

2017 DDA Meeting Schedule & Video Recordings

Video Recordings

Video Recordings of talks are included where the presenter has given written permission for this posting and where the recording was successful (e.g., the Monday afternoon session on Planetary Formation and System Architecture, was not recorded due to a technical glitch).

Sunday, June 11

- 17:00 Committee Meeting - The GO Jones Building (Building #25 on the [Campus Map](#) [1])
- 19:00 Opening Reception - The Graduate Centre (Building #18 on the [Campus Map](#) [1])

Monday, June 12 - Arts Two Lecture Theatre (Building #35 on the [Campus Map](#) [1])

- 8:00 Arts Two Opens - Registration Opens
- 8:15 Coffee, Tea and Continental Breakfast
- 9:00 Craig Agnor and Carl Murray Introduction

Post Main Sequence Planetary System Science, Part 1 (Chair: Dimitri Veras)

- 9:15 Amy Bonsor University of Cambridge [Dust around evolved stars: tracing the fate of planetary systems](#) [2] (Invited) [\[Video Recording\]](#) [3]
- 9:50 Roman Rafikov University of Cambridge [Physics of the Compact Debris Disks Around Metal Rich White Dwarfs](#) [4]
- 10:05 Rik Van Lieshout Institute of Astronomy, University of Cambridge [Exoplanet recycling in massive white-dwarf debris discs](#) [5]
- 10:20 Coffee Break

Post Main Sequence Planetary System Science, Part 2 (Chair: Michele Bannister)

- 10:50 Alexander Mustill Lunds Universitet [The dynamics of post-main sequence planetary systems](#) [6] (Invited) [\[Video Recording\]](#) [7]
- 11:25 Uri Malamud Technion Israel Institute of Technology [Post main sequence evolution of icy minor planets: water retention and white dwarf pollution](#) [8] [\[Video Recording\]](#) [9]
- 11:40 Matthew Payne Harvard-Smithsonian CfA [The Evolution of Small Bodies in Exo-Planetary Systems through All Stages of Stellar Evolution](#) [10] (Invited) [\[Video Recording\]](#) [11]

12:15	Dimitri Veras	University of Warwick	Simulating the tidal disruption of the asteroid orbiting white dwarf WD 1145+017 [12] [Video Recording] [13]
12:30	Lunch		
Planetary Formation and System Architecture, Part 1 (Chair: Matija Cuk)			
14:00	Matthew Clement	University of Oklahoma	An Early Instabilities Effect on Terrestrial Planetary Formation [14]
14:15	Anne-Sophie Libert	University of Namur	Influence of resonant periodic orbits on the formation of giant planetary systems [15]
14:30	Kedron Silsbee	Princeton University	Planet formation in binary systems: simulating coagulation using analytically determined collision velocities [16]
14:45	Craig Agnor	Queen Mary University of London	On the Present and Past Secular Architecture of the Terrestrial Planets [17]
15:00	Billy Quarles	University of Oklahoma	Maximizing planet packing in the alpha Centauri AB system [18]
15:15	Christopher Spalding	California Institute of Technology	The Intrinsic Multiplicity of Single-transiting Kepler Systems [19]
15:30	Coffee Break		
Planetary Formation and System Architecture, Part 2 (Chair: Ann-Marie Madigan)			
16:00	Nikolaos Georgakarakos	New York University Abu Dhabi	Long term evolution of planetary systems with a terrestrial planet and a giant planet [20]
16:15	Katherine A. Kretke	SSERVI/Southwest Research Institute	Effect of Giant Planet Formation on the Compositional Mixture of the Asteroid Belt [21] [Video Recording] [22]
The Caledonian Symmetric Four- and Five-Body Problems (Chair: Ann-Marie Madigan)			
16:30	Bonnie Steves	Glasgow Caledonian University	Analytical stability criteria for the Caledonian Symmetric Four and Five Body Problems [23] [Video Recording] [24]
16:45	Alex Davis	University of Colorado at Boulder	Constraining Binary Asteroid Mass Distributions Based On

[Mutual Dynamics](#) [25]
(Duncombe Award
winner) [\[Video
Recording\]](#) [26]

