

TTN-2018 International Conference

Scientific Programme

Wednesday, October 17 th	
Registration Desk opens at 10:30	
14:30	Opening
	Session 1: Josephson Junctions I (Chair: <i>Ruggero Vaglio</i>)
14:40	Spin-Orbit induced Spin locking and ϕ -Josephson coupling – Marco Aprili
15:00	In situ tailoring of single superconducting junctions and nano-SQUIDs via current-induced atom migration – Alejandro Silhanek
15:20	Metallic supercurrent and Josephson field-effect transistors – Francesco Giazotto
15:40	Towards Quantum Hall Effect in a Josephson Junction – Stephan Heun
16:00	How to “Marry” Josephson and Aharonov-Bohm Effects in Andreev Interferometers – Andrei Zaikin
16:20	<i>Coffee Break</i>
	Session 2: Josephson Junctions II (Chair: <i>Marco Aprili</i>)
16:50	Phase-Controllable Josephson Junctions for Cryogenic Memory – Norman Birge
17:10	Quantum Phase Slip as a Dual Process to Josephson Tunneling - Konstantin Yu. Arutyunov
17:30	Magnetoresistive and Microwave Responses of Hybrid Josephson Structures with Ferromagnetic Layers – Valery V. Ryazanov
17:50	Novel Josephson and Proximity Effect using Triplet Superconductors - Dirk Manske
19:00	<i>Welcome party</i>
Thursday, October 18 th	
	Session 3: Unconventional Structures I (Chair: <i>Alexey Ustinov</i>)
09:30	Epitaxial Helimagnetic Josephson Devices with Zero- π States - Jason Robinson
09:50	Generation of pure spin supercurrents in magnetic heterostructures via non-locally induced Landau Fermi-liquid effects - Matthias Eschrig
10:10	Direct Evidence of Proximity Induced Abrikosov Vortex Core in a Nonsuperconducting Metal – Alexander A. Golubov
10:30	Electrodynamics of unconventional magnetic Josephson junctions - Davide Massarotti
10:45	Solitonic Josephson Thermal Transport - Claudio Guarcello
11:00	<i>Coffee Break</i>
	Session 4: Unconventional Structures II (Chair: <i>Alexander Golubov</i>)
11:30	Non-monotonic and non-analytic response of quenched gapped quantum systems – Fabio Cavaliere
11:45	Interplay between superconductivity and magnetism in the LaAlO ₃ /SrTiO ₃ nanowires - Alexei Kalaboukhov
12:00	Gate-tunable quantum phase transition of the ground state of a magnetic impurity coupled to a superconductor - Alvaro Garcia-Corral
12:15	Static and dynamic properties of Josephson junctions with thin superconducting layer inside the weak link - Sergey V. Bakurskiy
12:30	How to handle the variability of tunnel currents in resistive random access memory cells by programming algorithms - Christian Wenger
12:50	<i>Lunch Break</i>

	Session 5: Superconductivity at the Nanoscale (Chair: Saw-Wai Hla)
15:00	Manipulating atomic-scale tunneling defects in amorphous oxides – Alexey Ustinov
15:20	A BCS signature revealed by the vortex cores of a high Tc Superconductor - Ivan Maggio-Aprile
15:40	Bosonic Mode in the Scanning Tunneling Spectra of Cuprate and Fe-based Superconductors - John Zasadzinski
16:00	Electronic and structural properties in the superconducting phase of URu ₂ Si ₂ - Edwin Herrera
16:20	<i>Coffee Break</i>
	Session 5 (continued): (Chair: Saw-Wai Hla)
16:50	STM studies of FeSe single crystals - Maria Iavarone
17:10	Josephson nano-structures fabricated from YBCO film by Focused He Ion beam – Edward Goldobin
17:30	PanScan Freedom Closed-Cycle UHV LT STM/AFM with R9plus Universal SPM Control System – Natalie Wasio
17:40	POSTER SESSION
Friday, October 19th	
	Session 6: Microscopy and Spectroscopy (Chair: Maria Iavarone)
09:30	Ultrafast time and frequency domain spectroscopy of magnetic atoms - Max Hänze
09:50	Magnetic shape memory free-standing nanodisks: actuation mechanisms and possible applications – Francesca Casoli
10:10	Quantitative MFM – measuring stray field landscapes of magnetic and superconducting samples on the nanometer scale - Volker Neu
10:30	Novel Scanning Probe Techniques for Quantum Measurements of Nanostructures - Saw-Wai Hla
10:50	Strain effect on magnetic anisotropy in multiferroic nanostructures - Maria E. Gomez
11:10	<i>Coffee Break</i>
	Session 7: Dynamic phenomena in heterostructures (Chair: Alejandro Silhanek)
11:40	Understanding magnetization dynamics of strongly interacting magnetic nanoparticles ensemble - Davide Peddis
12:00	Superconducting Vortex Dynamics on Spin-Ice Nanomagnets – Jose Luis Vicent
12:20	Mapping the spin distribution in adsorbed molecules - Rodolfo Miranda
12:40	Vortex lattice instability at the nanoscale - Gaia Grimaldi
12:55	Geometrically tunable spintronic platforms: towards curvatronics – Paola Gentile
13:10	Supermagnetoresistance of triplet spin-valves - Roberta Citro
13:25	<i>Lunch Break</i>
	Session 8: 2D Materials I (Chair: Rositsa Yakimova)
15:00	Conductive AFM of 2D materials and heterostructures for nanoelectronics - Filippo Giannazzo
15:20	Nanostructured materials for optoelectronics – Paola Barbara
15:40	Direct-write X-ray nanopatterning for oxide materials - Marco Truccato
16:00	Work function of stressed suspended graphene - Alexander Volodin
16:20	<i>Coffee Break</i>

	Session 9: 2D Materials II (Chair: Marika Schleberger)
16:50	Interaction of epitaxial graphene with heavy metals: towards novel sensing platform - Rositsa Yakimova
17:10	When 2D materials meet molecules: molecular functions in hybrid van der Waals heterostructures - Marco Gobbi
17:30	PRIZES (Chair: Fabio Beltram)
19:00	CONCERT
20:45	SOCIAL DINNER
Saturday, October 20th	
	Session 10: Nanomaterials for device applications (Chair: Paola Barbara)
09:30	Defects and Phase Transformations in Two-Dimensional Transition Metal Dichalcogenides - Arkady V. Krasheninnikov
09:50	Defect Engineering of 2D Materials by Particle Irradiation - Marika Schleberger
10:10	Extreme nanostructuring of graphene - Peter Bøggild
10:30	Gate-controlled chemical reactions at surfaces of two-dimensional materials - Ryo Nouchi
10:50	Highly Efficient MoS ₂ /Ag ₂ S/Ag Photoelectrocatalyst Obtained from a Recycled DVD Surface – Gaetano Granozzi
11:05	<i>Coffee Break</i>
	Session 11: Electronic properties of nanostructured materials (Chair: A. Di Bartolomeo)
11:30	Electronic properties of one or few-layers MoS ₂ films - Daniel J. Trainer
11:45	Tellurium-Poly(methyl methacrylate) nanocomposite materials - Angela Longo
12:00	Influence of molecular oxygen on h-BN/metal heterostructures - Victor Shevelev
12:15	The effect of Anodic Polarization and N ₂ O oxidization for graphene growth – Bo Liu
12:30	Effect of the structural parameters on the nature of the states of quasiperiodic superlattices – Yamina Sefir
12:45	MoS ₂ and WSe ₂ in field effect transistors – Antonio Di Bartolomeo
13:00	Closing