSHOPS

Focused workshops are important in evolving Ada technology to better meet the needs of the Ada community. Workshops are free for those registered for the conference. The following workshops are planned for SIGAda 2001:

1. Creating a Symbiotic Relationship between XML and Ada, Robert Leif
   Sunday, September 30, 9:00am

2. Ada Semantic Interface Specification (ASIS), Currie Colket
   Sunday, September 30, 6:30pm

3. Comparison of Concurrency in Java, C++, and Ada, Paul Stachour
   Wednesday, October 3, 6:30pm

Workshop descriptions will be on the SIGAda 2001 Home Page when they are available. Additional workshops or Birds-of-a-Feather (BOF) are welcome. Workshops have a focused objective and result in a report to be published in Ada Letters. BOFs are informal discussion groups. If you would like to propose a Workshop or BOF, please contact the Workshops Chair, Jim Hassett E-mail: hassett@acm.org
**SIGAda 2001 Advance Registration Form**

For On-Line registration, see [www.acm.org/sigada/conf/sigada2001/](http://www.acm.org/sigada/conf/sigada2001/)

Name (First Middle Initial Family Name): ____________________________

Title: ____________________________

Badge Name (as you wish it to appear): ____________________________

Organization/Affiliation: ____________________________

Address: ____________________________

City: ____________________________ State/Province: ____________________________

Zip/Postal Code: ____________________________ Country: ____________________________

Telephone: ____________________________ Fax: ____________________________

Electronic-Mail: ____________________________

Sponsoring or Cooperating Society & Member Number: ____________________________

You must provide your membership number to qualify for a discount. If you are not a member, join SIGAda and/or ACM now, and save money. Do not include my name, address and e-mail address in the conference attendee listing ____________________________

**Conference Rates**

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<thead>
<tr>
<th></th>
<th>Member</th>
<th>Non-Member</th>
<th>Student</th>
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<tbody>
<tr>
<td></td>
<td>On/Before 4 Sep</td>
<td>After 4 Sep</td>
<td>On/Before 4 Sep</td>
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<tr>
<td>Conference All 3 Days</td>
<td>$400</td>
<td>$550</td>
<td>$550</td>
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<tr>
<td>Conference One Day</td>
<td>$250</td>
<td>$250</td>
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<tr>
<td>Tutorial 2 Days</td>
<td>$500</td>
<td>$600</td>
<td>$700</td>
</tr>
<tr>
<td>Tutorial 1 Day</td>
<td>$350</td>
<td>$450</td>
<td>$450</td>
</tr>
</tbody>
</table>

Conference: Includes entry to all conference sessions, exhibits, Tuesday Dinner/Presentation, and copy of Procedings

Conference - Any one Day: Includes conference sessions, exhibits, Tuesday Dinner/Presentation, and copy of Proceedings

Tutorials - Two Days: Includes Tutorial sessions totaling 2 days, exhibits, and a full tutorials CDROM

Tutorials - One Day: Includes Tutorial sessions comprising one full-day or two half-days, exhibits, and a full tutorials CDROM

**Payment Computation**

Conference Fee $ ________

Tutorials Fee $ ________

Membership Dues Fee $ ________

Additional Proceedings: $ ________

__ copies x $50

Tuesday Evening: $ ________

__ additional tickets x $30

TOTAL ENCLODED $ ________

**How Paid**

_ Check Payable to "ACM SIGAda 2001"

_ Credit Card

__ Visa

__ Mastercard

__ American Express

**Credit Card Payment Information**

Important: Your signature indicates your agreement to pay the conference fees with the credit card number you specified below. Please be advised that this transaction will be described on your statement as a charge from ACM.

Card Number: ____________________________

Good Thru: ____________________________

Name, as on Card: ____________________________

Cardholder's Signature: ____________________________

**Registration Procedure:**

Mail form with payment to:

ACM SIGAda 2001

C/O Thomas A. Panfil

Registration Chair

PO Box 5210

Laurel, MD 20726-5210

Or fax to +1-301-604-3204

Registration Form Version: AP0106

Those registered before September 4, 2001 will receive confirmation by fax or mail.

**Cancellation Policy:**

Confirmed registrants who cannot attend, and do not send a substitute, are entitled to a refund of paid fees (less a $50 processing charge) if a request is received in writing or on or before September 4, 2001. Registrants are liable for their full fees after that date.

**ACM & SIGAda Membership**

- ACM Professional Membership $98
- ACM SIGAda Membership $25
- ACM Student Power Memb. $40
- ACM Student Undergraduate $18
- ACM SIGAda Student Membership $10

Total Membership Dues $____

See [www.acm.org/membership/](http://www.acm.org/membership/) for Member Qualifications and pledge.

**Tutorial Selections:**

For a list of tutorials available, visit the tutorials section of the registration web-site. Write the code for your selected tutorials on the appropriate lines.

- Sunday Full Day ______
- Monday Full Day ______
- Monday Morning ______
- Monday Afternoon ______

A block of rooms has been set aside for SIGAda 2001 attendees at the rate of US$86 single or double per night (this is below the US government per diem rate for Bloomington, Minnesota USA). Please identify your affiliation with SIGAda 2001 to receive this rate. Rooms in this block will be available at this favorable rate until 15 September 2001, after which the Conference rate or room availability cannot be guaranteed. Register early to obtain the Conference rate. Please make reservations directly with Best Western The Thunderbird Hotel & Convention Center, 2201 East 78th Street, Bloomington, MN 55425. Phone: +1.952.854.3411, Toll-Free Phone +1.800.328.1931 (M-F, 8:00am - 5:00pm CDT), FAX: +1.952.854.1183.
Annual International Conference
Ada Enters the 21st Century

GOOD REASONS WHY YOU SHOULD COME TO SIGAda 2001

Find out late-breaking news on the features being considered for the next version of Ada, and how they will affect your use of the language.

Participate in workshops that will influence Ada technology.

Hear recognized speakers on Ada and software engineering issues relevant to your organization.

Meet others addressing the same software engineering problems facing your organization.

Learn how Ada is being used successfully in application areas where Fortran, C, C++ and even Java were previously chosen.

Explore for yourself how Ada compilers and tools are becoming more powerful and cost effective.

See how Ada is being used to support the development of distributed, real-time, highly-reliable systems.

Understand how Ada is open to interfacing with legacy & COTS software programmed in other languages.

Realize the growing number of tools and third-party libraries available to Ada programmers.

Discover that Ada is easy to learn and is used by many colleges and universities in introductory computer science courses.

Take tutorials that will advance your career professionally.

For the latest updates, please visit the SIGAda 2001 Website: www.acm.org/sigada/conf/sigada2001