



Dipartimento
di Fisica
e Astronomia
Galileo Galilei



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



Istituto Nazionale di Fisica Nucleare
Sezione di Padova



PADOVA
CONVENTION & VISITORS BUREAU

ORGANIZATION
MANAGEMENT
DESTINATION

Welcome to PADUA 2023

Centro Universitario Padovano, 6 - 8 September 2023

One year ago...



Particle Avenues in the Dark Universe Arena (PADUA): Axions

Sala Rossini, Caffè Pedrocchi, 12 - 14 September 2022

INVITED SPEAKERS

José Luis BERNAL (Johns Hopkins University)
Caterina BRAGGIO (University of Padua)
Andrea CAPUTO (Tel Aviv University)
Pierluca CARENZA (Stockholm University)
Raymond CO (University of Minnesota)
Miguel ESCUDERO (Technical University of Munich)
Martina GERBINO (INFN Ferrara)
Arthur HEBECKER (Heidelberg University)
Sang Hui IM (IBS Daejeon)
David J.E. MARSH (King's College London)
Enrico MORGANTE (University of Mainz)
Marco REGIS (University of Turin)
Andreas RINGWALD (DESY Hamburg)
Nicholas RODD (CERN)
Geraldine SERVANT (DESY Hamburg)
Elisa TODARELLO (University of Turin)
Giovanni VILLADORO (ICTP Trieste)
Robert ZIEGLER (Karlsruhe Institute of Technology)

Astronomical and cosmological observations reveal that visible matter constitutes only a fraction of the total mass of the universe. Some form of dark matter, five times more abundant than ordinary matter, must exist. However, these observations tell us nothing about the origin and composition of this invisible constituent. None of the known particles is a viable candidate, and this firm empirical evidence leaves no doubt about the need for physics beyond the standard model. Unveiling the mystery of dark matter will rely upon the synergy between investigations of nature at the largest and smallest length scales.

The PADUA workshop will gather world experts to review the state-of-the-art and explore novel directions in the context of a well-motivated and popular dark matter candidate: the QCD axion.

<https://indico.dfa.unipd.it/event/391/>



ORGANIZING COMMITTEE:
Francesco D'Eramo, Luca Di Luzio, Antonio Masiero
Marco Peloso, Ennio Salvioni, Luca Vecchi



PADUA 2023: Light Dark Sectors

09:00	Registration 09:00 - 09:45
	Welcome from the University of Padua <i>Fabio Zwirner</i>
	Welcome from the Department of Physics and Astronomy <i>Flavio Seno</i>
	Welcome from the Istituto Nazionale di Fisica Nucleare (INFN) <i>Roberto Carlin</i>
10:00	Dark Matter Misalignment through the Higgs Portal <i>Brian Batell</i>
	Dark Matter in a symmetric world without strong CP problem <i>Andrea Tesi</i>
11:00	Coffee Break
	Two surprises in axion and hidden photon physics <i>Martin Bauer</i>
12:00	
13:00	
14:00	
15:00	
16:00	Direct detection of light dark matter with carbon nanotubes and superfluid helium
	Results from the MIGDAL experiment's commissioning with D-D neutrons <i>Christopher McCabe</i>
	Sub-GeV dark matter in the lab: new ideas and new tools <i>Angelo Esposito</i>
17:00	
18:00	Welcome Reception 18:00 - 20:00
19:00	
20:00	

10:00	The X17 boson anomaly: status and prospects <i>Enrico Nardi</i>
	Probing dark sectors at accelerators via proton bremsstrahlung <i>Adam Ritz</i>
11:00	Coffee Break
	Dark matter (h)eats young planets <i>Djuna Croon</i>
12:00	Connect the visible and dark Universe via one photon <i>Xiaoyong Chu</i>
13:00	
14:00	
15:00	Putting all the X in one basket: X-ray constraints on sub-GeV dark matter <i>Elena Pinetti</i>
	TBA <i>Joshua Foster</i>
	Coffee Break
16:00	Testing predictive models of decaying dark matter with direct and indire... <i>Gordan Krnjaic</i>
17:00	
18:00	Visit at the Giovanni Poleni Museum 17:30 - 18:30
19:00	
20:00	Social Dinner 20:00 - 23:00
21:00	
22:00	
23:00	

