PROGRAM

2015 ASTRONOMICAL DATA ANALYSIS SYSTEMS AND SOFTWARE CONFERENCE

25th – 29th October 2015

Rydges World Square, Pitt Street, Sydney, NSW, Australia

SUNDAY 25 OCTOBER 2015

Time	Item
2:00pm – 6:00pm	Registration Desk Opens *Rydges Hotel Foyer*
2:30pm – 4:00pm	Tutorial*: Open to all delegates* Ivan Zolotukhin *New Tools for X-ray Astrophysics in the Epoch of Data and Software Interoperability*
BoF Session 1	
4:00pm – 5:30pm	André Schaaff *BoF1: Affordable Immersive Visualization of Astronomical Data* Ballroom 1
6:00pm – 8:00pm	Welcome Drinks *Sydney Observatory* *Transfer via bus to and from hotel*
8:00pm	**Dinner** *Delegates' own choice – please see the conference app for some suggested places to eat*

ADASS XXV PROGRAM

MONDAY 26 OCTOBER 2015

Time	Item
6:30am	*Optional Activity* Morning Walk - *Please meet in Rydges Hotel Foyer at 6:30am*
7:30am – 8:50am	**Registration Desk Open**
Welcome	
9:00am	**Welcome/Acknowledgement of Country**
9:15am	**Welcome and Conference Overview**
Session I: Knowledge Discovery and Data Management Tools for Astronomical Big Data **Session Chair: Carlos Gabriel**	
9:30am – 10:00am	O1.1 Hugh Durrant-Whyte *(invited talk - keynote)* *Data, Knowledge and Discovery: Machine Learning meets Natural Science* (25 min presentation + 5 min Q&A)
10:00am – 10:30am	O1.2 Alesandra Aloisi *(invited talk)* *Maximizing the Science in the Era of Data-Driven Astronomy* (25 min presentation + 5 min Q&A)
10:30am – 10:45am	O1.3 Lisa Storrie-Lombardi *Observatory Archives in the Era of Big Data: Perspectives from the Spitzer Mission* (12 min presentation + 3 Min Q&A)
10:45am – 11:00am	O1.4 William O'Mullane *Bringing the Computing to the Data* (12 min presentation + 3 min Q&A)
11:00am – 11:45am	**Morning Tea** *Sphere Restaurant and Foyer* **Focus Demo 1:** Bruno Merin *ESA's Astronomy Multi-Mission Interface* Ballroom **Poster viewing and demo booth viewing** *Foyer, Grand Ballroom and Sphere Restaurant*

	Session II: Algorithms for Astronomical Data Reduction Session Chair: Fabio Pasian		
11:45am – 12:15pm	O2.1 Tamas Budavari *(invited talk)* *Streaming Algorithms* (25 min presentation & 5 min Q&A)		
12:15pm – 12:30pm	O2.2 Guido Cupani *Data Analysis for Precision Spectroscopy: the ESPRESSO Case* (12 min presentation + 3 min Q&A)		
12:30pm - 12:45pm	O2.3 Mohammad Akhlaghi *Noise Based Detection and Segmentation of Nebulous Signal* (12min presentation + 3 min Q&A)		
12:45pm – 1:00pm	O2.4 Tony Butler-Yeoman *Detecting Diffuse Sources in Astronomical Images* (12min presentation + 3 min Q&A)		
1:00pm – 1:15pm	O2.5 Tianheng Liang *A Modified Method for Extracting Filaments from Astronomical Images* (12min presentation + 3 min Q&A)		
1:15pm – 2:30pm	**Lunch (included in registration fee)** *Sphere Restaurant (overflow to Cidery Bar)* **Poster viewing and demo booths** *Foyer, Grand Ballroom and Sphere Restaurant*		
	Session III: LSST and Lessons Learned from Current Programs Session Chair: Nuria Lorente		
2:30pm – 3:00pm	O3.1 Mario Juric *(invited talk)* *LSST: Building the Data System for the Era of Petascale Optical Astronomy* (25 min presentation + 5 min Q&A)		
3:00pm – 3:15pm	O3.2 Christian Wolf *Developing Data Processing Pipelines for Massive Sky Surveys – Lessons Learned from SkyMapper* (12 min presentation + 3 min Q&A)		
3:15pm – 3:30pm	O3.3 Jesus Salgado *Access to Massive Catalogues in the Gaia Archive: a New Paradigm* (12 min presentation + 3 min Q&A)		

