2026 57th Annual DDA Meeting Schedule

2026 57th Annual Meeting of the DDA

Chicago Illinois, USA

Oral Presentations

All times are local time (CDT, UTC-5)

Venue: Eckhardt Research Center (ERC 161)

5640 S Ellis Ave, Chicago, IL 60637

Full abstracts will be posted **here** before the meeting.

Contributed talks are 12m+3 (for questions). Invited talks are 15m+3m or 17m+3m.

* 2026 Duncombe award

** Invited talk

For talks and posters tips, please see here [1], including on how to upload posters.

Sunday, June 21st

Opening Reception

Venue: Eckhardt Research Center (ERC501).

5:00 – 7:00

DDA Committee Meeting

Venue: Eckhardt Research Center: Chandrasekhar room (ERC545).

6:00 – 7:00

Monday, June 22nd

Introduction and Announcements
Gongjie Li, Matt Clement, Dan Fabrycky
SOC, LOC, and DDA Chairs

9:00 – 9:10

Exoplanets I: Spin Orbit (Mis)alignment
Chair: Malena Rice
Slack Chair: Mengrui Pan

9:10 – 1010

9:10	Luke Handley	The Dynamical Origin of Planet-Mass-Dependent Spin-Orbit Misalignment
9:25	Evgeni Grishin	Hot Jupiters in Old Wide Binary Systems
9:40	Diego Munoz	Explaining the Curious Orbits of Eccentric Warm Jupiters
9:55	Sabina Sagynbayeva*	Transit Photometry as a Surface Scanner: Mapping Starspots and Obliquities

Galaxies I: Theory
Chair: Sukanya Chakrabarti
Slack Chair: Leah English

10:10 – 10:40

10:10	Chris Hamilton	Galactokinetics
10:25	Uddipan Banik	Collisionless relaxation to equilibrium distributions in cold dark matter halos:

		origin of the Navarro-Frenk-White profile

Coffee Break

10:40 – 11:05

Brouwer Prize Lecture: Robin Canup
The origins of moons and the making of planets
Chair: Matt Clement
Slack Chair: Thea Faridani
11:05 – 12:05

Lunch
12:05 – 1:30

Satellites I: Giant planet satellites and rings
Chair: Raluca Rufu
Slack Chair: Kaustub Anand
1:30 – 2:45

1:30	Ian Brunton	The assembly of the Laplace resonance at the inner edge of the circumjovian disk
1:45	Keith Dabroski	Comparing Eccentricity Excitation at Various Titan Resonances
2:00	Guangyi Zhang	Tidal Response of Gravito-Inertial Modes in Rotating Giant Planets:Resonance Locking and the Migration of Jupiter's Moons
2:15	Wen-Han Zhou	The Eclipse-Yarkovsky Effect on the Planetary Ring: Are Saturn's Rings Decreting?
2:30	Sudat Khan	Circumplanetary Disk Formation in the Adiabatic Limit

Coffee Break
2:45 – 3:10

Special Session in honor of the contributions of Joseph Burns (part 1)
Chair: Matija Cuk
Slack Chair: Christopher O'Connor
3:10 – 4:25

3:10	Phil Nicholson**	In Memory of Joe Burns
3:30	Jeff Cuzzi**	Joe Burns and Early Planetary Ring Dynamics
3:40	Brett Gladman** (zoom)	Irregular moon systems of the Giant Planets
3:50	Doug Hamilton** (zoom)	Sculpting Jupiter's Ring System
4:00	William Bottke**	The Yarkovsky Effect and the Seeds of Discovery: Reflections on my Cornell Years with Joe Burns

Panel Q&A #1 (Nicholson, Cuzzi, Gladman, Hamilton, Bottke)
4:10-4:25

Coffee Break

4:25 – 4:40

Special Session in honor of the contributions of Joseph Burns (part 2)
Chair: Matt Clement
Slack Chair: Ian Brunton
4:40– 5:45

4:40	Matija Cuk**	Joe Burns and the Moons of Mars
4:50	Matthew Hedman**	Planetary Rings as Perturbed Things
5:00	Maryame El Moutamid**	Small Bodies, Big Questions: How Joe Burns Shaped our View of Planetary Systems
5:10	Daniel Tamayo**	Explaining the puzzle of Saturn's moon Iapetus
5:20	Matthew Tiscareno** (zoom)	Rings, disks, and wobbly moons: A story of analogues

