

# Analytical and numerical methods for open classical and quantum systems

June 09<sup>th</sup> - July 12<sup>th</sup>, 2019

Centro Internacional de Ciencias A.C., Cuernavaca, México

## Program

Day & Date	Time	Speaker & Title
<b>Monday</b> June 17 <sup>th</sup> , 2019	<b>17:00-18:00</b>	<b>Andres Garcia</b>
<b>Tuesday</b> June 18 <sup>th</sup> , 2019	<b>11:00-12:00</b>	<b>David Davalos (IFUNAM)</b> <i>Divisibility of quantum channels</i>
	<b>12:00-13:00</b>	<b>Thomas Stegmann (ICF-UNAM)</b> <i>Electronic transport in deformed graphene and phosphorene pn junctions</i>
	<b>16:30-17:30</b>	<b>Antonio Rosado (IFUNAM)</b> <i>Stern-Gerlach measurements</i>
	<b>17:30-18:30</b>	<b>Thorsten Haase (Darmstadt)</b> <i>Semiclassical Lasercooling - Beyond simple field configurations</i>
<b>Wednesday</b> June 19 <sup>th</sup> , 2019	<b>11:00-12:00</b>	<b>Erik Díaz-Bautista (CINVESTAV)</b> <i>A semi-classical approach for uniaxially strained magnetized graphene</i>
	<b>12:00-13:00</b>	<b>Carlos Pineda (IF-UNAM)</b> <i>Coarse graining and fuzzy measurements.</i>
	<b>16:00-17:00</b>	<b>Thomas Gorin (UdG)</b> <i>Semi-quantum extensions of classical stochastic (Markovian) processes</i>
	<b>17:30-18:30</b> <b>(Postpone to Tomorrow)</b>	<b>Hirdesh Kumar Pharasi (ICF)</b> <i>Financial market and its characterization</i>
		PTO

Day & Date	Time	Speaker & Title
Thursday June 20 <sup>th</sup> , 2019	12:00-13:00	David Amaro Alcalá <i>Sum rules in multiphoton interferometry</i>
	17:00-18:00	Hirdesh Kumar Pharasi (ICF) <i>Financial market and its characterization</i>
Friday June 21 <sup>th</sup> , 2019	12:00-13:00	Alejandro Contreras Reynoso <i>Errors in the Teleportation Protocol</i>
Monday June 24 <sup>th</sup> , 2019	17:00-18:00	Manuel Mijaíl Martínez Ramos <i>Mini Course I (Time series)</i>
Tuesday June 25 <sup>th</sup> , 2019	12:30-13:30	Nicole Sanchez <i>Stochastic Schrödinger Equation for the harmonic quantum oscillator</i>
	17:30-18:30	Thomas H. Seligman <i>Mini Course II (Time series)</i>
Wednesday June 26 <sup>th</sup> , 2019	12:30-13:30	Adrian Ortega <i>PT-symmetric tight-binding chain with gain and loss: A completely solvable model</i>
Thursday June 27 <sup>th</sup> , 2019	11:30-12:00	Thomas H. Seligman <i>Entropies, convex functions, partial orders etc. in classical and quantum systems!</i>
	12:00-13:00	Octavio Obregón Díaz, Carlos Andrés González Gutiérrez, Hirdesh K. Pharasi, Thomas H. Seligman <i>Round table discussion</i>
	17:00-18:00	Thorsten Haase <i>Dissipation-enabled efficient excitation transfer - A scheme for quantum information storage</i>
	17:00-18:00	Yave Alejandro Torres Mújica (UdG) <i>Opinion dynamics. Beyond the Ising model</i>
Tuesday July 2 <sup>nd</sup> , 2019	17:00-18:00	José Luis Parra <i>Evolution of Random Hopfield Networks</i>

Day & Date	Time	Speaker & Title
<b>Wednesday</b> <b>July 3<sup>rd</sup>, 2019</b>	<b>12:30-13:30</b>	<b>Manuel Mijaíl Martínez Ramos</b> <i>An application of Information Theory in portfolio management</i>
	<b>17:00-18:00</b>	<b>Yenni Ortiz</b> <i>Chains of benzenes with lithium-atom adsorption: Vibrations and spontaneous symmetry breaking</i>
<b>Thursday</b> <b>July 4<sup>rd</sup>, 2019</b>	<b>12:30-13:30</b>	<b>Antonieta Martínez Guerrero (CInC)</b> <i>Nonlinear autocorrelations in pitch fluctuations in music and its effects in brain electrical activity in musicians and non musicians</i>
	<b>16:30-17:30</b>	<b>Alejandro Ramírez Yañez</b> <i>Thermodynamic properties of a real gas in 1D, BEC en 3D and methods to attack them</i>
	<b>17:30-18:30</b>	<b>Thomas Gorin</b> <i>Classical stochastic channels and quantum extensions</i>
<b>Friday</b> <b>July 4<sup>th</sup>, 2019</b>	<b>12:30-13:30</b>	<b>Hirdesh K. Pharasi</b> <i>Oscillatory and turbulent rotating convection</i>
	<b>17:00-18:00</b>	<b>Thomas H. Seligman</b> <i>Observables and density matrices embedded in dual Hilbert spaces</i>
<b>Monday</b> <b>July 8<sup>th</sup>, 2019</b>	<b>12:00-13:00</b>	<b>Paola Vanesa Olguín Rodriguez</b> <i>Stationary and Dynamic Aspects of Electrical Brain Activity</i>
	<b>13:00-14:00</b>	<b>Daniel Arzate Mena</b> <i>Relationship between Default Mode Network and Stationary Pattern in EEG</i>
	<b>17:00-18:00</b>	<b>Adrian Huerta</b> <i>Percolation of redundant constraints of models on energy and entropy driven phase transition</i>

Day & Date	Time	Speaker & Title
Tuesday July 9 <sup>th</sup> , 2019	12:00-13:30	<b>Soham Biswas</b> <i>Zero temperature ordering dynamics in two dimensional Ising spin system with competing interaction</i>
	16:00-17:00	<b>Dalia Hernandez</b> <i>Studying short time series: Power map on correlation matrices</i>
	17:30-18:30	<b>Suchetana Sadhukhan</b> <i>Statistical analysis of column constrained ensembles</i>
Wednesday July 10 <sup>th</sup> , 2019	17:00-18:00	<b>Arlex Oscar Marin Garcia</b> <i>The Human Connectome Project Datasets: An Overview</i>
Thursday July 11 <sup>th</sup> , 2019	12:00-13:00	<b>Manan Vyas</b> <i>Multivariate analysis of singular correlation matrices</i>
	17:30-18:30 (Moshinsky Lecture)	<b>Jacobus Verbaarschot</b> <i>Black Holes and Compound Nuclei</i>
Friday July 12 <sup>th</sup> , 2019	12:00-13:00	<b>Jacobus Verbaarschot</b> <i>Replica trick with application to the Gaussian Unitary Ensemble</i>