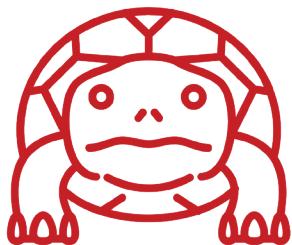


# Astronomical Data Analysis Software and Systems

*11-15 November 2018*



# ADASS XXVIII

COLLEGE PARK, MD USA

*Program*



# Welcome Message from the Organizers

We heartily welcome you to College Park, Maryland, home of the University of Maryland, for the XXVIII edition of the ADASS conference series.

The University of Maryland was founded in 1856 as an Agricultural College, and even today you will find the Astronomy Department, as well as the Joint Quantum Institute and the Joint Space-Science Institute, in a state-of-the-art building overlooking the horse and sheep barns. College Park is surrounded by many astronomical institutions in the Baltimore-Washington area, from Johns Hopkins University Applied Physics Lab and the Space Telescope Science Institute to our Northeast in Baltimore, to Goddard Space Flight Center next door in Greenbelt, to the Smithsonian and Carnegie institutes in D.C., to the National Radio Astronomy Observatory just a two-hour drive Southwest. Our online Google Map shows them all. The historic College Park airport (where the Wright brothers taught the U.S. Army how to fly) while not associated with the University, is well worth a visit.

Most of the ADASS program will be familiar: invited talks with contributed papers covering a dozen or so themes, selected by yourselves. Posters will be up during the whole meeting, we have Sunday tutorials, a dozen demo booths, and focus demos during the breaks. We've kept the schedule the same every day: breakfast 7:00-8:30; sessions from 9:00-17:00 (except for an early start on the first day at 8:30); and a varying evening program with BoFs, banquet, and free time to explore town. Please note that breakfast and lunch are included in your registration and will be served buffet style, so those of you not staying in The Hotel can still plan on joining us for meals. If you want to explore town, the College Park Metro is a 15-minute walk, or a 5-minute free shuttle bus ride, from the hotel, and you can be in the heart of Washington, D.C. within half an hour.

As in previous years, we are also hosting the IVOA meeting at ADASS, but this time from November 8-10 *before* the ADASS! A new addition to the ADASS activities this year is the community hackathon, focused on Time Domain Astronomy. The City of College Park has provided us with \$1000 of prize money, and Vigilante Coffee will be trying to keep us awake hacking over the weekend before the ADASS meeting. We look forward to awarding the prize during Wednesday morning's session.

We wish you all a very fruitful conference.

On behalf of the ADASS Organizing Committees,  
Nuria Lorente, POC chair  
Peter Teuben, LOC chair

Cover photo: M Circle (Peter Teuben)



# Program at a Glance

## Sunday

12:00	Registration and Tutorial Pre-Check
13:00 – 15:00	Tutorials
15:00 – 15:30	Break
15:30 – 17:30	Tutorials/Poster Setup
18:00 – 20:00	Opening Reception

## Monday

07:30	Registration/Setup
08:30 – 08:40	Welcome
08:40 – 10:15	Session 1
10:15 – 11:15	Break and Poster Session
10:45 – 11:15	Focus Demo
11:15 – 12:15	Session 2
12:15 – 12:30	Lightning Talks
12:30 – 14:00	Lunch
14:00 – 15:00	Session 3
15:00 – 16:00	Break and Poster Session
15:30 – 16:00	Focus Demo
16:00 – 16:45	Session 4
16:45 – 17:00	Lightning Talks
17:15 – 18:15	BoFs
18:15 – 19:15	BoFs

## Tuesday

09:00 – 10:15	Session 5
10:15 – 11:15	Break and Poster Session
10:45 – 11:15	Focus Demo
11:15 – 12:15	Session 6
12:15 – 12:30	Lightning Talks
12:30 – 12:45	Conference Photo
12:45 – 14:00	Lunch
14:00 – 15:00	Session 7
15:00 – 16:00	Break and Poster Session
15:30 – 16:00	Focus Demo
16:00 – 17:00	Session 8
17:15 – 18:15	BoFs
19:00 – 22:00	Banquet

## Wednesday

09:00 – 10:15	Session 9
10:15 – 11:15	Break and Poster Session
10:45 – 11:15	Focus Demo
11:15 – 11:30	Hackathon Prize Presentation
11:30 – 12:15	Session 10
12:15 – 12:30	Lightning Talks
12:30 – 14:00	Lunch
14:00 – 15:00	Session 11
15:00 – 16:00	Break and Poster Session
16:00 – 17:00	Session 12
17:15 – 18:15	BoF

## Thursday

09:00 – 10:15	Session 13
10:15 – 11:15	Break and Poster Session
11:15 – 12:30	Session 14
12:30 – 12:45	Closing Comments
12:45 – 14:00	(Box) Lunch

# Sunday 11 November

12:00	Registration and Tutorial Pre-Check
	<b>Tutorial:</b> <i>All-sky Astronomy with HiPS and MOCs</i> S. Derriere, <i>Salon A</i>
13:00 – 15:00	<b>Tutorial:</b> <i>Creating Astronomical Web Applications from Scratch: Introduction to Modern Full-Stack MEAN Development</i> M. D. Young, <i>Salon EFG</i>
15:00 – 15:30	Break
	<b>Tutorial:</b> <i>Working with Hubble Space Telescope Public Data on Amazon Web Services</i> I. Momcheva, <i>Salon A</i>
15:30 – 17:30	<b>Tutorial:</b> <i>A Comprehensive Use Case Scenario of VO Standards and Protocols</i> H. Heinl, <i>Salon EFG</i>
18:00 – 20:00	Opening Reception

