

AstroParticles Symposium 2019 program

Week 1

Monday, 14th October 2019

9.00-10.30 Registration and welcome coffee

11.00 Introduction to the workshop

12.30 Lunch break

15.00-17.00 Discussion on What will future surveys tell us about dark energy? led by Yashar Akrami and Santiago Casas

18.30 General public talk: « Dernieres nouvelles des trous noirs » par Jean-Pierre Luminet

Tuesday, 15th October 2019

11.00-13.00 Discussion on Why is it so hard to construct modified gravity models compatible with late time acceleration led by Patrick Valageas

13.10 Lunch break

15.00-16.00 Colloquium: « Physics at the LHC and beyond, the legacy and the future » by Michelangelo Mangano

19.30 Conference dinner

Wednesday, 16th October 2019

Conference Day

9.30-10.10 Baojiu Li : Galaxy formation in modified gravity

10.15-10.55 Santiago Casas : Extracting Dark Energy from Non-linear Observables

11.00-11.40 Nicola Bartolo : Anisotropies and non-Gaussianity of the Cosmological Gravitational Wave Background

11.45-12.25 Pierre Vanhove : Gravity Effective field theories and Post-Minkowskian contributions

13.10 Lunch break

14.00-14.30 Luigi Pilo : Dynamics of self-gravitating media and dark energy

14.35-15.15 Jose Cembranos : Non-comoving dark sectors

15.20-16.00 Jose Beltran Jimenez : Some phenomenology from inequivalent realisations of the cosmological principle

16.05-16.45 Alessandra Silvestri : What can Cosmology tell us about Gravity

16.50-17.30 Sylvain Fichet : Warped dark sector and quantum chameleons

17.30 Happy Science Hours

Thursday, 17th October 2019

9.00-12.30 Discussions/Personal time

13.00 Lunch break

15.00-17.00 Discussion on « The perils of Affinesia » led by Jose Cembranos and Jose Beltran Jimenez

Friday, 18th October 2019

10.30-12.30 Discussion on « Self-tuning, Sequestering and all that » led by Tony Padilla

13.00 Lunch break

14.00-16.00 Discussion on « Beyond Horndeski, DHOST and all that » led by Filippo Vernizzi

Week 2

Monday, 21st October 2019

9.00-10.30 Registration and welcome coffee

10.30 Introduction to the workshop

11.00-13.00 Discussion on « Astrophysical Tests of dark energy and modified gravity » led by Harry Desmond

13.10 Lunch break

15.00-17.00 Discussion on « Compact objects and black holes in modified and massive gravity » led by Christos Charmousis and Eugeny Babichev

18.30 General Public Talk: « L'Attraction de la Gravitation » by Pierre Vanhove

Tuesday, 22nd October 2019

10.30-12.30 Discussion on « Laboratory tests of dark energy » led by Clare Burrage and Anne-Christine Davis

13.10 Lunch break

15.00-16.00 Colloquium « Theoretical Cosmology: an overview and some ideas for the Future » by Sabino Matarrese

17.00-18.30 Discussion on « the H_0 tension » led by Lucas Lombriser

18.30 Happy Science Hours

Wednesday, 23rd October 2019

Machine Learning day

9.30-10.45 David Rousseau: Running Data challenges: Higgs machine learning

10.45-11.45 Kazuya Koyama: N.Body simulations and beyond

11.45-12.00 Coffee break

12.00-13.15 Amaury Habrard : Metric learning

13.15 Lunch break

14.15-15.30 Anais Moller Deep Learning in Cosmology

15.30-16.00 Coffee break

16.00-18.00 Discussion on « Gravitational effects of DE/MG on Binary Systems » led by Scott Melville and Leong Khim Wong

19.30 Conference dinner/cheese and wine

Thursday, 24th October 2019

Conference Day

9.30-10.10 Anne-Christine Davis : Laboratory Tests of Modified Gravity

10.15-10.55 Lavinia Heisenberg : TBA

11.00-11.40 Leong Khim Wong : A fifth force on Kerr Black Holes

11.45-12.25 Carsten van de Bruck: Dark energy, the equivalence principle and the swampland

12.30 Lunch break

14.00-14.40 Kazuya Koyama: Perturbation Theory for BAO reconstructed fields

14.45-15.25 Scott Melville: Two-body Effects for Disformal Dark Energy

15.30-16.10 Clare Burrage: Testing dark energy models with atom interferometry

16.15-16.55 Martin Pernot Borrás : Testing screening mechanism with MICROSCOPE

17.00-17.40 Harry Desmond : fifth forces searches in galaxies

17.40-18.20 Yashar Akrami : Dark energy observations and fundamental physics: the landscape, the swampland, and all that

Friday, 25th October 2019

10.00-12.00 Discussion on « Dark energy and the Swampland » led by Carsten van de Bruck and Lavinia Heisenberg

