Welcome to this issue of ACM Ada Letters. In this issue you will find two very interesting papers Priority Inversion with Fungible Resources by Gertrude Levine and Making Alive Register Transfer Level and Transaction Level Modeling in Ada by Negin Mahani. Trudy’s paper discusses the Priority inheritance protocols developed to limit priority inversions during competition over shared resources. Negin’s paper presents a specialized form of Ada as a system description language, like the way SystemC is used for description of systems.

The issue also provides details on AdaCore compiled **Ada Gems:**

- Where did my memory go? *by Emmanuel Briot*
- Speedy Shift and Rotate in SPARK *by Rod Chapman*
- GNAT Semaphores *by Pat Rogers*
- Type-Based Security *by Yannick Moy*
- The Distributed Systems Annexes *by Thomas Quinot*
- Ada Quiz 1 – Basic Types *by Quentin Ochem*
- The Distributed Systems Annex – Mailboxes *by Thomas Quinot*

In this issue you will find the Call for Technical Contributions for the High-Integrity Language Technology SIGAda 2012 conference to be held from December 2-6, 2012 in Boston USA. Another major Ada event, the International Conference on Reliable Software Technologies Ada-Europe 2012 will be held from June 11-15, in Stockholm, Sweden.

Once the National Bodies’ comments on the Ada 2012 were taken care, the incoming version will soon be a reality. The WG9 committee, after discussions with the ARG and with members of the Ada community, has instructed the ARG to complete the Amendment to Ada 2005 so that ISO standardization of the new version can be completed by 2012. This is a relatively short horizon, but it matches the interval between previous releases, demonstrates that the language continues to evolve with software theory and practice, and at the same time places a bound on the changes to the language, and ensures that they do not present an undue implementation burden on existing compilers. The most important enhancements are those directly related to correctness, namely the introduction of more powerful assertion mechanisms in the language: pre- and post conditions for subprograms, global assertions, type invariants, are other mechanisms that encourage the programmer to better specify the meaning of the code they write, and allow the run-time to verify that this meaning is in fact obeyed.

Our regular contributor Trudy Levine has provided updates to the Ada Reusable Software Components.

Ada Letters is a great place to submit articles of your experiences with the language revision, tips on usage of the new language features, as well as to describe success stories using Ada. We’ll look forward to your submission. You can submit either a MS Word or Adobe PDF file (with 1” margins and no page numbers) to our technical editor:

Pat Rogers, Ph.D.
AdaCore, 207 Charleston, Friendswood, TX 77546 (USA)
+1 281 648 3165, rogers@adacore.com

We look forward to hearing from you!

Alok Srivastava, Ph.D.
Technical Fellow, TASC Inc.
475 School St, SW; Washington, DC 20024 (USA)
+1 202 314 1419 Alok.Srivastava@auatac.com
Editorial Policy (from Alok Srivastava, Managing Editor)

As the editor of Ada Letters, I’d like to thank you for your continued support of ACM SIGAda, and encourage you to submit articles for publication. In addition, if there is some way we can make Ada Letters more useful to you, please let me know. Note that Ada Letters is now on the web! See http://www.acm.org/sigada/ada_letters/index.html. The two newest issues are available only to SIGAda members. Older issues beginning March 2000 are available to all.

Now that Ada is standing on its own merits without the support of the DoD, lots of people and organizations have stepped up to provide new tools, mechanisms for compiler validation/assessment, and standards (especially ASIS). The Ada 2005 language version is fulfilling the market demand of robust safety and security elements and thereby generating a new enthusiasm into the software development. Ada Letters is a venue for you to share your successes and ideas with others in the Ada community. Be sure to take advantage of it so that we can all benefit from each other’s learning and experience.

As some of the other ACM Special Interest Group periodicals have moved, Ada Letters also transitioned from quarterly to a tri-annual publication. With exception of special issues, Ada Letters now is going to be published three times a year, with the exception of special issues. The revised schedules and submission deadlines are as follows:

<table>
<thead>
<tr>
<th>Deadline</th>
<th>Issue</th>
<th>Deadline</th>
<th>Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 1st, 12</td>
<td>April, 2012</td>
<td>June 1st, 12</td>
<td>August, 2012</td>
</tr>
<tr>
<td>October 1st, 12</td>
<td>December, 2012</td>
<td>February 1st, 13</td>
<td>April, 2013</td>
</tr>
</tbody>
</table>

Please send your article to Dr. Pat Rogers at rogers@adacore.com

Guidelines for Authors

Letters, announcements and book reviews should be sent directly to the Managing Editor and will normally appear in the next corresponding issue.

