

ADA USER JOURNAL

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Contents

	<i>Page</i>
Editorial Policy for Ada User Journal	70
Editorial	71
Quarterly News Digest	72
Conference Calendar	80
Forthcoming Events	87
Articles from the AEiC 2024 Work-in-Progress Session	
V. Manjunath, M. Baunach <i>“A Framework for Improving Portability and Ensuring Correctness of Operating System Kernels”</i>	89
F. Siebert, M. Lill, M. Teufel <i>“Algebraic Effects and Static Analysis for Safety-Critical Applications in Fuzion”</i>	94
S. Levieux, F. Singhoff, S. Rubini, P. Plasson, P. V. Gouel, L. R. Malac-Allain, L. Miné, G. Brusq <i>“An Iterative Benchmark Configuration Method for Quantifying Multi-core Interference”</i>	99
G. Rincon, C. F. Nicolas, T. Poggi <i>“Improving Reliability in a Robotic Application without Loss of Safety”</i>	105
L. Sousa, J. Cecílio, P. M. Ferreira, A. Oliveira de Sá <i>“Reconfigurable and Scalable Honeynet for Cyber-physical Systems”</i>	109
J. Cecílio, A. Oliveira de Sá, A. Souto <i>“Software-Based Security Framework for Edge and Mobile IoT”</i>	113
P. Pirkelbauer, C. Liao, P. H. Lin, D. Wright, C. Reynolds, D. Quinlan <i>“Supporting Ada in the ROSE Compiler”</i>	118
M. Samadi, T. Carvalho, L. M. Pinho, S. Royuela <i>“Task-to-Thread Mapping in OpenMP Using Fuzzy Decision Making”</i>	124
Ada-Europe Associate Members (National Ada Organizations)	128
Ada-Europe Sponsors	Inside Back Cover

Quarterly News Digest

Alejandro R. Mosteo

Centro Universitario de la Defensa de Zaragoza, 50090, Zaragoza, Spain; Instituto de Investigación en Ingeniería de Aragón, Mariano Esquillor s/n, 50018, Zaragoza, Spain; email: amosteo@unizar.es

Contents

Preface by the News Editor	72
Ada-related Events	72
Ada-related Resources	76
Ada-related Tools	77
Ada Practice	78

[Messages without subject/newsgroups are replies from the same thread. Messages may have been edited for minor proofreading fixes. Quotations are trimmed where deemed too broad. Sender's signatures are omitted as a general rule. —arm]

Preface by the News Editor

Dear Reader,

In this quiet period leading up to the summer holidays, there are a couple of more meaty topics in the News Digest. For one, you can peruse the final & detailed information about the latest Ada-Europe conference [1]. You can even find on-line recordings of some of the sessions, as is the case for the Ada Developers Workshop [2]. (Link included in the thread.)

Times are always a-changin', and Alire is now a strong player in the Ada open source community. Not everyone has jumped on the train, and in this issue you can get an idea on the complexities of contributing your projects with the lending hand of a maintainer [3].

Sincerely,
Alejandro R. Mosteo.

- [1] "Ada-Europe Int. Conf. Reliable Software Technologies, AEiC 2024", in Ada-related Events.
- [2] "Ada Developers Workshop @ AEiC 2024, Speaker and Talk List", in Ada-related Events
- [3] "Software Engineer Seeks Compatible Cratifier", in Ada Practice.

Ada-related Events

Ada-Europe Int. Conf. Reliable Software Technologies, AEiC 2024

*From: Dirk Craeynest
<dirk@orka.cs.kuleuven.be>
Subject: Ada-Europe Int. Conf. Reliable Software Technologies, AEiC 2024
Date: Tue, 16 Apr 2024 10:55:23 -0000
Newsgroups: comp.lang.ada,
fr.comp.lang.ada, comp.lang.misc*

Call for Participation

28th Ada-Europe International Conference on Reliable Software Technologies (AEiC 2024)

11-14 June 2024, Barcelona, Spain

www.ada-europe.org/conference2024

*** Online registration open! ***

*** Extensive info on conference site ***

Organized by Ada-Europe and Barcelona Supercomputing Center (BSC), in cooperation with ACM SIGAda, ACM SIGBED, ACM SIGPLAN, and Ada Resource Association (ARA), supported and sponsored by ASCENDER project, ACM-W, Eurocity, AdaCore, Rising STARS project, ACM-W Barcelona Chapter, and OpenMP

#AEiC2024 #AdaEurope
#AdaProgramming

*** Early registration discount until May 20 ***

*** Highly recommended to book your hotel ASAP ***

Exciting News!

Preparations for AEiC 2024, the 28th Ada-Europe International Conference on Software Reliable Technologies, are well underway!

Registrations opened Tuesday April 16, and we've got some exciting offers lined up for you, courtesy of our generous sponsors Rising STARS and AdaCore, as well as an inspiring program.

See below for an overview, and visit our website for more details about accepted

contributions, registration fees, social events and many more.