Panel Q&A #2 (Cuk, Hedman, El Moutamid, Tamayo, Tiscareno)
5:30 – 5:45

DDA Mentoring Event

led by Juliette Becker and Santiago Torres

5:30 – 6:45

Tuesday, June 23rd

Exoplanets II: Formation of extreme and ultra-compact systems
Chair: Sarah Millholland
Slack Chair: Caleb Lammers

9:00 – 10:30

9:00	Youro Liu*	Hot-Jupiter-Hosting Binary Systems are Preferentially Eccentric
9:15	Grant Weldon*	Saving Doomed Planets: Mass Loss and Angular Momentum Return Boost Hot Jupiter Survival Rates
9:30	Sacha Gavino	Isolated Three-Body Resonances Stabilize Extremely Compact Three-Planet Systems
9:45	Julia Esposito	Unified Formation Channel of Hot and Warm Jupiters via Planet-Planet Scattering
10:00	Konstantin Batygin	Resonances as Tracers of Planet Formation and Migration
10:15	Gabriel Teixeira Guimaraes	Dynamical instabilities in apsidally aligned systems

Coffee Break
10:30 – 11:00

Satellites II: Earth's Moon and Beyond
Chair: Maryame El Moutamid
Slack Chair: Sudat Khan

11:00 – 12:00

11:00	Kaustub Anand	Evolution of Martian Ring Particles under the Yarkovsky-Schach Effect
11:15	Thea Faridani	The Last Giant Impact: Constraining the Dynamics of the Multiple-Impact model of Lunar Formation
11:30	Raluca Rufu	Earth's rapid rotation and magma ocean solidification drastically limit angular momentum removal by the evection resonance after a high-angular momentum Moon-forming giant impact
11:45	Helena Buschermohle (zoom)	Exomoons of Circumbinary Planets

Lunch
12:00 – 1:30

2025 Rubin Prize Lecture: Sam Hadden
Music of the (Exo)Spheres: Probing Planet Formation and Evolution with the Harmonies of Resonant Chains
Chair: Juliette Becker
Slack Chair: Janosz Dewberry
1:30-2:30

Coffee Break
2:30-3:00

Small Bodies I: Debris, Rubble and Bombardment
Chair: Seth Jacobson
Slack Chair: Tommy Chi Ho Lau
3:00-4:00

3:00	Yang Shen	A machine learning model to predict proper orbital elements for main-belt asteroid family classification
3:15	David Minton	From Orbits to Craters: Investigating the role of collisional fragmentation of planetesimals in shaping the cratering records of terrestrial planets
3:30	Ben Cassese	Jointly inferring dynamical and latent parameters from 500 million asteroid observations
3:45	Paul Wiegert	The challenges of observing interstellar meteors

Coffee Break
4:00 – 4:15

Galaxies II: Resonances at the galactic scale
Chair: Lina Necib
Slack Chair: Tucker Capps
4:15 – 5:00

4:15	Zachary Langford	Self-consistent dynamical modeling of the Milky Way bar with orbital frequency analysis
4:30	Elliot Davies	The erasure of Galactic bar resonances by dark matter subhaloes
4:45	Jordan Moncrieff	Consequences of mean motion resonances in AGN disks on merging black hole properties

Poster Session + Pizza
5:00 – 6:30

Wednesday, June 24th

Special Session in honor of the contributions of Stanley Dermott
Chair: David Minton
Slack Chair: Raluca Rufu

9:00 – 10:55

9:00	Renu Malhotra**	In Memory of Stan Dermott

9:20	Carl Murray**	The Origin and Evolution of "Solar System Dynamics"
9:40	Apostolos Christou**	Asteroid migration in the Main Belt: Larger asteroids stay sober but smaller asteroids get drunk
9:55	Daniel Durda**	The Collisional Evolution of the Asteroid Belt and its Contribution to the Zodiacal Cloud
10:10	Mark Wyatt**	Dynamical structure in extrasolar debris disks
10:25	Jer-Chyi Liou** (zoom)	From Solar System Dynamics to Orbital Debris
10:40	Ashley Espy Kehoe** (zoom)	The search for hidden dust bands