Proposed articles are to be submitted to the Technical Editor. Any article will be considered for publication, provided that topic is of interest to the SIGAda membership. Previously published articles are welcome, provided the previous publisher or copyright holder grants permission. In particular, keeping with the theme of recent SIGAda conferences, we are interested in submissions that demonstrate that “Ada Works.” For example, a description of how Ada helped you with a particular project or a description of how to solve a task in Ada are suitable.

Although Ada Letters is not a refereed publication, acceptance is subject to the review and discretion of the Technical Editor. In order to appear in a particular issue, articles must be submitted far enough in advance of the deadline to allow for review/edit cycles. Backlogs may result in an article’s being delayed for two or more issues. Contact the Managing Editor for information on the current publishing queue.

Articles should be submitted electronically in one of the following formats: MS Word (preferred) Postscript, or Adobe Acrobat. All submissions must be formatted for US Letter paper (8.5” x 11”) with one inch margins on each side (for a total print area of 6.5” x 9”) with no page
numbers, headers or footers. Full justification of text is preferred, with proportional font (preferably Times New Roman, or equivalent) of no less than 10 points. Code insertions should be presented in a non-proportional font such as Courier.

The title should be centered, followed by author information (also centered). The author's name, organization name and address, telephone number, and e-mail address should be given. For previously published articles, please give an introductory statement (in a distinctive font) or a footnote on the first page identifying the previous publication. ACM is improving member services by creating an electronic library of all of its publications. Read the following for how this affects your submissions.

**Notice to Contributing Authors to SIG Newsletters:**
By submitting your article for distribution in this Special Interest Group publication, you hereby grant to ACM the following non-exclusive, perpetual, worldwide rights:

- to publish in print on condition of acceptance by the editor
- to digitize and post your article in the electronic version of this publication
- to include the article in the ACM Digital Library
- to allow users to copy and distribute the article for noncommercial, educational or research purposes

However, as a contributing author, you retain copyright to your article and ACM will make every effort to refer requests for commercial use directly to you.

**Notice to Past Authors of ACM-Published Articles**
ACM intends to create a complete electronic archive of all articles and/or other material previously published by ACM. If you have a work that has been previously published by ACM in any journal or conference proceedings prior to 1978, or any SIG Newsletter at any time, and you do NOT want this work to appear in the ACM Digital Library, please inform permissions@acm.org, stating the title of the work, the author(s), and where and when published.

**Back Issues**
Back issues of Ada Letters can be ordered at the price of $6.00 per issue for ACM or SIGAda members; and $9.00 per issue for non-ACM members. Information on availability, contact the ACM Order Department at 1-800-342-6626 or 410-528-4261. Checks and credit cards only are accepted and payment must be enclosed with the order. Specify volume and issue number as well as date of publication. Orders must be sent to:

ACM Order Department, P.O. Box 12114, Church Street Station, New York, NY 10257 or via FAX: 301-528-8550.
KEY CONTACTS

Technical Editor
Send your book reviews, letters, and articles to:

Pat Rogers
AdaCore
207 Charleston
Friendswood, TX 77546
+1-281-648 3165
Email: rogers@adacore.com

Managing Editor
Send announcements and short notices to:

Alok Srivastava
TASC Inc.
475 School Street, SW
Washington DC 20024
+1-202-314-1419
Email: Alok.Srivastava@auatac.com

Advertising
Send advertisements to:

William Kooney
Advertising/Sales Account Executive
2 Penn Plaza, Suite 701
New York, NY 10121-0701
Phone: +1-212-869-7440
Fax: +1-212-869-0481

Local SIGAda Matters
Send Local SIGAda related matters to:

Greg Gicca
AdaCore
1849 Briland Street
Tarpon Springs, FL 34689, USA
Phone: +1-646-375-0734
Fax: +1-727-944-5197
Email: Gicca@AdaCore.Com