Iapetus! (Chair: Ann-Marie Madigan)

17:00	Matija Cuk	SETI Institute	A Secular Resonance Between Iapetus and the Giant Planets [27] [Video Recording] [28]
17:15	William Polycarpe	Observatoire de Paris	Is Titan responsible for Iapetus' orbit? [29]
17:30	DDA Business Meeting		
18:30	Adjourn		

Tuesday, June 13 - Arts Two Lecture Theatre (Building #35 on the [Campus Map](#) [1])

8:00	Arts Two Opens		
8:15	Coffee and Continental Breakfast		

Impact of Gaia Astrometry on Dynamical Astronomy, Part 1 (Chair: Monica Valluri)

9:00	Daniel Hestroffer	Paris Observatory	Astrometry and dynamics of Solar System Objects with Gaia GDR observations and catalogues [30] (Invited) [Video Recording] [31]
9:35	Todd Henry	RECONS	Our View of the Solar Neighborhood Before, During, and After Gaia [32] (Invited) [Video Recording] [33]
10:10	Norbert Zacharias	U.S. Naval Observatory	Galactic Dynamics: new proper motions from Gaia and UCAC [34] [Video Recording] [35]
10:25	Coffee Break		

Impact of Gaia Astrometry on Dynamical Astronomy, Part 2 (Chair: Norbert Zacharias)

10:55	Anna Lisa Varri	University of Edinburgh	New science from the phase space of old stellar systems [36] [Video Recording] [37]
11:10	Laura Watkins	Space Telescope Science Institute	Tycho-Gaia Astrometric Solution parallaxes and proper motions for 5 Galactic globular clusters [38] (Invited) [Video Recording] [39]
11:45	Monica Valluri	University of Michigan	Using tidal streams to investigate the rotation of the Milky Way's dark matter halo [40] [Video Recording] [41]

12:00	Lunch		
Planet and Satellite Rotation and Orientation (Chair: Benoit Noyelles)			
13:30	Rose-Marie Baland	Royal Observatory of Belgium	The influence of tides and of the precession of the pericenter on the orientation of the rotation axis of a solid Mercury [42]
13:45	Xiaojin Xi	I'Observatoire de Paris	Analytical representation for ephemeris with short time-span - Application to the longitude of Titan [43] [Video Recording] [44]
14:00	Marie Yseboodt	Royal Observatory of Belgium	Mars rotation using geodesy data [45] [Video Recording] [46]
14:15	Gwenaël Boué	UPMC	On Titan's obliquity [47] [Video Recording] [48]
14:30	Aswin Sekhar	Centre for Earth Evolution and Dynamics	Rapid Enhancement in General Relativistic Precession Rates due to Kozai Mechanism in Solar System Bodies [49] [Video Recording] [50]
14:45	Coffee Break		
Tides and Binaries (Chair: Laura Watkins)			
15:15	Michelle Vick	Cornell University	Dynamical Tides in Highly Eccentric Binaries: Chaos, Dissipation and Quasi-Steady State [51] (Duncombe Award winner)
15:30	Alexandre Correia	University of Aveiro	Tidal evolution of circumbinary systems [52] [Video Recording] [53]
15:45	Wm. Van Altena	Yale University	Sixteen Years of Speckle Interferometry at the WIYN Observatory [54]
16:00	James Cho	Queen Mary University of London	Turbulent Mixing on Close-In Planets by Libration Tide [55]
Brouwer Award Lecture (Chair: Craig Agnor)			
16:15	Rosemary Wyse	Johns Hopkins University	Brouwer Award Lecture: The Cosmological Context of the Milky Way Galaxy [56] [Video Recording] [57]



16:50 **Reception and Poster Session**

19:00 Adjourn

Wednesday, June 14 - Arts Two Lecture Theatre (Building #35 on the [Campus Map](#) [1])

8:00 Arts Two Opens

8:15 Coffee, Tea and Continental Breakfast

Kuiper Belt and Planet Nine (Chair: Matthew Payne)

