**2016 DDA Meeting - Program**

All talks, Business meeting, coffee breaks, and poster sessions will take place at Vanderbilt University, 2201 West End Ave., Nashville, TN 37235 in Wilson Hall

Rules for speakers:
- 35 minute invited talks (30 minutes + 5 minutes for questions)
- 15 minute contributed talks (12 minutes + 3 minutes for questions)

**Sunday, May 22nd**
17:00 Committee meeting - Wilson Hall
19:00 Opening reception - Wilson Hall

**Monday, May 23rd**
9:00-9:10 Welcome Address: Kelly Holley-Bockelmann (DDA Chair)

**Planet Formation and Migration (Chair: Renu Malhotra)**
9:10 Konstantin Batygin "Origins of Hot Jupiters, Revisited"
9:25 Aaron Boley "The in situ formation of giant planets at short orbital periods"
9:40 Sean Mills "Kepler-233: A resonant chain of four transiting, sub-Neptune planets"
9:55 Craig Agnor "On the nature and timing of giant planet migration in the solar system"
10:10 Juliette Becker "WASP-47: a hot Jupiter with close friends"
10:25 Christopher Spalding "Dynamical origins of the Kepler dichotomy"
10:40-11:10 Coffee Break

**Tidal Dynamics and Moon Formation (Chair: Alice Quillen)**
BROUWER LECTURE:
11:10 Sylvio Ferraz Mello "Anelastic tides of close-in satellites and exoplanets"
11:45 Billy Quarles "Obliquity variations of a rapidly rotating Venus"
12:00 Benoit Noyelles "On the rotation of viscoelastic satellites"
12:15 Matija Cuk "Did the Kozai resonance help form Pluto's small moons"
12:30-14:00 Lunch

**Stability of Many-body systems/non-conservative system (Chair: Fred Adams)**
14:00 Daniel Scheeres "Hill stability in the finite density N-body problem"
14:20 Daniel Tamayo "A library for adding additional effects to N-body simulations"
14:40 David Tsang "Symplectic integrators: variational integrators for nonconservative systems"
15:00 Xianyu Wang "High eccentricity MMRs in the circular planar restricted three-body problem"

**Poster Introductions (4x2 minutes)**
15:15 Alice Quillan Simulating Tidal evolution and encounters with mass-spring models
15:17 Karl Jaehnig The Structural Evolution of Forming and Early Stage Star Clusters
15:19 Christina Davis Galaxy Transformation from Flyby Encounters
15:21 Indranil Banik Galaxy cluster collision speeds as a test of LCDM: possible systematics & how to avoid them
15:25-15:45 Coffee Break (Poster viewing)

**Effects of unseen planets (Chair: Daniel Scheeres)**
15:45 Christa Van Laerhoven "Effect of Unseen Planets on Secular Interactions"
16:05 Fred Adams "Interaction Cross Sections and Survival Probabilities for Proposed Solar System Member Planet Nine"
16:45 Kathryn Volk "Dynamics of the Most Distant Kuiper Belt Objects"

**17:15 DDA Business Meeting**
Tuesday, May 24th
Special-Session: Impact of Astrometry on Dynamics (Chair: Alice Monet)
9:00  Gurtina Besla  "HSTPROMO and the dynamics of the Local Group" [INVITED]
9:35  Maria Tiongco  "Effects of dynamical evolution on the internal kinematical properties of star clusters" [DUNCOMBE]
9:50  Sebastien Lepine  "Local stellar kinematics from large astrometric surveys: mapping the Galactic phase-space substructure" [INVITED]
10:25  Keivan Stassun  "Determination of Precise Pre-main-sequence stellar properties through stellar and disk orbital dynamics"
10:40-11:10 Coffee Break
11:10  Seigfried Eggl  "Is astrometry enough? Deflection relevant Near Earth Object characterization efforts in Europe" [INVITED]
11:45  Maria Kudryashova  "Solar system object observations with Gaia Mission"
12:00  Davide Farnocchia  "Scout: short-arc orbit analysis and hazard assessment for newly discovered asteroids"
12:15  Victor Slabinski
12:30  P.K. Seidelmann  "Why the Greenwich Meridian Moved"
12:45-14:00 Lunch

Multiplanet Systems: Stability and Characterization (Chair: Craig Agnor)
14:00  Jack Lissauer  "Orbital eccentricity and the stability of planets in the Alpha Centauri system"
14:15  Sarah Morrison  "Orbital stability of High Mass Planetary systems"
14:30  Alysa Obertas  "The stability of tightly-packed and evenly-spaced planetary systems"
14:45  Daniel Jontof-Hutter  "Eccentricity inferences in multi-planet systems with transit timing; degeneracies and apsidal alignment"
15:00  Kyle Conroy  "Discovery of a triple star system through dynamical Eclipse timing variations with Kepler eclipsing binaries"
15:15  Abhijit Krishna Puranam  "Tidal Q of a Super Earth: Dynamical constraints from the Gj 876 System"

