

International Astrostatistics Association



IAA Newsletter – April 2016

14 April, 2016

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Members of the IAA,

Again, my apologies for the lateness of this Newsletter. I have been waiting until two major IAA events were completed. They were as of yesterday. Our next newsletter may be published at the beginning of June.

New IAA Logo



I designed the original IAA logo that has been used since the start of the IAA in 2012. It was a simple text design written in Word. It was time to have a genuine logo – one that better reflects the association. The above logo and its variations were designed by Arvind Ramessur of the University of Mauritius

(Mauritius is an island nation located some 2000km east of the African Continent in the Indian Ocean) from among a number of submissions. Stefano Andreon, the IAA membership chair, received the submissions. He checked for copyright problems and appropriateness, and presented ten candidate logos to Rafael de Souza (IAA Development chair) and myself to review for final selection. We unanimously selected the above logo to present to the Council.

Stefano and I would like to thank Roberto Casalegno, Saranjeet Kaur, Vinay L. Kashyap, Arvind Ramessur, Jamie D. Riggs, Maggie Lieu, and Emille Ishida for submitting logos for consideration. In some cases twenty or more alternative logos were submitted by an individual. Many of the submitted logo's were very well designed; it was a difficult decision to choose one.

New Official IAA Office

We now have an official office located at the Brera Astronomical Observatory in Milan, Italy. The Address is INAF Osservatorio Astronomico di Brera, Via Brea, 28, Milano, Italy
The IAA website URL with old Newsletters and other information is at:

<http://www.brera.mi.astro.it/IAA/>

Please make a note of this. You will be able to make amendments to your address and other information directly from this site in the near future. Also, new members will be able to self-register, but our membership chair will look over such registrations to check for robots and other non-welcome registrations. I will still be sending information to the ASAIP since there are others who may not be members of the IAA to which we would like to share certain types of information.

2016 IAA Awards

This is the first set of IAA awards that have been given to members who in some way have made major or outstanding contributions to the discipline of Astrostatistics & Astroinformatics. Publication awards were awarded to those nominated publications receiving the most votes in their respective category. Unless an individual or paper/book was nominated it could not be considered for an award. Please go to our new IAA website to download the Awards Report, and other information about the awards.

<http://www.brera.mi.astro.it/IAA/>

Rules for nomination of awards, voting and for the breaking of ties

- . Nominations can be made by any member of the IAA, as well as by members of the Awards Committee. Nominations should include information about the nominees, and for publications, the URL where the paper or book may be examined or obtained respectively. Nominations may be made to the awards committee chair by 15 March, 2016. Voting ballots must be submitted to the chair by members of the awards committee by 1 April, 2016, unless waived by the chair for good reason.
- . Self-nominations may be made by IAA members, excluding members of the awards committee. Self-nominations may be made for a publication award only.

- . Only members of the IAA can obtain an IAA award.
- . A member of the awards committee cannot vote for any nomination they have made.
- . The chair of the awards committee can only vote in case of a tie. The chair cannot vote for a tie if it involves them self. In such a case the chair will request a re-vote from the committee in order to break the tie.
- . Ties can be broken only in the case that all nominees have at least one vote.
- . An award cannot be made unless they receive at least one vote.
- . Publication awards are presented for works first published in 2014-2015. Any work related to a astrostatistics or astroinformatics is eligible. Aside from the above rules, no other criteria aside from the preference and votes by members of the awards committee is to be used in deciding awards. More specific criteria may be developed in the future.
- . Only PostDocs or students are to receive publication awards for their respective category of award.
- . An individual nominee may not receive more than one award in a given category.

AWARDS COMMITTEE (2016-2017)

Tanuka Chattopadhyay	Calcutta University, India (Chair)
Bruce Bassett	Univ of Cape Town, South Africa
Didler Fraix-Burnet	Astrophysics lab of Grenoble, France
David Hand	Imperial College, London, UK
Thomas Kitching	Univ of Edinburgh, UK
Oleg Malkov	Moscow State Univ, Russia

Outstanding Contributions to Astrostatistics Award

G. Jogesh Babu, *Pennsylvania State University, USA*

Eric D. Feigelson, *Pennsylvania State University, USA*

Joseph M. Hilbe, *Arizona State University, USA*

Fionn Murtagh, *University of Derby, UK*

Elected Fellows of the IAA

Stefano Andreon	<i>INAF-Astronomical Observatory of Brera, Italy</i>
G. Jogesh Babu	<i>Pennsylvania State University, USA</i>
Asis K. Chattopadhyay	<i>Calcutta University, India</i>
Kirk D. Borne	<i>Booz Allen Hamilton, Strategic Innovation Group, USA</i>
Eric D. Feigelson	<i>Pennsylvania State University, USA</i>
Alan J. Heavens	<i>Imperial College, London, UK</i>