3:30pm – 4:15pm	**Afternoon Tea** *Sphere Restaurant and Foyer* **Poster viewing and Demo Booth viewing** *Foyer, Grand Ballroom and Sphere Restaurant*

BoF Session 2		
4:15pm – 5:45pm	Sarah Brough BoF2: LSST and Australia *Ballroom 1*	Keith Shortridge BoF3: Future Astronomical Data Formats: Evolution and/or Revolution *Ballroom 2*
6:30pm	**Dinner** *Delegates' own choice* **POC Dinner**	

ADASS XXV PROGRAM

TUESDAY 27 OCTOBER 2015

Time	Item
6:30am	*Optional Activity* Fitness Activity with Personal Fitness Trainer
8:55am – 9:00am	**Announcements**
9:00am – 9:30am	**Keynote Address** Brian Schmidt, Nobel Laureate *Big Data and Big Astronomy* (25 min presentation + 5 min Q&A)
Session IV: Knowledge Discovery and Data Management Tools for Astronomical Big Data **Session Chair: Arnold Rots**	
9:30am – 9:45am	O4.1 Steven Berukoff *Petascale Data Management in Solar Physics: Approach of the DKIST Data Center* (12 min presentation + 3 min Q&A)
9:45am – 10:00am	O4.2 Kyler Kuehn *Managing the Data Deluge from the Dark Energy Survey* (12 min presentation + 3 min Q&A)
10:00am – 10:15am	O4.3 Lloyd Harischandra *Hadoop and Spark for Data Management, Processing and Analysis of Astronomical Big Data: Applicability and Performance* (12 min presentation + 3 min Q&A)
10:15am – 10:30am	O4.4 Alberto Accomazzi *Aggregation and Lining of Observational Metadata in the ADS* (12 min presentation + 3 min Q&A)
10:30am – 11:15am	**Morning Tea** *Sphere Restaurant and Foyer*
	Focus Demo 2: Ken Ebisawa *Web Applications to Explore the Earth and Universe at JAXA's Space Science Data Archive DART* *Ballroom Room* / **Poster viewing and demo booth viewing** *Foyer, Grand Ballroom and Sphere Restaurant*

Session V: Data Pipelines	
Session Chair: Harry Teplitz	
11:15am – 11:45am	O5.1 Janet Evans (*invited talk*) *The Chandra Source Catalog Pipeline: the Yin Yang of a Challenging Project* (25 min presentation + 5 min Q&A)
11:45am – 12:00pm	O5.2 Martin Kuemmel *Data Challenges for the Euclid Cataloging Pipeline* (12 min presentation + 3 min Q&A)
12:00pm - 12:15pm	O5.3 Carlos Gabriel *The XMM-Newton Pipeline Processing System PPS and the 3XMM-DR5, the Largest Ever Catalogue of X-ray Sources* (12 min presentation + 3 min Q&A)
12:15pm – 12:30pm	O5.4 Laurence Chaoul *Processing Gaia's Billion Stars, a Big Data Story* (12 min presentation + 3 min Q&A)
12:30pm – 2:00pm	**Lunch (included in registration fee)** *Sphere Restaurant (overflow to Cidery Bar)*

BoF Session 3		
2:00pm – 3:30pm	Alice Allen *BoF4: Improving Software Citation and Credit* Ballroom 1	Amr Hassan *BoF5: Building the Astronomical Data Archives of the Future* Ballroom 2
3:30pm – 4:15pm	**Afternoon Tea** *Sphere Restaurant and Foyer*	
	Poster viewing and demo booth viewing *Foyer, Grand Ballroom and Sphere Restaurant*	

Session VI: Real Time Processing	
Session Chair: Keith Shortridge	
4:15pm – 4:45pm	O6.1 Mike Wise (*invited talk*) *LOFAR* (25 min presentation + 5 min Q&A)

4:45pm – 5:00pm	O6.2 Jan David Mol *COBALT: Replacing LOFAR's Online Correlator and Beamformer* (12 min presentation + 3 min Q&A)
5:00pm – 5:15pm	O6.3 Nuria Lorente *Path-finding Algorithms for TAIPAN's Starbug Robots* (12 min presentation + 3 min Q&A)
5:15pm – 5:30pm	O6.4 Matthew Bailes *Real-Time Searching for Fast Radio Bursts and other Radio Transients Using the UTMOST Telescope* (12 min presentation + 3 min Q&A)
5:30pm – 5:45pm	O6.5 Ewan Barr *Massive Data Streaming and Processing for Pulsar Timing* (12 min presentation + 3 min Q&A)

