

MONDAY, AUGUST 31 – CENTRO CULTURAL MATUCANA 100

9:30-11:00	Registration
10:30-11:00	Coffee
11:00-11:50	Manuel del Pino "On a conjecture by De Giorgi in large dimensions"
12:00-14:00	Lunch
14:10-15:00	Juan Maldacena "The gauge-gravity duality"
15:10-16:00	Herbert Clemens "Exploring the Hodge conjecture"
16:00-16:30	Coffee Break
16:30-17:20	Artur Avila "Dynamics of renormalization operators"
17:30-19:00	OPENING and PRIZE CEREMONY RECEPTION

TUESDAY, SEPTEMBER 1 – UNIVERSIDAD DE SANTIAGO DE CHILE

TIME	PLACE	TITLE	SPEAKER
8:30 - 9:40	Aud. Froemel	Probabilistic and dynamical aspects of left-orderable groups	Andres Navas
	Aud. Quezada	Imaging with waves in homogeneous and random media	Josselin Garnier
9:45 – 10:55	Aud. Froemel	Orbifolds, Fields Theories and Strings: A Mathematical Perspective	Ernesto Lupercio
	Aud. Quezada	Self-similar Groups, Dynamical Systems and Algebras	Laurent Bartholdi
10:55 – 11:10	Coffee Break		
11:10 – 11:40	Aud. Froemel	Isotopy problems for manifolds with positive curvature	UMALCA Special Mention : Fernando Codá Marques
11:45 - 12:15	Aud. Froemel	On the Alekseevskii's conjecture for Einstein homogeneous manifolds	UMALCA Special Mention : Jorge Lauret
12:30 – 14:00	Lunch		
14:00 - 14:50	Aud. Froemel	Complex singularities and contact topology	Patrick Popescu-Pampu
	Aud. Quezada	Macroscopic sensitivity to localized defects in a class of growth models	Maria Eulália Vares
15:10 16:00	Aud. Froemel	Fractal geometry, Dynamical Bifurcations and Diophantine Approximations	UMALCA Prize Lecture : Carlos Gustavo Moreira

16:00 – 16:20	Coffee Break		
16:20 – 16:50	Aud. Froemel	Global dominated splitting or zero Lyapunov exponent almost everywhere	Dynamical Systems: Jairo Bochi
	Aud. Quezada	On Heisenberg-like supergroups	Lie Theory: Adolfo Sanchez Valenzuela
	Room A	Einstein Metrics, Complex Surfaces, and Symplectic 4-Manifolds	Geometry: Claude LeBrun
	Room B	Very fast methods and preconditioners for banded matrices and PDEs on irregular domains	Numerical Analysis: Daniel B. Szyld
	Room C	Projective splitting methods for the sum of monotone operators and the hybrid proximal-projection method	Optimization & Control: Benar Svaiter
17:00 – 17:30	Aud. Froemel	TBA	Dynamical Systems: Gonzalo Contreras
	Aud. Quezada	Matrix valued special functions	Lie Theory: Juan Alfredo Tirao
	Room A	The hyperbolic lattice point problem	Geometry: Roberto Miatello
	Room B	Solving Efficiently Robust Semiimplicit Discretizations of the Immersed Boundary Method	Numerical Analysis: Hector D. Ceniceros
	Room C	Characterization of Fractured Oil Reservoirs with Global Optimization	Optimization & Control: Susana Gomez

17:40 - 18:10	Aud. Froemel	TBA	Dynamical Systems: Wei Xiao Shen
	Aud. Quezada	TBA	Lie Theory: Vyacheslav Futorny
	Room A	Geometry of unitaries in a finite algebra: variation formulas and convexity	Geometry: Lazaro Recht
	Room B	Optimal error estimation for $\mathbf{H}(\text{curl})$ -conforming p -interpolation in two dimensions	Numerical Analysis: Norbert Heuer
	Room C	TBA	Optimization & Control: Rafael Correa
18:20 18:50	Aud. Froemel	Non-hyperbolicities	Special Invitation: Lorenzo Díaz
	Aud. Quezada	On Knots with ICON surfaces	Special Invitation: Mario Eudave
	Room A	Conformal Killing graphs with prescribed mean Curvature	Geometry: Marcos Dajczer
	Room B	An adaptive finite element method for shape optimization problems	Numerical Analysis: Pedro Morin
	Room C	State-closed groups	Special Invitation: Said Sidki