Joseph M. Hilbe	<i>Arizona State University, USA</i>
Ajit K. Kembhavi	<i>Inter University Center for Astronomy & Astrophysics (IUCAA), India</i>
Jean-luc Starck	<i>CEA-Saclay, France</i>
Roberto Trotta	<i>Imperial College, London, UK</i>
David A. van Dyk	<i>Imperial College, London, USA/UK</i>
Yanxia Zhang	<i>Chinese National Astronomical Observatory, China</i>

IAA Outstanding Publication Award (2)

Asis K. Chattopadhyay and Tanuka Chattopadhyay
for
Chattopadhyay A. & Chattopadhyay, T. (2014) *Statistical Methods for Astronomical Data Analysis*, Springer

Zeljko Ivezić, Andrew J. Connolly, Jacob T. VanderPlas, and Alexander Gray
for
Zeljko,Z, Connolly,A.J., Vanderplas, J.T., Gray, A. (2014), *Statistics, Data Mining and Machine Learning in Astronomy*, Princeton University Press

IAA Outstanding Publication by a PostDoc Award (3)

Rafael S. de Souza, Ewan Cameron, Emille E. O. Ishida, Ana L. Chies-Santos and Maduhura Killeda
for
de Souza, R.S., Hilbe, J.M., Buelens, B., Riggs, J.D., Cameron, E., Ishida, E.E.O., Chies-Santos,A.L., Killedar, M. “The Overlooked Potential of Generalized Linear Models in Astronomy III: Bayesian, Negative Binomial Regression and Globular Cluster Populations”, *Monthly Notices of the Royal Astronomical Society*, 453, 2, 1928-1940, 2015

Darlo Colombo
for
Colombo, D., Rosolowsky, E., Ginsburg, A., Duarte-Cabral, A.; Hughes, A. , “Graph-based interpretation of the molecular interstellar medium segmentation”, *Monthly Notices of the Royal Astronomical Society*, Volume 454, Issue 2, p.2067-2091, 2015.

Stefano Cavioti
for
Cavioti, S. 2015, *DataRich Astronomy: Mining Synoptic Sky Surveys*, Lambert Academic Publishing,

IAA Outstanding Publication by a Student Award (1)

Tuli De

for

De, T., Chattopadhyay, T. and Chattopadhyay, A.K., “Use of cross correlation function to study formation mechanism of massive elliptical galaxies”, *Publications of the Astronomical Society of Australia* (PASA), 2014, 31-47.

Additional notes:

There were only two student publication nominations, both for the same student, but for separate publications. Only the above student co-authored publication received votes.

Several nominated publications were disqualified by rule. One nomination was made for a publication first published in 2016. Only publications from 2014-2015 were considered. Another publication received a vote, but only from the awards committee member nominating it. This too was cause for disqualification. Other nominated papers/books failed to receive a vote.

For next year, you are urged to submit nominations for papers/books to the Awards Committee chair well prior to the to-be-posted deadline. Rules and criteria for awards will be reviewed and made available to the IAA membership early in 2017.

I thank the members of the Awards Committee, and particularly the Chair, for the time they committed to selecting award winners. The publication awards for this initial year were difficult to judge, due to the relative paucity of nominations. Each publication award is however justified. I am confident that each would be selected for an award if there had been 100 nominations in each category. I only wish there were many more nominations, and more publication awards could have been granted.

FOLLOW-UP 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.

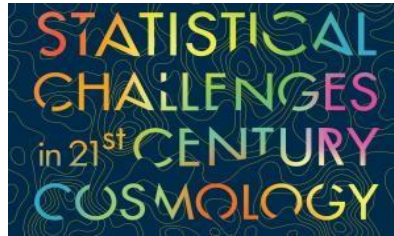
Thanks to funding from the LSST Corporation, a featured “LSST at SCMA Day” will highlight some of the urgent statistical issues facing the Large Synoptic Survey Telescope. Keynote speakers will be Zeljko Ivezic (Univ. of Washington) and Robert Tibshirani (Stanford)

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

FINAL ANNOUNCEMENT



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

Jean-Luc Starck: jstarck@cea.fr

Commissariat à l'Energie Atomique, France

Alan Heavens: a.heavens@imperial.ac.uk Imperial College, London, UK

2016-2017 IAA COUNCIL

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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
Solar & Planetary Science:	Jamie Riggs <jamie.riggs@northwestern.edu>

IAA COMMITTEES

Development	Rafael de Souza	rafael.2706@gmail.com
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Awards	Tanuka Chattopadhyay	tanuka@associates.iucaa.in
Public Relations	Emille Ishida	emilleishida@gmail.com
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.

Standing committees such as the ones we have already 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.

Best, Joseph Hilbe