Education and public outreach in the era of Big Data science

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With the development of many big science astronomical projects (CTA, EUCLID, FAST, GAIA, JWST, LSST, SKA, etc.) and large scale simulations, astronomy has become a Big Data science.

Astronomical data are a very valuable resource for education and public outreach (EPO), especially in the era of Internet and Cloud Computing.

• What is the value of astronomy data in EPO?
• What are advantages and benefits of data driven EPO?
• What are best practices of data driven EPO?
Astronomy is being fundamentally transformed by the Information and Computation Technology (ICT) revolution.

The new approaches to the data permits the development of new tools, techniques and resources for astronomy EPO.

• What are challenges facing data driven EPO?
• How to present astronomy to general public and schools with new technologies (es. VR)?
• There is the need for new software services and/or computing services for EPO uses?
Topics:

• State-of-the-art of astronomy education in countries/continents in the framework of the 2020-2030 IAU plan.
• Meta-analysis of astronomy education research on contents/school grade levels/focus on education cross studies.
• Literacy in Astronomy.
• Innovations in education methodologies and instrumentation.
• Research into the value and influence of astronomy education in other disciplines.
• Big Data in education and Open Astronomy.
• Astronomy as an interdisciplinary approach to science education in all levels.
• Inclusive education in Astronomy.
• Use of Astronomy Education Research experiments and results by teachers and in informal education activities (museum, planetarium, etc).
• Cultural Astronomy and heritage and education: from Stonehenge to the Space telescopes.

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