Ada CASE and Design Language Developers Matrix
Send ADL and CASE product Info to:

Judy Kerner
The Aerospace Corporation
Mail Stop M8/117
P.O. Box 92957
Los Angeles, CA 90009
+1-310-336-3131
Email: kerner@aero.org

Ada Around the World
Send Foreign Ada organization info to:

Dirk Craeynest
c/o K.U.Leuven, Dept. of Computer Science,
Celestijnenlaan 200-A, B-3001 Leuven (Heverlee)
Belgium
Email: Dirk.Craeynest@cs.kuleuven.be

Reusable Software Components
Send info on reusable software to:

Trudy Levine
Computer Science Department
Fairleigh Dickinson University
Teaneck, NJ 07666
+1-201-692-2000
Email: levine@fdu.edu
SIGAda Working Group (WG) Chairs
See http://www.acm.org/sigada/ for most up-to-date information

Ada Application Programming Interfaces WG
Geoff Smith
Lightfleet Corporation
4800 NW Camas Meadows Drive
Camas, WA 98607
Phone: +1-503-816-1983
Fax: +1-360-816-5750
Email: gsmith@lightfleet.com

Ada Semantic Interface Specification WG
http://www.acm.org/sigada/wg/asiswg/asiswg.html
Bill Thomas
The MITRE Corp
7515 Colshire Drive
McLean, VA 22102-7508
Phone: +1-703-983-6159
Fax: +1-703-983-1339
Email: BThomas@MITRE.Org

Education WG
http://www.sigada.org/wg/eduwg/eduwg.html
Mike Feldman
420 N.W. 11th Ave., #915
Portland, OR 97209-2970
Email: MFeldman@seas.gwu.edu

Standards WG
Robert Dewar
73 5th Ave.
New York, NY 10003
Phone: +1-212-741-0957
Fax: +1-232-242-3722
Email: dewar@cs.nyu.edu
Ada Around the World
(National Ada Organizations)
From: http://www.ada-europe.org/members.html

Ada-Europe
Tullio Vardanega
University of Padua
Department of Pure and Applied Mathematics
Via Trieste 63
I-35121, Padova, Italy
Phone: +39-049-827-1359
Fax: +39-049-827-1444
E-mail: tullio.vardanega@math.unipd.it
http://www.ada-europe.org/

Ada-Belgium
Dirk Craeynest
C/o K.U.Leuven, Dept. of Computer Science, Celestijnenlaan 200-A, B-3001 Leuven (Heverlee), Belgium
Phone: +32-2-725 40 25
Fax: +32-2-725 40 12
E-mail: Dirk.Craeynest@cs.kuleuven.be

Ada in Denmark
Jørgen Bundgaard
E-mail: Info at Ada-DK.org
http://www.Ada-DK.org/

Ada-Deutschland
Peter Dencker, Steinackerstr. 25
D-76275 Ettlingen-Spessartt, Germany
E-mail: dencker@parasoft.de
http://www.ada-deutschland.de/

Ada-France
Association Ada-France
C/o Jérôme Hugues
Département Informatique et Réseau
École Nationale Supérieure des Télécommunications, 46, rue Barrault
75634 Paris Cedex 135, France
E-mail: bureau@ada-france.org
http://www.ada-france.org/

Ada Spain
J. Javier Gutiérrez
P.O. Box 50.403
E-28080 Madrid, Spain
Phone: +34-942-201394
Fax : +34-942-201402
E-mail: gutierjj@unican.es
http://www.adaspain.org/

Ada in Sweden
Rei Stråhle
Box Saab Systems
S:t Olofsgatan 9A
SE-753 21 Uppsala, Sweden
Phone: +46-73-437-7124
Fax : +46-85-808-7260
E-mail: Rei.Strahl@saabgroup.com
http://www.ada-i-sverige.se/

Ada in Switzerland
Ahlan Marriott
White Elephant GmbH
Postfach 327
CH-8450 Andelfingen, Switzerland
Phone: +41 52 624 2939
Fax : +41 52 624 2334
E-mail: ada@white-elephant.ch
http://www.ada-switzerland.org/

Italy
Contact: tullio.vardanega@math.unipd.it

Ada-Europe Secretariat
e-mail: secretariat@ada-europe.org