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3rd International Conference and Exhibition on

Theoretical and Condensed Matter Physics

Condensed Matter Physics 2017

October 19-21, 2017 New York, USA

Tentative Scientific Program

Note: Date and Timings in this Tentative Program are subject to change

Day 1
October 19, 2017

07:30-08:30	**Registrations**
	Hall: Tribeca III+IV
08:30-08:55	**Opening Ceremony**
	Keynote Forum
08:55-09:00	**Introduction**
09:00-09:30	**Title:** Memristors – A new technology paradigm **Mehdi Anwar,** University of Connecticut, USA
09:30-10:00	**Title:** Transport theory in condensed matter physics-metamaterial is phase transition **Woon Siong Gan,** Acoustical Technologies Singapore Pte Ltd, Singapore
10:00-10:30	**Title:** Proposed link between the periodic table and the standard model **John O Roberts,** University of Liverpool, UK
10:30-11:00	**Title:** The history of spin fluctuation theory in itinerant electron systems **Rikio Konno,** Kindai University Technical College, Japan
	Group Photo
	Networking & Refreshments Break 11:00-11:20
	Track 1: Condensed Matter Physics
	Session Introduction
	Session Chair: Yshai Avishai, Ben Gurion University, Israel
	Session Co-Chair: Eliade Stefanescu, Advanced Studies in Physics Centre of the Romanian Academy, Romania
11:20-11:40	**Title:** Universal and system-specific charge density wave features in 2H-transition metal dichalcogenides **Utpal Chatterjee,** University of Virginia, USA
11:40-12:00	**Title:** Spin-orbit interaction and topological states in spin 3/2 cold atomic gas **Yshai Avishai,** Ben Gurion University, Israel
12:00-12:20	**Title:** Inspired by photonics - unconventional electron flow across 2-D P-N junctions **Avik Ghosh,** University of Virginia, USA
12:20-12:40	**Title:** Structural and optical properties of the MoTe2-WTe2 alloy system **Patrick M Vora**, George Mason University, USA
12:40-13:00	**Title:** Model of classical thermodynamics based on partition theory, earth attraction, and semi-classical asymptotics **V P Maslov,** National Research University Higher School of Economics, Russia
13:00-13:20	**Title:** Absorption processes and their relationship with the transport processes in semiconductors **Ceballos Garzón Ricardo** and **Carrillo Guerrero Sergio**, National University of Colombia, Colombia and Central University of Venezuela, Venezuela
	Lunch Break 13:20-14:20
14:20-14:40	**Title:** Phonon interference and emergence of energy wave packets **Anant Raj,** North Carolina State University, USA
14:40-15:00	**Title:** Effect of phase transition on spin transport in quantum frustrated antiferromagnets **Leonardo dos Santos Lima,** Centro Federal de Educação Tecnológica de Minas Gerais, Brazil
15:00-15:20	**Title:** Environmental heat conversion into usable energy as a quantum effect of the matter-field dynamics **Eliade Stefanescu,** Advanced Studies in Physics Centre of the Romanian Academy, Romania
	Panel Discussion
	Speaker Opportunity Available
	Track 2: Theoretical Physics
	Session Introduction
	Session Chair: Loris Ferrari, University of Bologna, Italy
	Session Co-Chair: Holger Bech Nielsen, Niels Bohr Institute, Denmark
15:20-15:40	**Title**:Fundamental physics experiment reveals origin construct of DNA **Manuel S Morales,** Independent Researcher, USA
15:40-16:00	Title: Gab-less semiconductor model for relativistic particles **Holger Bech Nielsen,** Niels Bohr Institute, Denmark

