International Symposium on Astronomy and Astrobiology Education: theory, methods, impacts and future directions. (Utrecht, Netherlands, July 3-8th 2017)

This international symposium, co-sponsored by the International Astronomical Union (IAU) and the European Astrobiology Campus (EAC, http://astrobiology-campus.eu/), is designed to bring education research in astronomy in general, and in astrobiology in particular, to the professional scientific community.

Education has always played a large role in the field of astrobiology and in part this workshop is a follow-up to the successful International Workshop on Education in Astrobiology (IWEA) held in Höör, Sweden, in 2013 (http://www.nordicastrobiology.net/IWEA/). On the other hand, education research has seldom been the main subject in IAU events, yet the scientific results from this field have a great potential to improve the teaching and learning of astronomy for students of all ages. New results and research methodologies from the cognitive and learning sciences domains can, however, be of large influence on the work of educators but generally, professional astronomers are not fully aware of the results from astronomy education research.

With this first meeting in astronomy education and in combination with the growing subdiscipline astrobiology, we aim to strengthen both fields through cross teaching collaborations. The symposium is designed specifically to expand awareness of the results of the cognitive and learning sciences, as well as to provide a forum for active scholars in astronomy and astrobiology education

Invited talks will be given by international leaders in discipline-based astronomy education research and in astrobiology. Contributed talks are also solicited from astronomers and educators who have conducted studies in this field, and from all scientists working in astrobiology and with experience in teaching interdisciplinary subjects to various audiences. Outreach will be an important part of the symposium, with a full day devoted to outreach activities for teachers and the general public. The symposium will feature key speakers in :

- o State-of-the-art in astronomy and astrobiology education research
- o Content of astronomy teaching and popularisation in schools and culture
- Innovations in research methodologies and instruments in school, museum, and planetarium learning
- Analyses of astronomy successful evidence-based practice, materials, and programs
- Astronomy research on leveraging new media and information systems for teaching and learning
- Impact of the 2015 International Year of Light on astronomy education of astrobiology teaching in different institutions and different countries
- Teaching astrobiology to a university multidisciplinary audience: opportunities and pitfalls
- New assessment forms for multidisciplinary courses
- Teaching astrobiology to young pupils (10-16 years)
- o How to present astrobiology lectures to general audiences
- Future international cooperation in astrobiology teaching and training
- Open discussions on innovative teaching and assessment methods

<u>SOC</u>

<u>Co-Chairs:</u>

* Beatriz García,

President of IAU-C.C1, Instituto en Tecnologías de Detección y Astropartículas, Universidad Tecnológica Nacional-FRM, Mendoza, Argentina.

* Muriel Gargaud,

Chair of the IAU-Inter Commission C1-F2-F3-H2 WG on Education and Training in Astrobiology; President of the Société Française d'Exobiologie, Laboratoire d'Astrophysique de Bordeaux, France

<u>Members:</u>

- Susana Deustua (United States), Space Telescope Science Institute, Baltimore
- Kathleen Eastwood (United States), Northern Arizona University, Flagstaff
- Wolf Dietrich Geppert (Sweden), Stockholm University,
- Kalle Kirsimae (Estonia), Tartu University
- Nicoletta Lanciano (Italy), Universita di Roma "La Sapienza"
- Anthony Lelliott (South Africa), University of the Witwatersrand, Johannesburg
- Rosa M. Ros (Spain), Technical University of Catalonia, Barcelona
- Magda Stavinschi (Romania), Astronomical Institute of the Romanian Academy, Bucarest
- Inge Loes ten Kate (Netherlands), University of Utrecht
- Akihiko Tomita (Japan), Wakayama University,

<u>LOC</u>

Chair: Inge Loes ten Kate (Netherlands), University of Utrecht

Date: July 3- 8, 2017

Location: Utrecht, the Netherlands

Coordinating organizations:

- IAU Division C Education, Communication with the Public, History and Heritage,

- IAU Division F Planetary Systems and Astrobiology.

- European Astrobiology Campus

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