General Information

The 28th Ada-Europe International Conference on Reliable Software Technologies (AEiC 2024) will take place in Barcelona, Spain. The conference schedule comprises a keynote and an invited talk, a panel with invited experts, a journal track, an industrial track, a work-in-progress track, a vendor exhibition, parallel tutorials and hackaton, and satellite workshops. There will be time for networking during breaks and lunches, as well as various social events.

AEiC 2024 is the latest in a series of annual international conferences started in the early 80's, under the auspices of Ada-Europe, the international organization that promotes knowledge and use of the Ada programming language and reliable software in general, into academic education and research, and industrial practice.

The Ada-Europe series of conferences has over the years become a leading international forum for providers, practitioners and researchers in reliable software technologies. These events highlight the increased relevance of Ada in general and in safety- and security-critical systems in particular, and provide a unique opportunity for interaction and collaboration between academics and industrial practitioners.

The 2024 edition of the conference continues a number of important innovations started in previous years:

- reduced conference registration fee for all authors;
- low registration fee for all tutorials and workshops;
- journal-based open-access publication model for peer-reviewed papers;
- compact program with two core days (Wednesday & Thursday);
- tutorials on Tuesday, followed by welcome event for all participants;
- workshops on Friday, optional chill event on Thursday evening

Overview of the Week

- Tue 11: six half-day tutorials, full-day hackaton, welcome reception

- Wed 12: core technical program, conference banquet
- Thu 13: core technical program, post conference chill-out
- Fri 17: four full-day workshops

Extensive information on AEiC 2024 is on the conference website, such as an overview of the program, the list of accepted papers and presentations, and descriptions of workshops, tutorials, hackaton, keynote and invited presentations, panel, and social events. Also check the conference site for registration, accommodation and travel information. The Advance Program brochure will be available there as well.

Venue

The conference will take place in UPC Campus Nord, easily accessible by metro from the airport and city centre. If you can stay over before or after the conference, there's a lot to see around. Check the Practical Information section of the conference website for more info.

Invited Speakers

This year the conference will feature a keynote talk on the first day, and a panel with three invited speakers on the second, plus an invited talk. All will address topics of relevance in the conference scope, with time for questions and answers.

- On Wed June 12, a keynote talk by Francisco J. Cazorla and Jaume Abella, from Barcelona Supercomputing Center, who will talk about "Strategies to Build Safety Relevant High-Performance HW/SW Platforms for Critical Embedded Systems".
- On Thu June 13, a panel on "AI for Safety-Critical Systems: How 'I' Should the AI be?", moderated by Cristina Seceleanu, Mälardalen University, with three invited experts: Kerstin Bach (Norwegian University of Science and Technology), Irune Yarza (Ikerlan), Marta Barroso (Barcelona Supercomputing Center).
- And an invited talk by Rosa Maria Badia, Barcelona Supercomputing Center, on "Simplifying the Life-Cycle Management of Complex Application Workflows".

Conference Core Composition

The core conference program features three distinct types of technical presentations, with different duration, in addition to the keynote talk and the panel session: journal-track talks (25 minutes), industrial-track talks (15 minutes), work-in-progress-track talks (10 minutes).

All papers presented in the journal track, the industrial track and the work-in-progress track have undergone peer

review. Presentations are combined into by-theme and not by-track sessions, in order that authors and participants alike enjoy all flavors of the program in a mixed as opposed to segregated combination.

Papers and Presentations:

- 8 sessions with a mix of presentations on specific topics
- 13 journal-track talks
- 8 work-in-progress reports
- 5 industrial presentations and experience reports
- submissions from around the world
- accepted contributions by authors from Belgium, China, France, Germany, India, Italy, Portugal, Spain, Sweden, UK, USA

Tutorials

Six three-hour tutorials are offered on Tuesday 11th:

- "Lock-Free Programming in Ada-2022: Implementing a Work-Stealing Scheduler for Ada-2022's Light-Weight Parallelism", by S. Tucker Taft, AdaCore, USA
- "Ada for Business Applications", by Gautier de Montmollin, Ada-Switzerland, Switzerland
- "Rust Fundamentals", by Luis Miguel Pinho and Tiago Carvalho, ISEP, Portugal
- "Concurrency and Parallelism in Rust", by Luis Miguel Pinho and Tiago Carvalho, ISEP, Portugal
- "Modeling Concurrent State Machines in TLA+", by J. Germán Rivera, Tesla, USA
- "Introduction to the Development of Safety-Critical Software", by Jean-Pierre Rosen, Adalog, France
- "METASAT: Programming High Performance RISC-V Technologies for Space", by Leonidas Kosmidis, Barcelona Supercomputing Center, Alejandro Calderon, Ikerlan, Aridane Alvarez Suarez, fentISS, Lorenzo Lazzara, Collins Aerospace, Eckart Göhler, OHB
- "Introduction to Certifiable General Purpose GPU Programming for Safety-Critical Systems", by Leonidas Kosmidis, Barcelona Supercomputing Center, Rod Burns and Verena Beckham, Codeplay/Intel

as well as a "hackaton":

- "Optimizing AI-driven Workflows within a Mission-Critical Cyber-Physical System", if you're keen to explore the latest AI techniques for Adaptive Optics applications in giant telescopes with Damien Gratadour, Observatoire de Paris, CNRS, France

