

Dark Matter and Dark energy as modified gravity
(20mn/talk)

Wednesday July 1:

ROOM 2.

2.00 pm – 4.00 pm :

« **Higher-order gravity** » :

- **M. Francaviglia, S. Capozziello, S. Mercadante**
« *Dark Metric in the non-linear Palatini formalism*»
- **G. Olmo-Alba**
« *New phenomenology for Palatini $f(R)$ gravity: non-singular universes*»
- **S. Capozziello**
« *Cosmography and large scale structure by $f(R)$ gravity: New results*»
- **S.E. Joras, V. Miranda, I. Waga, M. Quartin**
« *Viable Singularity-Free $f(R)$ Gravity Without a Cosmological Constant*»
- **J. Miritzis, R. Giambo**
« *Expanding universes with scalar fields coupled to matter*»
- **K. Van Acoleyen**
« *A catch 22 for large distance modifications of gravity*»

4.00 pm – 4.30 pm : <i>Coffee Break</i>

4.30 pm – 5.50 pm :

« **Higher-order gravity** » , :

- **P. Dunsby, K. Ananda, R. Goswami, J. Larena, A.-M. Nzoiki, M. Abdelwahab, A. Abebe**
« *Towards an understanding of Fourth Order Gravity*»
- **N. Goheer, R. Goswami, P. Dunsby, K. Ananda**
« *On the co--existence of matter dominated and accelerating solutions in $f(G)$ -gravity*»
- **P. Saffin, S.-Y. Zhou, E. J. Copeland**
« *Cosmological dynamics of $f(G)$ dark energy models*»
- **O. Bertolami**
« *Modified theories of gravity with non-trivial curvature-matter coupling*»

Thursday July 2:

ROOM 2.

9.30 am – 11.10 am :

« **Unified description of Dark Matter and Dark Energy and Modified Gravity** » :

- **J.-M. Alimi, A. Füzfa**
« Abnormally Weighting Energy (AWE) Hypothesis: The missing link between dark matter and dark energy »
- **A. Füzfa, J.-M. Alimi,**
« *Dark Energy and Dark Matter from Gravitational Symmetry Breaking* »
- **T. Dent, S. Stern, C. Wetterich**
« *Dark energy and quintessence with varying constants* »
- **S. Mantry, S. M. Carroll, M. Ramsey-Musolf, C. Stubbs**
« *Implications of a Scalar Dark Force for Terrestrial Experiments* »
- **H. Kim**
« *Brans-Dicke gravity theory as a unified model for Dark matter and Dark energy* »

11.10 am – 11.30 am : **Coffee Break**

11.30 am – 12.50 pm :

« **High-Energy Physics-inspired approaches** » :

- **R. Garattini**
« *The induced Cosmological Constant as a tool for exploring geometries in modified gravity theories* »
- **S. Mukohyama**
« *Higgs phase of gravity and ghost condensate* »
- **O. Pujolas**
« *Ghost-Free Self-Acceleration in Modified Gravity* »
- **M.A. García Aspeitia**
« *Cosmic Acceleration from Topological Considerations* »

12.50 pm – 1.40 pm : **Lunch**

1.40 pm – 4.00 pm:

« **MOND-inspired approaches** » :

- **L. Blanchet**
« *Gravitational polarization and MOND* »
- **A. Le Tiec, L. Blanchet**
« *Dipolar dark matter and dark energy* »
- **H.S. Zhao**
« *Neutrinos: connecting the dark sector and gravity* »
- **J.-P. Bruneton**
« *Dark Matter approaches to modified gravity* »
- **J. Moffat**
« *Observationally Verifiable Predictions of Modified Gravity* »
- **L. Iorio**
« *A Solar System Constant and Uniform External Field Effect (EFE) in MOND? Observational Constraints* »

« **Scalar-tensor gravity and galaxy rotation curves** » ,

- **X. Hernandez, S. Mendoza, T. Suarez**
« *An empirical Gravitational law up to galactic scales* »

4.00 pm – 4.30 pm : <i>Coffee Break</i>

4.30 pm – 5.30 pm :

- **Y. Sobouti, A. Hasani Zonoozi**
« *Tully-Fisher relation, key to dark matter in spiral galaxies* »
- **J. Cervantes-Cota, M. A. Rodriguez-Meza, D. Nunez**
« *Spherical scalar-tensor galaxy model* »
- **A. Vajdi, K. Saaidi**
« *Spherically Symetric Solution of $f(R)$ gravity in Weak Field Limit* »

Friday, July 3rd:

ROOM 2.

9.30 am – 11.10 am:

« **Alternative gravity models** » ,

- **S. Odintsov**
« *Modified gravity as unification of DE, inflation and DM* »
- **S. Carloni, E. Elizalde, S. Odintsov**
« *Conformal transformations: the covariant approach perspective* »
- **A. Tartaglia, N. Radicella**
« *From elastic continua to space-time* »
- **N. Radicella, A. Tartaglia**
« *Massive gravitational waves from the Cosmic Defect theory* »
- **I. Dymnikova and Evgeny Galaktionov.**
"Dark Ingredients in One Drop"