6:00pm	**Dinner** *Delegates' own choice*	*Optional Activity* *(additional cost: $318 for Bridge Climb Only)* **Sydney Harbour Bridge Climb** Dinner – *Delegates' own choice*

ADASS XXV PROGRAM

WEDNESDAY 28 OCTOBER 2015

Time	Item
6:30am	*Optional Activity* Yoga
8:55am – 9:00am	**Announcements**
Session VII: Knowledge Discovery and Data Management Tools for Astronomical Big Data **Session Chair: Tadafumi Takata**	
9:00am – 9:30am	O7.1 Ann Marie Cody *(invited talk)* *Multiwavelength Variability Surveys: Reaping The Stellar Harvest* (25 min presentation + 5 min Q&A)
9:30am – 9:45am	O7.2 Amr Hassan *Enabling Science in the Petascale Era: MWA Data Archive and Dissemination Platform* (12 min presentation + 3 min Q&A)
9:45am – 10:00am	O7.3 Paul Hirst *A New Data Archive For Gemini – Fast, Cheap and in the Cloud* (12 min presentation + 3 Min Q&A)
10:00am – 10:15am	O7.4 Fabio Pasian *ASTERICS – Addressing Cross Cutting Synergies and Common Challenges for the Next Decade Astronomy Facilities* (12 min presentation + 3 min Q&A)
10:15am – 11:00am	**Morning Tea** *Sphere Restaurant and Foyer* **Poster viewing and demo booth viewing** *Foyer, Grand Ballroom and Sphere Restaurant*
Session VIII: Algorithms for Astronomical Data Reduction **Session Chair: Pascal Ballester**	
11:00am – 11:15am	O8.1 Thomas Robitaille *The Astropy Project: Current Status and Future Plans* (12 min presentation + 3 min Q&A)

11:15am – 11:30am	O8.2 Greg Madsen *An Infrared Search for Satellite Orbital Debris* (12 min presentation + 3 min Q&A)
11:30pm – 11:45pm	O8.3 Elise Hampton *Using an Artificial Neural Network to Classify Multi-Component Emission Line Fits* (12 min presentation & 3 min Q&A)
11:45pm – 12:00pm	O8.4 Ian Stewart *LIME – the Line Modelling Engine* (12 min presentation & 3 min Q&A)
12:00pm – 2:00pm	**Lunch (included in registration fee)** *Sphere Restaurant (overflow to Cidery Bar)*
Session IX: Data Pipelines **Session Chair: Stephen Gwyn**	
2:00pm – 2:15pm	O9.1 Sarah Hegarty *Realistic Imaging of Simulated Universes with the Theoretical Astrophysical Observatory* (12 min presentation + 3 min Q&A)
2:15pm – 2:30pm	O9.3 Hadrien Devillepoix *Handling Ultra-Wide Field Astronomical Data: the Story of a Continent-Scale Observatory* (12 min presentation & 3 min Q&A)
2:30pm – 2:45pm	O9.4 Sean Carey *Final Calibration and Processing of Warm IRAC Data* (12 min presentation + 3 min Q&A)
2:45pm – 3:30pm	**Afternoon Tea** *Sphere Restaurant and Foyer* **Focus Demo 3** Thomas Robitaille *Interactive data exploration with Glue* *Ballroom Room* **Poster viewing and demo booth viewing** *Foyer, Grand Ballroom and Sphere Restaurant*

Session X: Visualization and Innovative User Interfaces **Session Chair: Mike Fitzpatrick**	
3:30pm – 4:00pm	O10.1 Xiuqin Wu (*Invited talk*) *IPAC Firefly Development Roadmap* (25 min presentation & 5 min Q&A)
4:00pm – 4:15pm	O10.2 Pragya Mohan *Three Tools to Aid Visualisation of FITS Files for Astronomy* (12 min presentation & 3 min Q&A)
4:15pm – 4:30pm	O10.3 Adam Gauci Hybrid Multi-Framed and Blind Astronomical Image Deconvolution Through L1 and L2 Minimisation (12 min presentation & 3 min Q&A)
4:30pm – 4:45pm	O10.4 Christopher Fluke *The Ultimate Display* (12 min presentation & 3 min Q&A)
4:45pm – 5:00pm	O10.5 Faviola Molina *AstroCloud: An Agile Visualization Platform for Specific Analysis of Astronomical Images* (12 min presentation & 3 min Q&A)
5:00pm – 5:15pm	O10.6 Guido de Marchi *Promoting Scientific Creativity in Astronomy* (12 min presentation & 3 min Q&A)
6:30pm – 10:00pm	**Dinner** *Conference Dinner* *Luna Park – travel by bus and ferry return* *includes a ride on Luna Park's iconic Ferris Wheel* *(additional cost $100/delegate)*

