

# Adrian-James Gevero

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## TECHNICAL SKILLS

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**Languages** – C, C++, Assembly (ARM/x86), BASH, Python, L<sup>A</sup>T<sub>E</sub>X, OpenMP, VHDL, OpenGL, Java

**Other** – Linux Command Line, Vim, Git, Perforce, Trace32, GNU Debugger, STM32CubeIDE, Xilinx Vivado, Docker, Dr. Memory, GNU Make, FreeRTOS, Wireshark, Ghidra, JIRA/Confluence, Microsoft Office

## PUBLICATIONS

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A Gevero, D Rutishauser. **Flash Memory Scrubbing Application for Boot File Preservation of NASA's Descent and Landing Computer**. (GN&C Technology VII - Velocimeters) *AIAA SciTech Forum*. 2022; San Diego, CA. DOI: <https://doi.org/10.2514/6.2022-1833>

## EXPERIENCE

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**Embedded Software Engineer – Qualcomm Technologies | San Diego, CA** 07/2022 – Present

- Designed and developed firmware device drivers, in C, as part of the Core SoC Infrastructure team.
- Utilized Lauterbach Trace32 to perform JTAG debugging of software images flashed onto silicon.
- Supported debugging efforts for internal device drivers, such as GPIO interrupts, Clocks, HWIO, etc.
- Performed unit testing on device drivers to ensure robust functionality, while coordinating additional testing with the Core Platform Testing (CPT) team.
- Developed and provided Board Support Package (BSP) firmware for numerous hardware targets.
- Employed Perforce, Git and Docker to interface with codebase, maintain version control, and utilize CI/CD.

**Software Engineer Intern – NASA Johnson Space Center | Houston, TX** 01/2021 – 09/2021

- Conducted research on Error correction codes (ECC) and memory scrubbing methodologies.
- Supported NASA's Safe and Precise Landing - Integrated Capabilities Evolution (SPLICE) Project through contributions to the Descent and Landing Computer (DLC).
- Designed and implemented C application for flash memory scrubbing on the DLC.
- Leveraged the Xilinx Vivado Design Suite to interface with the QSPI NOR flash, Timer, and MicroBlaze soft processor.
- Conducted rigorous unit testing on application to ensure its ability to detect and correct soft-errors in memory.
- Investigated potential of parallelizing and vectorizing SPLICE algorithms using OpenMP and gcc optimizations.
- Developed Python and BASH scripts to automate compilation and perform batch tests with varied input data.
- Quantified runtime, context switch, cache miss, and other performance metrics; Compiled graphs into presentations to team members.
- Authored documentation and research related to flash memory scrubbing application; Published findings to the Journal of Guidance, Navigation, and Control.
- Presented technical paper at the 2022 AIAA SciTech Forum in San Diego, CA.

## HONORS

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| • 2022 AIAA SciTech Technical Paper Presenter | • IEEE-Eta Kappa Nu (ECSE Honor Society) |
| • RIT Computing Medalist                      | • Order of the Engineer                  |
| • Dean's Honor List                           | • Leadership Award, RPI                  |

## EDUCATION

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**B.S. in Computer and Systems Engineering – Rensselaer Polytechnic Institute** 09/2018 – 05/2022

**GPA:** 3.42/4.00

**Clubs:** Rensselaer Electric Vehicle, Embedded Hardware Club, Engineers Without Borders