	Networking & Refreshments Break 16:00-16:20
16:20-16:40	**Title**: Pseudobosons and quasiphonons: The hidden side of bogoliubov collective excitations **Loris Ferrari,** University of Bologna, Italy
16:40-17:00	**Title**: Quantum physics as dynamic space-time differential calculus **Eugene Machusky,** National Technical University of Ukraine, Ukraine
17:00-17:20	**Title:** Synthesis of graphene-Fe magnetic nanofluid for enhancement of water thermal conductivity **Mohamed İbrahim,** Süleyman Demirel University, Turkey
17:20-17:40	**Title:** Efficient numerical integrator based on Fer expansion: Application to solid-state NMR experiments **Eugene Stephane Mananga,** The City University of New York, USA
17:40-18:00	**Title**: SnO2/TiO2 nanohexagon arrays heterojunction photoanode based dye-sensitized solar cells with enhanced performance **Hafiz Muhammad Asif Javed,** University of Agriculture Faisalabad, Pakistan
	Panel Discussion
	Speaker Opportunity Available
	Day 2 **October 20, 2017**
	Hall: Tribeca III+IV
	Keynote Forum
09:00-09:30	**Title:** Atomic dynamics in liquid in real space and time: towards the liquid-state-physics **Takeshi Egami,** University of Tennessee, USA
09:30-10:00	**Title:** Unitary relativistic quantum theory **Eliade Stefanescu,** Advanced Studies in Physics Centre of the Romanian Academy, Romania
10:00-10:30	**Title:** Electronic structure of inverse opal- and nanoparticulate- TiO2 electrodes **Taro Toyoda,** The University of Electro-Communications, Japan
10:30-11:00	**Title:** The interplay between off-stoichiometry and intrinsic point defects in quaternary **Susan Schorr,** Freie University, Germany
	Networking & Refreshment Break 11:00-11:20
	Track 1 : Condensed Matter Physics Physics
	Session Introduction
	Session Chair: Rikio Konno, Kindai University Technical College, Japan
	Session Co-Chair: Rita John, University of Madras, India
11:20-11:40	**Title:** Strongly correlated electrons in two-dimensional quantum world **Sergey V Kravchenko,** Northeastern University, USA
11:40-12:00	**Title:** Density matrix in description of the collision of atomic particle with solid film **Gennadiy Filippov**, Chuvash State Agricultural Academy, Russia
12:00-12:20	**Title:** A diatomic chain with a mass impurity **Ming B Yu,** 191 Waterton Lakes Ave. Las Vegas, Nevada, USA
12:20-12:40	**Title:** Theory of thermal expansion of localized paramagnons **Rikio Konno,** Kindai University Technical College, Japan
12:40-13:00	**Title:** Influence of multiorbital and anisotropic coulomb interactions on isotope effect coefficient in doped Fe-based superconductors **Luxmi Rani,** Physical Research Laboratory, India
13:00-13:20	**Title:** First principle calculations on the effect of addition of X (Co, Rh, Ir) on TiPd **Rita John,** University of Madras, India
	Lunch Break 13:20-14:20
14:20-14:40	**Title:** On the possibility of refining the gravitational constant and solving the task of integrating the gravitational and electromagnetic fields **Valentyn A Nastasenko,** V A Kherson State Maritime Academy, Ukraine
14:40-15:00	**Title:** Quantum simulation of (1+1) D U (1) lattice gauge-Higgs model by using cold atoms in one-dimensional optical lattice **Yoshihito Kuno,** Kyoto University, Japan
	Panel Discussion
	Speaker Opportunity Available
	Track 3: Materials Science and Engineering **Track 4: Meta Materials and Magnetic Materials** **Track 5: Nanotechnology and Mesoscopic Scale**
	Session Introduction
	Session Chair: Jose Alberto Perez Benitez, Instituto Politécnico Nacional, Mexico
	Session Co-Chair: Juan-Luis Domenech-Garret, Madrid Technical University, Spain
15:00-15:20	**Title:** Structural, optical and gas sensing properties of swift heavy ions irradiated metal oxide thin films **Azher M Siddiquia,** Jamia Millia Islamia, India
15:20-15:40	**Title:** Magnetic and transport properties in Mn doped III-V semiconductor: the cases of GaAs and InP **Georges Bouzerar,** CNRS and Université Lyon 1, France
15:40-16:00	**Title:** A non-equilibrium approach regarding hot metals **Juan-Luis Domenech-Garret,** Madrid Technical University, Spain
	Coffee Break 16:00-16:20