WEDNESDAY, SEPTEMBER 2 – UNIVERSIDAD DE SANTIAGO DE CHILE

TIME	PLACE	TITLE	SPEAKER
8:30 - 9:40	Aud. Froemel	Probabilistic and dynamical aspects of left-orderable groups	Andres Navas
	Aud. Quezada	Imaging with waves in homogeneous and random media	Josselin Garnier
9:45 - 10:55	Aud. Froemel	Orbifolds, Fields Theories and Strings: A Mathematical Perspective	Ernesto Lupercio
	Aud. Quezada	Self-similar Groups, Dynamical Systems and Algebras	Laurent Bartholdi
10:55 - 11:10	Coffee Break		
11:10 - 12:00	Aud. Froemel	The structure of large graphs	Noga Alon
12:30 - 14:00	Lunch		
14:00 - 14:50	Aud. Froemel	The model theory of real and complex exponential equations	Angus MacIntyre
	Aud. Quezada	On Free Multiplicative Convolutions	Victor Pérez Abreu
15:10 16:00	Aud. Froemel	$C1$ dynamics including endomorphisms	Martin Sambarino
	Aud. Quezada	Elimination theory revisited	Aron Simis

16:00 – 16:20	Coffee Break		
16:20 – 16:50	Aud. Froemel	A Class of non-Gaussian selfsimilar stochastic processes	Probability & Statistics: Soledad Torres
	Aud. Quezada	Higher Fano manifolds	Algebraic Geometry: Carolina Araujo
	Room A	Stable splittings and almost commuting elements in Lie Groups	Topology: José Manuel Gómez
	Room B	Characterizations of maximal regularity via operator-valued Fourier multipliers	Analysis: Carlos Lizama
	Room C	Towards an affine Robinson-Schensted-Knuth Correspondence	Combinatorics: Luc Lapointe
17:00 - 17:30	Aud. Froemel	Trace asymptotics for Levy processes	Probability & Statistics: Rodrigo Bañuelos
	Aud. Quezada	TBA	Algebraic Geometry: Eduardo Friedman
	Room A	Two-vector bundles, D-branes and Frobenius manifolds	Topology: Jorge Devoto
	Room B	Sharp weighted bounds for fractional integral operators	Analysis: Rodolfo Torres
	Room C	Acute triangulations of polytopes	Combinatorics: Igor Pak

17:40 - 18:10	Aud. Froemel	Interacting particle systems in random environment	Probability & Statistics: Milton Jara
	Aud. Quezada	Foliaciones límite	Algebraic Geometry: Fernando Cukierman
	Room A	On mapping class groups of non-orientable surfaces	Topology: Miguel Xicotencatl
	Room B	Holomorphic extension theorems via Clifford analysis	Analysis: Ricardo Abreu-Blaya
	Room C	Geometrization of Graphs in Surfaces	Combinatorics: Sóstenes Lins
18:20 18:50	Aud. Froemel	Test for anisotropy in Gaussian random fields	Probability & Statistics: José R. León
	Aud. Quezada	On the level and sublevel of rings	Special Invitation: Ricardo Baeza
	Room A	Algebraic K-theory of virtually free groups	Topology: Daniel Juan Pineda
	Room B	An analogue of the Riesz-Haviland Theorem for the truncated moment problem	Analysis: Raul Curto
	Room C	Two critical periods in the evolution of random planar graphs	Combinatorics: Tomasz Luczak