12.00-12.30 Eugeny Babichev « Scalarisation »

13.00 Lunch break

14.00-15.00 Ignacy Sawicki The Wrapping-up session

15.00 Happy Science Hours

Week 3

Monday, 28th Octobre 2019

11.00 Introduction and welcome coffee

13.00 Lunch break - buffet

14.00-16.00 Discussion about SUSY and DM led by Carlos Munoz and Tony Gherghetta

16.00 Happy Science Hours

Tuesday, 29th Octobre 2019

10.00-12.00 : Discussion about the « The 21cm line » led by Adam Falkowski

13.00 Lunch break - canteen

15.00-16.00 : Colloquium Joe Silk « Dark Matters »

16.00 Coffee break

Wednesday, 30th October 2019

Conference day

10.00-10.30 : Antonio Masiero, « Muon anomalous magnetic moment and DM »

10.30-11.00 : Laura Covi, « Asymmetric Dark Matter »

11.00-11.30 : Oleg Lebedev, « Real scalar dark matter »

11.30-12.00 : Giorgio Arcadi, « Dark Matter Through the Higgs Portal(s) »

12.00-12.30 : Daniel Lopez « Multicomponent dark matter in R-parity breaking supersymmetry »

12.30 Group photo (Cathedral)

12.30-14.00 Lunch break - canteen

14.00-14.30 : Genevieve Bélanger, « Dark matter freeze-in with a light mediator »

14.30-15.00 : Michel Tytgat, « On FIMP »

15.00-15.30 : Hyun Min Lee « Inflaton and dark matter integrated »

15.30-16.00 : Keith Dienes « Deciphering the Archaeological Record: Cosmological Imprints of Non-Minimal Dark Sectors »

16.00-16.30 : Brooks Thomas « Enlarging the Space of Viable Inflation Models: A Slingshot Mechanism »

16.30-17.00 : Kunio Kaneta « Gravitino dark matter in high scale »

17.00-17.30 : Aghileh Ebrahimi « Are dynamical dark energy models distinguishable in the light of data ? »

19.30 Conference dinner at le Gramophone in Orsay

Thursday, 31st October 2019

9.00-11.00 Discussions/Personal time

11.00-12.00 Colloquium Cliff Burgess « Modifying Gravity, the View from Below »

13.00 Lunch break - canteen

14.00-16.00 Discussion about dark matter tools led by Genevieve Bélanger and Alexander Pukhov

18.30-19.30 General Public Talk Hubert Reeves « Une histoire de l'Univers »

Friday, 1st November 2019

Day off

Week 4

Monday, 4th November 2019

10.30-11.30 Discussion about « Inflation and dark matter » led by Marcos Garcia

11.30-12.30 Discussion about « Inflation and gravitational waves » led by Marco Peloso

13.00 Lunch break - buffet

14.00-16.00 : Discussion about « Alternative scenario to WIMP dark matter » led by Michel Tytgat and Thomas Hambye

16.00 Happy Science Hours

Tuesday, 5th November 2019

10.30-11.30 Direct and Indirect detection status and prospective Marco Cirelli, Andreas Goudelis

13.00 Lunch break - canteen

15.00-16.00 Colloquium Antonio Masiero « Prospects for Astroparticle Physics in Europe»

16.00 Coffee break

Wednesday, 6th November 2019

10.00-10.30 : Patrick Valageas : Fate of scalar dark matter solitons around supermassive galactic black holes

10.30-11.00 : Malcolm Fairbairn : The Atmosphere as a Beam Dump

11.00-11.30 : Avik Banerjee : Dark matter seeping through dynamic gauge kinetic mixing

11.30-12.00 : Lucien Heurtier : The Inflaton Portal to a Highly decoupled EeV Dark-Matter Particle

12h-14h : Lunch break - canteen

14h-14h30 : Leszek Roszkowski : Dark matter in search of its identity

14.30-15.00 : Soo-Min Choi: A new model for vector SIMP dark matter

15.00-15.30 : Kpatcha Essodjolo: Hunting long-lived particles at the LHC in the μ SSM

15.30-16.00 : Madhurima Pandey : Two component WIMP-FIMP dark matter model with singlet fermion, scalar and pseudo scalar

16.00-16.30 : Matthew Talia : Dark matter abundance under non-standard conditions in the early universe

20.00 Conference dinner

Thursday, 7th November 2019

10.00-12.30 Discussions/Personal time

13.00 Lunch break - canteen

14.00-16.00 Status of WIMP scenarios Giorgio Arcadi, Mathias Pierre

18.30-19.30 General Public Talk Jean-François Clervoye « Les défis du vol habité spatial »

Friday, 8th November 2019

10.00-12.00 : Wrapping-up session – All participants

13.00 Lunch break

15.00 Good bye Happy Hours