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Citizenship: chilean
Birth: june 28, 1977

CURRENT POSITION.

From july 2006, assistant professor at Departamento de Matemáticas USACH.

PREVIOUS EXPERIENCE.

From january to june 2006, post-doctoral position at CMM, Universidad de Chile.

EDUCATION.

- . December 2005 Ph.D. in Mathematics, Université de Bourgogne, France.
Ph.D in Science of Engineering, Universidad de Chile.
Advisors: Jean-Marc Gambaudo and Alejandro Maass.
- . January 2002 Mathematician Engineer, Universidad de Chile.

AWARDS, FELLOWSHIPS AND GRANTS

- . 2010-2013 Fondecyt No. 1100318.
- . 2007-2009 Fondecyt de Iniciación No. 11060002.
- . 2007-2007 Cooperación internacional CNRS-CONICYT No. CNRS0706.
- . 2007-2009 Millennium Science Nucleus *Information and Randomness*. Young researcher.
- . 2002-2005 Graduate scholarship, CONICYT and french government.

RESEARCH SUBJECTS

Dynamical systems, mainly: topological dynamics, ergodic theory, combinatorics, tilings, symbolic dynamics, etc.

PUBLICATIONS

- *Topological orbit equivalence classes and numeration scales of logistic maps.* Joint work with Juan Rivera-Letelier. Accepted for publication in Ergodic Theory Dynam. Systems.
- *Invariant measures for non-primitive tiling substitutions.* Joint work with Boris Solomyak. Accepted for publication in Journal d'Analyse Mathématique.
- *Linearly repetitive Delone systems have a finite number of non periodic Delone system factors.* Joint work with Fabien Durand and Samuel Petite. Proc. Amer. Math. Soc. 138 (2010), 1033-1046.
- *Choquet simplices as spaces of invariant probability measures on post-critical sets.* Joint work with Juan Rivera-Letelier. Ann. Inst. H. Poincaré Anal. Non Linéaire 27 (2010), 95-115.
- *Invariant measures of minimal post-critical sets of logistic maps.* Joint work with J. Rivera-Letelier. Israel Journal of Mathematics 176 (2010), 157193.
- *G-odometers and their almost 1-1 extensions.* Joint work with S. Petite. J. London Math. Soc. (2) 78 (2008) 1–20.
- *Self similar tiling systems, topological factors and expansion constants.* Joint work with F. Durand. Discrete Comput. Geom. 40 (2008) 622–640.
- *Rotation Topological Factors of minimal \mathbb{Z}^d -actions on the Cantor set.* Joint work with J-M. Gambaudo, A. Maass. Trans. Amer. Math. Soc. 359 (2007), no. 5, 2305–2315.
- *\mathbb{Z}^d -Toeplitz arrays.* Disc. and Cont. Dyn. Sys. Vol 15, N.3 (2006), 859–881.
- *Realization of a Choquet simplex as the set of invariant probability measures of a tiling system.* Ergodic Theory Dynam. Systems 26 (2006), no. 5, 1417–1441.
- *Continuous and measurable eigenfunctions of linearly recurrent dynamical Cantor systems.* Joint work with F. Durand, B. Host et A. Maass. J. London Math. Soc. 67 (2003), 790–804.

PREPRINTS.

- *Set of invariant measures of generalized Toeplitz subshifts.* Joint work with S. Petite. Submitted.

RESEARCH VISITS.

February 22 to february 26, 2010, visiting scholar at Instituto de Matemática UNAM, México.
Host: prof. Ricardo Gomez.

October 18 to november 1, 2009, visiting scholar at the Department of Mathematics of the University of Washington, USA. Host: prof. Boris Solomyak.

September 13 to september 25, 2009, visiting scholar at Laboratoire Amiénois de Mathématique Fondamentale et Appliquée UMR 6140, Université de Picardie, France. Host: prof. Fabien Durand.

July 5 to july 19, 2008, visiting scholar at Laboratoire Amiénois de Mathématique Fondamentale et Appliquée UMR 6140, Université de Picardie, France. Host: prof. Samuel Petite.

January 1 to march 27, 2008, visiting scholar at the Department of Mathematics of the University of Washington, USA. Host: prof. Boris Solomyak.