THURSDAY, SEPTEMBER 3 – UNIVERSIDAD DE SANTIAGO DE CHILE

TIME	PLACE	TITLE	SPEAKER
8:30 -9:40	Aud. Froemel	Probabilistic and dynamical aspects of left-orderable groups	Andres Navas
	Aud. Quezada	Imaging with waves in homogeneous and random media	Josselin Garnier
9:45 – 10:55	Aud. Froemel	Orbifolds, Fields Theories and Strings: A Mathematical Perspective	Ernesto Lupercio
	Aud. Quezada	Self-similar Groups, Dynamical Systems and Algebras	Laurent Bartholdi
10:55 – 11:10	Coffee Break		
11:10 – 12:00	Aud. Froemel	Rigidity results in cellular automata theory: probabilistic and ergodic approach	UMALCA Prize Lecture: Alejandro Maass
12:30 – 14:00	Lunch		
14:00 - 14:50	Aud. Froemel	Harmonic Analysis related to Schrödinger operators	Eleonor Harboure
	Aud. Quezada	Statistical properties of real and complex one-dimensional dynamical systems	Juan Rivera-Letelier
15:10 16:00	Aud. Froemel	TBA	UMALCA Prize Lecture: Federico Rodriguez Hertz
16:00 – 16:20	Coffee Break		

16:20 – 16:50	Aud. Froemel	Variational Methods in Imaging	Partial Differential Equations: Irene Fonseca
	Aud. Quezada	Groups and algebras associated to holomorphic dynamical systems	Algebra: Volodymyr Nekrashevych
	Room A	On the Geometry of Hamilton-Jacobi equation	Mathematical Physics: David Martin de Diego
	Room B	Mathematical engineering research in clarifier-thickener modelling	Mathematics in Science and Tech: Raimundo Bürger
	Room C	Inverse limits in holomorphic dynamics	Complex Dynamics: Carlos Cabrera
17:00 – 17:30	Aud. Froemel	On the uniqueness of sign changing solutions of semilinear equations	Partial Differential Equations: Carmen Cortazar
	Aud. Quezada	TBA	Algebra: Fritz Gruenewald
	Room A	Framed sheaves on projective surfaces	Mathematical Physics: Ugo Bruzzo
	Room B	Mathematics in Computed Tomography.	Math. in Science and Tech: Matias Courdurier
	Room C	TBA	Complex Dynamics: Bertrand Deroin

17:40 - 18:10	Aud. Froemel	Entropy maximizing measures for some partially hyperbolic systems	Dynamical Systems: Federico Rodriguez Hertz
	Aud. Quezada	Construction of Weil representations for *-classical groups using Bruhat presentations	Lie Theory: José Pantoja
	Room A	Harmonic Mappings and Conformal Parametrizations of Minimal Surfaces	Geometry: Martin Chuaqui
	Room B	Numerical Analysis of a Residual Local Projection Method for the Darcy Equation	Numerical Analysis: Frederic Valentin
	Room C	On regularization methods of EM-Kaczmarz type	Optimization & Control: Antonio Leitão
18:20 18:50	Aud. Froemel	Simplicity and fragmentation	Dynamical Systems: Frederic Le Roux
	Aud. Quezada	Formal multiplications, bialgebras of distributions and non associative Lie theory	Lie Theory: José María Pérez Izquierdo
	Room A	Constant mean curvature hypersurfaces in Riemannian manifolds	Geometry: Frank Pacard
	Room B	Fuel Cells: Electrochemistry and Fluid Dynamics	Numerical Analysis: L. Hector Juarez V.
	Room C	Computational Noise in Simulation-Based Optimization Problems	Optimization & Control: Jorge Moré

FRIDAY, SEPTEMBER 4 – UNIVERSIDAD DE SANTIAGO DE CHILE

TIME	PLACE	TITLE	SPEAKER
8:30 - 9:40	Aud. Froemel	Probabilistic and dynamical aspects of left-orderable groups	Andres Navas
	Aud. Quezada	Imaging with waves in homogeneous and random media	Josselin Garnier
9:45 – 10:55	Aud. Froemel	Orbifolds, Fields Theories and Strings: A Mathematical Perspective	Ernesto Lupercio
	Aud. Quezada	Self-similar Groups, Dynamical Systems and Algebras	Laurent Bartholdi
10:55 – 11:10	Coffee Break		
11:10 – 12:00	Aud. Froemel	On the global behavior of solutions to critical nonlinear dispersive and wave equations	Carlos Kenig
12:30 – 14:00	Lunch		
14:00 - 14:50	Aud. Froemel	Role of Movement and Dispersal on Disease Dynamics and Evolution with Applications to Influenza and Other Diseases	Carlos Castillo Chavez
	Aud. Quezada	Orbifold string topology	Bernardo Uribe