Satellite Events

Four workshops are held on Friday 14th:

- 3rd ADEPT workshop "AADL by its practitioners"
- 9th International Workshop on "Challenges and New Approaches for Dependable and Cyber-Physical System Engineering" (DeCPS 2024)
- "Enabling the use of AI in Safety-Critical Systems"
- "Ada Developers Workshop", an informal yet dynamic gathering for developers in the Ada community to meet, share insights, and present their latest projects or project updates, using the Ada programming language and Ada-related technology

Social Program

The conference provides several opportunities to socialize:

- Each day: coffee breaks and lunches offer ample time for interaction and networking with participants and vendors.
- Tuesday early evening: welcome reception at the picturesque gardens of Torre Girona. Guests will be treated to a curated selection of local wines paired with the globally renowned Iberian ham, and an array of delectable appetizers representing the rich culinary heritage of Catalonia and Spain. Attendees will have the unique opportunity to explore the cutting-edge facilities of the Barcelona Supercomputing Center, and marvel at its latest addition, the Marenostrum V supercomputer, and its predecessor, Marenostrum IV, housed within the historic chapel of Torre Girona.
- Wednesday evening: Conference Banquet at the emblematic restaurant "7 portes". Attendees will have the opportunity to savor the finest flavors of the Catalan and Mediterranean cuisines, such as the renowned "Paella Perallada", a masterpiece that harmoniously combines semi-dry rice with succulent peeled shellfish, delectable seafood and tender meats. With a history spanning over 180 years, "7 portes" stands as a witness to the evolution of some of the most illustrious artists of their time, including Pablo Picasso and Antoni Tàpies. Their presence has left an indelible mark, forming a captivating small art gallery within the restaurant's walls, waiting to be discovered by guests.
- Thursday evening: Chill event at the Moritz Barcelona Brewery, the brewery of the first beer of Barcelona. The event is divided in three parts: a visit to the brewery, a welcome drink at the Brasserie room, offering an exclusive vantage point overlooking the maceration tanks, and a banquet served

within the same Brasserie room, by renowned chef Jordi Vilà, adorned with a Michelin star, promising a gastronomic experience to be savored and remembered.

Further Information

Registration:

- registration information is provided at <http://www.ada-europe.org/conference2024/registration.html>
- early registration discount until Monday May 20, 2024
- payment possible by credit card or bank transfer
- special low conference fee for authors
- discount for Ada-Europe, ACM SIGAda, SIGBED and SIGPLAN members
- registration includes coffee breaks, lunches and social events
- low tutorial and workshop fees for all participants
- strong discount on all fees for students
- minimal fee for AI Hackaton and Ada Developers Workshop
- see registration page for all details

Promotion:

- recommended Twitter hashtags: #AEiC2024 #AdaEurope #AdaProgramming

AEiC 2024 Sponsors:

- Barcelona Supercomputing Center: <https://www.bsc.es/>
- ASCENDER project: <https://www.bsc.es/research-and-development/projects/ascender-arquitectura-software-paradornos-de-computo-continuo>
- ACM-W: <https://women.acm.org/>
- Eurocity: <https://eurocity.be/>
- AdaCore: <https://www.adacore.com/>
- Rising STARS project: <https://risingstars-project.eu/>
- ACM-W Barcelona Chapter: https://twitter.com/BCN_ACM_W
- OpenMP: <https://www.openmp.org/>

The conference is supported and sponsored by

- Ada-Europe: <http://www.ada-europe.org/>

and organized in cooperation with

- ACM SIGAda: <http://www.sigada.org/>
- ACM SIGBED: <https://sigbed.org/>
- ACM SIGPLAN: <http://www.sigplan.org/>
- ARA: <https://www.adaic.org/community/>

Please make sure you book accommodation as soon as possible. For more info and latest updates see the conference website at <http://www.ada-europe.org/conference2024>.

We look forward to seeing you in Barcelona in June 2024!

Our apologies if you receive multiple copies of this announcement.

Please circulate widely.

Dirk Craeynest, AEiC 2024 Publicity Chair

Dirk.Craeynest@cs.kuleuven.be

* 28th Ada-Europe Int. Conf. Reliable Software Technologies (AEiC 2024)

* June 11-14, 2024, Barcelona, Spain, www.ada-europe.org/conference2024

(V7.1)

Ada Monthly Meetup, May 2024

From: Fernando Oleo / Irvise

<irvise_ml@irvise.xyz>

Subject: Ada Monthly Meetup, May 2024

Date: Wed, 17 Apr 2024 12:29:46 +0200

Newsgroups: comp.lang.ada

I would like to announce the May (2024) Ada Monthly Meetup which will be taking place on the 11th of April at 13:00 UTC time (15:00 CEST). As always, the meetup will take place over at Jitsi. The Meetup will also be livestreamed to Youtube.

If someone would like to propose a talk or a topic, feel free to do so! We currently have one talk that will be given by A.J. Ianozi about GetAda[1], an all-batteries included installer for Ada tooling in a short single command!