# Monday 12 November

08:30 – 08:40	Welcome
<b>Monday Morning – Session 1</b> Chair: Nuria Lorente	
08:40 – 09:00	<b>A. Varshney (Invited)</b> <i>Astronomy-inspired Visual Computing</i>
09:00 – 09:30	<b>B. Kent (Invited)</b> <i>3D Data Visualization in Astrophysics</i>
09:30 – 09:45	C. Zapart <i>An introduction to FITSWebQL</i>
09:45 – 10:00	A. Comrie <i>An HDF5 Schema for SKA Scale Image Cube Visualization</i>
10:00 – 10:15	E. Ramirez <i>Analysis of Astronomical Data Using VR: the Gaia catalogue in 3D</i>
10:15 – 11:15	Break and Poster Session
10:45 – 11:15	<b>Focus Demo:</b> A. Mechev, <i>Building LOFAR As A Service: Processing Petabytes with just a click</i>
<b>Monday Morning – Session 2</b> Chair: Jim Lewis	
11:15 – 11:45	<b>J. Bosch (Invited)</b> <i>An Overview of the LSST Image Processing Pipelines</i>
11:45 – 12:00	A. Kepley <i>Auto-multithresh: A General Purpose Automated Masking Algorithm for Clean</i>
12:00 – 12:15	D. Tavagnacco <i>Performance-related aspects in the Big Data Astronomy Era: architects in software optimization</i>
12:15 – 12:30	Lightning Talks
12:30 – 14:00	Lunch

# Notes

*University of Maryland Entrance (Photo by Peter Teuben)*



## Monday Afternoon – Session 3

Chair: Xiuqin Wu

14:00 – 14:15	N. Dencheva <i>GWCS – A General Approach to Astronomical World Coordinates</i>
14:15 – 14:30	C. Y. Lam <i>Data-Driven Pixelisation with Voronoi Tessellation</i>
<b>14:30 – 15:00</b>	<b>R. Plante</b> (Invited) <i>The BagIt Packaging Standard for Interoperability and Preservation</i>
15:00 – 16:00	Break and Poster Session
15:30 – 16:00	<b>Focus Demo:</b> M. Raddick, <i>SciServer: Collaborative data-driven science</i>

## Monday Afternoon – Session 4

Chair: Sébastien Derriere

16:00 – 16:15	R. Diaz <i>Adding Science Validation to the JWST Calibration Pipeline</i>
16:15 – 16:30	G. Landais <i>Quality assurance in the ingestion of data into the CDS VizieR catalogue and data services</i>
16:30 – 16:45	F. Bonnarel <i>ProvTAP: A TAP Service for providing IVOA provenance metadata</i>
16:45 – 17:00	Lightning Talks  <b>BoF: Data Formats</b> (Jessica Mink, presenting) <i>Salon G</i>
17:15 – 18:15	<b>BoF: Open Source/Development Software Projects and Large Organizations/Missions: Recommendations and Challenges</b> (Erik Tollerud and Steve Crawford, presenting) <i>Salon AB</i>
18:15 – 19:15	<b>BoF: Data Citation: from Archives to Science Platforms</b> (August Muench and Greg Schwartz, presenting) <i>Salon G</i>  <b>BoF: Beginners Guide to Machine Learning in Astronomy</b> (Kai Polsterer, presenting) <i>Salon AB</i>

## Tuesday 13 November

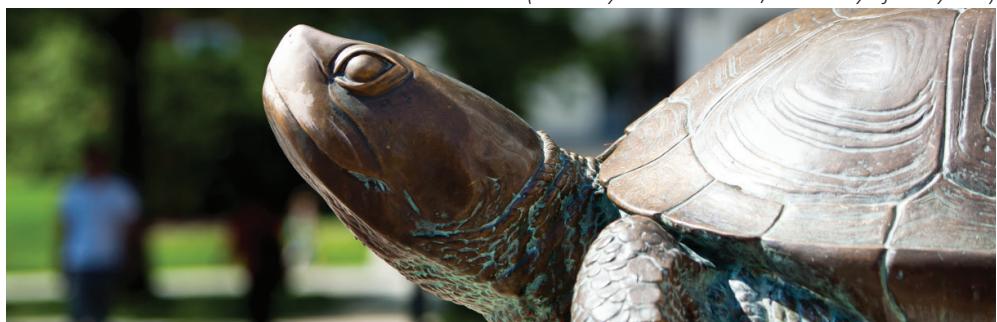
### Tuesday Morning – Session 5

Chair: Jorge Ibsen

09:00 – 09:30	<b>F. Stoehr</b> (Invited) <i>Astronomical archives: Serving up the Universe</i>
09:30 – 09:45	C. Brasseur <i>AstroCut: A cutout service for TESS full-frame image sets</i>
09:45 – 10:00	P. Zecevic <i>AXS: Making end-user petascale analyses possible, scalable, and usable</i>
10:00 – 10:15	N. Buchschacher <i>No-SQL databases: An efficient way to store and query heterogeneous astronomical data in DACE.</i>
10:15 – 11:15	Break and Poster Session

# Notes

*Testudo* (Photo by John T. Consoli/University of Maryland)



## Tuesday Morning (continued)

10:45 – 11:15 **Focus Demo:** E. Joliet, *Visualization in IRSA Services using Firefly*

### Tuesday Morning – Session 6 Chair: Jessica Mink

11:15 – 11:45	<b>K. Borne (Invited)</b> <i>Massive Data Exploration in Astronomy: What Does Cognitive Have To Do With It?</i>
11:45 – 12:00	I. Toledo <i>Data Science != Software Engineering. Exploring a workflow for ALMA operations.</i>
12:00 – 12:15	T. Nakazato <i>New Synthesis Imaging Tool for ALMA based on the Sparse Modeling</i>
12:15 – 12:30	Lightning Talks
12:30 – 12:45	Conference Photo
12:45 – 14:00	Lunch

