



## DEADLINES

Call for abstracts	15/03/2017
Abstract Submission Deadline	16/06/2017
Notification to Authors	15/07/2017
Preliminary Programme	01/08/2017
Registration Deadline	15/09/2017
Final Programme	At workshop

## ORGANISING COMMITTEE

- Thorsten Fehr** | ESA/ESTEC, Earth Observation Programmes Directorate
- Juan Lizarraga Cubillos** | ESA/ESTEC, Telecommunications and Integrated Applications Directorate
- Roberto Prieto Cerdeira** | ESA/ESTEC, Galileo Programme and Navigation-Related Activities Directorate

## CONTACT

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## REGISTRATION

No participation fees will be charged. Participants are expected to finance their own travel and accommodation expenses.

For information regarding nearby hotel accommodation, please visit: [www.haps4esa.org](http://www.haps4esa.org)

## → HAPS4ESA

**Towards an ESA stratospheric High Altitude Pseudo-Satellites (HAPS) Programme**

09–10 October 2017 | ESA–ESTEC | Noordwijk, The Netherlands



## BACKGROUND

High Altitude Pseudo-Satellites (HAPS) are stratospheric platforms that stay over a fixed point on Earth from weeks to months. Compared to ground-based systems, towers or aircraft, HAPS operate quasi-stationarily at an altitude of approximately 20 km. This allows them to complement or extend the capabilities of satellites with the potential to further integrate with ground infrastructure opening new opportunities to provide improved products and services.

Capitalising on these developments, ESA is reaching out to the Earth Observation, Telecommunication and Navigation communities to present and discuss synergies between satellites and HAPS as well as to collect feedback and recommendations regarding a potential ESA HAPS programme.

## OBJECTIVES

The objective of the workshop is to identify potential synergies between High Altitude Pseudo Satellites (HAPS) and satellites in the domains of Earth Observation, Telecommunication and Navigation. Based on the technologies and applications presented, the European Space Agency will establish priorities for initial demonstration of HAPS capabilities. The workshop discussion and recommendations will support the European Space Agency in identifying needs, opportunities and criticalities for the preparation of a programme proposal. ESA is inviting all interested parties from industry (manufacturers, technology providers, operators, service providers), science, academia, regulatory bodies, policy makers, as well data users to participate to the workshop which will also provide a forum for networking and interaction with European experts.

## TOPICS

Contributions to the following topics are invited:

- **Platforms:** State-of-the-Art and future HAPS.
- **Synergies** of HAPS with:
  - operational and scientific Earth Observation missions, applications and services
  - telecommunication systems, applications and services,
  - PNT (positioning, navigation and timing) systems, applications and services,
  - integrated applications and services: Earth observation + navigation + telecommunications.
- **Payloads**, including miniaturisation, modular architectures to accommodate multiple missions, customization and standardization efforts.
- **Ground segment** solutions for HAPS, including command and control, communications, user segment and on-ground data processing.
- **Demonstration activities** and prototyping campaigns.
- **Operations** solutions for HAPS.
- **Regulatory topics:** airspace regulation for HAPS with a focus on Europe, airworthiness, spectrum.