16:20-16:40	**Title:** Some progress concerning the use of magnetic barkhausen noise for magnetic materials characterization **Jose Alberto Perez Benitez,** Instituto Politécnico Nacional, Mexico
16:40-17:00	**Title:** Characterization and theranostics application of pluralistic ferrite nanoparticles **Yuko Ichiyanagi,** Yokohama National University, Japan
17:00-17:20	**Title:** Study of structural and magnetic properties of manganese doped cobalt ferrite nanoparticles for high frequency and sensor applications **Feroz A Khan,** Bangladesh University of Engineering and Technology, Bangladesh
17:20-17:40	**Title:** Ballistic transport of spin waves in ultrathin disordered [Fe1-cNic]n alloy nanojunctions between Co leads using an EFT-PFMT formalism **Elie A Moujaes,** Federal University of Rondônia, Brazil
	Panel Discussion
	Speaker Opportunity Available
	Day 3 **October 21, 2017**
	Hall: Tribeca IV
	Keynote Forum
09:00-09:30	**Title:** On-chip plasmonic modulator **M A Swillam,** The American University in Cairo, Egypt
09:30-10:00	**Title:** Negative partial density of states in mesoscopic systems **P Singha Deo,** S N Bose National Centre for Basic Sciences, India
	Track 6: Quantum Physics and High Energy Physics **Track 7: Superconductivity and Superfluidity** **Track 8: Theoretical and Experimental Study of Soft Matter**
	Session Introduction
	Session Chair:
	Session Co-Chair: Ranjan Chaudhury, S N Bose National Centre For Basic Sciences, India
10:00-10:20	**Title:** BCS-Bose crossover extended with hole cooper pairs **I Chavez,** Instituto De Investigaciones En Materiales, Mexico
10:20-10:40	**Title:** Topological excitations in low dimensional magnetic systems **Ranjan Chaudhury,** S N Bose National Centre For Basic Sciences, India
	Networking & Refreshments Break 10:40-11:00
11:00-11:20	**Title**: Initial model of ether describing electromagnetic phenomena, including gravity **Ioan Has,** Land Forces Academy, Romania
11:20-11:40	**Title:** Weyl semimetals A S -matrix study **D Schmeltzer,** The City University of New York, USA
11:40-12:00	**Title:** Fast zero-point family of methods for computing phonon dispersion **Anant Raj,** North Carolina State University, USA
12:00-12:20	**Title:** Photoinduced interfacial electron transfer dynamics of CdSe quantum dots on single crystal rutile TiO2 (001), (110), and (111) surfaces **Taro Toyoda,** The University of Electro-Communications, Japan
	Panel Discussion
	Poster Presentations 12:20-13:00
CMP-001	**Title:** Equivalence between floquet-magnus and Fer expansions to investigate the dynamics of a spin system in the three-level system **Eugene Stephane Mananga,** The City University of New York, USA
CMP-002	**Title:** Introduction in the band theory of liquid dielectrics **Alexander Shimkevich,** NRC Kurchatov Institute, Russia
CMP-003	**Title:** Hybrid plasmonic electro-optical ring resonator based modulator based on electrically **M A Swillam,** American University in Cairo, Egypt
CMP-004	**Title:** Python Script in the processing of electrochemical impedance spectroscopy and current transient measurements for the determination of the chemical capacitance **Daniel Andres Triana Camacho,** Industrial University of Santander, Colombia
	Lunch Break 13:00-14:00
	Video Presentations
14:00-14:10	**Title:** Treatment of the 'sing problem' by pair phase space pseudopotential **V S Filinov,** Joint Institute for High Temperatures of the Russian Academy of Sciences, Russia
14:10-14:20	**Title:** Scaling of thermocapillary molten pool shape during laser melting **Peng-Sheng Wei,** National Sun Yat-Sen University, Taiwan
14:20-14:30	**Title:** The decomposition of the solution during phase transition **Alex Guskov,** Institute of Solid State Physics of RAS, Russia
	Speaker Opportunity Available
14:30-14:40	**Closing Ceremony**