AHS 2017

11th NASA/ESA
Conference on Adaptive
Hardware and Systems

California Institute of Technology,
Pasadena, CA, USA

July 24 - 27, 2017

We invite you to participate in the 11th edition of the NASA/ESA Conference on Adaptive Hardware and Systems, to be held at California Institute of Technology, Pasadena, California.

Adaptation occurs in all living systems and is a desired characteristic of most artificial systems. Adaptation reflects the capability of a system to maintain or improve its performance in the context of internal or external changes, changes in the operational environment, incidental or intentional interference, or trade-offs between performance requirements and available resources.

The conference will bring together academic and industrial researchers and government specialists to communicate the latest research results, share experiences, and discuss new applications. We welcome original contributions in the areas of hardware and software adaptation at different levels, including, but not limited to:

IMPORTANT DATES

Regular Papers:
- Submission: Feb 17, 2017
- Notification: Apr 14, 2017

Tutorials:
- Proposals: Jan 27, 2017
- Notification: Feb 17, 2017

Workshops:
- Proposals: Feb 24, 2017
- Notification: Mar 10, 2017

Special Sessions:
- Proposals: Jan 27, 2017
- Notification: Feb 3, 2017

1. Adaptation in hardware, for example as manifested in:
   - Reconfigurable circuits
   - Circuits and structures
   - Prosthetic hardware
   - Wearable devices

2. Algorithms for adaptation, in contexts such as:
   - Optimization, learning, and evolution
   - Coordination and cooperation
   - Fault tolerance and robustness

3. Design methodologies for adaptive systems, e.g., related to:
   - Computer-aided design
   - Performance, cost, power, and reliability strategies
   - Formal methods

4. Adaptation in robotics and unmanned systems, as reflected in:
   - Sensing and perception
   - Navigation and mapping
   - Human-robot interaction
   - Multi-robot teams

- Cognitive architectures
- Tensegrity and compliance
- Soft robots

5. Applications in areas such as:
   - Space systems and missions
   - Autonomous vehicles
   - Social systems, economics, and finance
   - Telecommunications
   - Biotechnology and pharma
   - Assisted living and healthcare

The above topics are only examples and we welcome original contributions in the broader domains of consumer, industrial, medical, defense, and security areas. Technology developed in these fields could make an important impact to space applications; vice-versa, space technologies can find new applications in these fields. For further details, please visit the conference website at http://www.ahs-conf.org

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