Here are the connection details from previous posts: The meetup will take place over at Jitsi, a conferencing software that runs on any modern browser. The link is Jitsi Meet The room name is "AdaMonthlyMeetup" and in case it asks for a password, it will be set to "AdaRules". I do not want to set up a password, but in case it is needed, it will be the one above without the quotes. The room name is generally not needed as the link should take you directly there, but I want to write it down just in case someone needs it.

[1] <https://www.getada.dev/>

From: J-P. Rosen <rosen@adalog.fr>

Date: Wed, 17 Apr 2024 14:49:57 +0200

> I would like to announce the May (2024) Ada Monthly Meetup which will be taking place on the 11th of April

Presumably, you meant May 4th... (1st saturday of May)

From: Fernando Oleo / Irvise

<irvise_ml@irvise.xyz>

Date: Wed, 17 Apr 2024 16:27:36 +0200

> Presumably, you meant May 4th... (1st saturday of May)

Ouch! My mistake, thank you for noticing it! But it is indeed the 11th of *May*, so April -> May. I changed it to the second Saturday since I will most likely not be available the first week due to some holidays here in Spain :)

[...]

From: Fernando Oleo / Irvise

<irvise_ml@irvise.xyz>

Date: Thu, 9 May 2024 22:19:26 +0200

This is a kind reminder that the next Ada Monthly Meetup will take place this Saturday, so in less than 48h!

The main topics to be talked about are going to be AJ's GetAda and the Ada Developers Workshop that will take place on the 14th of June!

There will be no Ada Monthly Meetup in June due to the aforementioned Workshop.

Ada Developers Workshop @ AEiC 2024, Speaker and Talk List

From: Fernando Oleo / Irvise

<irvise_ml@irvise.xyz>

Subject: Ada Developers Workshop @ AEiC 2024, Speaker and Talk list

Date: Wed, 15 May 2024 13:03:51 +0200

Newsgroups: comp.lang.ada

[The video recordings and slides from the workshop are now available via <http://www.ada-europe.org/conference2024/adadev.html> —arm]

The list of speakers, talks and schedule for the Ada Developer Workshop has been published [1]. The Workshop will take place on the 14th of June in Barcelona. The entry has a small price of 10€ if paid before the 20th of May and 20€ if later. The price covers the cost of two coffee breaks and a meal. You can find more information in the registration page [2]

Here is a short summary of what will be shown during the workshop:

- "SweetAda: a Multi-architecture Embedded Development Framework" by Gabrielle Galeotti (Italy), Fernando Oleo Blanco (Spain)
- "Avoiding Access Types" by Jeffrey R. Carter (Belgium)
- "G-NAV: Soaring the Clouds with AdaWebPack" by Guillermo A. Hazenbrouck (Belgium)

- "Alire 2.0: a Quality of Life Update" by Alejandro Mosteo (Spain)
- "HiRTOS: a Multicore RTOS Written in SPARK Ada" by J. German Rivera (USA)
- "Ironclad: a Formally Verified OS Kernel Written in SPARK/Ada" by Cristian Simon (Spain)
- "An Ada Story of Time" by Jean-Pierre Rosen (France)
- "Controlled I/O: a Library for Scope-Based Files" by Jeffrey R. Carter (Belgium)
- "Ada Community Advocacy" by Fernando Oleo Blanco (Spain)

[1] <http://www.ada-europe.org/conference2024/adadev.html>

[2] <http://www.ada-europe.org/conference2024/registration.html>

Best regards,

The Ada Developers Workshop organisation team

From: Dirk Craeynest

<dirk@orka.cs.kuleuven.be>

Date: Tue, 28 May 2024 10:15:33 -0000

Update: thanks to sponsoring, in-person participants will only pay the low registration fees specified above; remote participants are required to register as well, but participation will be totally free!

Dirk Craeynest

Dirk.Craeynest@cs.kuleuven.be (for Ada-Belgium/Ada-Europe/SIGAda/WG9)

* 28th Ada-Europe Int. Conf. Reliable Software Technologies (AEiC 2024)

* June 11-14, 2024, Barcelona, Spain, www.ada-europe.org/conference2024

From: Dirk Craeynest

<dirk@orka.cs.kuleuven.be>

Date: Sat, 1 Jun 2024 10:10:55 -0000

Remember that registration is still open for the Ada Developers Workshop #AdaDevWS at the #AdaEurope conference #AEiC2024 in Barcelona on Friday 14 June 2024.

