

Monday, 23.09.2019

08:30 – 09:00

Registration

09:00 – 09:10

Welcome & Introduction (Pavel Kroupa & Indranil Banik)

09:10 (25 min) Federico Lelli:

Scaling relation – observations (Chair: Stacy McGaugh)

The empirical laws of galactic rotation

09:50 (25 min) Pengfei Li:

Fitting the radial acceleration relation to individual SPARC galaxies

10:30 (25 min) Harry Desmond:

Galaxy velocity & size correlations, the halo Tully-Fisher relation and tests of the External Field Effect

11:10 – 11:40

Coffee break

11:40 (25 min) Aaron A. Dutton:

Scaling relations in Λ CDM simulations (Chair: Donatella Romano)

Galaxy scale challenges for cold dark matter

12:20 (25 min) Enrico Garaldi:

The Radial Acceleration Relation of satellite galaxies

13:00 – 14:30

Lunch break

14:30 (25 min) Earl Schulz:

Scaling relations – observations (Chair: Benoit Famaey)

Scaling relations and the gravitational acceleration at the edge of disk galaxies

15:10 (25 min) Tom Richtler:

Elliptical galaxies and the Baryonic Tully-Fisher Relation (BTFR)

15:50 – 16:35

Coffee break

16:35 (25 min) Richard P. Woodard:

MOND lensing & relativistic theories (Chair: Hongsheng Zhao)

A nonlocal metric realization of MOND

17:15 (40 min) André Maeder:

The scale invariant theory and MOND: the case of the radial acceleration relation (RAR)

18:05-18:30

Discussion (Chair: Oliver Müller)

Tuesday, 24.09.2019

MOND lensing & relativistic theories (Chair: Mordehai Milgrom)

- 09:00 (45 min) Constantinos Skordis: *A relativistic theory of Modified Newtonian Dynamics*
10:00 (20 min) Hongsheng Zhao: *The alternative way to separate the baryon peaks from the lensing peaks of the Bullet Clusters*

10:30 – 11:00 Coffee break

Lensing & dynamics (Chair: Tom Richtler)

- 11:00 (25 min) Kyu-Hyun Chae: *Radial Acceleration Relation in a supercritical acceleration range*
11:40 (25 min) Chung-Ming Ko: *Gravitational lensing by spiral and elliptical galaxies in MOND*
12:20 (25 min) Yong Tian: *Mass discrepancy-acceleration relation in Einstein rings*

13:00 – 14:30 Lunch break

MOND & cosmology (Chair: Benoit Famaey)

- 14:30 (25 min) Mordehai Milgrom: *The a_0 - Λ connection*
15:10 (25 min) Stacy McGaugh: *Signatures of MOND in cosmology*

15:50 – 16:20 Coffee break

Other cosmological models (Chair: André Maeder)

- 16:20 (25 min) Václav Vavryčuk: *CMB as thermal radiation of cosmic dust?*
17:00 (25 min) Benoit Famaey: *Superfluid dark matter and related ideas*
17:40 (25 min) Mahmood Roshan: *Evolution of spiral galaxies: distinction between modified gravity and particle dark matter*

18:20 – 18:40 Discussion (Chair: Emilio Romano-Diaz)

Wednesday, 25.09.2019

Wide binaries (Chair: Indranil Banik)

- 09:00 (25 min) Riccardo Scarpa: *Probing Newtonian Dynamics in the low acceleration regime with wide binary stars*
- 09:40 (25 min) Ricardo Adán Martín Cortés: *Challenging a Newtonian prediction through Gaia wide binaries*
- 10:20 (25 min) Charalambos Pittordis: *Testing modified gravity theories with wide binaries from Gaia DR2*

11:00 – 11:25 Coffee break

Λ CDM simulations of dwarf galaxies (Chair: Akram Zonoozi)