Coffee Break
10:55 – 11:25

Hierachical Triples

Chair: Evgeni Grishin
Slack Chair: Brian Cook

11:25 – 12:10

11:25	Mark Dodici*	Constraining tidal dissipation rates with tightly bound stellar triples
11:40	Ygal Klein	Short Range Forces effect on hierarchical triple systems - revisited
11:55	Seth Jacobson	Triple Vision: Formation of Triple Planetesimal Systems from the Gravitational Collapse of Pebble Clouds

Lunch
12:10 – 1:30

2024 Rubin Prize Lecture: Sarah Millholland
Dynamics and Formation of Extrasolar Worlds
Chair: Juliette Becker
Slack Chair: Wolf Cukier

1:30-2:30

Coffee Break
2:30 – 3:00

Exoplanets III: From Disks to Deserts and Valleys
Chair: Konstantin Batygin
Slack Chair: Mutian Wang
3:00 – 4:45

3:00	Ritika Sethi	Age-dependent occurrence rates of close-in sub-Neptunes
3:15	John Zanazzi	Forming scorched sub-Saturns through tidal shocks during high-eccentricity migration
3:30	Sho Shibata	Elevated Eccentricities in the Radius Valley Hint at Water-Rich Mini-Neptunes
3:45	Jiaru Li	Steady Warps in Protoplanetary Disks: Nonlinear Effects and Breaking
4:00	Antranik Sefilian	When debris disks fight back: Self-gravity suppresses planet-induced secular excitation
4:15	Tim Hallatt (zoom)	Revealing the Origins of Desert Dwellers via Stellar Obliquities

Coffee Break
4:30 – 4:45

IDEA Discussion

led by Malena Rice and Santiago Torres

4:45 – 5:45

DDA Banquet
Venue: **Quartino** [2]

8626 N State St, Chicago, IL 60620 (312)-612-5000

7:00 - 9:00

Thursday, June 25th

Special Session: New probes of dark matter from innovations in stellar and galactic dynamics
Chair: Uddipan Banik
Slack Chair: Mark Dodici

9:00 - 10:57

9:00	Lina Necib**	

		Predicting the Weather of the Milky Way
9:18	Newlin Weatherford**	How Dynamics in Globular Clusters Shape Stellar Streams as Dark Matter Probes
9:36	Robyn Sanderson**	Globular clusters and their stellar streams in cosmologically evolving galaxies
9:54	Adrian Price-Whelan** (zoom)	Orbital Torus Imaging: Using Stellar Invariants to Map Orbits and Mass in the Milky Way
10:12	Sukanya Chakrabarti	Nonlinear phase space dynamics and the Gaia Snail(s)
10:27	Brigette Vazquez Segovia	Can pre-accretion tidal heating produce gaps, spurs and cocoons in a GD-1-like stream?
10:42	Ting Li	Morphological and Kinematic Signatures in Stellar Streams as Probes of Dark Matter: Views from S5 and DESI

Coffee Break

10:57 – 11:25

Planetary Dynamical Tools and Metrics
Chair: Christopher O'Connor
Slack Chair: Brian Cook

11:25 - 12:10

11:25	Renu Malhotra	A metric for measuring and comparing the architectures of simulated Solar systems
11:40	Tjarda Boekholt	Punctuated chaos in gravitational N-body systems
11:55	Janosz Dewberry	GPU spin me right round: accelerated calculations of internal waves in rapid rotators

Lunch
12:10– 1:40

Small Bodies II: TNO formation and dynamics
Chair: Renu Malhotra
Slack Chair: Luis Eduardo Ramriez-Montoya

1:40 - 2:40

1:40	Nathan Kaib	Observed Long-Period Comet Orbits May Show a Signature of a Recent Close Stellar Encounter
1:55	Rosemary Pike	The Orbital Distribution of the Hot Classical Kuiper Belt
2:10	Ruth Murray-Clay (zoom)	An Exploration of Eyehole Libration
2:25	Dallin Spencer	The Impact of Secular Resonance on the Observed Structure of the Classical Belt TNOs

Coffee Break

2:40 – 3:10

Dynamics in dense clusters and nuclei
Chair: Robyn Sanderson
Slack Chair: Hangci Du

3:10 – 3:55

3:10	Jordan Bruce	Dynamics of Binary Stars in Multiple-Population Globular Clusters
3:25	Constanza Echiburu Trujillo	Probing the Dynamics of Recoiling Black Holes with Andromeda's Nucleus
3:40	Miguel Angel Martinez	Walking without Direction: (Partial) Spin-Orbit Tilt Isotropization of Binary Black Holes in Dense Star Clusters
3:55	Brian Cook	Kinematic Heating of Globular Cluster Stellar Streams due to Internal Spin and Tidal Shocks

