

# Curriculum Vitae

Eduardo Cerpa

March 2017

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## 1 Personal Data

Name Eduardo Cerpa  
Born October 23, 1979. Santiago, Chile  
Nationality Chilean  
Address Avda. Vicuña Mackenna 3939, San Joaquín, Santiago, Chile  
Email eduardo.cerpa@usm.cl  
Website <http://ecerpa.mat.utfsm.cl/>

## 2 Academic Positions

Since 2016 Associate Professor, Dep. de Matemática, Universidad Técnica Federico Santa María, Chile.  
2012–2015 Assistant Professor, Dep. de Matemática, UTFSM, Chile.  
2009–2011 Research and teaching position, Dep. de Matemática, UTFSM, Chile.  
2008/2009 Postdoc with Miroslav Krstic, Dep. MAE, University of California at San Diego, USA.  
2007/2008 Research and teaching position (ATER), Dép. de Mathématiques, U. Paris-Sud, France.

## 3 Education

2005–2008 PhD in Mathematics. Advisor: Jean-Michel Coron. Université Paris-Sud, France.  
2004/2005 Master in Numerical Analysis and PDE, Université Pierre et Marie Curie, France.  
1998–2004 Mathematical Engineering, Universidad de Chile, Chile.

## 4 Awards and Fellowships

2015 *SIAM Activity Group on Control and Systems Theory Prize.*  
'12, '13, '14 *Maestro Destacado* (outstanding lecturer), UTFSM.  
2004–2008 *Graduate Scholarship*, Conicyt (Chile) and French Government.  
2003 *Fundación Andes* Scholarship. 3-month Internship at Pôle Scientifique Dassault-Aviation.  
'98, '99, '03 *Alumno Destacado* (outstanding undergraduate student), Universidad de Chile.

## 5 Scientific Community Service

Since 2017 Associate Editor for IEEE Transactions on Automatic Control.  
Since 2017 Coordinator of the Mathematical Sciences Committee for Graduate Scholarships, Conicyt.  
Since 2014 Member of the Conference Editorial Board of the IEEE Control Systems Society. Associate Editor for American Control Conference and IEEE Conference on Decision and Control.  
Since 2010 Reviewer for MathReviews (MathScinet).  
Since 2009 Referee for *American Control Conference*, *IEEE Conference on Decision and Control*, and *IFAC Symposium on Nonlinear Control Systems*.  
Since 2008 Referee for the following journals: SIAM Journal on Control and Optimization, Automatica, IEEE Transactions on Automatic Control, Systems and Control Letters, ESAIM Control Optimisation and Calculus of Variations, Mathematical Control and Related Fields, Mathematics of Control Signals and Systems, International Journal on Robust and Nonlinear Control, International Journal of Control, IMA Journal of Mathematical Control and Information, Journal of Dynamical and Control Systems International Journal of Systems Science, Annals de IHP - Analyse non linéaire, Journal of Functional Analysis, Journal of Differential Equations, Nonlinearity, Journal of Optimization Theory and Applications, Acta Applicandae Mathematicae, Applicable Analysis, Mathematical Methods in the Applied Sciences, ZAMP, Discrete and Continuous Dynamical Systems Series B, Nonlinear Analysis Real World Application  
2014 – 2016 Reviewer for Graduate Scholarships, Conicyt.

## 6 University Service

|           |  |
|-----------|--|
| 2014–2016 | Responsible of Mathematical Engineering, Campus Santiago, UTFSM.   |
| 2015–2016 | Member of <i>Comisión Universitaria</i> , Campus Santiago, UTFSM.  |
| 2015      | Member of Hiring Committees for the Department of Physics and the Department of Mathematics, Campus Santiago, UTFSM. |
| 2011–2013 | Responsible of teaching activities at Math Department, Campus Santiago, UTFSM.                                       |
| 2009–2010 | Responsible of the Seminar at Math Department, UTFSM.  |