Poster Introductions (4x2 minutes)
15:30  Robert Jacobson  The Gravity Field of Saturn and the Mass of the Saturnian Rings at the end of the Cassini Mission
15:32  Oleksiy Golubov  Modelling evolution of asteroid's rotation due to the YORP effect
15:34  B. Carter & M. Hedman  A dusty ringlet with connections to both Prometheus and the F ring
15:36  Charlie Finch  URAT Parallax Catalog: the largest parallax catalog since Hipparcos
15:40-16:10 Coffee Break (Poster viewing)
16:10  Renu Malhotra  "The mass distribution function of planets in the Galaxy"
16:25  Eva Bodman  "Cometary source for the strange behavior of KIC 8462852" [DUNCOMBE]
16:40  Karen Collins  "A case study in dynamical planet ingestion by a hot host star"
19:00-22:00 Public event at Dyer Observatory (optional): Panel discussion on Exoplanets

Wednesday, May 25th

Special session: Dynamics of Disks and Rings (Chair: Matthew Tiscareno)
9:00  Henrik Latter  "Planetary rings and astrophysical disks" [INVITED]
9:35  Douglas Hamilton  "Keeping the Edges Sharp I: Honing the Theory of Narrow Rings"
9:50  Andre Izidoro  "Structure of the Asteroid Belt from the Gas Giants' Growth and Chaotic Dynamics"
10:05  Seth Jacobson  "Establishing different size distributions in the asteroid belt"
10:20  Dong Lai  "Formation and dynamics of circumbinary planets"
10:35-11:00 Coffee Break
11:00  Alice Quillen  "Warp and streams - Pushing and lifting material out of the midplane from galactic and circumstellar disks" [INVITED]
11:35  Sarah Loebman  "Chemodynamical signatures of radial migration in the Milky Way" [INVITED]
12:10  Jon Bird  "Galaxy disks in balance: vertical settling as a result of inside-out growth"
12:25  Curtis Stuck  "Near-exponential galaxy disks produced by scattering"
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12:40- 14:00 Lunch

**Dynamics of galaxies and around supermassive black holes (Chair: Sarah Loebman)**

14:00 Stacy McGaugh "Predicting the Velocity Dispersions of the Dwarf Satellites Galaxies of Andromeda"

14:15 Indranil Banik "Anomalous motions in the local group: Evidence of a past Milky-Way Andromeda Flyby" [DUNCOMBE]

14:30 Kelly Holley-Bockelmann "Bar formation from Galaxy Flybys"

14:45 Monica Valluri "Orbits in N-body bars and the origin of the X-shapes in boxy-peanut bulges"

15:00 Ann-Marie Madigan "Gas clouds as dynamical probes of the accretion flow around Sgr A*"

15:15 Mauri Voltonen "Orbit of the OJ287 black hole binary as determined from the General Relativity centenary flare"

15:30-16:00 Coffee Break (Poster viewing)

**Dynamics of Small Solar System Bodies (Chair: Christa Van Laerhoven)**

16:00 Henry (Luke) Dones "Could the crates on the mid-sized moons of Saturn been made by satellite debris?"

16:15 Mark Showalter "Orbital and rotational dynamics of Pluto's small moons"

16:30 Rachel Smullen "The fate of debris in the Pluto-Charon system"

16:45 Daohai Li "Himalia and Phoebe: Little moons that punch above their weight"

17:00 Paul Chodas "Designing Asteroid Impact Scenario Trajectories"

17:15 Oleksiy Golubov "Spin state equilibria of asteroids due to YORP effects"

17:30 Rodney Anderson "Low-energy asteroid and comet transit analysis using isolating blocks"

19:00 **Conference Banquet:** [1] target="_blank">Sambuca, 601 12th Ave South, 7 pm, Wed. $65

--> **Sign-up for banquet by COB Monday. See Kelly H-B for details.**

**Thursday, May 26th**

**Saturn and Saturn's rings (Chair: Douglas Hamilton)**

9:00 Matthew Tiscareno "Propeller peregrinations: Ongoing observations of disk-embedded migration in Saturn's rings"

9:15 Thomas Rimlinger "Keeping the Edges Sharp II: Honing Simulations of Narrow Rings"

9:30 Philip Nicholson "Kronoseismology III: An update on Saturn-driven waves in the C ring"

9:45 Matthew Hedman "An array of asymmetry in Saturn's structure revealed by its rings"

10:00 Maryame El Moutamid "Tesseral resonances in the rings of Saturn"

10:15 Ethan Arnault "Physical characteristics of 'wisps' in the outer edge of the Keeler gap in Saturn's rings"

10:30-11:00 Coffee Break

11:00 Robert Jacobson "The gravity field of Saturn and the mass of the Saturnian rings at the end of the Cassini Mission"

11:15 Joseph Spitale "4-km body(ies?) embedded in Saturn's Huygens Ringlet"

11:30 Robert Chancia "Persistent pattern speeds in Saturn's D ring"

**Public Event on Exoplanets at Dyer Observatory:**

Public nights at Dyer Observatory [2] are typically sold out a month in advance and draw about 100 visitors, limited only by the available parking on the mountain. We will provide transportation to and from Dyer for a special DDA-sponsored public event on exoplanetary dynamics and astrobiology on May 24th at 7 pm.

We plan a short introductory primer on exoplanets, followed by a 4-6 member panel debate and Q+A session on what new data reveal about the possibility of life on other worlds.
If you would like to participate in this public event as a speaker, panelist, or guest, please email Kelly Holley-Bockelmann (k.holley@vanderbilt.edu [3]) with the subject line 'DDA at Dyer'.

Last update: 29 April 2016

Source URL: https://dda.aas.org/meetings/2016/program

Links
[2] https://wp0.its.vanderbilt.edu/dyer/
[3] mailto:k.holley@vanderbilt.edu