

ICP2DC7 AGENDA



Mon 18 Sep 2023

		Opening	
09:00	09:20	Program Chair Aldo Di Carlo	
Chair:Dmitrii Yakovlev		Excitons and Optics 1	
09:20	10:10	Olivia Pulci Are Xenex excitonic insulators?	K
10:10	10:40	Anvar Baimuratov Excitons in mesoscopically reconstructed moiré heterostructures	I
10:40	11:10	Nika Akopian Multi-Qubit Photonic Devices	I
		Coffee Break 1	
11:10	11:30		
Chair:Dmitrii Yakovlev		Excitons and Optics 2	
11:30	12:00	Tobias Bucher Probing chiral farfield properties of monolayer transition metal dichalcogenides coupled to resonant nanoantennas	I
12:00	12:30	Valentyn Volkov Giant optical anisotropy in van der Waals materials: perspectives and challenges	I
12:30	13:00	Mariia Tiukhova Low-temperature hole-transport layers for p-i-n flexible perovskite solar cells	I
		Lunch	
13:00	14:00		
Chair:Galia Pozina		Characterization Techniques 1	
14:00	14:50	Dmitrii Yakovlev	K

		Spin physics in 2D perovskites	
14:50	15:20	Andrea Orsini 2D-materials mechanical measurements by nanowire precise strain control	I
15:20	15:50	Paolo De Padova Evidence for sp ² -like Hybridization of Si Valence Orbitals in Silicene and Multilayer Silicene on Si(111)R30°-Bi	I

		Coffee Break 2	
15:50	16:10		

Chair:Galia Pozina		Characterization Techniques 2	
16:10	16:40	Paolo Moras Electronic structure of 2D materials probed by photoelectron spectroscopy	I
16:40	17:10	Dmitry Muratov	I

Chair:Giuseppe Eramo		Athena Group Meeting	
17:10	18:30	Athena Group members only Meeting Athena University with local Institu- tions	I

Chair:Giuseppe Eramo		Welcome Cocktail	
19:00	22:00		

Tue 19 Sep 2023

Chair:Mikhail Portnoi		Collective and Non-linear Effects 1	
09:00	09:50	Sergey Andreev Controllable fusion of electromagnetic bosons in 2D semiconductors: toward efficient sources of strongly- correlated photons and quantum chemistry of light	K

09:50	10:20	Nina Voronova I Dynamical screening effects in a hybrid Bose-Fermi mixture of exciton-polaritons and 2D electron gas
10:20	10:50	Kok Wee Song I Superexchange in magnetic van der Waal materials

Coffee Break 1	
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10:50	11:10	
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Chair:Mikhail Portnoi	Collective and Non-linear Effects 2	
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11:10	11:40	Georgy Shlyapnikov I Novel phase transitions in disordered quantum systems
11:40	12:10	Dmitry Krizhanovskii I Nonlinear Rybderg exciton-polaritons in cuprous oxide based semiconductor microcavities.
12:10	12:40	Aldo Di Carlo I The 2D and 2D/3D strategy for performing new generation solar cells

Lunch	
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12:40	14:00	
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Chair:Nina Voronova	Topological and Valley Physics 1	
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14:00	14:50	Mikhail Portnoi K To the theory of the quantum Hall effect
14:50	15:20	Zhigang Chen I Novel phenomena in photonic graphene
15:20	15:50	Vasil Saroka I Tunable dissipationless coherent transport in the bulk of topological materials

		Coffee Break 2
15:50	16:10	

Chair:Nina Voronova		Topological and Valley Physics 2
16:10	16:40	Even Thingstad I Topological interlayer superconductivity mediated by magnons

Chair:Daniele Baretin		Athena Group Meeting
16:40	18:30	Athena Group members only I Meeting Athena University with local Institutions

Wed 20 Sep 2023

Chair:Giuseppe Eramo		Excursion
09:00	12:00	
14:00	18:00	

Chair:Giuseppe Eramo		Lunch
12:00	14:00	

Thu 21 Sep 2023

Chair:Alexey Akimov		Fabrication Technologies, Part I
09:00	09:50	Galia Pozina K Exploring the possibility of synthesis of 2D ultra-wide bandgap Ga ₂ O ₃ semiconductor
09:50	10:20	Yury Illarionov I

		Main challenges for integration of 2D FET technologies into FAB process lines: thermal budget, oxides, reliability	
10:20	10:40	Evgeniya Lobanova Laser MBE synthesis of WS ₂ and WSe ₂ on CaF ₂	C

		Coffee Break 1	
10:40	11:00		

Chair:Alexey Akimov		Fabrication Technologies, Part II	
11:00	11:30	Daniele Baretin Three degrees of quantum confinement in Wurtzite InGaAs/AlGaAs nanostructures	I
11:30	12:00	Free slot	I

		Lunch	
12:00	14:00		

Chair:Olivia Pulci		Quantum emitters, Part I	
14:00	14:50	Alexey Akimov Color center ins diamond and in hexagonal boron nitride	K
14:50	15:20	Snezana Lazic Strain tuned non-classical light emission from localized quantum states in 2D layered semiconductors	I
15:20	15:50	Steffen Michaelis Ultrafast quantum optics with single-photon emitters in hBN	I

		Coffee Break 2	
15:50	16:10		

Chair:Olivia Pulci		Quantum emitters, Part II	
16:10	16:40	Martin Esmann	I Monolayer-based single photon source in a liquid-helium-free open cavity featuring 65% brightness and quantum coherence
Chair:Matteo Ginesi		Athena Group Meeting	
16:40	18:30	Athena Group members only	I Meeting Athena University with local Institutions
Chair:Giuseppe Eramo		Social Dinner	
19:00	22:00		
Fri 22 Sep 2023			
		Closing Session	
09:00	09:20	Program Chair Aldo Di Carlo	
		Departure	
09:20	12:00		