Some places remain for in-person participation, many remain for remote participation. :-)

Dirk Craeynest

Dirk.Craeynest@cs.kuleuven.be (for Ada-Belgium/Ada-Europe/SIGAda/WG9)

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* June 11-14, 2024, Barcelona, Spain, www.ada-europe.org/conference2024

Ada-Europe - AEiC 2024 Early Registration Deadline Imminent

From: Dirk Craeynest

<dirk@orka.cs.kuleuven.be>

Subject: Ada-Europe - AEiC 2024 early registration deadline imminent

Date: Sat, 18 May 2024 11:01:38 -0000

*Newsgroups: comp.lang.ada,
fr.comp.lang.ada, comp.lang.misc*

UPDATED Call for Participation

*** Early registration DEADLINE
May 20 ***

28th Ada-Europe International
Conference on Reliable Software
Technologies (AEiC 2024)

11-14 June 2024, Barcelona, Spain

www.ada-europe.org/conference2024

* Extensive info and registration online *

*** Add tutorials and/or a workshop to
your conference registration ***

#AEiC2024 #AdaEurope
#AdaProgramming

Organized by Ada-Europe and Barcelona Supercomputing Center (BSC), in cooperation with ACM SIGAda, ACM SIGBED, ACM SIGPLAN, and Ada Resource Association (ARA), supported and sponsored by ASCENDER project, Eurocity, Collins Aerospace, ACM-W, BSC Severo Ochoa Center of Excellence, AdaCore, Rising STARS project, ACM-W Barcelona Chapter, and OpenMP

UPDATE

Ada-Europe - AEiC 2024 early registration deadline imminent

Come to the Ada-Europe conference in Barcelona, experience a packed program in an exciting town, benefit from tutorials or a hackaton on Tuesday, join a workshop on Friday, enjoy the social events and some sightseeing!

Register now: discounted fees until May 20!

<http://www.ada-europe.org/conference2024/registration.html>

Extra conference sponsorship allows for an extremely low 10 EUR fee for the AI Hackaton on Tuesday and the Ada Developers Workshop on Friday!

See below for an overview, and visit our website for more details about accepted contributions, registration fees, social events and many more.

[General Information, Overview of the Week, Venue, Invited Speakers, Conference Core Composition, Tutorials,

Satellite Events and Social Program sections are the same as in "Ada-Europe Int. Conf. Reliable Software Technologies, AEiC 2024" in this AUJ issue, pp. 70-72 —arm]

*** Further Information

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- strong discount on all fees for students
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- see registration page for all details

Promotion:

- recommended Twitter hashtags: #AEiC2024 #AdaEurope #AdaProgramming

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- Ada-Europe <http://www.ada-europe.org/>
- Barcelona Supercomputing Center <https://www.bsc.es/>

in cooperation with:

- ACM SIGAda <http://www.sigada.org/>
- ACM SIGBED <http://www.sigbed.org/>
- ACM SIGPLAN <http://www.sigplan.org/>
- Ada Resource Association (ARA) <http://www.adaic.org/community/>

supported and sponsored by:

- ASCENDER Project: <https://www.bsc.es/research-and-development/projects/ascender-arquitectura-software-para-entornos-de-computo-continuo>
- Eurocity <https://eurocity.be/>
- Collins Aerospace <https://www.collinsaerospace.com/>
- ACM-W <https://women.acm.org/>
- BSC Severo Ochoa Center of Excellence <https://www.bsc.es/news/bsc-news/bsc-achieves-severo-ochoa-center-excellence-accreditation>
- AdaCore <https://www.adacore.com/>

- Rising STARS project
<<https://risingstars-project.eu/>>
- ACM-W Barcelona Chapter
<https://twitter.com/BCN_ACM_W>
- OpenMP <<https://www.openmp.org/>>

Please make sure you book accommodation as soon as possible.

For more info and latest updates see the conference website at
<<http://www.ada-europe.org/conference2024>>.

We look forward to seeing you in Barcelona in June 2024!

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Please circulate widely.

Dirk Craeynest, AEiC 2024 Publicity Chair

Dirk.Craeynest@cs.kuleuven.be

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(V8.1)

2024 Ada-Belgium General Assembly

From: Dirk Craeynest

<dirk@orka.cs.kuleuven.be>

Subject: 2024 Ada-Belgium General Assembly

Date: Tue, 28 May 2024 08:52:59 -0000

Newsgroups: comp.lang.ada

To all Ada-Belgium members who didn't register yet for the 2024 Ada-Belgium General Assembly meeting, to be held online Tuesday 28 May 2024 18:30 CEST, please check your mailbox for the convocation that was sent some time ago, and register ASAP.

Ada-related Resources

[Delta counts are from May 28th to July 11th. —arm]

Ada on Social Media

From: Alejandro R. Mosteo

<amosteo@unizar.es>

Subject: Ada on Social Media

Date: 11 Jul 2024 18:24 CET[b]

To: Ada User Journal readership

Ada groups on various social media:

- Reddit: 8_741 (+36) members [1]
- LinkedIn: 3_521 (+11) members [2]
- Stack Overflow: 2_411 (+6) questions [3]

- Gitter: 258 (+5) people [4]
- Ada-lang.io: 241 (+21) users [5]
- Telegram: 205 (+4) users [6]
- Libera.Chat: 73 (-2) concurrent users [7]

- [1] <https://old.reddit.com/r/ada/>
- [2] <https://www.linkedin.com/groups/114211/>
- [3] <https://stackoverflow.com/questions/tagged/ada>
- [4] https://app.gitter.im/#/room/#ada-lang_Lobby:gitter.im
- [5] <https://forum.ada-lang.io/u>
- [6] https://t.me/ada_lang
- [7] <https://netsplit.de/channels/details.php?room=%23ada&net=Libera.Chat>

Repositories of Open Source Software

From: Alejandro R. Mosteo

amosteo@unizar.es

Subject: Repositories of Open Source software

Date: 11 Jul 2024 18:27 CET[c]

To: Ada User Journal readership

- GitHub: >740* (=) developers [1]
- Rosetta Code: 979 (+29) examples [2]
- 42 (=) developers [3]
- Alire: 412 (+7) crates [4]
- 1_068 (+20) releases [5]
- Sourceforge: 252 (+1) projects [6]
- Open Hub: 214 (=) projects [7]
- Codelabs: 57 (=) repositories [8]
- Bitbucket: 37 (-1) repositories [9]

*This number is a lower bound due to GitHub search limitations.