## 7 Teaching Experience

|           |   |
|-----------|---|
| 2017/1 CS | <i>Ordinary Differential Equations</i> . Coordinator and lecturer, UTFSM.   |
| 2016/2 CS | <i>Complex Variables</i> . UTFSM.   |
| 2016/1 CS | <i>Linear Algebra</i> . UTFSM.  |
| 2016/1 CC | <i>PDE Control</i> . UTFSM.   |
| 2015/2 CS | <i>Integral Calculus</i> . UTFSM.   |
| 2015/1 CS | <i>Ordinary Differential Equations</i> . UTFSM.   |
| 2015/1 CS | <i>Introduction to Mathematical Engineering</i> . UTFSM.  |
| 2014/1 CC | <i>PDE Control</i> . UTFSM.   |
| 2014/1 CC | <i>Calculus of Variations and Optimal Control</i> . UTFSM.  |
| 2014/1 CS | <i>Differential Calculus</i> . UTFSM.   |
| 2014/1 CS | <i>Introduction to Mathematical Engineering</i> . UTFSM.  |
| 2013/2 CS | <i>Integral Calculus</i> . Coordinator and lecturer, UTFSM.   |
| 2013/1 CS | <i>Ordinary Differential Equations</i> . UTFSM.   |
| 2013/1 CS | <i>Differential Calculus</i> . UTFSM.   |
| 2012/2 CS | <i>Vector Calculus</i> . UTFSM.   |
| 2012/1 CC | <i>Calculus of Variations and Optimal Control</i> . UTFSM.  |
| 2012/1 CS | <i>Differential Calculus</i> . UTFSM.   |
| 2011/2 CC | <i>PDE Control</i> . UTFSM.   |
| 2011/1 CS | <i>Differential Calculus</i> . UTFSM.   |
| 2011/1 CS | <i>Linear Algebra</i> . UTFSM.  |
| 2010/2 CC | <i>Control of ODE</i> . UTFSM.  |
| 2010/2 CC | <i>Functional Analysis</i> . UTFSM.   |
| 2009/2 CC | <i>Control of ODE</i> . UTFSM.  |
| 2009/1 CC | <i>Vector Calculus, MAT024</i> . UTFSM.   |
| 2007/2008 | <i>Geometry</i> . Université Paris-Sud, Francia.  |
| 2000–2003 | Teaching Assistant in <i>PDE's, Numerical Analysis, Multivariable Calculus, Calculus, Applied Mathematics</i> and <i>Linear Algebra</i> . Universidad de Chile. |

## 8 Students and Postdocs

### Graduate students

|            |  |
|------------|--|
| Since 2017 | Esteban Hernández, PhD in Mathematics, UTFSM.  |
| Since 2016 | Claudia Moreno, PhD in Mathematics, UTFSM.   |
| Since 2013 | Patricio Guzmán, PhD in Mathematics, UTFSM.  |
| March 2017 | Esteban Hernández, Master in Mathematics, UTFSM. Thesis: Adaptive control for parameter identification in parabolic model of batteries.                |
| Aug 2016   | Nicolás Molina, Master in Mathematics, U. de Chile. Thesis: On some controllability problems for Saint-Venant equations. Co-direction with Axel Osses. |
| Nov 2013   | Esteban Paduro, Master in Mathematics, UTFSM. Thesis: Approximate controllability for the Two-Trapped ions system. Co-direction with Alberto Mercado.  |
| Aug 2012   | Patricio Guzmán, Master in Mathematics, UTFSM. Thesis: Analysis and control of the Kuramoto-Sivashinsky equation. Co-direction with Alberto Mercado.   |

## Undergraduate students

- May 2015 Esteban Hernández, Mathematical Engineering, UTFSM. Thesis: Adaptive control of bio-process associated to microalgae models. Co-direction with Francis Mairé.
- Nov 2013 Esteban Paduro, Mathematical Engineering, UTFSM. Thesis: Approximate controllability for the Two-Trapped ions system. Co-direction with Alberto Mercado.
- Dec 2011 Patricio Guzmán, Mathematical Engineering, UTFSM. Thesis: Lipschitz stability for some inverse problems for the Kuramoto-Sivashinsky equation. Co-direction with Alberto Mercado.

