GAP NEWSLETTER; APRIL 2019

Hello GAP Members!

A lot has happened since our October newsletter was published. Read on for highlights from the past six months.

- First and foremost, welcome to the 17 new university members that have joined GAP since October 2018. New members include:

  - British Columbia Institute of Technology, Burnaby, BC
  - Universidad Aeronáutica en Querétaro, Colón, Querétaro, Mexico
  - University of Nebraska-Lincoln, Lincoln, NE
  - Chalmers University of Technology, Gothenburg, Sweden
  - College of North West London, Wembley Park Drive, Middlesex, England
  - Nanzan University, Shōwa-ku, Nagoya, Japan
  - University of Beira Interior, Covilhã, Portugal
  - Istanbul Technical University, Istanbul, Turkey
  - Grace Brethren High School, Simi Valley, CA
  - Sacramento City College, Sacramento, CA
  - Yeshiva University, New York, NY
  - Dresden University of Applied Sciences, Dresden, Germany
  - University of Naples Federico II, Naples, Italy
  - Bochum University of Applied Sciences, Heiligenhaus, Germany
  - North Idaho College, Coeur d'Alene, ID
  - University of Southern Mississippi, Hattiesburg, MS
  - Goldsmiths, University of London, London, England

- Two of our GAP members recently shared blog posts regarding recent/ongoing projects. If you would like to contribute a blog on a project that your students are working on, please let me know!

  - [Train control using Ada on a Raspberry Pi](#)
    by Julia Teissl, FH Campus Wien – Sep 18, 2018

  - [Ten Years of Using SPARK to Build CubeSat Nano Satellites With Students](#)
    by Peter Chapin, Vermont Technical College – Mar 01, 2019

- Julia Teissl,FH Campus Wien, also presented a paper, Autonomous Train Control Systems: a First Approach, on February 2 at FOSDEM 2019 in Brussels, Belgium.

- Our new learning site, Learn.adacore.com, now has an interactive book available on SPARK Ada for the MISRA C Developer. This book presents the SPARK technology -- the SPARK subset of Ada and its supporting static analysis tools -- through an example-driven comparison with the rules in the widely known MISRA C subset of the C language.

- On February 15, 2019, AdaCore provided a workshop to students of the Yeshiva College computer science program. The first half of the session involved an introduction to the Ada and SPARK programming languages as well as instruction on how to write bug-free code. The second half was the hackathon, where students were tasked with applying what they had learned to enable two Micro:bits to talk to each other over a radio link.

Students of Yeshiva College working on their hackathon project

- On April 11, 2019, AdaCore presented two back-to-back mini-hackathons to some 40 students of the Borough of Manhattan Community College's Computer Information Systems Department. We plan to collaborate again to provide a more in-depth session.
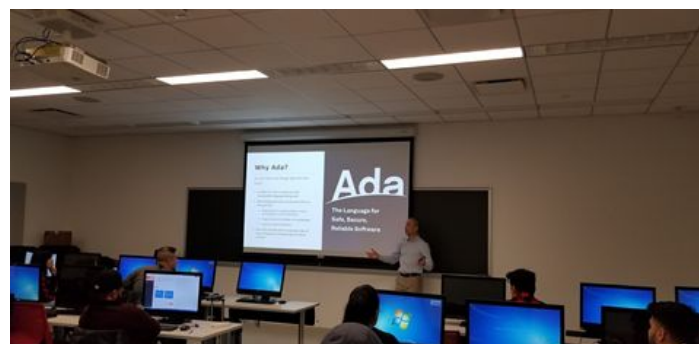
Albert Lee, AdaCore Software Engineer, leading a workshop and hackathon at the Borough of Manhattan Community College.

- The judges selected the top three winners of our third annual *Make with Ada* programming competition, which ran from October 16, 2018, through February 15, 2019. *Make with Ada* aims to show how the Ada and SPARK language technologies can significantly improve code quality for modern embedded systems without requiring a steep learning curve for developers unfamiliar with these languages. Prizes were awarded to the projects that best met the overall criteria of software dependability, openness, collaborativeness, and inventiveness. Here are the winning submissions:

    - 1st prize - PID Light Meter Controller
    - 2nd prize - Ada Modbus Analyzer
    - 3rd prize - Low-Cost ECG Pathology Detection with Deep Neural Networks
    - Student prize - Ada Modbus Analyzer

- AdaCore exhibited at SIGCSE, Feb 27-Mar 3, 2019 in Minneapolis to share the value of incorporating Ada and SPARK into academic curriculums. Most of the educators and administrators we spoke to were looking for ways to help their students differentiate themselves in today's competitive job market. And many asked us point blank, **"*Will my students find jobs using Ada and SPARK when they graduate?*" The answer is a resounding, "*YES!*"** Our customers are always asking us where they can find developers with knowledge of Ada and SPARK. Ada is already well established in safety-critical industries, and by facilitating partnerships between academia and our customer base, we hope to promote sound software engineering principles that will continue to push these industries forward.

REMINDER:
As of September 31, 2018, we changed the renewal process so that all GAP subscriptions will now expire annually on May 31. Even if you just signed up this year, you will be reminded of the expiration date two weeks prior via email. **You must reply before May 31, 2019, confirming that you are still interested in receiving GAP benefits**. In the absence of an answer, the account will be automatically closed at the date of expiration, but it can be reopened at any time should you decide to renew your membership at a later date.

As always, please remember, the success of GAP relies on Member participation. **If you are working on an exciting project using Ada or SPARK, please let us know!** We can help you publicize it through our customer newsletter, academic web pages, and technical publications. All we need from you are a couple of paragraphs describing your work, and, if possible, some accompanying photos. To see a current list of GAP member projects, visit https://www.adacore.com/academia/projects.

Thank you for helping us keep Ada and SPARK at the forefront of university study. We truly believe that exposing your students to these state-of-the-art programming languages will help them become more skilled and principled programmers.

If you have any questions, please do not hesitate to contact me.

Regards,

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