10:00	Light dark sectors and nano-Hz gravitational waves <i>Pedro Schwaller</i>
	Phenomenological Aspects of Dark First Order Phase Transitions <i>Bibhusan Shakya</i>
11:00	Coffee Break
	Axion Dark Matter and Gravitational Wave Detection with Microwave Ca... <i>Raffaele Tito D'Agnolo</i>
12:00	Closing gaps in the Gw spectrum: Ideas to detect muHz and high fr GWs <i>Diego Blas</i>

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SOCIAL EVENTS

16:00		
17:00		
18:00	Visit at the Giovanni Poleni Museum	17:30 - 18:30
19:00		
20:00	Social Dinner	20:00 - 23:00
21:00		
22:00		
23:00		

Welcome Reception: Wed at 6:00 pm

Drinks and food today at 6:00 pm

Where? Just downstairs!



Museo Poleni: Thursday at 5:30 pm

Meeting point downstairs (see the figure below) at 5:15 pm

Walk to the museum together, visits will start at 5:30 pm



Meeting Point HERE

Social Dinner: Thursday at 8:00 pm

“Sala Rossa”
of Caffè Pedrocchi
at 8:00 pm



Sala Rossa
(ground floor)

Wifi Info

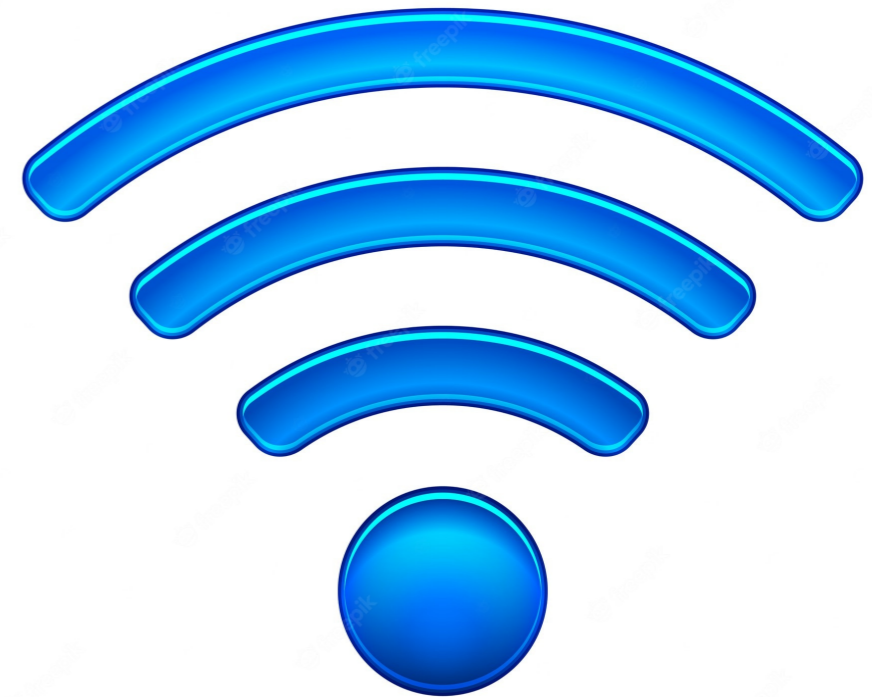
Option I: CU aule studio

No password needed, just register

Option II: eduroam

Option III: CU Segreteria

Password: 82segreteria2020



Group Photo: Wednesday at 11:00 am



Before the first coffee break
Group photo downstairs in the courtyard



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Have fun!

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