- [1] <https://github.com/search?q=language%3AAda&type=Users>
- [2] <https://rosettacode.org/wiki/Category:Ada>
- [3] https://rosettacode.org/wiki/Category:Ada_User
- [4] <https://alire.ada.dev/crates.html>
- [5] `alr search --list --full`
- [6] <https://sourceforge.net/directory/language:ada/>
- [7] <https://www.openhub.net/tags?names=ada>
- [8] https://git.codelabs.ch/?a=project_index
- [9] <https://bitbucket.org/repo/all?name=ada&language=ada>

Language Popularity Rankings

From: Alejandro R. Mosteo

<amosteo@unizar.es>

Subject: Ada in language popularity rankings

Date: 11 Jul 2024 18:38 CET[d]

To: Ada User Journal readership

[Positive ranking changes mean to go up in the ranking. —arm]

- TIOBE Index: 24 (-2) 0.78% (-0.05%) [1]
- PYPL Index: 17 (+2) 0.96% (+0.14%) [2]
- Languish Trends: 192 (-12) 0.00% (-0.01%) [3]
- Stack Overflow Survey: 42 (=) 0.77% (=) [4]
- IEEE Spectrum (general): 36 (=) Score: 0.0107 (=) [5]
- IEEE Spectrum (jobs): 29 (=) Score: 0.0173 (=) [5]
- IEEE Spectrum (trending): 30 (=) Score: 0.0122 (=) [5]

- [1] <https://www.tiobe.com/tiobe-index/>
- [2] <http://pypl.github.io/PYPL.html>
- [3] <https://tjpalmer.github.io/languish/>
- [4] <https://survey.stackoverflow.co/2023/>
- [5] <https://spectrum.ieee.org/top-programming-languages/>

We Are Hiring Software Engineers

From: Björn Lundin <bnl@nowhere.com>

Subject: We are hiring software engineers

Date: Thu, 25 Apr 2024 16:11:31 +0200

Newsgroups: comp.lang.ada

This is not technical, just a note that we are hiring.

We are hiring software engineers to work on our WCS (Warehouse Control System). It means communication with automation devices, and making them move pallets or totes in a way that we and customers are happy with.

We have mostly largish customers, but some less large as well.

It is circa 1.2 Mloc of Ada - a mix from Ada83 -> Ada22.

We (can) adapt quite some to customers so usually

- * design
- * implementation
- * testing
- * commissioning
- * support

is part of the package

Remote is ok, but willingness to travel will then be needed sometimes

The ad is here

<<https://careers.consafelogistics.com/jobs/3613985-software-developer-to-the-wcs-team>>

To give some insight - the site shown here - the conveyors and Autostore are controlled by our software. We tell the devices where to pickup and where to deliver - different protocols. It went live this spring.

<<https://www.youtube.com/watch?v=57oSqx19C4w>>

What is an Autostore?

<<https://www.youtube.com/watch?v=iHC9ec591II&t=43s>>

What we do? We control devices like the ones in this video

<<https://www.youtube.com/watch?v=IW3PkMMN8ns>>

Ada-Lang and Its Forum

From: Fernando Oleo / Irvise

<irvise_ml@irvise.xyz>

Subject: Ada-Lang and it's (more active than CLA) forum

Date: Sat, 11 May 2024 13:30:32 +0200

Newsgroups: comp.lang.ada

This is a simple and quick reminder (or announcement if it's the first time you get notified) regarding Ada-Lang [1] and its Forum [2].

Ada-Lang is a community maintained and supported webpage whose intent is to give a nice "landing page" to anybody wanting to learn Ada and become a hub for all Ada users. It has a few nice links to social media and chat-rooms (at the bottom), a section to read C.L.A directly on your web-browser [3], a formatted version of the ARM [4], tutorial and examples (WIP) [5] and a few other nice features.

The Forum is quite active and it has a lot of topics. You can think about it as a modern web version of C.L.A :) Though, an account is required... And I do not mean to belittle C.L.A, it is a great resource!

Everybody is more than welcomed to participate in the forums and help the website grow in quality and content. Everything is open source, so it is very easy to help around!

