



## Math-AmSud Seminar "Optimization and Bio-Mathematics"

IMPA, Rio de Janeiro, November 21 - 22, 2017

### Ricardo Mañé Auditorium

Hour	Tuesday, 21
09:00 - 09:35	<b>German Ariel Torres</b> (Universidad Nacional de Córdoba, Argentina) <i>Optimization problems that arise in complex systems and tumor growth</i>
09:35 - 10:10	<b>José Verschae</b> (Universidad Católica de Chile, Chile) <i>Approximation Algorithms for Covering Problems with a Non-Linear Objective</i>
10:10 - 10:30	<b>Coffee Break</b>
10:30 - 11:05	<b>Sergio González Andrade</b> (Escuela Politécnica Nacional, Ecuador) <i>Numerical Simulation of Complex Fluids with Temperature-Dependent Parameters</i>
11:05 - 11:40	<b>Marcelo Fiori</b> (Universidad de la Republica, Uruguay) <i>Graph matching problems: probabilistic and deterministic results</i>
11:40 - 12:15	<b>Arturo Gil</b> (Universidad Central de Venezuela) <i>Interval Analysis Optimization in Parallel Robots Kinematics Singularity Problems</i>
12:15 - 14:00	<b>Lunch</b>
14:00 - 14:35	<b>Gabriela Cybis</b> (Universidade Federal de Paraná, Brazil) <i>Phylodynamic methods for epidemics</i>
14:35 - 15:10	<b>Sylvain Sorin</b> (Université Pierre et Marie Curie-CNRS, France) <i>Optimization, learning and games "Replicator dynamics: old and new"</i>
15:10 - 15:40	<b>Coffee Break</b>
15:40 - 16:15	<b>Jean-Stéphane Dhersin</b> (Institut national des sciences mathématiques et de leurs interactions) <i>Limit theorem for a SIR model on a random graph</i>
16:15 - 16:50	<b>Pedro Merino</b> (Escuela Politécnica Nacional, Ecuador) <i>A DC approach for the numerical solution of PDE-constrained optimization problems with fractional penalizations</i>
17:00	<b>Renewal Ceremony of the Unité Mixte Internationale</b>

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Instituto de Matemática Pura e Aplicada



Cooperación Regional Francesa PARA AMÉRICA DEL SUR



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Hour	Wednesday, 22
09:00 - 09:35	<b>Geovani Grapiglia</b> (Universidade Federal de Paraná, Brazil) <i>Accelerating Universal Newton Methods</i>
09:35 - 10:10	<b>Juan Manuel Pedraza</b> (Universidad de los Andes de Colombia, Colombia) <i>How much can a cell know about its environment?</i>
10:10 - 10:30	<b>Coffee Break</b>
10:30 - 11:05	<b>Marcos Villagra</b> (Universidad Nacional de Asunción, Paraguay) <i>Multiobjective Optimization in a Quantum Adiabatic Computer</i>
11:05 - 11:40	<b>María Inés Fariello</b> (Universidad de la Republica, Uruguay) <i>Darwin in the mathematics land: how mathematics merged two (incompatible) evolution theories and some applications</i>
11:40 - 12:15	<b>Gloria Carvalho</b> (Cendit, Venezuela) <i>Mathematical models used in telecommunication systems, Electromagnetic field propagated into the human body</i>
12:15 - 14:00	<b>Lunch</b>
14:00 - 14:35	<b>Lisandro Parente</b> (CONICET - Universidad Nacional de Rosario, Argentina) <i>An approximation scheme for uncertain minimax optimal control problems</i>
14:35 - 15:10	<b>Salvador Flores</b> (Universidad de Chile, Chile) <i>Computing principled leverage indicators for robust large scale regression</i>