ADASS XXV PROGRAM

THURSDAY 29 OCTOBER 2015

Time	Item
6:30am	*Optional Activity* Morning Walk
8:55am – 9:00am	**Announcements**
Session XI: Knowledge Discovery and Data Management Tools for Astronomical Big Data **Session Chair: Nuria Lorente**	
9:00am – 9:30am	O11.1 Sarah Kendrew *(invited talk)* *7 years of .Astronomy: Building the Astronomy Community of the Future* (25 min presentation + 5 min Q&A)
9:30am – 9:45am	O11.2 Mark Allen An Hierarchical Approach to Big Data (12 min presentation + 3 min Q&A)
9:45am – 10:00am	O11.3 Christophe Arviset *The VO: A Powerful Tool for Global Astronomy* (12 min presentation + 3 min Q&A)
10:00am – 10:15am	O11.4 Slava Kitaeff *VO Services with JPEG2000 Client-Server Visualisation: Astronomy Data Services at Pawsey Supercomputing Centre* (12 min presentation + 3 min Q&A)
10:15am – 10:30am	O11.5 Jessica Chapman and James Dempsey The CSIRO ASKAP Science Data Archive (12 min presentation + 3 Min Q&A)
10:30am – 11:15am	**Morning Tea** *Sphere Restaurant and Foyer* **Focus Demo 4** — Petr Skoda — *The Distributed Cloud Based Engine for Knowledge Discovery in Massive Archives of Astronomical Spectra* — Ballroom Room **Poster viewing and demo booth viewing** *Foyer, Grand Ballroom and Sphere Restaurant*

Session XII: Data Pipelines Session Chair: Randall Wayth	
11:15am – 11:45am	O12.1 Adrian White (invited talk) *Amazon Web Services* (25 min presentation + 5 min Q&A)
11:45am – 12:00pm	O12.2 Daniel Durand *HST in the Clouds* (12 min presentation & 3 min Q&A)
12:00pm – 12:15pm	O12.3 Howard Bushouse *The JWST Data Calibration Pipeline* (12 min presentation + 3 min Q&A)
12:15pm – 12:30pm	O12.4 Cormac Purcell *The Possum Pipeline: Getting Results from ASKAP Early Science* (12 min presentation + 3 min Q&A)
12:30pm – 2:00pm	**Lunch (included in registration fee)** *Sphere Restaurant (overflow to Cidery Bar)*
2:00pm – 2:30pm	O12.5 Andreas Wicenec *(invited talk)* *Drop Computing: Data Driven Pipeline Processing for the SKA* (25 min presentation & 5 min Q&A)
2:30pm – 2:45pm	O12.6 Kevin Vinsen *Imaging SKA-Scale Data in Three Different Computing Environments – The Cloud, A Supercomputer and an In-House Cluster* (12 min presentation + 3 min Q&A)
2:45pm – 3:00pm	O12.7 Christopher Hollitt *An Overview of the SKA Science Analysis Pipeline* (12 min presentation + 3 min Q&A)

	Session XIII: Knowledge Discovery and Data Management Tools for Astronomical Big Data Session Chair: Sebastian Derriere	

3:00pm – 3:15pm	O13.1 Bradley Whitmore *Version 1 of the Hubble Source Catalog* (12 min presentation + 3 min Q&A)
3:15pm – 3:30pm	O13.2 Bruce Berriman *The Next Generation of the Montage Image Mosaic Toolkit* (12 min presentation + 3 min Q&A)
3:30pm – 3:45pm	O13.3 Santhilata Kuppili Venkata *Adaptive Caching Using Sub-query Fragmentation for Reduction in Data Transfers from Distributed Databases* (12 min presentation + 3 min Q&A)
3:45pm – 4:00pm	O13.4 Wrap up and close 2016 Conference Announcement Program Organising Committee Chair handover
4:00pm	**CLOSE**
2016	**ADASS XXVI:** **16-20 October 2016** **Stazione Marittima Conference Centre** **Trieste, Italy** followed by the IVOA Interoperability Workshop (21-23 October)