



ARIADNA NEWS

www.esa.int/gsp/ACT/ariadna/news.htm

Seeking proposals for 3 new studies

The first Ariadna Call for Proposals in 2009 has just been released with the following three topics:

- Mapping the spacetime metric with a global navigation satellite system
- Evolution in robotic islands: Enhancing the potential of automatic design techniques through a parallel distributed environment
- Path planning strategies inspired by swarm behaviour of plant root apices



Proposals for all 3 'standard' studies (25 k€) must be submitted before midday on the 10th July 2009. See the website for further information, including documentation to download:

www.esa.int/gsp/ACT/ariadna/OpenCalls.htm

Successful follow-up of Ariadna Study

The Ariadna Study "Numerical Simulation of the Helicon Double Layer Thruster Concept" led to a successful project proposal to the European Commission. The study included a deep numerical investigation on Double layer formation, stability and characteristic and explores the applicability of this concept to space missions.

[www.esa.int/gsp/ACT/pro/pp/Helicon RF Plasma thruster/Double-Layers.htm](http://www.esa.int/gsp/ACT/pro/pp/Helicon_RF_Plasma_thruster/Double-Layers.htm)

Final presentations videos online

Short executive final presentations of the call for ideas Ariadna studies on the 'Preparing for Apophis - Encouter 2029' studies are now available on our YouTube channel:

www.youtube.com/view_play_list?p=53249251CDEDE5A4

Website

NEW The Ariadna section of the ACT website has been updated, including an interactive webpage for all Ariadna studies, an animated introduction to Ariadna and a more user-friendly FAQ. Other parts of the ACT website have also been improved.

www.esa.int/ariadna

Other Ariadna studies

The five studies launched this year should be concluded before and during the summer. All the details on these and every other Ariadna study can be found on this interactive webpage:

www.esa.int/gsp/ACT/ariadna/studies.htm

ESA ACT NEWS

Global Trajectory

Optimisation Competition

The 4th Global Trajectory Optimisation Competition (GTOC) took place this March. Initiated in 2005, the aim is to stimulate research into techniques for finding the optimal trajectory for different missions. This year's competition was organised by the *Centre National d'Etudes Spatiales* (CNES). The ACT arrived at third place out of 47 registered teams, following the teams from The Aerospace Corporation (US) and the winner, Moscow State University (Ru). All GTOC results will be presented on Monday, September 28, 2009 in Toulouse, France, just prior to the beginning of the [ISSFD](http://www.issfd.org) conference. The problem descriptions and the results of the competition can be found at:

cct.cnes.fr/cct02/gtoc4/index.htm



GENERAL ESA NEWS

NEW Call for White Papers for the Fundamental Physics Roadmap Advisory Team

ESA has convened an expert body, the Fundamental Physics Roadmap Advisory Team, with a mandate to draw up a recommendation for the Agency on the scientific and technological roadmap necessary to lead Europe toward the realization of future space missions in the framework of the Cosmic Vision 2015-2025 plan in the field of fundamental physics. The deadline for receipt of the White Papers is 28 May 2009.

sci.esa.int/science-e/www/object/index.cfm?fobjectid=44550

Invitations to Tender (ITTs)

Periodically the European Space Agency 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.esa.int.

UPCOMING CONFERENCES AND EVENTS

- "Space Transportation: To New Frontiers" In order to help prepare the future of space transportation vehicles by 2030 and far beyond, CNES and ESA have initiated a seminar co-organized by the AAFF and Prospective 2100.

www.esa.int/gsp/ACT/newsroom/NewsArchive/New30_Mar09_SpaceTransportationSeminar.htm

- "International Joint Conference on Artificial Intelligence (IJCAI-09)" will include a 'Workshop on Artificial Intelligence in Space', co-organised by the ACT and JPL and held at Pasadena, California, USA on the 17 - 18 July 2009.

www.congex.nl/09c17/

- Also, make sure you check out ESA's conference portal: conferences.esa.int/

CAREER OPPORTUNITIES

ESA

ESA offers a unique opportunity to work in a European context in a multicultural environment. A rich diversity of culture, language and professional backgrounds makes it a truly dynamic and exciting place to work. There are currently no vacancies in the ACT.

www.esa.int/SPECIALS/Careers_at_ESA/

Other opportunities

If you have any other opportunities you would like us to inform the Ariadna research community about, please tell us.

ACT PERSONNEL

Since December, three new colleagues have joined the ACT:

- Joris Olympio from France, Research Fellow in Mission Analysis and Design.
- Francesco Biscani from Italy, Research Fellow in Informatics and Applied Mathematics.
- Nicolas Weiss, from Germany/Uruguay, Stagiaire in Artificial Intelligence.

We also said farewell to José Llorens Montolio who has spent 2 years with the team and is moving on to a post-doc position at the National Centre for Microelectronics in Madrid.

www.esa.int/gsp/ACT/whoware/whoware.htm

About: The aim of ESA's Advanced Concepts Team is to explore emerging technologies with potential applications in future space missions. This team collaborates on studies with academic research centres through the Ariadna scheme, specifically tailored to their needs and limited administrative resources.