July 2007, visiting scholar at Laboratoire Amiénois de Mathématique Fondamentale et Appliquée UMR 6140, Université de Picardie, France. Host: prof. Fabien Durand.

ORAL PRESENTATIONS AT CONFERENCES.

December 15-18, 2010, Pucón, CHILE

First joint meeting AMS-SOMACHI, Special Session on Group Actions: Probability and Dynamics, *Dimension groups and generalized odometers.*

September 10, 2010, Amiens, FRANCE

Journée ANR sub-tile, *Invariant measures of non minimal substitution tiling systems.*

May 24- June 04, 2010, San Pedro de Atacama, CHILE

Bicentennial Workshop on Dynamical Systems, *Invariant measures of non minimal substitution tiling systems.*

February 15-19, 2010, CIRM, Marseille, FRANCE

Towards new interactions between mathematics and computer science, Multi-dimensional Subshifts and Tilings, *Generalized odometers and Toeplitz systems.*

July 6-10, 2009, Sydney, AUSTRALIA

First PRIMA Congress, Special Session of Dynamical System *Choquet simplices as the set of invariant probability measures of a postcritical set.*

April 28-30, Universidad de Magallanes, Punta Arenas, CHILE

XXIII Conference of Mathematics of the South 2009, *Sistemas de embaldosados y medidas invariantes.*

March 12-14, 2009, Universidad Nacional de Salta, ARGENTINA

I Encuentro de Matemática Discreta, In honor of Thomas Hibbard's 80th birthday, *Sistemas dinámicos generados por embaldosados.*

November 07-10, 2007, Punta de Tralca, CHILE

VII Symposium of the Chilean Mathematical Society, *G-odometers and Toeplitz systems.*

October 25-26, 2007, Universidad Federico Santa María, Valparaíso, CHILE.
Congress honoring the 65th birth of Professor Eduardo Saez, *omega-limit sets and generalized odometers admitting infinitely many ergodic measures*.

October 05-06, 2007, DePaul University, Chicago, USA.
1030th AMS Meeting, *Omega-limit sets which admit infinitely many ergodic measures*.

September 10-14, 2007, CIRM, Marseille, FRANCE.
Ordre Apériodique: nouveaux liens et anciens problèmes revisités, *Omega-limit sets which admit infinitely many ergodic measures*.

April 25-27, 2007, Concepción, CHILE.
XXI Conference of Mathematics of the South 2007, *Omega-limit sets admitting an arbitrary finite number of ergodic measures*.

January 11-12, 2007, Universidad de Santiago, CHILE.
Third workshop GAFEVOL, *Eigenvalues of minimal Cantor systems*.

August 2-5, 2006, Universidad de La Serena, CHILE.
COMCA, *Substitution tiling systems, topological factors and stretching constants*.

May 21-25, 2006, Merlimont, FRANCE.
Congress Dynamique et Alèa, *Γ -odometers and their almost 1-1 extensions*.

November 07-08, 2005, PUC, CHILE.
LIV National Congress in Dynamical Systems, *\mathbb{Z}^d -Toeplitz arrays*.

May 11, 2005, University of Littoral, Calais, FRANCE.
Fourth Conference Amiens-Calais of Ergodic Theory *\mathbb{Z}^d -Toeplitz arrays*

April 25-30, 2004, Aussois, FRANCE.
Colloque "Jeunes Probabilistes et Statisticiens", *Valeurs propres mesurables des systèmes linéairement récurrents*.

ORAL PRESENTATIONS AT SEMINARS.

April 11, 2011, Universidad de Santiago, CHILE.
Dynamical System Seminar of Santiago, *Orbit equivalence classes of uniquely ergodic minimal Cantor systems*.

February 25, 2010, IMATE, UNAM, Mexico City, MEXICO.
Geometry, Convex, Combinatorics Seminar, *Medidas invariantes de sistemas de embaldosados de sustitución no minimales*.

October 27, 2009, Department of Mathematics of the University of Washington, USA.
Rainwater seminar, *Invariant measures for non-minimal substitution tiling systems*.