### Tuesday Afternoon – Session 7 Chair: Kimberly DuPrie

14:00 – 14:30	<b>M. Lieu (Invited)</b> <i>Deep learning of astronomical features with big data</i>
14:30 – 14:45	M. Ansdell <i>Automatic Classification of TESS Planet Candidates Using Deep Learning</i>
14:45 – 15:00	B. Nikolic <i>Acceleration of Non-Linear Minimisation with PyTorch</i>
15:00 – 16:00	Break and Poster Session
15:30 – 16:00	<b>Focus Demo:</b> J. Good, <i>Image Processing in Python with Montage</i>

### Tuesday Afternoon – Session 8 Chair: Keith Shortridge

16:00 – 16:15	S. Gilda <i>Importance of Feature Selection in ML Models</i>
16:15 – 16:30	C. Dai <i>A method to detect radio frequency interference based on convoluted neural networks</i>
16:30 – 17:00	<b>E. Kuulkers (Invited)</b> <i>Coordinating observations among ground and space-based telescopes in the multi-messenger era</i>
17:15 – 18:15	<b>BoF:</b> <i>How do you get the most out of your teams?</i> (Simon O'Toole, Steve Crawford, and Erik Tollerud, presenting) <i>Salon AB</i>
19:00 – 22:00	<b>BoF:</b> <i>Data analysis challenges for multi-messenger astrophysics</i> (Peter Shawhan, presenting) <i>Salon G</i>
19:00 – 22:00	<b>Conference Banquet at Top of the 7's</b>

# Notes

*The Joseph Weber Memorial Garden (Photo by Peter Teuben)*



# Wednesday 14 November

## Wednesday Morning – Session 9

Chair: Mike Fitzpatrick

09:00 – 09:15	B. Martinez <i>Data-driven Space Science at ESA Science Data Center</i>
09:15 – 09:30	S. O'Toole <i>Bringing together the Australian sky – coordination and interoperability challenges of the All-Sky Virtual Observatory</i>
09:30 – 09:45	J. Gonzalez-Nuñez <i>Driving Gaia Science from the ESA Archive: DR2 to DR3</i>
09:45 – 10:00	S. Graves <i>Harnessing the power of archival data to increase scientific output: the JCMT experience</i>
10:00 – 10:15	A. Allen <i>Receiving Credit for Research Software</i>
10:15 – 11:15	Break and Poster Session
10:45 – 11:15	<b>Focus Demo:</b> K. Vahi, <i>Workflows Management using Pegasus</i>

## Wednesday Morning – Session 10

Chair: Marc Pound

11:15 – 11:30	Hackathon Prize Presentation
11:30 – 12:00	<b>A. Nebot</b> (Invited) <i>Data challenges of the VO in Time Domain Astronomy</i>
12:00 – 12:15	M. Juric <i>The ZTF Alert Stream: Lessons from the first six months of operating an LSST precursor</i>
12:15 – 12:30	Lightning Talks
12:30 – 14:00	Lunch

## Wednesday Afternoon – Session 11

Chair: Stephen Gwyn

14:00 – 14:30	<b>M. Holman</b> (Invited) <i>The Minor Planet Center Data Processing System</i>
14:30 – 14:45	E. Racero <i>ESASky: A New Window for Solar System Data Exploration</i>
14:45 – 15:00	A. Raugh <i>The PDS Approach to Science Data Quality Assurance</i>
15:00 – 16:00	Break and Poster Session

# Notes

*View across campus of the Chapel (Photo by Peter Teuben)*



## Wednesday Afternoon – Session 12

Chair: Christophe Arviset

16:00 – 16:30	<b>I. Momcheva</b> (Invited) <i>Hubble in the Cloud: A Prototype of a Science Platform at STScI</i>
16:30 – 16:45	M. Fitzpatrick <i>The NOAO Data Lab: Design, Capabilities, and Community Development</i>
16:45 – 17:00	T. Donaldson <i>Astropy and the Virtual Observatory</i>
17:15 – 18:15	<b>BoF: Unconference Session: I want to talk about...</b> (Alice Allen, presenting) <i>Salon AB</i>

## Thursday 15 November

### Thursday Morning – Session 13

Chair: Pascal Ballester

09:00 – 09:30	<b>R. Guerra Noguero</b> (Invited) <i>DevOps: the perfect ally for Science Operations for a large and distributed astronomy project</i>
09:30 – 09:45	M. Loose <i>Agile and DevOps from the trenches at ASTRON</i>
09:45 – 10:00	J. Smith <i>Lilith: A Versatile Instrument and All-Sky Simulator for Use with Space-Based Astrophysics Observatories</i>
10:00 – 10:15	M. O. Boussejra <i>aflak: Pluggable Visual Programming Environment with Quick Feedback Loop Tuned for Multi-Spectral Astrophysical Observations</i>
10:15 – 11:15	Break and Poster Session

### Thursday Morning – Session 14

Chair: Roberto Pizzo

11:15 – 11:45	<b>M. Wise</b> (Invited) <i>Establishing the SKA Regional Centre Network: Mesh Management and Culture Change</i>
11:45 – 12:00	A. Alexov <i>Hit the Ground Running: Data Management for JWST</i>
12:00 – 12:15	M. Tomasi <i>Towards new solutions for scientific computing: the case of Julia</i>
12:15 – 12:30	BoF Summary Lightning Talks
12:30 – 12:45	Closing Remarks
12:45 – 14:00	(Box) Lunch

