

ACT NEWS

ACT Research Fellow Opportunities

The Advanced Concepts Team is currently recruiting 5 Research Fellows (post-docs) in the following fields:

- **Innovation Dynamics & Computational Economics**
[Description](#), application deadline: 21 Nov. 2011 □
- **Planetary System Science and Climate Engineering**
[Description](#), application deadline: 18 Dec. 2011 □
- **Computer Science & Applied Mathematics**
[Description](#), application deadline: 21 Nov. 2011 □
- **Advanced Renewable Energy Systems & Wireless Power Transmission**
[Description](#), application deadline: 21 Nov. 2011
- **Mission Analysis and Design**
[Description](#), application deadline: 18 Dec. 2011

Applicants are invited to send their CV, a covering letter stating their motivation and research interests as well as the filled-out RF application form to temp.htr@esa.int and to the ACT act@esa.int.

ARIADNA NEWS

We started 3 new Ariadna studies:

- Analytical perturbative theories of motion in highly inhomogeneous gravitational fields ([Study Description](#)) 11-5201, Standard study together with the University of Strathclyde, UK
- 'Scent of Science': Autonomous Source Localization for Exploration ([Study Description](#)) 11-6301, Standard study with Carleton University, CA
- Analogue Transformational Acoustic: An alternative theoretical framework for acoustic metamaterials ([Study Description](#)) two parallel small studies with
1. 11-1301a Imperial College, UK and
2. 11-1301b Universitat Politècnica de Valencia, ES

We finished 3 Ariadna studies on active space debris removal:

- Expanding foam application for active removal of space debris – with the University of Pisa, Italy ([study description](#)) ([final report](#))
- Hybrid Solar Sails for Active Debris Removal – with the University of Surrey, UK ([study description](#)) ([final report](#))
- Active Removal of Space Debris: Reversed Electric Propulsion with Electrodynamic Tether – with the Universidad Politécnica de Madrid, Spain ([study description](#)) ([final report](#))

Study reports can be downloaded from: www.esa.int/act.
Short summary videos at our [youtube channel](#).

SOCIS

The team organised the first [ESA Summer of Code \(SOCIS\)](#) as a pilot project, modelled after the Google Summer of Code, and encouraging students to work on existing space-related open source projects during three months.

Acta Futura

We published the fourth issue of our on-line, open-access peer-reviewed scientific journal "Acta Futura" dedicated to multidisciplinary research papers on innovative space systems and concepts at the intersections of disciplines.

GENERAL ESA NEWS

Invitations to Tender (ITTs)

The European Space Agency periodically issues Invitations to Tender on a broad range of subject areas and activity types. A list of both upcoming and currently open ITTs can be accessed at [Emits](#).

Some potentially interesting studies could be:

- AO6955 - INNOVATIVE TECHNOLOGIES OR MISSIONS (1A.071) (07/10/2011 to 16/12/2011, Act.Ref.: 11.1TF.06)
- AO6945 - 10/108 PERSPECTIVE FOR SOLAR PUMPING OF SOLID STATE LASERS FOR ESA MISSIONS, (20/10/2011 to 08/12/2011, Act.Ref.: 10.197.16)
- AO6973 - RE-ISSUE OF PLANETARY PROTECTION RESEARCH ACTIVITY (20/10/2011 to 18/11/2011, Act.Ref.: 11.1QI.01)

ESA- Education Office

ESA's Education Office is offering sponsored opportunities to develop and run experiments on several space-related platforms. Open Calls for Proposals open to European universities:

- Spin Your Thesis! - Hyper-gravity conditions in a large diameter centrifuge (deadline 12 Dec 2011)
- Drop Your Thesis! - Micro-gravity conditions in a drop tower (deadline Feb 2012)

CONFERENCES AND EVENTS

- November 15-18, 2011: Global Collaboration in Environmental and Alternative Energy Strategies, 2011 International Workshop; ESA/ESTEC, Noordwijk
- November 22, 2011: ESA Technology Innovation Days, ESA/ESTEC, Noordwijk, the Netherlands
- 29 November 2011: Earth Observation for Ocean-Atmosphere Interactions Science, ESRIN, Italy
- 21 February 2012: ISU 16th Annual International Symposium: "Sustainability of Space Activities: International Issues and Potential Solutions", ISU Central Campus, Strasbourg, France

Check out also ESA's conference portal:
<http://conferences.esa.int>

ACT PERSONNEL

Since the last newsletter we said farewell to Xurxo Otero and we welcome our new colleagues Luke O'Connor, and Daniel Alazard. ([List of all ACT members](#)).

About the ACT: The aim of ESA's Advanced Concepts Team is to perform, monitor and foster research on advanced space systems, innovative concepts and working methods. The team also collaborates on studies with academic research centres through the Ariadna scheme.