February 12, 2008, Department of Mathematics of the University of Washington, USA.
Rainwater seminar, *Bratteli-Vershik representation of minimal Cantor systems: applications to omega-limit sets*.

October 10, 2007, Universidad de Santiago, CHILE

Dynamical System Seminar of Santiago, *omega-limit sets and generalized odometers admitting infinitely many ergodic measures.*

June 26, 2007, Universidad Católica del Norte, CHILE.

Dynamical Systems seminar, *omega-limit sets admitting a finitely or infinitely many ergodic measures.*

July 13, 2006, Universidad de Santiago, CHILE.

GAFEVOL Seminar, *Substitution tiling systems, topological factors and stretching constants.*

May 16, 2006, IMB, Dijon, FRANCE.

Student Seminar, *Systèmes de pavages avec plusieurs mesures ergodiques.*

May 09, 2006, Probabilities and Random Models Laboratory Paris VI-VII, FRANCE.

Ergodic Theory Seminar, *Odomètres et leurs extensions minimales symboliques presque injectives: systèmes de Toeplitz*

February 02, 2006, IMATE, UNAM, Mexico City, MEXICO.

Geometry, Convex, Combinatorics Seminar, *\mathbb{Z}^d -Toeplitz arrays.*

June 30, 2005, Amiens, LAMFA, FRANCE.

Probability and Ergodic Theory Seminar, *Quelques notions basiques sur les pavages.*

March 15, 2005, IML, Marseille, FRANCE.

Dynamics, Arithmetics and combinatorics Seminar *\mathbb{Z}^d -Toeplitz arrays .*

MINI-COURSES.

March, 7-11, 2011, Universidad Nacional de Salta, ARGENTINA

Emalca, *Elementos de Sistemas dinámicos y embaldosados.*

December, 14-18, 2009, Universidad Mayor de San Andrés, La Paz, BOLIVIA

II Escuela de Sistemas Dinámicos, *Sistemas simbólicos minimales: subshifts de sustitución y otros.*

June 24-26, 2009, Universidad Católica del Norte, Antofagasta, CHILE

Sistemas minimales de Cantor, diagramas de Bratteli-Vershik y aplicaciones.

ORGANIZING COMMITTEE.

July 25-27, 2007, Universidad de Santiago, CHILE.

LVI National Congress in Dynamical Systems in honoring of Jorge Billeke.

August 31-september 4, 2009, Matucana 100 and Universidad de Santiago de Chile

III Congreso latinoamericano de matemáticos (III CLAM).

September 7-11, 2009, Pontificia Universidad Católica de Valparaíso

III CLAM Satellite dynamical system conference.

January 18-29, 2010, Pontificia Universidad Católica de Chile

Non-uniformly hyperbolic days.

November 3-5, 2010, Pontificia Universidad Católica de Valparaíso
LVII Coloquio de sistemas dinámicos, celebrando el 60 aniversario de Víctor Guíñez.

TEACHING EXPERIENCE (Universidad de Santiago).

Introduction to Functional Analysis. Undergraduate course. 2011/2.
Introduction to Ergodic Theory. Graduate and undergraduate course. 2011/1
Introduction to Symbolic Dynamics. Graduate and undergraduate course. 2007/1, 2010/1.
Algebra. Undergraduate course. 2010/1, 2008/1.
Introduction to Dynamical Systems. Undergraduate course. 2009/1, 2009/2.
Measure Theory. Graduate course. 2008/1, 2009/1
Analysis I (metric spaces). Undergraduate course. 2007/1, 2008/2
Analysis II (measure theory and integration). Undergraduate course. 2007/2, 2010/2, 2011/1.
Linear Algebra, Undergraduate course. 2006/2.

POPULARIZATION OF SCIENCE.

2006, 2008, 2010. Participant in the EXPLORA activity, "1000 científicos 1000 aulas."

ADMINISTRATION (Universidad de Santiago)

2006-2009, 2011– member of the Mathematical Engineer committee.
From 2007, member of the postgraduate studies in mathematics committee.

OTHERS.

- Computational skills: Windows, UNIX (LINUX), \LaTeX , Matlab, C, HTML.
- Languages: Spanish (mother tongue), french and english.