# Notes

*The Barns (Photo by Peter Teuben)*



# Posters

Adámek, Karel	P8.1	A GPU implementation of the harmonic sum algorithm
Afrin Badhan, Mahmuda	P7.1	Stellar activity effects on moist habitable terrestrial atmospheres around M dwarves
Albert, Kinga	P4.1	Performance analysis of the SO/PHI software framework for on-board data reduction
Alesina, Fabien	P3.1	Exoplanets data visualization in multidimensional plots using virtual reality in DACE
Allen, Christopher	P4.2	Optimization of Aperture Photometry in the Chandra Source Catalog
Allen, Mark	P2.1	Toward common solutions for data access, discovery and interoperability
Araya, Mauricio	P1.1	Cherenkov Shower Detection Combining Probability Distributions from Convolutional Neural Networks.
Arviset, Christophe	P10.1	ESA Science Archives and ESASKY
Asercion, Joseph	P4.3	Utilizing Conda for Fermi Data Analysis Software Releases
Atemkeng Teufack, Marcellin	P10.2	Baseline-dependent dimensional reduction techniques for radio interferometric big data compression
Baines, Deborah	P5.1	DEAVI: Dynamic Evolution Added Value Interface
Baumann, Matthieu	P5.2	New Python developments to access CDS services
Becciani, Ugo	P3.2	VislVO Visual Analytics Tool an EOSC Science Demonstrator for data discovery
Berriman, Bruce	P5.3	Breathing New Life Into An Old Pipeline: Precision Radial Velocity Spectra of TESS Exo-planet Candidates
Blanco-Cuaresma, Sergi	P6.1	Fundamentals of effective cloud management for the new NASA Astrophysics Data System
Boch, Thomas	P10.3	Creating and managing very large HiPS: the PanSTARRS case
Boisson, Catherine	P6.2	Executable user documentation for in-development software
Bolton, Adam	P2.2	Towards a National Center for Optical and Infrared Astronomy: Opportunities and Challenges in Science, Software, and Data
Brown, Matthew	P4.4	Streamlining Pipeline Workflows: Using Python with an Object-Oriented Approach to Consolidate Aggregate Pipeline Processes
Burnier, Julien	P6.3	Development, tests and deployment of web application in DACE
Bushouse, Howard	P12.1	The JWST Data Calibration Pipeline
Cano, Juan Luis	P4.5	Full Stack Data Science: Using Python to download, clean, analyze and visualize Gaia data
Cardiel, Nicolás	P11.1	Rectification and wavelength calibration of EMIR spectroscopic data with Python
Ceballos, M.Teresa	P12.2	Jitter and readout sampling frequency impact on the Athena/X-IFU performance
Chen, Wei	P9.7	An automatic data collection and analysis software for GRB studies and its result
Chilingarian, Igor	P13.1	Binospec@MMT: a database-driven model of operations, from planning to data reduction and archiving
Chu, Selina	P1.21	Automatic Detection of Microlensing Events in the Galactic Bulge using Machine Learning Techniques
Coulais, Alain	P6.4	GDL- GNU Data Language 1.0
Crawford, Steven	P2.3	Triumphs and Challenges of the Astropy Project: Open Development of a Python Library for Astronomy
Cupani, Guido	P4.6	Astrocook: your spectral analysis recipe book, now with a GUI
da Silva, Daniel	P7.2	CCSDSPy – Convenient Decoding of Binary Spacecraft Telemetry
Delgado, Arancha	P5.4	Gaia Photometric Science Alerts Data Flow
Dempsey, James	P10.4	Serving large scale survey data for ASKAP with SIA2 and SODA
Deshpande, Shubhankar	P4.7	GMRT Archive Processing Project
Dower, Theresa	P6.5	Automating Multimission Access: rolling out a flexible Virtual Observatory-based infrastructure
Dowler, Patrick	P10.5	Archive-2.0: Metadata and Data Synchronisation between MAST, CADC, and ESAC

Dreissigacker, Christoph	P1.2	Deep-Learning Continuous Gravitational Waves
Ebisawa, Ken	P9.8	CALET Gamma-ray Burst Monitor web-analysis system
Eguchi, Satoshi	P8.2	Prototype Implementation of a Web-Based Gravitational Wave Signal Analyzer: SNE-GRAF
Eisenhamer, Jonathan	P13.2	JWST Association Generation: Piecing It All Together
Emonts, Bjorn	P5.5	CASA, the Common Astronomy Software Applications for Radio Astronomy
Fan, Dongwei	P12.3	A simple survey for cross-matching method
Feinstein, Carlos	P12.4	Extragalactic stellar photometry and the blending problem
Ferguson, Henry	P5.6	Data Analysis Tools for JWST and Beyond
Fernique, Pierre	P8.3	Time in Aladin
Gabriel, Carlos	P13.3	The COSPAR Capacity Building Initiative: entering a new phase
Gallegos, Julio	P6.6	Agile meets Requirements
Geers, Vincent	P13.4	MIRISim: the JWST-MIRI simulator
Giardino, Giovanna	P13.5	Preparing for JWST: a detailed simulation of a MOS deep field with NIRSpec
Gordon, Craig	P5.7	The Present State of XSPEC and CFITSIO, Astronomical Analysis Packages Maintained by NASA's HEASARC.
Goz, David	P12.5	Astrophysical codes migration into Exascale Era
Gracia Abril, Gonzalo	P2.4	Gaia DPAC Project Office: Coordinating the production of the largest star catalogue.
Grange, Yan	P5.8	The Dutch contribution to the ESRC
Grishin, Kirill	P3.3	Open-source web tools for spectroscopic and imaging data visualization for the VOXAs-tro initiative
Guedes dos Santos, Luiz Fernando	P1.20	Analyzing WIND data using machine learning
Gupta, Pramod	P4.8	Computational Astrophysics with Go
Gwyn, Stephen	P13.6	MegaPipe 2.0: 10000 square degrees of CFHT MegaCam imaging
Hague, Peter	P3.4	BasC- A Bayesian path to improved source finding in radio astronomy
Han, Jun	P6.7	The conceptual design of amateur public observatory software framework
He, Helen	P12.6	Pixel mask Filtering of CXC Datamodel
Irby, Bryan	P5.9	HEASOFT: A FITS Data Processing and Analysis Software Suite
Ireland, Jack	P7.3	The SunPy Ecosystem
Iwasaki, Hiroyoshi	P1.3	A new implementation of deep neural network to spatio-spectral analysis in X-ray astronomy
Jenness, Tim	P13.7	Abstracting the storage and retrieval of image data at the LSST
Johnston, Kyle	P1.4	Variable Star Classification Using Multi-View Metric Learning
Joncour, Isabelle	P1.5	Multiscale spatial analysis of young stars complex using the dbscan clustering algorithm recursive
Kaleida, Catherine	P4.9	JWST Data Management Subsystem Operations: Preparing to Receive, Process, and Archive JWST Data
Kaplan, Kyle	P12.7	The algorithms behind the HPF and NEID pipeline
Karim, Ramsey	P12.8	Alpha-X: An Alpha Shape-based Hierarchical Clustering Algorithm
Kaufman, Zeke	P4.10	CIAO: A Look Under the Hood of Chandra's X-Ray Imaging and Analysis Software Configuration Management – Past, Present, and Future.
Kawasaki, Wataru	P3.5	Vissage: viewing polarisation data from ALMA
Kelley, Michael	P7.4	ZChecker: Finding Cometary Outbursts with the Zwicky Transient Facility
Kitaeff, Vyacheslav	P4.11	DALiuGE/CASA based processing for the extragalactic HI observations with FAST.
Kong, Xiao	P1.6	The construction of a new stellar classification template library for the LAMOST 1D Pipeline based on LAMOST DR5
Kosack, Karl	P4.12	Data Processing Challenges for CTA
Kosugi, George	P12.9	Qualification of Sparse Modeling Technique for radio interferometric imaging of ALMA
Kyprianou, Mark	P2.5	Lessons Learned from the behemoth JWST Data Management effort
Labrie, Kathleen	P11.2	DRAGONS – Data Reduction for Astronomy from Gemini Observatory North and South