9:00	Michele Bannister	Queen's University Belfast	Fantastic Icy Worlds and Where to Find Them [58] (Invited) [Video Recording] [59]
9:35	Rodney Gomes	Obs. Nacional	Making the cold Kuiper belt in a planetary instability migration model [60] [Video Recording] [61]
9:50	Darin Ragozzine	Brigham Young University	Tripling the Haumea Family Membership to Constrain Its Formation [62] [Video Recording] [63]
10:05	Elizabeth Bailey	Caltech	The Role of Resonances in the Search for Planet Nine [64] [Video Recording] [65]
10:20	Robert Jacobson	JPL	Constraints on the Mass and Location of Planet 9 set by Range and VLBI Observations of Spacecraft at Saturn [66]

10:35 Coffee Break

Comets (Chair: Phil Nicholson)

11:05	Travis Swenson	Stanford University	Invariant Manifolds and the Transport and Capture of Comet Shoemaker-Levy 9 [67] [Video Recording] [68]
11:20	Luke Dones	Southwest Research Institute	Ways of Changing the Number and Size Distribution of Ecliptic Comets [69] [Video Recording] [70]

Rings and Moons Beyond Saturn (Chair: Phil Nicholson)

11:35	Robert Chancia	University of Idaho	Weighing Uranus' moon Cressida with the η ring [71] (Duncombe Award winner) [Video Recording] [72]
11:50	Bruno Sicardy	Obs. Paris and Paris 6 Univ.	The dynamics of rings around small, irregular bodies [73]
12:05	Mark Showalter	SETI Institute	Ongoing Dynamics and

12:20	Rosemary Cave	Queen Mary University of London	Evolution of Neptune's Ring-Moon System [74] Uranus' Unstable Moons: Collision Outcomes and Implications [75] [Video Recording] [76]
12:35	Lunch		
Galaxies and Cosmology (Chair: Anna Lisa Varri)			
14:05	Ann-Marie Madigan	CU Boulder	Tidal disruption events from eccentric nuclear stellar disks [77] [Video Recording] [78]
14:20	Heikki Salo	University of Oulu	N-body modeling of barlens galaxies: Boxy/Peanut/X observed at different viewing geometries [79]
14:35	Juntai Shen	Shanghai Astronomical Obs.	A Potential Proxy of the Second Integral of Motion (I2) in a Rotating Barred Potential [80]
14:50	Phil Breen	University of Edinburgh	Dynamical evolution of globular clusters in dark matter halos [81]
15:05	Raphaël Errani	University of Edinburgh	The effect of a disc on the population of cuspy and cored dark matter substructures in Milky Way-like galaxies [82]
15:20	Toshio Fukushima	National Astronomical Observatory of Japan	Numerical computation of gravitational field of general extended body and its application to rotation curve study of galaxies [83] [Video Recording] [84]
15:35	Indranil Banik	University of Saint Andrews	The High Velocity Galaxy Challenge to ΛCDM in the Local Group [85] [Video Recording] [86]
15:50	Coffee Break		
Saturn's Rings and Ring-Satellite Dynamics (Chair: Matt Tiscareno)			
16:20	Maryame El Moutamid	Cornell University	On what we have learned about the system of Saturn thanks to Cassini [87] (Invited) [Video Recording] [88]
16:55	Silvia Giuliatti-Winter	Campus De Guaratingueta UNESP	The Long Term Evolution of the Satellites Aegaeon, Methone, Anthe, and

17:10	Aurélien Crida	Observatoire de la Côte d'Azur	Pallene, and the Nearby Region [89] Formation of Janus and Epimetheus from Saturn's rings as coorbitals, thanks to Mimas' 2:3 inner Mean Motion Resonances [90] [Video Recording] [91]
17:25	Jing Luan	University of California at Berkeley	How tides get dissipated in Saturn? A question probably answerable by Cassini [92] [Video Recording] [93]
17:40	Benoit Noyelles	University of Namur	The relation between the geophysical activity of the Saturnian satellites and the Cassini Division [94] [Video Recording] [95]
17:55	Adjourn		
19:00	Banquet		

Thursday, June 15 - Arts Two Lecture Theatre (Building #35 on the [Campus Map](#) [1])

