



International Astrostatistics Association

IAA Newsletter – January 2016

01 January, 2016

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Message from IAA President

In the November 2015 Newsletter I provided you specifically with an overview of our activities during 2015, as well as some of the major conferences and projects we've been involved with over the past 3 years. The IAA was born in 2012, and its predecessor, the ISI Astrostatistics Network, in January 2010. In fact, the Network came into existence a month after we became the ISI astrostatistics committee (December 2009), upon action of the ISI executive board at their Winter meeting in The Netherlands. For those of you who are not aware, the ISI is the International Statistical Institute, which is to the discipline of statistics as the IAU is to astronomy/astrophysics. It was the very first astrostatistics committee ever recognized by a statistical or astronomical organization.

In this Newsletter I want to focus on the future – what the IAA wants to do for you, as members of the astrostatistics/astroinformatics community. First, however, I should mention that I accepted the invitation of our Council to remain as President for one more term. This new term begins 1 January, 2016 and ends 31 December, 2017. We also have a new Council for the 2016-2017 term, with several members from the previous Council remaining for another term. The new Council and officers are listed on the second page of this Newsletter. I have also listed the two current sections within the IAA and their Directors, and our Committees.

IAA Sections are collaborations of astronomers, statisticians, information scientists, and others who gather together in a workshop environment to prepare research projects, and together write one or more manuscripts which are published in major astronomical journals, or prepare statistical software designed to assist astrostatisticians in the analysis of their study data. The first COIN workshop held in Lisbon in 2014 resulted in 4 published journal articles and 2 published software packages. The 2015 COIN workshop held this August will have the same level of productivity.

The Planetary Science section, headed by Jamie Riggs of Northwestern University, is now developing a program and identifying a site for their initial workshop. Members who are interested in this area of astronomy should contact Jamie (see p. 2) or myself. We want to develop a network of IAA sections, with the following as possible titles (go to page 3):

2016-2017 IAA COUNCIL

Stefano Andreon	ITALY	Brera Observatory	stefano.andreon@brera.inaf.it
Jogesh Babu	USA	Pennsylvania State Univ	babu@psu.edu
Bruce Bassett	S. AFRICA	Univ of Cape Town	bruce.a.bassett@gmail.com
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OFFICERS

President	Joseph M. Hilbe
V-President - statistics	Jogesh Babu
V-President - astronomy	Jean-luc Starck
V-President - astroinformatics	Kirk Borne
V-President - development	Rafael S. de Souza
V-President - at large	Bruce Bassett

CURRENT IAA SECTIONS

Cosmostatistics Initiative (COIN):	Rafael S de Souza
Planetary Science:	Jamie Riggs <jamie.riggs@northwestern.edu>

IAA COMMITTEES

Development	Rafael de Souza
Membership	Stefano Andreon (pro temp)
Awards	
Public Relations	
Nominations	

PROPOSED SECTIONS

Exoplanets

Solar Physics

Galactic evolution

Stellar Evolution

Astrobiology

Instrumentation and Observation Methodology

Radio astronomy

Optical including infrared and ultraviolet

X-ray astronomy

Gamma ray astronomy

Please contact me if you are interested in heading any of the above sections, or others you may suggest, or who are interested in participating in a section. I am going to be focusing my energies this term in securing funding to support our sections, but I can't very well make a proposal to a funding agency. or to a corporate partner about supporting a section on exoplanets, for example, if there is no such section. Rafael de Souza has also accepted the task as VP for development, and will be working with me and a development committee to secure funding and partnerships.

In page 2 I list several committees. Standing committees like this are vital to the operation of any viable professional or academic scientific association. I urge you to participate in joining a committee. Since we are a global association, committees are not going to be meeting at a physical location. Rather they can periodically meet by *Skype*, *Facetime*, or *Hangout*. We can also set up private blog-type meeting sites through ASAIP or another through some alternative site. It is very important to our long term success for us to have viable committees such as I have listed.

I am pleased to advise you that we are entering into a partnership with Overleaf. The partnership will be with COIN and IAA jointly together with Overleaf, which is a popular collaborative writing and publishing web environment. I'll provide the specific benefits that IAA members will get in my next communication in mid-January. I want to wait until we've signed the agreement before giving details. I'm certain that you'll appreciate the partnership.

I wish you all a very happy and healthy holiday season, and a productive 2016 as well.

Best, Joseph Hilbe

ANNOUNCEMENT

Statistical Challenges in Modern Astronomy VI

Carnegie Mellon University, June 6 to 10, 2016.

Second Announcement, and Call for Papers

Visit scma6.org for more information.

After five groundbreaking conferences at Penn State, Statistical Challenges in Modern Astronomy VI will be held at Carnegie Mellon University, June 6 to 10, 2016.

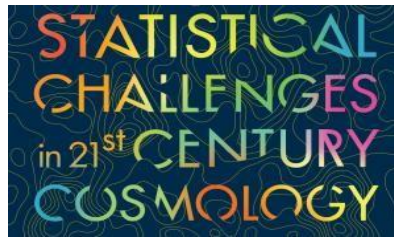
This meeting will continue the interdisciplinary tradition of its predecessors, bringing together researchers in astronomy, cosmology, statistics, and machine learning to address broad inference and discovery challenges, highlighting topics such as exoplanets, gravitational lensing, variable sources, Milky Way structure and evolution, among others.

Thanks to funding from the LSST Corporation, a featured “LSST at SCMA Day” will highlight some of the urgent statistical issues facing the Large Synoptic Survey Telescope. Keynote speakers will be Zeljko Ivezic (Univ. of Washington) and Robert Tibshirani (Stanford)

We welcome submissions of contributed talks or posters. Submit an abstract by February 1 for full consideration. Travel grants are available for early career researchers. Apply online by March 1.

See scma6.org for more details and for the latest information.

On behalf of the Scientific Organizing Committee,
Shirley Ho and Chad Schafer, cschafer@stat.cmu.edu , co-chairs



COSMO21

24-27 May, 2016 : Chania, Crete (Greece)

<http://cosmo21.cosmostat.org/>

The emphasis of the conference is on advances and methodological challenges in cosmology, and new results derived from advanced data analysis and modeling methods. Cosmology is entering a new area which will require processing of huge data sets, and measurements at the sub-percent level of accuracy in order to answer fundamental cosmological questions such as the nature of dark matter, dark energy and gravity. As ever, statistics will inevitably play a fundamental role in understanding the new generation of data, but with additional challenges of ever-increasing datasets and large parameter spaces.

Topics

- Cosmic microwave background: non-Gaussianity, component separation methods.
- Weak lensing: galaxy shape measurements, projected mass density map reconstruction, three-dimensional mapping of the dark matter, high order statistics, Euclid, LSST. □ Large-scale structure □ High redshift supernovae.
- Mapping high- z 21-cm radiation
- Lyman-alpha forest
- Astronomical discovery from overwhelmingly large datasets: BOSS, EUCLID, PAU, LAMOST, LOFAR, SKA, LSST and others.
- Statistical methods used in astronomical data analysis (including new developments coming from fertile cross-interactions in astrostatistics). A preliminary list of these methods is included below:

There will be several sessions during the conference. Each session will have at least one keynote speaker, and half of the talks will be contributed talks. The cross-disciplinary nature of the symposium is reflected in the inclusion of speakers from the statistics community in the suggested list. Conference Registration and Abstract submission opens: 1 January, 2016

Chairs, Scientific Organizing Committee

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IAA CO-SPONSOR OF COSMO21