Lacy, Mark	P2.6	The VLA Sky Survey- operations, data processing and archiving
Lammers, Jason	P5.10	Optimization Strategies for running Legacy Codes
Landoni, Marco	P6.8	Application of Google Cloud Platform in Astrophysics
Laurino, Omar	P10.6	Mapping Data Models to VOTable
Lemson, Gerard	P10.7	FileDB, a pattern for querying cosmological simulations
Li, Changhua	P1.7	Design of KNN Star-QSO Classification Algorithm Based on Cloud Computing
Lim, Pey Lian	P11.3	stginga: Ginga Plugins for Data Analysis and Quality Assurance of HST and JWST Science Data
Lin, Ganghua	P11.4	The quality assurance of Chinese solar physics historical observation data archives
Louys, Mireille	P11.5	A TripleStore implementation of the IVOA Provenance Data model
Lu, Yuxi	P12.10	Modeling Narrow Rings with a Single Chain of Gravitating Particles
Lundquist, Michael	P9.9	Searching for Optical Counterparts to Gravitational Wave Events with the Catalina Sky Survey
Lutz, Katharina	P13.8	Getting ready for the fourth Asterics DADI virtual observatory school
Ma, Xiang	P8.4	Insight-HXMT Timing Analysis of New Black Hole Candidate MAXI J1820+070
Major, Brian	P5.11	Arcade: A User Focussed, Visual Compute Environment in CANFAR
Marquez, Maria Jose	P5.12	Galaxy Cataloguing Expert System (GCES): Use Cases
Martin, Thomas	P1.8	Putting more intelligence into the reduction and analysis of SITELLE data.
McWhirter, Paul Ross	P1.9	Saving endangered animals with Astro-Ecology
Mellado, Pablo	P3.6	Realtime telescope and data visualization using web technologies
Michel, Laurent	P13.9	ALiX: An advanced search interface for AladinLite
Micol, Alberto	P10.8	The new science portal and the programmatic and VO interfaces of the ESO science archive
Million, Chase	P8.5	Evaluating Methods for Flare Detection in GALEX Light Curves
Mink, Jessica	P5.13	Finding Your Place in the Cosmos with WCSTools
Molinaro, Marco	P13.10	Starting up a Data Model for Exoplanetary Data
Morii, Mikio	P12.11	Image reconstruction method for an X-ray telescope with an angular resolution booster
Navarro, Vicente	P5.14	ESAC Science Exploitation and Preservation Platform Reference Architecture
Nie, Jianyin	P10.9	HXMT Archive and Data Process System
Nieto, Sara	P10.10	Science Exploration in a Big Data Archive: The Euclid Scientific Archive System
Nomaru, Junichi	P13.11	Subaru Telescope Network 5 or STN5 – The new computer and network system at Subaru Telescope
Oloketyl, Jacob	P7.5	The Analysis of Periodic Variation of Sunspot Groups and the X-ray Flare Classes
Paillasse, Maxime	P1.10	Identifying contaminants in astronomical images using convolutional neural networks
Parra, Jose	P10.11	WAN Optimization for ALMA Data
Pascual, Sergio	P4.13	Running GTC data reduction pipelines in Jupyter
Patterson, Gerald	P13.12	Anticipated Data Products from the Europa Imaging System (EIS) on Europa Clipper
Paxson, Charles	P6.9	Transforming Science Code into Maintainable Software, Insights into the G-CLEF Exposure Time Calculator
Perea-Calderon, Jose Vicente	P4.14	Reprocessing all the XMM-Newton scientific data: a challenge for the Pipeline Processing System
Perez, Fernando	P6.10	Centralisation and management of science operations procedures and test cases using SOCCI
Pineau, Francois-Xavier	P13.13	The CDS HEALPix library
Polisensky, Emil	P10.12	The VLITE Database Pipeline
Prix, Reinhard	P12.12	Efficient FFT-based F-statistic implementation for continuous-gravitational-wave searches
Renil, Rosly	P4.15	MeerKAT: Operational Workflow and Data Analysis