- 11:25 (25 min) François Hammer: *On the absence of dark matter in dwarf galaxies surrounding the Milky Way*
- 12:05 (25 min) Donatella Romano: *Gas removal from ultrafaint dwarf galaxies – a high-resolution study*

12:45 – 14:15 Lunch break

Simulated galaxies without a dynamical discrepancy (Chair: Xufen Wu)

- 14:15 (25 min) Graeme Candlish: *The external field effect on cluster disk galaxies*
- 14:55 (20 min) Hosein Haghi: *The dynamics of ultra-diffuse galaxies in MOND*
- 15:25 (25 min) Moritz Haslbauer: *Galaxies lacking dark matter in cosmological Λ CDM simulations*

16:05 – 16:30 Coffee break & group photo

Observations of dwarf galaxies and galaxy clusters (Chair: Oliver Müller)

- 16:30 (25 min) Steffen Mieske: *Gravity tests with dwarf galaxy structure*
- 17:10 (25 min) Michael Hilker: *Kinematic complexity in a rising velocity dispersion profile around the Hydra I cluster central galaxy NGC 3311*
- 17:50 (25 min) Michael Fellhauer: *Sometimes Newton is enough*

18:30 – 18:50 Discussion (Chair: Hosein Haghi)

19:30 Dinner

Thursday, 26.09.2019

Satellite planes (Chair: François Hammer)

09:00 (25 min) Marcel Pawlowski: *Planes of satellites: observational evidence in light of Gaia DR2, and testing proposed solutions with cosmological simulations*

09:40 (25 min) Oliver Müller: *Small-scale cosmology with dwarf galaxies*

10:20 – 10:50 Coffee break

MOND simulations (Chair: Michal Bilek)

10:50 (25 min) Nils Wittenburg: *The formation of late-type galaxies in MOND*

11:30 (25 min) Indranil Banik: *Simulating disk galaxies in MOND: application to M33*

12:10 (25 min) Ingo Thies: *On the origin of the Local Group in Modified Newtonian Dynamics*

12:50 – 14:30 Lunch break

Galaxy groups (Chair: Moritz Haslbauer)

14:30 (25 min) Yanbin Yang: *The origin of the Magellanic Clouds and their Stream*

15:10 (25 min) Wolfgang Oehm: *Constraints on the existence of dark matter haloes by the M81 group and the Hickson compact groups of galaxies*

15:50 – 16:20 Coffee break

Elliptical galaxies (Chair: Michael Hilker)

16:20 (25 min) Xavier Hernández: *MONDian gravity in astrophysical systems beyond rotation curves: elliptical galaxies, globular clusters and wide binaries*

17:00 (25 min) Michal Bilek: *Gravitational fields of early-type galaxies investigated using the kinematics of globular clusters*

17:40 (25 min) Jörg Dabringhausen: *Early-type galaxies without non-baryonic dark matter*

18:20 – 18:40 Discussion (Chair: Indranil Banik)

Friday, 27.09.2019

Star cluster and galaxy simulations (Chair: Graeme Candlish)

- 09:00 (25 min) Xufen Wu: *The anisotropy of star clusters undergoing gas expulsion*
09:40 (25 min) Guillaume Thomas: *The External Field Effect of the Milky Way and its impact on globular clusters*
10:20 (25 min) Behnam Javanmardi: *Number of Satellites vs. Bulge Mass in Λ CDM*

11:00 – 11:30 Coffee break

11:30 – 13:00 Debate (Chair: Stacy McGaugh)

13:00 – 14:30 Lunch break

Other gravity theories (Chair: Pavel Kroupa)

- 14:30 (25 min) Mariano Cadoni: *Anomalous rotation curves of galaxies as a long-range quantum gravity effect*
15:10 (25 min) Antonaldo Diaferio: *Dynamics of DiskMass Survey galaxies in Refracted Gravity*
15:50 (25 min) Dragan Slavkov Hajdukovic: *Gravitational polarisation of the quantum vacuum as the cause of phenomena usually attributed to dark matter*

16:30 End of conference