



# International Astrostatistics Association

IAA Newsletter – October 2014

Announcing

## Cosmology on Safari Workshop

26-30 January, 2015

Bonamanzi, KwaZulu-Natal, South Africa

Contact: Kavilan Moodley [kavilan.moodley@gmail.com](mailto:kavilan.moodley@gmail.com)

We are pleased to announce that registration is now open for Cosmology on Safari at

<http://www.acru.ukzn.ac.za/~cosmosafari>.

The conference will focus on the interplay between cosmological models and data, with emphasis on the challenges that remain in cosmology. Topics covered will include constraints on primordial perturbations, dark radiation, gravitational waves and inflationary models from the cosmic microwave background, constraints on dark energy, dark matter, and theories of gravity. Invited speakers include Markus Boettcher, J. Richard Bond, Neal Dalal, Romeel Dave, Henk Hoekstra, Jack Hughes\*, Marc-Antoine Miville-Deschenes\*, Lyman Page, Joe Silk, Eva Silverstein, and Rashid Sunyaev\* (\*=to be confirmed).

Cosmology on Safari will take place at Bonamanzi Game Reserve

(<http://www.bonamanzi.co.za/>),

a private game reserve in the heart of the Zulu kingdom, two hours north of Durban on the east coast of South Africa. Bonamanzi is home to elephants, rhinos, giraffes, zebra, hippos, cape buffalo, leopards, impala, nyala, kudu, crocodiles, wildebeest, and warthogs, along with many other species as well as countless birds. It is also a short 20 minute drive from the world-class Hluhluwe-iMfoloze game reserve which also hosts all the big cats and the endangered African wild dog. The park spearheaded rhino conservation efforts, and is now home to about 10% of the world's rhino population. We will arrange an outing to Hluhluwe-iMfolozi as part of the conference. The weather on the east coast of South Africa is moderated by the Indian Ocean and in January daily highs average 30/86 (C/F) and daily lows average 20/68.

Registration and abstract submission close on December 1, 2014. The registration fee is 4000 ZAR (approximately 360 USD/280 EUR) and covers the conference facility, tea breaks, lunches, bus transportation between the Durban airport and Bonamanzi, a river cruise and conference banquet. Room rates at Bonamanzi are 1200 ZAR pp (single) and 1100 ZAR pp (sharing). This includes dinners and breakfasts. There are also a limited number of dorm-style rooms for

students at a reduced rate. There is also some funding to partially support local students - interested parties should contact the conference organizers. While we strongly recommend participants stay at Bonamanzi, there are a number of other lodging options in the vicinity.

From the local organizing committee: H. Cynthia Chiang, Matt Hilton, Kavilan Moodley, Adam Moss, Jonathan Sievers, and Amanda Weltman. Logistical questions can be directed to Vicki Hooper: [info@venues.co.za](mailto:info@venues.co.za)

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## **SuSTaIn EdgeCutter One Day Workshop on "Astrostatistics"**

**Royal Statistical Society, London, UK  
17th December 2014**

This workshop will present a selection of cutting edge international research in the rapidly growing discipline of Astrostatistics. The workshop will bring together statisticians who are interested in astronomy and astronomers who are interested in statistical methods. We aim to provide a valuable opportunity to network and to foster extensive future interaction between the two disciplines.

This workshop is organised by Ofer Lahav, Guy Nason and David van Dyk.

### ***Invited speakers***

- Sarah Bridle, University of Manchester, UK
- Alan Heavens, Imperial College, UK
- Jason McEwen, University College, London, UK
- Daniel Mortlock, Imperial College, UK
- Xiao-Li Meng, Harvard University, USA
- Jean-Luc Starck, CEA Saclay, France
- Licia Verde, Universitat de Barcelona, Spain
- Ian Vernon, Durham University, UK

**WORKSHOP URL:** <http://www.sustain.bris.ac.uk/ws-astrostatistics/>

**Information Email:** [astrostatistics-workshop@bristol.ac.uk](mailto:astrostatistics-workshop@bristol.ac.uk)

**Contact person:** Guy Nason [G.P.Nason@bristol.ac.uk](mailto:G.P.Nason@bristol.ac.uk)  
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# Reminders

## 2014 AstroData Hack Week, 15-19 Sept at the Univ. of Washington

Sponsored by the **UW eScience Institute**, with funding from the Alfred P. Sloan Foundation and the Gordon & Betty Moore Foundation.