Reustle, Alexander	P6.11	Automating the Fermi Software Development Process with Continuous Integration Practices
Roby, Trey	P3.7	New visualization Features in Firefly
Romelli, Erik	P4.16	Euclidizing external tools: an example from SDC-IT on how to handle software and humanware
Rubtsov, Evgenii	P5.15	Stellar atmospheric parameters from full spectrum fitting of intermediate and high-resolution spectra against PHOENIX/BT-Settl synthetic stellar atmospheres
Rutkowski, Kristin	P13.14	Science Data Pipeline of NICER
Ryan, P. Wesley	P13.15	Schroedinger's code: Source code availability and transparency in astrophysics
Salgado, Jesus	P10.13	Gaia DR2 and the Virtual Observatory: VO in operations new era
Sanguillon, Michele	P10.14	An overview of the OVGSO data centre
Santos, Rafael	P1.11	A hybrid neural network approach to estimate galaxy redshifts from multi-band photometric survey.
Schaaff, Andre	P1.12	Chatting with the astronomical data services.
Servillat, Mathieu	P11.6	The IVOA Provenance Data Model
Shen, Robert	P5.16	ASVO MWA project: lower technical barrier to access MWA data
Shin, Min-Su	P8.6	Applications of the in-memory database Redis in processing transient event alerts
Shipman, Russell	P13.16	Pipeline Processing of Stratospheric Terahertz Observatory (STO-2) Galactic Plane Survey
Shirasaki, Yuji	P13.17	VO service in Japan: Registry service based on Apache Solr and SIA v2 service for Japanese Facilities
Sihlangu, Isaac	P1.13	MeerKAT Radio Frequency Interference characterization using Machine Learning
Snyder, Gregory	P1.14	Mock Datasets and Galaxy Merger Statistics from Cosmological Hydro Simulations
Solar, Martin	P13.18	Azimuthal variation of oxygen abundance in galactic stellar discs of the EAGLE simulations
Solar, Mauricio	P12.13	Tensor Clusters for extracting and summarizing components in spectral cubes
Song, Xinying	P4.17	Development on Data Analysis Software on GECAM
Stenborg, Travis	P2.7	Contracts Tracking for Astronomical Infrastructure Projects in Jira
Stephens, Tom	P13.19	Running the Fermi Science Tools on Windows
Streicher, Ole	P11.7	DOI in Astronomy
Sutrisno, Raymond	P1.15	A Machine Learning Approach to Detect Dark Matter Particles Under Extreme Class Imbalance and Large Datasets
Swade, Daryl	P10.15	The TESS Science Data Archive
Tao, Yihan	P1.16	Spectral Classification of Galaxies using Deep Neural Networks and Self-taught Learning
Taylor, Mark	P3.8	TOPCAT and Gaia
Teuben, Peter	P13.20	QAC: Quick Array Combinations with CASA
Tian, Fan	P12.14	Robust Registration of Astronomy Catalog
Torres, Simón	P4.18	An on-site data reduction pipeline for the Goodman Spectrograph
Tsutsumi, Takahiro	P12.15	Development of auto-multithresh: an automated masking algorithm for deconvolution in CASA
Vitello, Fabio	P3.9	VisIVO Visual Analytics Tool an EOSC Science Demonstrator for data discovery
Wang, Rui	P1.17	Analysis of Stellar Spectra from LAMOST DRS with Generative Spectrum Networks
Wicenec, Andreas	P10.16	The Murchison Widefield Array's VO compliant archive
Woods, Paul	P13.21	Software and data policies for Nature journals
Xiao, Jian	P1.18	Research on Automatic Recognition of Radio Frequency Interference Based on Deep Learning
Xu, Yang	P12.16	An algorithm of selection of meteor candidates in GWAC system
Yamaguchi, Masayuki	P13.22	Super-resolution Imaging of the Protoplanetary Disk HD 142527 using Sparse Modeling
Yunfei, Xu	P9.10	aLigo/Virgo Gravitational Wave Electromagnetic Counterparts Host Galaxy Candidates Filtering Pipeline
Zhang, Yanxia	P1.19	Machine Learning for Quasar Candidate Selection

## WiFi and Network

- Network SSID: **The Hotel at UMD Guest**
- Select “**Enter Complimentary Code**” from the drop-down list
- Enter “**southerndifference**” as the code
- Check the box (below the Continue button) to accept the Terms and Conditions, then click the **Continue** button

Conference WiFi is complimentary, but you will need to renew your lease every 24 hours. Please do not connect more than two devices at a time. Note that wifi connections are limited to 5Mbit.

The speaker’s podium will have a 100Mbit ethernet line.

## Registration Desk

The Registration Desk is located in Foyer A, and will always be staffed. Check in here to validate parking and submit your signed Copyright Release form.

### Registration Hours

Sunday	12:00 – 19:00
Monday	07:30 – 09:30
Tuesday-Thursday	08:00 – 09:30

You can also email the Registration Desk at [adass18registration@umd.edu](mailto:adass18registration@umd.edu) for requests that are not time-critical.

## Bulletin Board

A bulletin board will be located near the Registration Desk for formal notices advertising jobs, internships, conferences, etc., as well as notes and individual messages.

## Conference Meals

Breakfast and lunch are included in your conference registration:

Buffet Breakfast	07:00 – 08:30	Salon CD
Buffet Lunch	12:30 – 14:00	Salon CDEF

*Please wear your ADASS badge at all times.*

## Parking

**Daily hotel self-parking** will be discounted to \$7/day. When you come into the parking garage you will receive a ticket that you must take to the registration desk for a validation sticker. *Do this first thing when you arrive in the morning.* Before going to your car, stop at the pay station and insert your ticket with the validation sticker. Your parking will be reduced from \$24 to \$7 for the day.

**Self-parking for overnight** guests will be discounted to \$10/night (from \$16). When you check-in, let the front desk know that you have parked a vehicle and the charges will be added to your room. You will receive a white card to use for in and out access to the garage.

