

# PROGRAMME OF DSU2013

SUNDAY 13 OCT - SISSA

18:00 – 20:30 Welcome Drinks and Registration

MONDAY 14 OCT

9:00 – 9:30 Registration

## Dark Matter in Galaxies, Groups and Clusters; Simulations of Galaxy/Cluster Formation

- 9:30 – 10:10 **De Zotti** *Self-regulated evolution of spheroidal galaxies and active nuclei*  
10:10 – 10:35 **Maio** *The birth of the first tiny objects*  
10:35 – 11:00 **Rovira** *Accurate Theoretical Density Profile and Mass Function of CDM Haloes*
- 11:00 – 11:30 COFFEE BREAK
- 11:30 – 11:55 **Fuertes** *Canonical Halo Mass Definition and Universal Mass Function*  
11:55 – 12:20 **Hague** *A Bayesian Method for Constraining Dark Matter Halo Profiles*  
12:20 – 12:55 **Villaescusa-Navarro** *Clustering properties in cosmologies with massive neutrinos*  
12:55 – 13:20 **Musso** *Probing the Universe with halo mass function and bias*
- 13:30 – 15:00 LUNCH
- 15:00 – 15:40 **Dunsby** *Shining light on the nature of  $f(R)$  dark energy*

## Dark Matter candidates; Dark Matter searches

- 15:40 – 16:20 **Pyungwon Ko** *Generic aspects of Higgs portal DM and Higgs phenomenology*  
16:20 – 16:45 **Tytgat** *Significant Bremsstrahlung from the Vector-Like Portal*
- 16:45 – 17:10 COFFEE BREAK
- 17:10 – 17:35 **Hambye** *Effective Theory of DM decay into gamma-ray lines*  
17:35 – 18:00 **Comelli** *DM & EW corrections*  
18:00 – 18:25 **Beck** *Axionic Dark Matter as an Astrophysical Probe*  
18:25 – 18:50 **Kersten** *Dark Radiation from Particle Decay*  
18:50 – 19:15 **Lineros** *Probing interactions within the dark matter sector via extra radiation contributions*

## TUESDAY 15 OCT

- 9:30 – 10:10 **Csaba Balazs** *Dark matter, Higgs boson and supergravity*  
10:10 – 10:35 **Mambrini** *Z' and dark matter*  
10:35 – 11:00 **Yaguna** *Models of dark matter and neutrino masses*
- 11:00 – 11:20 COFFEE BREAK
- 11:20 – 11:45 **Kulkarni** *Introducing SModelS with an application to light neutralino DM*  
11:45 – 12:10 **Farzan** *Natural explanation for 130 GeV photon line within vector boson dark matter model*
- 12:10 – 12:35 **Garcia - Cely** *Novel Gamma-ray Spectral Features in the Inert Doublet Model*  
12:35 – 13:00 **Lopez Gehler** *Constraining dark matter scenarios with gamma-ray boxes*  
13:00 – 13:25 **Seto** *Dirac sneutrino as a GeV mass dark matter*
- 13:30 – 14:15 LUNCH

## Afternoon: excursion in Duino-Aquileia

### 20:00 Social Dinner

## WEDNESDAY 16 OCT

- 9:30 – 10:10 **Morselli** *Dark Matter Signals in the gamma-ray sky*  
10:10 – 10:50 **Landsman** *The Xenon project: Past, Present, & Future*  
10:50 – 11:15 **Gondolo** *Halo-independent analysis of direct detection data*
- 11:15 – 11:35 COFFEE BREAK
- 11:35 – 12:00 **Gay** *Indirect Search for Dark Matter with the ANTARES Neutrino Telescope*  
12:00 – 12:25 **Gaggero** *Dimensional models of CR propagation*  
12:25 – 12:50 **Wild** *Prospects of antideuteron detection from Dark Matter annihilations or decays at AMS-02 and GAPS*  
12:50 – 13:15 **Lamperstorfer** *Dark matter annihilations and decays after the AMS-02 positron measurements*
- 13:30 – 14:45 LUNCH
- 14:45 – 15:25 **Munoz** *Constraints on WIMP Annihilation for Contracted Dark Matter in the inner Galaxy with the Fermi-LAT*  
15:25 – 15:50 **Gomez Vargas** *Dark Matter implications of Fermi-LAT measurement of anisotropies in the diffuse gamma-ray background*
- 15:50 – 16:20 COFFEE BREAK

16:20 – 16:55 **Zhou** *Implications of the recent AMS-02 results on dark matter annihilation and decay*

## **Cosmology. Dark Energy. Planck Science**

16:55 – 17:35 **Nesti** *Dark matter distribution in the Galaxy*

17:35 – 17:55 **Sefusatti** *Uncertainties in the extragalactic gamma-ray signal from Dark Matter annihilation*

17:55 – 18:20 **Mesinger** *Probing dark matter with the cosmological 21cm signal*

## **THURSDAY 17 OCT**

9:30 – 10:10 **Natoli** *Highlights from the 2013 Planck cosmology*

10:10 – 10:50 **Shafi** *Will Planck Observe Gravity Waves?*

10:50 – 11:15 COFFEE BREAK

11:15 – 11:40 **Killedar** *Aiding cluster cosmology with simulations*

11:40 – 12:05 **Taylor** *Direct Shear Mapping: using IFU data to measure weak gravitational lensing*

12:05 – 12:25 **Bonometto** *Strongly coupled Dark Energy cosmologies*

12:25 – 12:50 **Piedipalumbo** *High Redshift Investigation On The Dark Energy Equation of State*

12:50 – 13:15 **Evoli** *Unveiling the nature of Dark Matter from the high-redshift Universe*

13:30 – 15:00 LUNCH

15:00 – 15:25 **Cerezo** *The importance of being warm (during inflation)*

## **Modifying Newton-Einstein theory of gravity? Abandoning the LCDM Universe paradigm?**

15:25 – 15:50 **Lobo** *Foundations of (modified) gravitation theory*

15:50 – 16:15 **Saridakis**  *$f(T)$  Gravity and Cosmology*

16:15 – 16:30 COFFEE BREAK

16:30 – 16:55 **Golovnev** *On gravitational collapse in MOND*

16:55 – 17:20 **Minamitsuji** *Degravitation features in the cascading gravity model*

17:20 – 17:45 **Spaans** *A topological extension of GR: Black holes induce dark energy*

17:45 – 18:40 **De Vega** *Warm Dark Matter: the New Paradigm.*

18:40 – 20:00 **POLL+DISCUSSION**

20:00 – 20:30 Happy leaving