IEEE SMC-IT / SCC 2024
10th International Conference on Space Mission Challenges for Information Technology
15th International Conference on Space Computing

Computer History Museum
Mountain View, CA, USA
July 15-19, 2024

UPCOMING HIGHLIGHTS

Sponsored by: IEEE Computer Society, IEEE's Technical Committee on Software Engineering (TCSE) and IEEE's Technical Committee on Computer Architecture (TCCA)

General Information: http://smcit-scc.space
Email Inquiries: smcit-scc_chairs@list.jpl.nasa.gov
Registration: http://smcit-scc.space/registration
Schedule: https://smcit-scc.space/schedule.html

HIGHLIGHTS:

BANQUET DINNER
Limited spaces are available. Our conference dinner will be held at the Ameswell Hotel with featured guest speaker Dr. Stephen K. Robinson. Before joining the faculty at the University of California, Davis in 2012, Dr. Stephen Robinson spent 37 years at NASA, where he worked as a technician, engineer, research scientist, pilot, and astronaut.

FLIGHT SOFTWARE FRAMEWORK F PRIME TUTORIAL (by Jet Propulsion Laboratory)
F Prime is an open-source, flight-proven flight software development ecosystem created by NASA JPL, tailored for small-scale systems such as CubeSats, SmallSats, and instruments. F' was used in the Ingenuity Helicopter. See the Open Source for Space Workshop's page on our website for details.

Introduction to Omniverse and Robotics Simulation in Isaac SIM (by NVIDIA)
This workshop will introduce the Omniverse and Isaac SIM platforms, cutting-edge solutions for robotics and simulations. It'll feature a hands-on lab where you'll dive into the simulation loop of a 3D engine, learning to initialize experiments with objects, robots, and physics logic, and build some small robotics control tasks and applications within the simulation environment. See the Space Robotics Workshop's page on our website for details.

Panel: Technology for Accessibility in Space

- Shawna Pandya (Astronaut & Director of Space Medicine Group, International Institute for Astronautical Sciences)
- Kalind Carpenter (Robotics Engineer, NASA Jet Propulsion Laboratory)
- Stephane Ghiste (Houston Office Liaison, European Space Agency, Deputy Manager of the Fly! Feasibility Study)
- Sheyna Gifford (Associate Professor of Orthopedics and Rehabilitation Physician St. LouisUniversity School of Medicine)

KEYNOTE SPEAKERS:
- Eugene Tu (Center Director, NASA Ames Research Center)
- Elizabeth Turtle (Planetary Scientist, Johns Hopkins Applied Physics Laboratory)
- Prasun Desai (Deputy Associate Administrator, Space Technology Mission Directorate, NASA HQ)
- Jason Aspiotis (Director, In-Space Infrastructure and Logistics, Axiom Space)
- Jesse Mee (Senior Scientist for Radiation Hardening Technologies, Air Force Research Laboratory)
- Damon Bradley (Founder and President, DeepSpace Technologies)
- Stephen Robinson (Director, Center for Spaceflight Research, UCDavis; ex-NASA Astronaut)

WORKSHOPS:

In addition to the keynotes and main SMC-IT and SCC technical tracks, the conference will feature the following workshops:

- 1st Distributed Autonomy for Space Systems (DASS) Workshop
- 3rd Open Source for Space Workshop
- 5th Augmented, Virtual, and Mixed Realities Workshop: xR Technologies in Digital Engineering Environments
- Balancing Performance, Fault-tolerance, and Security for Future Space Systems: What are the trends? What are our challenges?
- HPSC – Redefine What's Possible for the Future of Space Computing
- New Ideas and Emerging Results
- Space Cybersecurity Technical Standards
- Space Robotics Workshop: Emerging Challenges and Needs for Autonomy in the New Era of Space Exploration
- Space Terrestrial Internetworking (STINT) Workshop
- Trustworthiness of Foundation Models and What They Generate
- Verification and Validation of Multi-Core System Architectures
- What is Resilience? A Workshop on Resilience, Adaptation, and Robustness to Design Resilient Space System Architectures

CALL FOR STUDENT VOLUNTEERS:
If you are a full-time student and have an interest in volunteering to help with conference operations, please drop us an email at smcit-scc_chairs@list.jpl.nasa.gov.

We look forward to seeing you in person in July 2024!

ORGANIZING COMMITEE:
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- General Co-chair (SMC-IT/SCC): Rory Lipkis (NASA ARC)
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    - Michael Campbell (The Aerospace Corporation, Ret.)
    - Michelle Carter (The Aerospace Corporation)