## Conference Proceedings

All presenters must prepare and upload a draft of their paper for the proceedings before the conference starts so that the publisher can accurately assess pages to assign for the book. The final version must be submitted by 1 December 2018.

This year there is no excuse for not sending in your draft, as we made personalized LaTeX files with your paper-ID code processed from your registration form. You just need to test that you can make a PDF from the LaTeX file. We provide you with a Makefile to streamline this process. Uploads are enabled for [ftp.astro.umd.edu](ftp://ftp.astro.umd.edu) in the **incoming/adass** directory. Use filenames with your paper-ID and version number, e.g., "P12-3\_v1.tar.gz".

Please check the conference website for details and updates.

*Jim Henson with Kermit the Frog statue (Photo by Peter Teuben)*



## The Henson Room

The Henson Room, named for UMD alum and father of the Muppets, Jim Henson, is located in the far left (northwest) corner of the conference space. This room will serve as both a Ready Room and an impromptu meeting space, as needed.

## Poster and Booth Setup

Setup for participants is Sunday 16:00-18:00, and Monday starting at 07:30, in Foyer AB. For those setting up posters, we will provide pushpins and (Velcro-friendly) poster boards with your poster ID in the corner. You can find your poster ID in the "Posters List" in this booklet.

Note that this Foyer is not secured overnight. If you need to secure equipment overnight, or any time during the conference, please stop at the Registration Desk and request access to the Wayne Curry Room, which is next to the Henson Room.

# Presentations

## Oral

Invited talks are allotted 25 minutes plus 5 minutes for questions; oral presentations are allotted 12+3 minutes.

Please format your slides for a 16:9 (high-def) display, and convert them to PDF. Name your PDF file with your surname ("surname.pdf") and email it to [adass2018@astro.umd.edu](mailto:adass2018@astro.umd.edu) at least 12 hours prior to your presentation. Alternately, you can hand it to the tech support person in the presentation room on a USB drive during a break in the earlier sessions. We will post these files publicly after your talk.

If you require your own laptop to make your presentation, please let us know at least a day in advance to make arrangements to have the setup tested. Any time required for setup on the spot will be deducted from the time allotted for the presentation.

The presentation computer will have a 100Mbit ethernet connection. If your talk depends critically on that connection, please let us know via email to [adass2018@astro.umd.edu](mailto:adass2018@astro.umd.edu).

## Lightning Talks

20 of the 158 posters submitted will be selected for Lightning Talks. Email your poster ID to [adass2018@astro.umd.edu](mailto:adass2018@astro.umd.edu) if you wish to be considered for a Lightning Talk. We will draw names randomly for the Tuesday and Wednesday Lightning Talk sessions. Those selected must send their (ideally) 16:9 format slides in the form of a PDF file to [adass2018@astro.umd.edu](mailto:adass2018@astro.umd.edu) in advance so it can be cued up for the presentation. You may submit as many slides as you like, but you will be strictly limited to three minutes.

## Posters

Please send a PDF of your poster to [adass2018@astro.umd.edu](mailto:adass2018@astro.umd.edu) as soon as possible. We will provide a link to it in the online program. Name the file using your poster-ID, e.g., "P12-3.pdf". You can find your poster-ID elsewhere in this booklet.

If you like, you may send us a single, nice, telling JPEG slide (preferably 16:9) that summarizes your poster, to be placed in the conference slide rotation. This slide should also be named using your poster-ID, e.g., "P12-3.jpg".

# Social Events

Opening Reception      Sunday, 18:00 – 20:00      Foyer AB

The Opening Reception is included with your registration and includes heavy hors d'oeurves and a cash bar (ADASS is buying the first round).

Conference Banquet      Tuesday, 19:00 – 22:00      *Top of the 7's*

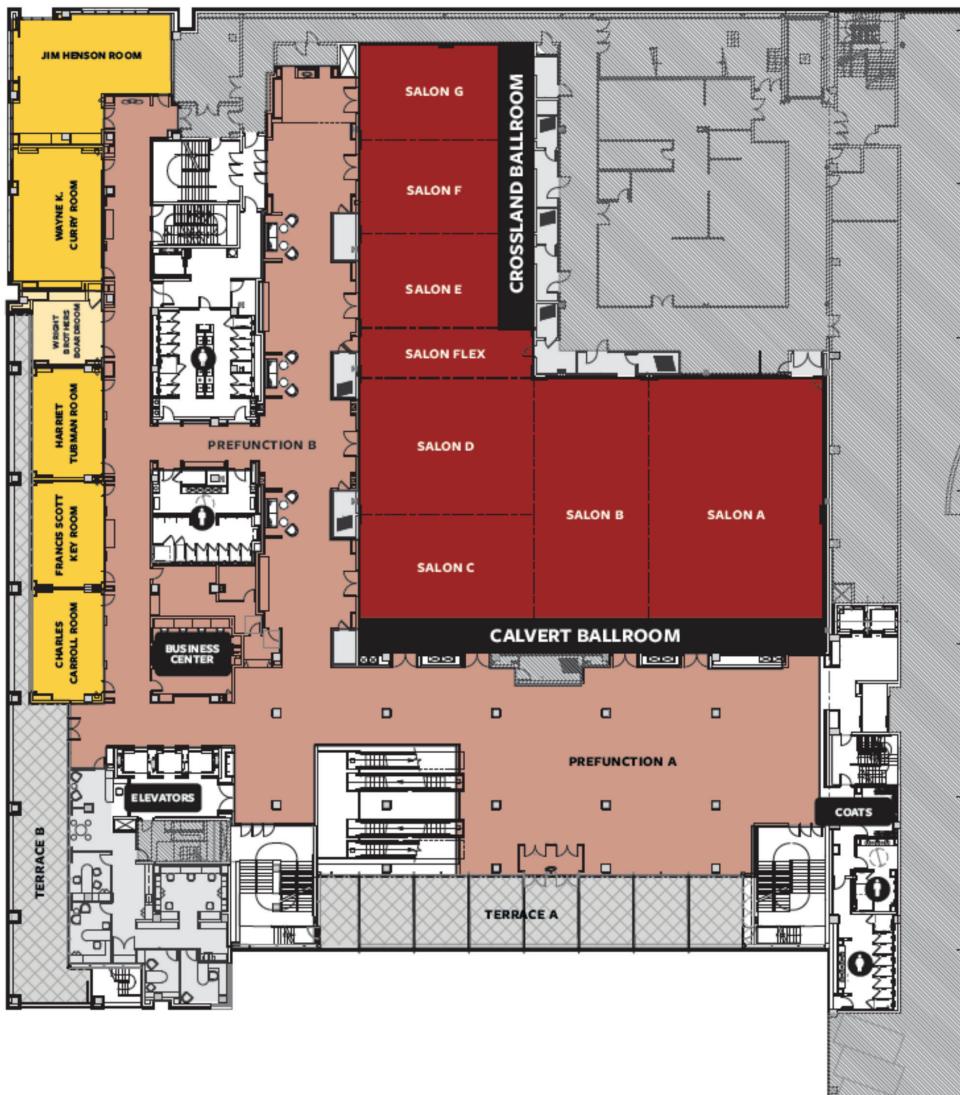
*Top of the 7's* is located on the penthouse level of The Hotel.

