## Monday July 3, 2017

|            |                                | 11011ddy 5d1y 5, 2017   |
|------------|--------------------------------|---|
| 830-930    | Registration                   |   |
| 930-940    | Opening and Welcome            |   |
|            |                                |   |
|            | Ses                            | sion I. State-of-the-art of astronomy education research  |
| 0.40.40.40 |                                | Chair: Christopher Impey  |
| 940-1040   | Anthony Lelliott               | <b>INVITED</b> : 40 years of astronomy education research: misconceptions, interventions and a future agenda  |
| 1040-1110  |                                | coffee break  |
| 1110-1130  | Daniel Barringer               | "How do we know planets are common?": A coherent content storyline for exoplanets   |
| 1130-1150  | Chris Impey                    | Online Astronomy Courses for Formal and Informal Learners   |
| 1150-1210  | Fransisco Javier Perez Cacerez | ScienceIES, a distinctive way to teach Astronomy  |
| 1210-1400  |                                | lunch   |
|            | Session II. Research o         | on leveraging new media and information systems for teaching and learning   |
|            |                                | Chair: Susana Deustua   |
| 1400-1500  | Pamela Gay                     | INVITED: Doing astronomy out loud: Using new and social media to create an educated mob   |
| 1500-1520  | Chenzhou Cui                   | Data driven astronomy education and public outreach   |
| 1520-1550  |                                | tea break   |
| 1550-1610  | Marieke Baan                   | Thinking big in a small country – astronomy outreach and education in the Netherlands   |
| 1610-1630  | Annette Lee                    | Celestial Calendar-Paintings and Culture-Based Digital Storytelling: Cross-Cultural, Interdisciplinary, STEM/STEAM Resources for Authentic Astronomy Education Engagement |
| 1630-1650  | Margarita Metaxa               | Gaming to learn astronomy, an innovation approach, two study cases.   |
| 1650-1710  | Maarten Roos-Serote            | Space videos on YouTube: what the audiences really likes.   |
| 1710-1830  |                                | Poster Session I  |
|            |                                |   |
|            |                                | Tuesday July 4, 2017  |
|            | 5                              | Session III: Astronomy Education Research in Schools  |
|            |                                | Chair: Beatriz Garcia   |
| 900-1000   | Néstor Camino                  | INVITED: How to teach Astronomy to humans in a full of life Universe  |
| 1000-1020  | Cristina Leite                 | The sky observation in Brazilian textbooks  |
| 1020-1050  |                                | coffee  |
| 1050-1110  | Antonio Eff-Darwich            | Looking for stars, the sun and exoplanets in the educational core standards: the Spanish case   |
| 1110-1130  | Shanshan Li                    | Data Driven Astronomy Education in Primary Schools  |

| 1130-1150 | Cristiano Mattos      | Astronomical concepts in bilingual deaf education  |
|-----------|-----------------------|--|
| 1150-1210 | Masamitsu Ohyama      | The teaching materials for teachers about small astronomical telescopes  |
| 1210-1230 | Rosa Maria Ros        | Evaluating Quality in Education; the NASE ISO experience   |
| 1230-1400 |                       | lunch  |
|           |                       |  |
| 1400-1500 | Constance Walker      | INVITED: Outcomes from the IYL2015 Quality Lighting Teaching Kit Program: Reaching for the Stars                   |
| 1500-1520 | Jorge Rivero Gonzalez | Astronomy Pre-tertiary Education at Leiden Observatory: Beyond Universe Awareness                                  |
| 1520-1550 |                       | tea break  |
| 1550-1610 | Magda Stavinschi      | Science and religion in undergraduate school education   |
| 1610-1630 | Olga Suarez           | EduCosmos, astronomical research in the classroom  |
| 1630-1650 | Kentaro Yaji          | Solar science education with use of the images and movies, its practice and evaluation                             |
| 1650-1710 | Hector Bravo-Alfaro   | Eight years after IYA2009: a project on Astronomy Education and its impact on selected countryside towns in Mexico |
| 1710-1830 |                       | Poster Session II  |

#### Wednesday July 5, 2017

# Session IV: Research into the value and influence of astronomy education in other disciplines AND Interplay of students' worldviews with the worldview of science in a globalizing world

