

# 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:

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
5. Applications in areas such as:
  - Cognitive architectures
  - Tensegrity and compliance
  - Soft robots
  - 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>

## 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

## ORGANISING COMMITTEE

- Adrian Stoica - NASA JPL (General Chair)
- David Merodio Codinachs – ESA (Co-chair)
- Didier Keymeulen - NASA JPL (Co-chair)
- Tughrul Arslan – University of Edinburgh (Technical/Program Chair)
- Carlo Pinciroli – Worcester Polytechnic Institute (Technical Co-chair)
- Soon-Jo Chung – California Institute of Technology (Local Co-chair)
- Marco Quadrelli, NASA JPL and Mike Newell - Athens Consulting (Local Co-chairs)
- Yumi Iwashita - NASA JPL (Finance Chair)
- Giovanni Beltrame - Polytechnique Montréal (Sponsorship Chair)
- Robért Glein and Florian Rittner - Fraunhofer IIS (Tutorials Chairs)
- Adewale Adetomi - University of Edinburgh (Web Chair)
- Godwin Enemali - University of Edinburgh (Social Media Chair)

Contact Email: [ahs2017@ahs-conf.org](mailto:ahs2017@ahs-conf.org)

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