# Notes

*Main Administration Building with Reflecting Pool  
(Photo by John T. Consoli/University of Maryland)*



# The Venue

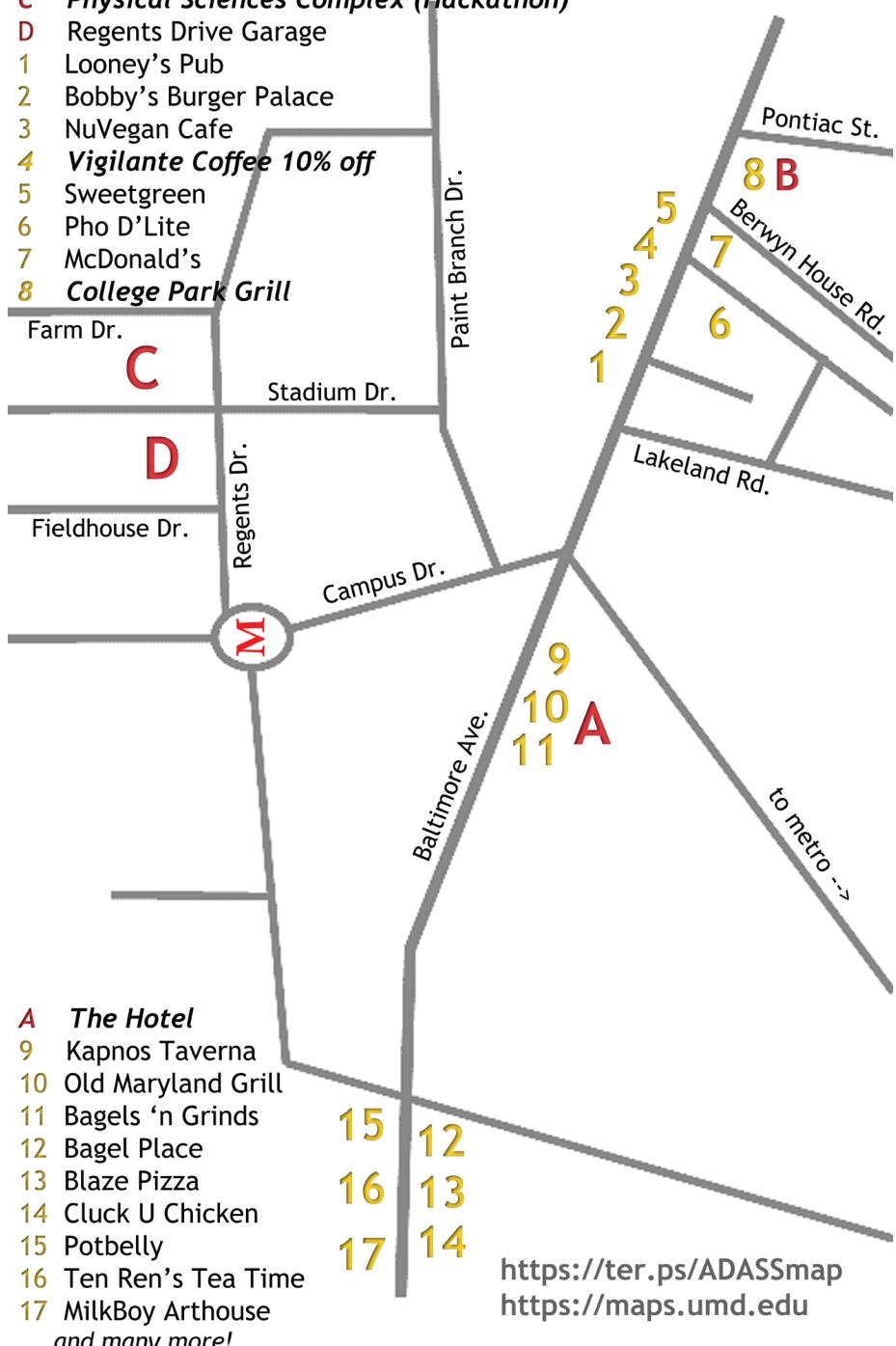


*The Hotel at UMD (Photo by Peter Teuben)*



# Local Area

- B Cambria Hotel
- C **Physical Sciences Complex (Hackathon)**
- D Regents Drive Garage
- 1 Looney's Pub
- 2 Bobby's Burger Palace
- 3 NuVegan Cafe
- 4 **Vigilante Coffee 10% off**
- 5 Sweetgreen
- 6 Pho D'Lite
- 7 McDonald's
- 8 **College Park Grill**



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