## Evaluation Committees

- Jan 2017 Bojan Mavkov, PhD in Automatic Control, Gipsa-lab, Grenoble. Advisors: C. Prieur and E. Witrant.
- Sep 2016 Alejandro Rojas-Palma, PhD in Mathematics, U. de Chile & U. de Montpellier. Advisors: H. Ramírez and A. Rapaport.
- Jun 2015 Andrei Rodríguez, Qualifying Exams, PhD in Mathematics, UTFSM. Advisor: A. Quaas.
- Jul 2014 Mauricio Cardoso Santos, PhD in Mathematics, Universidade Federal da Paraíba, Brasil. Advisors: F. Araruna y E. Fernández-Cara.
- Aug 2012 Pammella Queiroz de Souza, Master in Mathematics, Universidade Federal da Paraíba, Brasil. Advisor: F. Araruna.
- Aug 2012 Mauricio Cardoso Santos, Qualifying Exams, PhD in Mathematics, Universidade Federal da Paraíba, Brasil. Advisor: F. Araruna.
- Aug 2012 Digeo Araujo de Souza, Qualifying Exams, PhD in Mathematics, Universidade Federal da Paraíba, Brasil. Advisor: F. Araruna.
- Jun 2011 Omar Risco Pedraza, BS in Mathematics, UTFSM. Advisor: P. Gajardo.

## Postdocs

- 2014–2016 Nicolás Carreño, funded by Postdoc Fondecyt No. 3150089.
- 2013–2016 Mamadou Gueye, funded by Postdoc Fondecyt No. 3140059.
- 2013–2014 Laurent Bakri, funded by Proyecto Basal CMM-U.de Chile.
- 2014 Ivonne Rivas, funded by Anillo ACT-1106.
- 2013 Thuy Nguyen, funded by Anillo ACT-1106.

## Undergraduate research assistants

- 2014 Eduardo Nuñez, student at UTFSM. Funded by DGIP and Basal AC3E.
- 2014 Swann Marx, student at Ecole Normale Supérieure Cachan (France). Funded by ENS.
- 2014 Daniel Quero, student at UTFSM. Funded by DGIP.
- 2013 Esteban Paduro, student at UTFSM. Funded by DGIP.
- 2012 Consuelo Moreno, student at UTFSM. Funded by DGIP.
- 2011–2013 Esteban Hernández, student at UTFSM. Funded by DGIP.