[1] <https://ada-lang.io/>

[2] <https://forum.ada-lang.io/>

[3] <https://usenet.ada-lang.io/comp.lang.ada/>

[4] <https://ada-lang.io/docs/arm>

[5] <https://ada-lang.io/docs/learn/why-ada>

Ada-related Tools

GCC 14.1.0 for MacOS

From: Simon Wright

<simon@pushface.org>

Subject: ANN: GCC 14.1.0 for macOS

Date: Thu, 16 May 2024 21:09:55 +0100

Newsgroups: comp.lang.ada

GCC 14.1.0 suite available for macOS:

aarch64,

<https://github.com/simonjwright/distributing-gcc/releases/tag/gcc-14.1.0-aarch64>

x86_64,

https://github.com/simonjwright/distributing-gcc/releases/tag/gcc-14.1.0-x86_64

From: Simon Wright

<simon@pushface.org>

Date: Thu, 23 May 2024 16:00:32 +0100

> GCC 14.1.0 suite available for macOS:

> aarch64,

><https://github.com/simonjwright/distributing-gcc/releases/tag/gcc-14.1.0-aarch64>

> x86_64,

>https://github.com/simonjwright/distributing-gcc/releases/tag/gcc-14.1.0-x86_64

and an aarch64-based cross-compiler to arm-eabi, at

<https://github.com/simonjwright/distributing-gcc/releases/tag/gcc-14.1.0-aarch64-arm-eabi>

From: Orangefish

<orangefish@invalid.invalid>

Date: Fri, 17 May 2024 11:01:09 -0400

> aarch64,

><https://github.com/simonjwright/distributing-gcc/releases/tag/gcc-14.1.0-aarch64>

Do you know how this differs from Iain Sandoe's port

(<https://github.com/iains/gcc-darwin-arm64/>)?

From: Simon Wright

<simon@pushface.org>

Date: Sat, 18 May 2024 21:02:05 +0100

> Do you know how this differs from Iain Sandoe's port?

It's from Iain's repo

<https://github.com/iains/gcc-14-branch>.

I think that this corresponds to GCC's releases/gcc-14.1.0 tag ????

I can't find it now, but when I asked why he separated the release "branches" from the development one (gcc-darwin-arm64) Iain referenced some difficulty with Github.

From: Lawrence D'Oliveiro

<ldo@nz.invalid>

Date: Sat, 18 May 2024 21:42:34 -0000

> Iain referenced some difficulty with Github.

People need to remember that GitHub ≠ Git.

PragmAda Reusable Components

From: Pragmada Software Engineering

<pragmada@pragmada.x10hosting.com>

Subject: [Reminder] The PragmAda Reusable Components

Date: Sat, 1 Jun 2024 14:48:06 +0200

Newsgroups: comp.lang.ada

The PragmARCs are a library of (mostly) useful Ada reusable components provided as source code under the GMGPL or BSD 3-Clause license at

<https://github.com/jrcarter/PragmARC>.

This reminder will be posted about every six months so that newcomers become aware of the PragmARCs. I presume that those who want notification when the PragmARCs are updated have used Github's notification mechanism to receive them, so I no longer post update announcements. Anyone who wants to receive notifications without using Github's mechanism should contact me directly.

Simple Components v4.69

From: Dmitry A. Kazakov

<mailbox@dmitry-kazakov.de>

Subject: ANN: Simple Components v4.69

Date: Sat, 29 Jun 2024 09:30:47 +0200

Newsgroups: comp.lang.ada

The library provides implementations of smart pointers, directed graphs, sets, maps, B-trees, stacks, tables, string editing, unbounded arrays, expression analyzers, lock-free data structures, synchronization primitives (events, race condition free pulse events, arrays of events, reentrant mutexes, deadlock-free arrays of mutexes), pseudo-random non-repeating numbers, symmetric encoding and decoding, IEEE 754 representations support, streams, persistent storage, multiple connections server/client designing tools and protocols implementations.

<http://www.dmitry-kazakov.de/ada/components.htm>

Changes the previous version:

- The procedure Compile was added to Python bindings in order to get a handle to the compiled module;
- The function Object_Super of the bindings is an equivalent of x.super().y. It returns the implementation of y from the x's parent class.

Ada Practice

Was the Mandate Change a Poor Decision?

*From: Kevin Chadwick <kc-usenet@chadwicks.me.uk>
Subject: Was the mandate change a poor decision?
Date: Thu, 4 Apr 2024 00:47:20 -0000
Newsgroups: comp.lang.ada*

<https://dl.acm.org/doi/pdf/10.1145/260096.260385>

This paper completely ignored arguments such as the mandate apparently only requiring demonstrating an expectation of being more cost effective than Ada. Replaced by a mandate that is apparently ignored as it is basically reduced to an aim of being cost effective without competition to Ada which was designed to be cost effective and so hard to beat.

History seems to have shown that he was completely wrong and in my opinion the mandate change has inflated costs to taxpayers significantly, such as in the F-35/JSF program.

Do you think that this paper had any influence on making the mandate impotent?

Am I ignorant of improvements that the mandate change has brought about?

