

## Gravity in the Local Group, Carnegie Mellon University, June 2 - 5 2025 (version June 2)

### Methods (Monday morning, chair: Raphael)

|                      |   |   |
|----------------------|---|---|
| James Taylor         | Waterloo Centre for Astrophysics                      | Tidal mass loss as a 1-dimensional process  |
| Jens Stücker         | University of Vienna                                  | Tidal stripping in the adiabatic Limit  |
| Amery Gration        | University of Surrey                                  | Distribution-function models and mass estimates for binary-rich ultrafaint galaxies |
| Sofia Splawski       | Carnegie Mellon University                            | The stellar profiles of dwarf galaxies affect estimates of their dynamical mass     |
| Jan Pflamm-Altenburg | Helmholtz-Institut für Strahlen- und Kernphysik, Bonn | The gravitational N-body system in QUMOND and AQUAL                                 |

### Dwarfs I (Monday afternoon, chair: James)

|                    |                        |  |
|--------------------|------------------------|--|
| Axel Widmark       | Columbia University    | Using simulation based inference on tidally perturbed dwarf galaxies   |
| Daniel Boyea       | University of Victoria | Can tides explain Sculptor and Ursa Minor's extended density profiles? |
| Shashank Dattathri | Yale                   | Core dynamics and instability: not all cores are equal                 |

### Streams (Tuesday morning, chair: Tjitske)

|                   |                        |   |
|-------------------|------------------------|---|
| Andrew Pace       | University of Virginia | The Outer Limits: Searching for Stellar Halos and Tidal Debris Around Classical Milky Way Dwarf Spheroidal Galaxies       |
| Hayden Foote      | University of Arizona  | Segue 2 Recently Collided with the Cetus-Palca Stream: New Opportunities to Constrain Dark Matter in an Ultra Faint Dwarf |
| Jacob Nibauer     | Princeton University   | The Galactic Acceleration Field Local to the GD-1 Stream  |
| Colin Holm-Hansen | University of Michigan | Modeling Globular Cluster Tidal Disruption in a Dynamic Galactic Potential  |
| Kiyan Tavangar    | Columbia University    | Identifying stellar stream features for dark matter constraints using a new flexible density model                        |
| Haifeng Wang      | University of Padova   | Milky Way disk and Sagittarius Dwarf Galaxy Stream  |

### Dwarfs II (Tuesday afternoon, chair: Andrew)

|                       |   |  |
|-----------------------|---|--|
| Eugene Vasiliev       | University of Surrey                              | Tango for the Clouds   |
| Himansh Rathore       | University of Arizona                             | Gravity in the Clouds: Using the Dis-equilibrium of the LMC and SMC to Inform the Evolution of the SMC's Dark Matter Profile |
| Kosuke Jamie Kanehisa | Leibniz Institute for Astrophysics Potsdam (AIP)  | Andromeda's asymmetric satellite system challenges CDM cosmology   |
| Roeland Van Der Marel | Space Telescope Science Institute                 | Dark Matter Cusp Slopes in Dwarf Spheroidal Galaxies from Hubble and JWST Proper Motions                                     |
| Marcel S. Pawlowski   | Leibniz-Institute for Astrophysics, Potsdam (AIP) | Phase-Space Peculiarities among the Satellite Galaxy Systems in the Local Group  |
| Mariana P. Júlio      | Leibniz Institute for Astrophysics Potsdam (AIP)  | The radial acceleration relation at the EDGE of galaxy formation: challenging its universality in low-mass dwarf galaxies    |

### Cosmic Connection (Wednesday morning, chair: Stacy)

|                     |   |  |
|---------------------|---|--|
| Tjitske Starkenburg | Northwestern University                             | Evolving stellar halos, streams and shells beyond the Milky Way                |
| Arpit Arora         | University of Washington                            | Shaping dark matter halos: The interplay of mergers and cosmic filaments       |
| Neil Ash            | University of Michigan                              | Halo tumbling induced by torques from infalling satellites                     |
| Edward Olex         | Universidad Autónoma de Madrid                      | Hidden Patterns in the Local Universe: Cosmic Coincidence or New Physics?      |
| Lorenzo Pizzuti     | Department of Physics, University of Milano-Bicocca | Unveiling the nature of gravity with kinematical properties of galaxy clusters |
| Antoine Dumont      | Max Planck Institut für Astronomie                  | What Centaurus A can teach us about dark matter halos in Elliptical galaxies   |

### Globular Clusters (Wednesday afternoon, chair: Monica)

|                          |   |  |
|--------------------------|---|--|
| Brigitte Vazquez Segovia | University of Michigan                  | Accreted Globular Cluster Stellar Stream Microstructures Resulting from Tides from the Parent Dwarf Galaxy |
| Yingtian "Bill" Chen     | University of Michigan                  | Stellar streams reveal properties of progenitor globular clusters  |
| Giulia Pagnini           | Observatoire Astronomique de Strasbourg | Chemo-dynamical ties: the accretion of $\omega$ Centauri and its progenitor galaxy                         |
| Till Sawala              | University of Helsinki                  | Measuring the Galactic potential from expanding star clusters  |
| Raphael Errani           | Carnegie Mellon University              | Stellar Mass Segregation in Dark Matter Halos  |

### Milky Way (Thursday morning, chair: Kathryn)

|                  |   |   |
|------------------|---|---|
| Jenni Häkkinen   | University of Helsinki                          | Revisiting the prediction of the MW--M31 merger   |
| Mika Lambert     | University of California - Santa Cruz           | A Disturbance in the Galactic Anticenter: Observational Evidence of a Tidally-Induced Spiral Arm Using Kinematics of Main Sequence Turn-Off Stars with DESI |
| Taavet Kalda     | Max Planck Institute for Astronomy              | Dynamical modelling of the solar neighbourhood in the Milky Way with Deep Potential   |
| Hanyuan Zhang    | Institute of Astronomy, University of Cambridge | Radial migration in the Galactic disc with a decelerating bar   |
| Kathryn Johnston | Columbia University                             | Snails across scales  |
| Stacy McGaugh    | Case Western Reserve University                 | The Gravitational Potential of the Milky Way  |