AstroData Hack Week is a week-long summer school / hack week / unconference focused on astrostatistics and data-intensive astronomy, taking place at the University of Washington

The mornings will be a typical summer school format, with lectures and exercises covering essential skills for working effectively with large astronomical datasets. The afternoons will be entirely unstructured, and offer opportunities for collaborative research, breakout sessions on special topics, and application of the concepts covered during the morning sessions.

The vision is to provide a space to encourage learning, research, collaboration, and sharing of expertise, for the benefit of both young and experienced astronomical researchers alike.

We have space for around 40 attendees, and registration will be open soon! For more information, please see <http://uwescience.github.io/AstroData/>

The Heilbronn Institute is advertising a fellowship (postdoc) in computational statistics and statistical learning. Both UK and US citizens may be suitable.

The link is:

<http://www.bristol.ac.uk/jobs/find/details.html?nPostingID=1722&nPostingTargetID=5833>

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## IAA Working Group in Cosmostatistics Project Groups

Led by **Rafael de Souza** <rafael.2706@gmail.com> of the International Research School on Astrophysics, Eötvös Loránd University (Univ of Budapest), the **IAA Working Group on Cosmostatistics** is sponsoring various Project Groups, which are formed for the purpose of engaging in the development of software appropriate for cosmological analysis, as well as other more specific research tasks. We currently have 50 members in 5 project groups. Project management is being hosted by the **Astronomer's Workbench** <<http://awob.mpg.de>>, a function of the Max Planck Institutes in Germany. We welcome proposals for additional Project Groups, each of which will result in published results. The aim is to actually do serious research utilizing the resources of both astronomers and statisticians. We also welcome proposals for additional Working Groups.

## **ASAIP – PORTAL**

Be sure to check out the portal if you have not accessed it for awhile. We have been trying to continually update it, and provide new features. You may find something that will be of interest to your research. <https://asaip.psu.edu>

## **ISI World Statistics Congress**

**Rio de Janeiro, Brazil**

**Jul 27-31 July, 2015**

We have made two Special Topics Sessions in Astrostatistics proposals for the 2015 World Statistics Congress. A report on the proposals will be provided in the October Newsletter.

NOTE: We recently received notice that our Special Topics Session on Astrostatistics has been approved.

**Organizer/Chair:** Joseph M. Hilbe, Arizona State Univ; Jet Propulsion Laboratory, Caltech  
**Presenters**

**Radu Stoica,**

Probability and Statistics Unit, Laboratory Paul Painlevé, Univ. of Lille 1, France

"Pattern detection and statistical characterization for astronomical data using marked point processes"

**Jogesh Babu**

Departments of Statistics and Astronomy, Pennsylvania State Univ, USA

"A Primer for Exoplanets: statistical and computational challenges in detecting and confirming exoplanets"

**Dalia Chakrabarty**

Dept of Mathematics, Univ of Leicester and Dept of Statistics, Univ of Warwick, UK

"How much do galaxies weigh—new Bayesian state space modelling of missing data"

**Rafael de Souza**

Dept of Astronomy, Eötvös Loránd Univ (Hungary)

"The Fantastic Four: Bridging the gap between Cosmology, machine learning, statistics and biology"

**29<sup>th</sup> IAU General Assembly  
and  
226th Meeting, American Astronomical Society  
Honolulu, Hawaii, USA  
3-14 August, 2015**

The IAU Astrostatistics and Astroinformatics Working Group (IAUAAWG) was awarded a Focus Meeting (FM8) at the triennial 29<sup>th</sup> IAU General Assembly next August in Honolulu, Hawaii. The title of the meeting is: "Statistics and Exoplanets". It is the first astrostatistics Focus Meeting at the IAU General Assembly. The American Astronomical Society (AAS) Summer Meeting is being held at the same location and dates (1<sup>st</sup> week) as the IAU GA, making it the largest combined gathering of astronomers in history. Hotel rooms are going to be tight, so don't wait too long. I'll report on this event as we get more information.

**IAA Membership Registry on ASAIP**

I have now had the IAA Registry of membership information, including research interests, placed on ASAIP. I will no longer send it as an attachment with Newsletters. I plan on updating it at least once every other month. Summary member information will be periodically sent to members as an attachment. It will be in Excel format. Send corrections to [Hilbe@asu.edu](mailto:Hilbe@asu.edu).

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Please send me announcement information for inclusion in future Newsletters.

# International Astrostatistics Association

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<through 2015>

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