15:00 15:30	Aud. Froemel	Automorphisms of Handlebodies	Special Invitation: Ruben Hidalgo
	Aud. Quezada	Periods and generating functions in Algebraic Geometry	Algebraic Geometry: Hossein Movasati
	Room A	TBA	Topology: Stevo Todorcevic
	Room B	Weighted inequalities for the two-dimensional one-sided hardy- littlewood maximal function	Analysis: Liliana Forzani
	Room C	TBA	Combinatorics: Stephan Thomasse
15:30 16:00	Aud. Froemel	Aging scaling limit for trap models and K-processes	Probability & Statistics: Luiz Renato Fontes
	Aud. Quezada	Subvarieties of small codimension	Algebraic Geometry: Enrique Arrondo
	Room A	Combinatorial Algebraic Topology	Topology: Dmitry Kozlov
	Room B	$C\alpha$ -Holder classical solutions for non-autonomous neutral differential equations	Analysis: Eduardo Hernández
	Room C	A measure-theoretic approach to the theory of dense hypergraphs	Combinatorics: Gabor Elek

16:00 – 16:20	Coffee Break		
16:20 – 16:50	Aud. Froemel	On the support of solutions for the Ostrovsky Equation	Partial Differential Equations: Pedro Isaza
	Aud. Quezada	Galois coverings of finite dimensional algebras	Algebra: José Antonio de la Peña
	Room A	On the spectrum of the twisted Dolbeault Laplacian on Kahler manifolds	Mathematical Physics: Marcos Jardim
	Room B	Mathematical and Computational Challenges in Climate Modeling	Math. in Science and Tech: Pedro L. da Silva Dias
	Room C	Monodromy of singularities of holomorphic foliations in the plane	Complex Dynamics: David Marin
17:00 - 17:30	Aud. Froemel	Homogenization of degenerate porous medium type equations in ergodic algebras	Partial Differential Equations: Hermano Frid
	Aud. Quezada	Symmetric and skew-symmetric elements in group algebras	Algebra: Francisco César Polcino Milies
	Room A	Aharonov-Bohm Effect and Scattering Theory	Mathematical Physics: Ricardo Weder
	Room B	Mathematical modeling of extraction of copper from a deposit by using in situ leaching technology	Math. in Science and Tech: C. Conca/J. San Martín
	Room C	Skew-product complex dynamics	Complex Dynamics: Mario Ponce

17:40 - 18:10	Aud. Froemel	The trace of the resolvent of an elliptic cone operator	Partial Differential Equations: Gerardo Mendoza
	Aud. Quezada	Group algebras in coding theory	Algebra: Angel Del Rio Mateos
	Room A	The many faces of integrability in random matrix models	Mathematical Physics: Patrick Desrosiers
	Room B	A Web-Services accessible turbulence database of isotropic turbulence and sample application	Math. in Science and Tech: Charles Meneveau
	Room C	Multi-summability of unfoldings of tangent to the identity diffeomorphisms	Complex Dynamics: Javier Ribon
18:20 18:50	Aud. Froemel	A free boundary problem for the $p(x)$ -laplacian	Partial Differential Equations: Noemi Wolanski
	Aud. Quezada	Structure and representations of alternative superalgebras	Algebra: Ivan Shestakov
	Room A	Eigenvalue statistics for random Schrödinger operators	Mathematical Physics: François Germinet
	Room B	TBA	TBA
	Room C	Topological aspects of a holomorphic vector field singularity	Complex Dynamics: Rudy Rosas