

International Astrostatistics Association : An Overview

International Astrostatistics Association. This document gives a brief history and overview of its goals and purposes, lists Councilors, Officers and committees, and described the membership procedure.

This document is also available in [PDF format](#)

The *International Astrostatistics Association* (IAA) is a recently created professional association for astronomers, physicists, statisticians, computer-information scientists, and others who are interested in the statistical analysis of astronomical data. Membership is without cost and is open to seasoned researchers, PostDocs, and students having an interest in astrostatistics and astroinformatics.

The IAA is derived from the ISI Astrostatistics Committee and Network, which had a membership of astronomers and statisticians from 27 nations, representing all continents except Antarctica. The ISI is the *International Statistical Institute* (founded 1885), the world association of statisticians, with headquarters in The Hague, The Netherlands.

A timeline of the formation and approval by the appropriate governing body for each of the above astrostatistical organizations is given as:

- 07/2008 ISI Astrostatistics Interest Group
- 12/2009 ISI Astrostatistics Committee
- 01/2010 ISI International Astrostatistics Network
- 08/2012 International Astrostatistics Association (An independent association 30-08-2012)

The IAA is associated with the ISI through the ISI Astrostatistics Committee, and with the IAU through the newly authorized IAU Commission on astroinformatics and astrostatistics, which took effect following the 2015 IAU General Assembly in Honolulu, Hawaii. IAU Council member Eric Feigelson was selected to serve as the initial President of the Commission.

The IAA provides detailed information to members on publications related to astrostatistics, forthcoming conventions and conferences, workshops, and educational opportunities. A foremost goal of the IAA is to foster collaboration between astronomers, physicists, statisticians, and computer-information scientists in order to achieve better research results as well as more meaningful interpretations of results, especially in light of the mass of data that is and will be generated by the new data-gathering technologies. We will also seek to provide members with the same benefits given to members of similar professional associations.

The IAA consists of Section and committees. Section are special subject area working groups that convene to work on various projects which are then published in the major journals. The

Cosmostatistics Initiative (COIN) was the first IAA Section, founded by Rafael de Souza in early 2014. IT has been hugely successful. A Solar System Science section, founded by Jamie Riggs, was founded in 2015 and is developing working groups for both the crater count and solar astronomy communities.

IAA Committees are listed below. The currently active committees are the Development, Public relations, Membership, Awards, and Outreach and Knowledge Transfer committees. Other committees will be formed this year.

In early 2012 an *Astrostatistics and AstroInformatics Portal* (<https://asaip.psu.edu>) was developed through the Penn State University Center for Astrostatistics under the direction of Eric Feigelson, a professor of astronomy at Penn State and Associate Director of the Center. He serves as overall editor of the Portal, with myself (Arizona State/JPL) as co-editor of the IAA/astrostatistics component. The second component is for national entities, such as the Working Group in Astroinformatics and Astrostatistics of the American Astronomical Society (AAS), who may use this portion of the ASAIP Web site. The third component of the Portal is for the Information and Statistical Sciences Consortium of the planned Large Synoptic Survey Telescope (LSST/ISSC). Subscription to the Portal is open without cost to any researcher with an interest in astrostatistics and astroinformatics. Portal and IAA membership gives automatic access to the Portal, but a login username and password is still required, and is sent upon request.

In late 2011 the well regarded scientific/academic publisher Springer agreed to publish a new "Springer Series in Astrostatistics", which is now to be co-sponsored by IAA. The editorial board of the Series are all IAA members. The currently published books include

Vol 1: Hilbe (ed), *Astrostatistical Challenges for the New Astronomy* (2012)

Vol 2: Sarro, Eyer, O'Mullane, and De Ridder (eds), *Astrostatistics and Data Mining* (2012)

Vol 3: A. Chattopadhyay & T Chattopadhyay, *Statistical Methods for Astronomical Data Analysis* (2014)

Vol 4: Andreon and Weaver, *Bayesian Methods for the Physical Science* (2015)

The first astrostatistics-oriented symposium was sponsored by the IAU in 2014 – IAUS-306. Held in Lisbon, the Proceedings are now published by the IAU, titled, *Statistical Challenges in 21st Century Cosmology*. A follow conference is being held from 23-27 May 2016 in Chania, Crete called COSMO21. <http://cosmo21.cosmostat.org/>. The IAA is again a co-sponsor.

The IAA had 455 members from 54 nations on 1 January, 2016. We plan on growing to a thousand members by the end of 2016. But more importantly, the IAA is aimed to provide a professional association and forum for collaboration and education for everyone having an interest in the statistical analysis of astronomical data as well as having an interest in the data gathering and machine analysis of such data.