Coffee Break
4:10 – 4:30

Exoplanets IV: Real or not?
Chair: Diego Munoz
Slack Chair: Gabriel Teixeira Guimaraes

4:30 – 5:30

4:30	Daniel Yahalomi	When One Planet Looks Like Two: Degeneracies and Demographics of Cool Gas Giants with Gaia DR4
4:45	Juliette Becker	Warm Jupiter Tidal Migration Can Spare Inner Planets; Hot Jupiter Tidal Migration May Not

5:00	Samuel Yee	Not so Lonely: Hot Jupiters with Near-Resonant Companions
5:15	Caleb Lammers	TTV-Not-So-Fast: Uniqueness and Degeneracy in Perturbing Planet Parameters

DDA Business Meeting

All DDA Meeting attendees are welcome and encouraged to attend!
Only DDA members will be able to vote. DDA officers will give reports, and future meetings and activities of the AAS Division on Dynamical Astronomy (DDA) will be discussed.
5:30 –6:15

Public talk
Sukanya Chakrabarti

Dark matter - in real time

7:00 – 8:00

Friday, June 26th

Small Bodies III: Planetesimal Formation
Chair: Rosemary Pike
Slack Chair: Daniel Tamayo

9:00 – 10:00

9:00	Mark Pais	Effects of Increasing Particle Resolution to Explore Debris Evolution during Terrestrial Planet Formation
9:15	Daniel Scheeres	Formation of Contact Binaries through the Creation of Asteroid Pairs
9:30	Tommy Chi Ho Lau	Formation of Multiple Dynamical Classes in the Kuiper Belt via Disk Dissipation
9:45	Vaibhav Chhajed	Polydispersity in gravitationally collapsing pebble clouds and its effect on final planetesimal shapes, densities, and rotation states

Coffee Break

10:00 - 10:20

Galaxies III: Evolution

Chair: Ting Li
Slack Chair: Callum Bloor

10:20 – 11:50

10:20	Hiroka Warren	Effect of the Galactic Disk on a Population of Stellar Streams
10:35	Tucker Capps	Satellite-driven acceleration of radial migration in a Milky Way–like disk
10:50	Carlos Jurado	Dynamical Origins of Azimuthal Metallicity Variations in the Galactic Disk
11:05	Hannah Woodward	Kinematic Imprints of Spiral Arm-Driven Star Formation in the FIRE Simulations
11:20	Kashika Mahajan	A Dynamical Clock for Triggered Star Formation: Reconstructing the Sco–Cen Superbubble
11:35	Lekshmi Thulasidharan	The Age--Thickness Relation as a Tracer of Merger History of Disk Galaxies

Coffee Break
11:50- 12:05

Exoplanets V: Breaking Chains: New constraints and developments

Chair: J.J. Zanazzi
Slack Chair: Joseph Livesey

12:05– 13:20

12:05	Mengrui Pan	Breaking resonant chains of Super-Earths and Mini-Neptunes driven by magnetospheric rebound effect
12:20	Christopher O'Connor	Intruder Alert: Breaking resonant chains with planetesimal flybys
12:35	Fei Dai	Resonant Chains as Possible Initial Condition for Kepler-like Planetary Systems
12:50	Ryan LaRusso	Breaking the resonance chains of cold Neptunes by planetesimal scattering

1:10	Agustin Heron	Probing the formation and disruption of resonance chains with size ordering