Chair: Magda Stavinschi 900-1000 Nicoletta Lanciano **INVITED**: Inter-, multi- and trans-disciplinary approaches in astronomy education research Christopher Corbally and Evaluation Research Using Astronomy Theatre Suggests Good Promise for Young Hispanic Women to Margaret Boone Rappaport Choose Science Majors 1000-1020 coffee 1020-1050 The impact on education of Astronomical Olympiads and the International Olympiad on Astronomy and 1050-1110 Greg Stachowski Astrophysics Teacher's misconceptions in curricular astronomy 1110-1130 Aniket Sule Session V: Innovations in research methodologies and instrumentation Chair: Akihiko Tomita 1

|           |                    | Chair. Akiniko Torrita  |
|-----------|--------------------|---|
| 1130-1150 | Beatriz Garcia     | Data exploration througth the sonorization: an opportunity of multiple learning |
| 1150-1210 | Nataliya Kovalenko | Learning theories and Planetarium environment for astronomy education           |
| 1210-1230 | Pablo Santamaria   | Storytelling in a revolutionary way: fulldome production for planetariums       |
| 1230-1400 |                    | lunch   |
|           |                    |   |

#### Thursday July 6, 2017

### Session VI: Teaching astrobiology to a university multidisciplinary audience: opportunities and pitfalls

Chair: Muriel Gargaud

| 900-1000  | Charles Cockell    | INVITED: How to establish a complete introductory astrobiology course at your university                   |
|-----------|--------------------|--|
| 1000-1020 | Molly Simon        | An Analysis of College Students' Understanding of Planet Formation Before Instruction                      |
| 1020-1050 |                    | coffee   |
| 1050-1110 | Jonas Souza        | Astrobiology: obstacles and possibilities in the science teaching scenario                                 |
| 1110-1130 | Rosemary Cane      | The Astrobiology Academy: Four Years of Resource Development for Primary and Secondary Schools             |
| 1130-1150 | Roberto Vazquez    | Learning Astrobiology 101 with experiments in Baja California, Mexico                                      |
| 1150-1210 | Michael Waltemathe | Teaching with Astrobiology - Enhancing Science and Technology-Awareness in non-science university students |

# Session VII: Organization of astrobiology teaching and training in different institutions and countries / Future international cooperation in astrobiology teaching

Chair: Wolf Geppert, Inge Loes ten Kate

| 1210-1230 | Wolf Geppert | The European Astrobiology Campus – Towards a comprehensive training of Astrobiology Students in Europe. |
|-----------|--------------|---|
| 1230-1400 |              | lunch   |

1400-1500 Karen Meech INVITED: International field- base courses in astrobiology: Experiences and lessons learned

### Session V - continued: Innovations in research methodologies and instrumentation

Chair: Akihiko Tomita

| Chail. Akilliko Tolilita |                       |   |
|--------------------------|-----------------------|---|
| 1500-1520                | Emanuele Balboni      | Other stars, Other planets  |
| 1520-1550                |                       | tea break   |
| 1550-1610                | Silvia Galano         | A teaching-learning mudule on stellar structure and evolution                                   |
| 1610-1630                | Simon Portegies Zwart | Education in Computational Astrophysics with the Astronomical Multipurpose Software Environment |
| 1630-1650                | Patricia Spinelli     | What does the general public expect from a night-sky observation?                               |
| 1650-1710                | In-Ok Song            | Application of spectrometer in research-based astronomy education                               |
|                          |                       |   |

1900-2300 conference dinner

## Friday July 7, 2017

## Session VIII: Innovative teaching and new assessment methods

Chair: Kalle Kirsimäe

| 900-1000  | Charley Lineweaver        | INVITED: Making an Astrobiological MOOC (Massive Open Online Course): Why? How? For Whom?                                   |  |
|---|---------------------------|---|--|
| 1000-1020   | Kirsi Lehto               | eTimeTrek: digital deep history of the Universe   |  |
| 1020-1050   |                           | coffee  |  |
| 1050-1110   | Jasmina Lazendic-Galloway | Assessment for learning in 1st year astronomy and astrobiology courses  |  |
| 1110-1130   | Clementina Medina         | The best skies on Earth: How to link astronomy and cosmology to local development in the Argentinean Puna                   |  |
| 1130-1150   | Oleg Kotsyurbenko         | Astrobiology Education in Russia: problems and perspectives   |  |
| 1150-1210   | Micheal Reid              | Non-Science Majors Doing Inquiry with Robotic Telescopes  |  |
| 1210-1230   | Marcos Voelzke            | Impact of a didactic sequence on basic Astronomy concepts for graduates in Physics of online and classroom modalities       |  |
| 1230-1400   |                           | lunch   |  |
| Session VIII: How to present astrobiology lectures to the general public and young pupils (10-16 years old) |                           |   |  |
|   |                           | Chair: Inge Loes ten Kate   |  |
| 1400-1500   | Daniella Scalice          | <b>INVITED</b> : NASA and the Navajo Nation: Bringing Together Astrobiology Science and Cultural Knowledge for Native Youth |  |
| Closing lecture   |                           |   |  |
| 1500-1600   | Paulo S. Bretones         | INVITED: Astronomy Education Research: impact and future directions   |  |
| 1600-1620   |                           | Wrap up and closing   |  |
|   |                           |   |  |