IAA Structure And Officers

The IAA is managed by the Council, with the IAA executive committee making decisions of a more immediate nature. Council terms are for two years and are renewable. The executive committee of the Council are the association officers, and are for a period of two years. Due to the fact that we are beginning with less than a year to the next ISI World Statistics Congress, this first term ran from 2012-2015. The second term runs from 1 Jan 2016 to 31 Dec 2017.

IAA Council – 2016-2017

Member	Organization	Nationality
Stephano Andreon	Astronomical Observ of Brera	Italy
Jogesh Babu	Pennsylvania State Univ	USA
Bruce Bassett	Univ of Cape Town	South Africa
Kirk Borne	George Mason Univ	USA
Ewan Cameron	Oxford University	Australia
Asis Chattopadhyay	Calcutta Univ	India
Jessi Cisewski	Yale University	USA
Rafael de Souza	Eötvös Loránd University	Brazil
Eric Feigelson	Pennsylvania State Univ	USA
David Hand	Imperial College, London	UK
Alan Heavens	Imperial College, London	UK
Joseph Hilbe	Arizona State Univ/JPL	USA
Tom Loredó	Cornell University	USA
Oleg Malkov	Moscow State University	Russia
Hiranya Peiris	University College, London	Sri Lanka/UK
Chad Shafer	Carnegie Mellon University	USA
Jean-luc Starck	CEA/Saclay	France

Roberto Trotta	Imperial College, London	UK
David van Dyk	Imperial College, London	USA
Licia Verde	University of Barcelona	Italy
Ben Wandelt	Univ of Pierre & Marie Curie	Germany

Officers/Executive Committee 2016-2017

Office	Group	Member
President		Joseph Hilbe
Vice-President	Statistical sciences	Jogesh Babu
Vice-President	Astronomy/Astrophysics	Jean-luc Starck
Vice-President	AstroInformatics	Kirk Borne
Vice-President	Development	Rafael de Souza
Vice-President	At-Large	Bruce Basset

Sections

Cosmostatistics Initiative (COIN) – Rafael de Souza

<https://asaip.psu.edu/organizations/iaa/iaa-working-group-of-cosmostatistics>

Solar System Science – Jamie Riggs < jamie.riggs@northwestern.edu >

Committees

Outreach & Knowledge Transfer – Roberto Trotta, Imperial College, London
 Development – Rafael de Souza – Eötvös Loránd University, Hungary
 Public Relations – Emille Ishida – Blaise Pascal University, Clermont-Ferrand
 Membership – Stefano Andreon – Brera Observatory, Italy
 Awards – Tanuka Chattopadhyay – Calcutta University, India
 Nominations
 Publications
 Program

Contacts

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 Tanuka Chattopadhyay - tanuka@iucaa.ernet.in
 Jamie Riggs - jamie.riggs@northwestern.edu

Eric Feigelson - edf@astro.psu.edu
 Jogesh Babu - babu@stat.psu.edu
 Bruce Bassett - bruce.a.bassett@gmail.com
 Emille Ishida - emilleishida@gmail.com
 Kirk Borne - kborne@gmu.edu

Awards

The IAA will begin in 2016 authorizing awards to those who have contributed to the discipline of astrostatistics and astroinformatics, as well as to the IAA. This includes IAA Fellowship status, with awards sponsored by Cambridge University Press and Overleaf Corp. Other yearly awards for outstanding publications will also be presented. The Awards Committee, chaired by Tanuka Chattopadhyay of Calcutta University, will be ruling on the nature of awards. When the award categories are announced, nominations should be submitted to Prof Chattopadhyay.

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

Application For IAA Membership

Until notified differently, requests for membership in the IAA is through an email request to Membership Chair, Stefano Andreon stefano.andreon@brera.inaf.it. IAA membership will grant you membership on the ASAIP (Portal). A password will be sent to you from Prof. Feigelson. You may also request membership in the Portal and IAA to Eric Feigelson (edf@astro.psu.edu) or Joseph Hilbe, however please advise if you wish membership to the Portal and not IAA. No membership fees are required in either case. Dr. Andreon is currently preparing an online registration system, where applicants can register for the IAA, as well as where members can make changes to their information. The membership will be notified when this capability is ready. When sending membership information, please provide the following data. * items are essential.

- * name
- * affiliation and position
- * email address
- * nationality
- URL (if available)
- Research Interests