Poster Presentations

Available Monday - Thursday

Mike Alexandersen	Dynamical curiosities from the Large Inclination Distant Objects (LIDO) survey
Neil Ash	Halo tumbling and realignment induced by LMC-like encounters
Sricharan Balaji	Modeling planetary orbital evolution with stellar mass loss and equilibrium tides
Matthew Belyakov	A Perturbation Theory Approach to Stability in Neptune's Scattered Disk
Callum Bloor	Deprojection and Stellar Dynamical Modeling of Barred Galaxies
Lucas Brefka	Effects of Pebble Accretion Isolation Mass on Observable Exoplanet Properties
Lucas Brefka	Using MEGNO to preserve computational resources in N-body simulations
Stefano Casotto	The Planetary Equations and Poisson's Extended Method
Matt Clement	Assembling the secular architecture of the inner solar system
Matija Cuk	Dione-Rhea 5:3 Resonance as the source of Tethys' Inclination
Wolf Cukier	Dynamical stability of double planets in compact multiplanetary systems
Kavi Dey	Computational Methods to find Action Angle Variables in the Solar System
David Dickson	TIME to Study Binary Mass Transfer: New Horizons in 3D Hydrodynamics
Jupiter Ding	Planet-Induced Warps in Protoplanetary Disks
Mark Dodici	Hypervelocity stars produced by the disk of an active galactic nucleus
Hangci Du	A Unified Local Pattern Speed Framework for Bars and Spirals: Revealing Bar-like Structures in TNG50 Early-Type Galaxies
Maryame El Moutamid	S/2025 U 1: a new member within Uranus' densely-packed inner satellite system
Leah English	Dancing Stellar Streams in Merging Dark Matter Halos
Jamie Erak (SLACK only)	Sometimes You Just Can't Put a Ring on It: Setting Constraints on Rings around Moons from Magnetic Fields
Jiapeng Gao	Constraining the Interior and Origin of GJ 436b Through Coupled Structural and Dynamical Evolution
David Gonzalez	BFEs for Merging Halos: Best Practices for modeling stellar streams in merger events using Basis Function Expansions
Qunfeng Jiang (SLACK only)	A Stability-Filter Hypothesis for Circumbinary Planets
Daniel Jontof-Hutter	Kepler-50: A pair of super Earths in close resonance perturbed by a third planet.
Katrina Kianpoor	Stability Sculpting Across Resonances: A Promising Probe of Neptune's Migration
Zachary Langford	Photodynamics.jl: differentiable multi-body transit light curves
Yurou Liu	High-Eccentricity Tidal Migration Driven by Secular Chaos in Wide-Binary Systems
Joseph Livesey	The Dearth of Nearby Outer Companions to Hot Jupiters
Nicholas Marston	Do Super-Puffs Defy Core Accretion? Population-Wide Interior Structure

	Constraints
Aarushi Mehrotra	Effects of Nonuniform Spacing on Stability of Compact Many-Planet Systems
Evelyn Meyersieck	Dynamical Instabilities and Planetary Engulfment in Extrasolar Systems
Kaustav Mitra	Satellite galaxy kinematics: A bold new tool for cosmological parameter inference
Allen Murray	Actively Accreting Circumbinary Disk System Evolution
Hung Nguyen	Lunar core and mantle abundances can be reproduced from a bulk-silicate Earth composition when starting from a surviving Theia core
Phil Nicholson	Enigmatic vertical structure in the Cassini Division
Tristan Parmerlee	Using Machine Learning to Model Collisional Dynamics in the Galactic Center
Rosemary Pike	The Minor Planet Center
Jonathan Pond	An Overcrowded Resonance: The 5:2 Population and Distribution.
Luis Eduardo Ramriez-Montoya	NEOs.jl: an open-source software library to study near-Earth objects
Luis Eduardo Ramriez-Montoya	Jet transport applications to the preliminary orbit determination problem
Aysu Ece Saricaoglu	Primordial Black Hole-Star Binaries as Probes of Dark Matter
Jaden Sidhu	The Interplay of Stellar Evolution and Collisions in Galactic Nuclei
Amir Siraj	Measuring the Dynamical Structure of the Distant Kuiper Belt
Joseph Spitale	Another Ambiguous B-ring Object
Alexander Stephan	Contribution of White Dwarf Formation Kicks to the Free-Floating Planet Population
Glen Stewart	Bouncing Scale Heights in Saturn's Rings Caused by Nonlinear Bending Waves
Aster Taylor	The Kinematic Age of 3I/ATLAS and Its Implications for Early Planet Formation
Mutian Wang	Early Emergence of Intra-System Mass Uniformity via Type-I Migration
Mutian Wang	An adolescent and near-resonant planetary system near the end of photoevaporation
Erick White	Simulation of Ejection Frequencies in the Sphere-Restricted Finite-Density Three-Body Problem
Nicholas Yurchak	Tracing a Possible Black Hole Merger Through Stellar Orbits at the Galactic Center
Yiqiu Zhou	Formation of Binary IMBHs through Dynamical Interactions in Globular Clusters

Links
[1] https://dda.aas.org/meetings/2025/presentation-guidelines-and-tips
[2] https://quartinoristorante.com/