8:00	Arts Two Opens		
8:15	Coffee, Tea and Continental Breakfast		
Cassini Ring-Grazing Orbits and Grand Finale, Part 1 (Chair: Marina Brozovic)			

9:00	Pierre-Yves Longaretti	IPAG	Global modes in Saturn's main rings. Theoretical background and current issues [96] (Invited) [Video Recording] [97]
9:35	Glen Stewart	Univ. of Colorado	Straw Formation and Enhanced Damping of Strong Density Waves in Saturn's Rings [98] [Video Recording] [99]
9:50	Marius Lehmann	University of Oulu	The role of collective self-gravity in the nonlinear evolution of viscous overstability in Saturn's rings [100]
10:05	Joseph Spitale	Planetary Science Institute	Saturn's Misbegotten Moonlets [101] [Video Recording] [102]

10:20	Coffee Break		
Cassini Ring-Grazing Orbits and Grand Finale, Part 2 (Chair: Glen Stewart)			

10:50	Linda Spilker	JPL	Cassini's Grand Finale and Recent Science Highlights [103] (Invited) [Video]
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11:25	Matthew Tiscareno	SETI Institute	Recording [104] Targeted flyby images of propellers in Saturn's A ring [105] [Video Recording] [106]
11:40	Matthew Hedman	University of Idaho	Drifting waves in Saturn's C ring. evidence for changes in Saturn's interior [107] [Video Recording] [108]
11:55	Philip Nicholson	Cornell Univ.	The puzzling structure in Saturn's outer B ring [109] [Video Recording] [110]
12:10	Carl Murray	Queen Mary University of London	High resolution Cassini observations of Saturn's A ring in the vicinity of object "Peggy" [111]
12:25	Lunch Small Bodies, Stability, and Instability (Chair: Aswin Sekhar)		
14:00	Michael Cahill	Univ. of Wisconsin, Washington County	Use of the Digamma Function in Statistical Astrophysics Distributions [112] [Video Recording] [113]
14:15	Apostolos Christou	Armagh Observatory and Planetarium	Orbital evolution and escape of Martian Trojans due to the Yarkovsky effect [114] [Video Recording] [115]
14:30	Seth Jacobson	University of Bayreuth	Origin of the Mars Trojans [116] [Video Recording] [117]
14:45	Daohai Li	Armagh Observatory	Dispersion of the Himmalia family of jovian irregular satellites by planetesimal encounters [118] [Video Recording] [119]
15:00	Othon Winter	UNESP	Dynamical Evolution of NEAs: A New Classification [120]
15:15	Brian Anderson	University of Southern California	Invariant Manifolds and The Transport of Asteroid 2006 RH120 [121]
15:30	Adjourn		

Posters - Arts Two Lecture Theatre (Building #35 on the [Campus Map](#) [1])

Dimitri Veras	University of Warwick	Total, partial and annular eclipse geometry of exoplanetary systems at
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Aswin Sekhar	Centre for Earth Evolution and Dynamics	exo-syzygy [122] Change in Minimum Orbit Intersection Distance due to General Relativistic Precession in Small Solar System Bodies [123]
Robert Jedicke	University of Hawaii	Broken Plane Delta-v Calculation For Rapid Assessment of Synthetic Asteroid Targets for In-situ Resource Utilization [124]
Marina Brozovic	Jet Propulsion Laboratory/Caltech	Lost and found: orbital uncertainties of the irregular satellites of the outer planets [125]
Thomas Rimlinger	University of Maryland, College Park	Ringing in an HNBODY Upgrade [126]
Kedron Silsbee	Princeton University	Forming a detached disk in the absence of external perturbations [127]
Juntai Shen	Shanghai Astronomical Obs.	Gas inflow patterns and nuclear rings in barred galaxies [128]
Altair Gomes	Observatório do Valongo	Predictions of Stellar Occultations by Irregular Satellites up to 2020 [129]
Bruno Morgado	Observatório Nacional do Brasil	Astrometry of mutual approximations between the Galilean moons observed at 2016 [130]
Elke Pilat-Lohinger	University of Vienna	Multi-Planets in Binary Star Systems [131]

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