Software Engineer Seeks Compatible Cratifier

*From: Jeffrey R. Carter
<spam.jrcarter.not@spam.acm.org.not>
Subject: Software Engineer Seeks Compatible Cratifier
Date: Tue, 18 Jun 2024 15:05:38 +0200
Newsgroups: comp.lang.ada*

<https://forum.ada-lang.io/t/2024-crate-of-the-year-awards/923/8?u=jc001>

[Contents of the above link follow.—arm]

I don't use gprbuild or Alire, but I, too, have a collection of software on GitHub that might benefit from cratification, if someone would find that a worthwhile activity.

*From: Pascal Obry <pascal@obry.net>
Date: Tue, 18 Jun 2024 15:40:01 +0200*

The first thing would be to accept adding a GPR project file into your projects. You have rejected my PR proposing just this. How one is supposed to build a set of unrelated Ada files?

*From: Jeffrey R. Carter
<spam.jrcarter.not@spam.acm.org.not>
Date: Tue, 18 Jun 2024 20:06:06 +0200*

IIUC, there has to be a project file in the crate. That does not mean there has to be a project file in my Github repository.

*From: Pascal Obry <pascal@obry.net>
Date: Tue, 18 Jun 2024 20:27:16 +0200*

But then you impose on someone to create a project file. And this would be needed by all packagers, there are not only crates around to build a component. And moreover, you let the "packager" find the correct options to be used which is certainly not a good solution.

That's exactly why I had proposed a PR with a project file. It "documents" the way the code must be compiled (at least with GNAT) and installed for everyone wanting to package your components.

*From: Simon Wright
<simon@pushface.org>
Date: Tue, 18 Jun 2024 22:12:15 +0100*

>> IIUC, there has to be a project file in the crate. That does not mean there has to be a project file in my Github repository.

The crate in the index contains (amongst other things) the name of the .gpr and a link to the source; e.g.

```
project-files = "minimal_containers.gpr"
[origin]
commit = "592661c64b8ad6fa40864e9584a8faa3a1d2b283"
url = "git+https://github.com/simonjwright/minimal_containers.git"
```

The project file is in the source.

It would be possible to 'cratify' the PragmaARCs by forking the repo and adding an alire.toml and a .gpr - which would be very simple if there was no particular need for special compilation switches (and one wouldn't need compile_all.adb). But it would feel a bit daunting without a helpful README.

*From: Luke A. Guest
<laguest@archeia.com>
Date: Wed, 19 Jun 2024 09:36:33 +0100*

> How one is supposed to build a set of unrelated Ada files?

alr init --lib --in-place

*From: Simon Wright
<simon@pushface.org>
Date: Wed, 19 Jun 2024 11:22:19 +0100*

> <https://forum.ada-lang.io/t/2024-crate-of-the-year-awards/923/8?u=jc001>

I'm prepared to do this, if we can agree.

I would fork your repo, and make changes/distribute from there.

I propose an alire.toml, on these lines:

```
name = "pragmarc"
### needs to be in lower case
description = "Utility library"
```

```
version = "4.0.0"
### you have 4 releases on Github, the
### current code is the 4th, I believe.
### The release needs to be in this
### form; I did think about
### e.g. 2024.03.23, that might work
```

```
authors = ["Jeffrey R. Carter"]
maintainers = ["Simon Wright
<simon@pushface.org>"]
maintainers-logins = ["simonjwright"]
licenses = "BSD-3-Clause"
```

```
website = https://github.com/
jrcarter/Pragmarc
### is there a better one? if not, this
### should probably be to my fork
```

```
tags = ["utility", "library"]
### what should this list be
### extended to?
```

```
[build-switches]
"*.Style_Checks = "no"
### alire's style checks disagree
### violently with your usage!
"*.Ada_Version = "Ada12"
### this is what you specify in the code
```

(email: simon@pushface.org)

*From: Alastair Hogge <agh@riseup.net>
Date: Sun, 23 Jun 2024 08:10:04 -0000*

> That's exactly why I had proposed a PR with a project file.

+1 for a .gpr project file to enable package maintainers; it makes it easier to integrate Ada systems with the host system.

*From: Dmitry A. Kazakov
<mailbox@dmitry-kazakov.de>
Date: Sun, 23 Jun 2024 15:21:51 +0200*

> +1 for a .gpr project file to enable package maintainers; it makes it easier to integrate Ada systems with the host system.

Yes, but the system must generate a parent gpr file with the target settings. Fedora's GNAT has such a thing in a very primitive form. It must define the target OS description, default switches, 32 vs 64 bit, architecture, availability of pragma Atomic for 64-bit scalars, some standard libraries for the linker etc. Then the user gpr will be able to refer to these in the main gpr.

OT, the reason why I do not use Alire is because it has no upload function. I cannot manually submit my projects each time I ship a new version of some of them. It should support automated uploads.

*From: G.B.
<bauhaus@notmyhomepage.invalid>
Date: Tue, 25 Jun 2024 22:47:49 +0200*

> The first thing would be to accept adding a GPR project file into your projects.

Might a good README actually be better? And also stable?

The number of programming languages in production used to be really large. So large, 400+, that a reduction project was

given green light. To get the number up again, it seems that the market is having every programming language multiplied by at least two build tools' description language.

As before, mostly single vendors are providing the definitions of a respective formalism, versions, obsolescence, life cycle policies, all included.