

Announcement & Call for Papers

ReSpace/MAPLD 2010: Reconfigurable Microsystems & the Coming Revolution in Space

Abstract Submission deadline: 1 July 2010

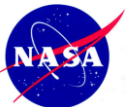


1-4 November 2010 ▪ Hyatt Regency Albuquerque ▪ Albuquerque NM

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Recent advances in reconfigurable electronics and microsystems are revolutionizing space including compact and low cost spacecraft. ReSpace 2010 will be the first conference to address the underlying electronics, components, and systems technologies along with the workforce development and management to fuel this revolution. While Moore's Law has stunningly impacted consumer electronics, computers, and even automobiles, this trend is just beginning to dramatically impact space systems and capabilities. Reconfigurable microsystems will improve large, managed space programs and smaller, experimental spacecrafts alike, affecting all areas of satellite capability from individual devices, sensors, and components to complete spacecraft and constellations. ReSpace/ Military and Aerospace Programmable Logic Devices (MAPLD) 2010 will explore the impact of these changes on global space industry. ReSpace/MAPLD 2010 seeks papers from industry, government, and academic institutions on the following topics:

- **Bold Operational Concepts and Orbital Flexibility:** Mission assurance/economy tradeoffs; novel approaches to space effects mitigation; implementing "big" missions with small spacecraft (such as imaging and comm.); operational responsiveness; systems engineering/design tools to demonstrate the lifetime cost, reliability, and performance impact of reconfigurable microsystems on spacecraft and constellations.
- **Practical Modularity and Novel Modules:** Space Plug-and-Play (SPA) and related standards; physical standards; interface standards; new compact spacecraft modules for attitude determination and control; power generation and energy storage; software defined radio; reconfigurable antennas.
- **Novel Component Manufacturing and Materials:** Reconfigurable materials; rapid component prototyping and fabrication; software defined discrete components and networks.
- **Workforce Development for the Coming Age of Rapid Spacecraft Design:** Technical/program management; K-12 programs to prime workforce development; novel community college/university curricula and learning laboratories.
- **FPGAs in Space Experiments:** Results, plans and significance.
- **Designs for FPGA Applications in Space:** Actual implementations, lessons learned, validation and verification.
- **Design and Verification Tools for FPGAs** - Lessons learned regarding tools and methodologies for efficient FPGA design and verification.
- **How Fast is Your Circuit?:** Discussions on optimizing designs for performance.
- **New Radiation and Reliability Information on FPGAs:** Recent data on devices, applications and qualifications.
- **Multi-Core Processors, FPGAs, and ASICs:** Trade-offs for spaceflight electronics.
- **FPGA-based systems:** Memories, power, I/O and interconnect, System-On-a-Chip (SOC) architectures.

Seminars will include:

Are you crazy flying that? – "success" stories
Reliable design of FPGAs for Space
Mitigating radiation – art, science, fiction

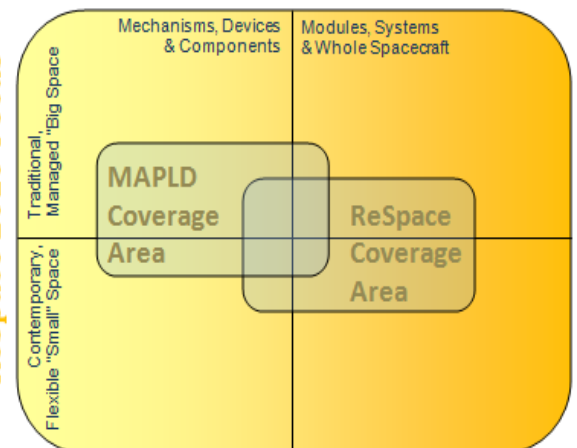
Please submit **BOTH** of the following items in PDF format to respace2010abstracts@cosmiac.org by **1 July, 2010**

- Short abstract not to exceed 400 words;
- Extended abstract not to exceed 3 pages.

Send your email request to respace2010@cosmiac.org

Or visit www.cosmiac.org/respace2010

ReSpace 2010 Focus



For additional information, please call (505) 242-0339