## 9 Publications

### Journal papers

22. S. Marx, E. Cerpa, *Output feedback stabilization of the Korteweg-de Vries equation*, under review.
21. E. Cerpa, I. Rivas, *On the controllability of the Boussinesq equation in low regularity*, under review.
20. E. Cerpa, E. Crépeau, *On the control of the improved Boussinesq equation*, under review.
19. S. Marx, E. Cerpa, C. Prieur, V. Andrieu, *Global stabilization of a Korteweg-de Vries equation with saturating distributed control*, SIAM J. Control Optim., to appear.
18. E. Cerpa, P. Guzmán, A. Mercado, *On the control of the linear Kuramoto-Sivashinsky equation*, ESAIM Control Optim. Calc. Var., Vol. 23, No. 1, 2017, pp. 165-194.
17. B. Calsavara, N. Carreño, E. Cerpa, *Insensitizing controls for a phase field system*, Nonlinear Anal., Vol. 143, 2016, pp. 120-137.
16. N. Carreño, E. Cerpa, *Local controllability of the stabilized Kuramoto-Sivashinsky system by a single control acting on the heat equation*, J. Math. Pures Appl., Vol. 106, No. 4, 2016, pp. 670-694.
15. F. Araruna, E. Cerpa, A. Mercado, M. Santos, *Internal null controllability of a linear Schrodinger-KdV system on a bounded interval*, J. Differential Equations, Vol. 260, No. 1, 2016, pp. 653-687.
14. E. Cerpa, A. Mercado, A. Pazoto, *Null controllability of the stabilized Kuramoto-Sivashinsky system with one distributed control*, SIAM J. Control Optim., Vol. 53, No. 3, 2015, pp. 1543-1568.
13. L. Baudouin, E. Cerpa, E. Crépeau, A. Mercado, *On the determination of the principal coefficient from boundary measurements in a KdV equation*, J. Inverse Ill-Posed Probl., Vol. 22, No. 6, 2014, pp. 819-846.
12. E. Cerpa, *Control of a Korteweg-de Vries equation: a tutorial*, Math. Control Relat. Fields, Vol. 4, No. 1, 2014, pp. 45-99.
11. E. Cerpa, I. Rivas, B.-Y. Zhang, *Boundary controllability of the Korteweg-de Vries equation on a bounded domain*, SIAM J. Control Optim., Vol. 51, No. 4, 2013, pp. 2976-3010.
10. E. Cerpa, J.-M. Coron, *Rapid stabilization for a Korteweg-de Vries equation from the left Dirichlet boundary condition*, IEEE Trans. Automat. Control, Vol. 58, No. 7, 2013, pp. 1688-1695.
9. L. Baudouin, E. Cerpa, E. Crépeau, A. Mercado, *Lipschitz stability in an inverse problem for the Kuramoto-Sivashinsky equation*, Appl. Anal., Vol. 92, No. 10, 2013, pp. 2084-2102.
8. E. Cerpa, A. Mercado, A. Pazoto, *On the boundary control of a parabolic system coupling KS-KdV and Heat equations*, Scientia Series A: Math. Sciences, Vol. 22, 2012, pp. 55-74.
7. E. Cerpa, A. Pazoto, *A note on the paper "On the controllability of a coupled system of two Korteweg-de Vries equations"*, Comm. Contemp. Math., Vol. 13, 2011, pp. 183-189.
6. E. Cerpa, A. Mercado, *Local exact controllability to the trajectories of the 1-D Kuramoto-Sivashinsky equation*, J. Differential Equations, Vol. 250, No. 4, 2011, pp. 2024-2044.
5. A. Smyshlyaev, E. Cerpa, M. Krstic, *Boundary stabilization of a 1-D wave equation with in-domain anti-damping*, SIAM J. Control Optim., Vol. 48, 2010, pp. 4014-4031.
4. E. Cerpa, *Null controllability and stabilization of a linear Kuramoto-Sivashinsky equation*, Commun. Pure Appl. Anal., Vol. 9, No. 1, 2010, pp. 91-102.
3. E. Cerpa, E. Crépeau, *Rapid exponential stabilization for a linear Korteweg-de Vries equation*, Discrete Contin. Dyn. Syst. Ser. B, Vol. 11, No. 3, 2009, pp. 655-668.
2. E. Cerpa, E. Crépeau, *Boundary controllability for the nonlinear Korteweg-de Vries equation on any critical domain*, Ann. Inst. H. Poincaré Anal. Non Linéaire, Vol. 26, No. 2, 2009, pp. 457-475.
1. E. Cerpa, *Exact controllability of a nonlinear Korteweg-de Vries equation on a critical spatial domain*, SIAM J. Control Optim., Vol. 46, No. 3, 2007, pp. 877-899.

### Conference papers and others

8. C. Roman, D. Bresch-Pietri, E. Cerpa, C. Prieur and O. Sename, *Backstepping Observer Based-Control for an Anti-Damped Boundary Wave PDE in Presence of In-Domain Viscous Damping*, IEEE Conference on Decision and Control, Las Vegas, 2016.
7. S. Marx, E. Cerpa, C. Prieur, V. Andrieu, *Global stabilization of a Korteweg-de Vries equation with a distributed control saturated in  $L^2$ -norm*, IFAC Symposium for Nonlinear Control, Monterey, 2016.
6. E. Cerpa, *Boundary control of Korteweg-de Vries and Kuramoto-Sivashinsky PDEs*, Encyclopedia of Systems and Control, edited by Tariq Samad and John Baillieul, Springer-Verlag London, 2015.
5. S. Marx, E. Cerpa, C. Prieur, V. Andrieu, *Stabilization of a linear Korteweg-de Vries equation with a saturated internal control*, European Control Conference, Linz, 2015.

4. S. Marx, E. Cerpa, *Output Feedback Control of the Linear Korteweg-de Vries Equation*, IEEE Conference on Decision and Control, Los Angeles, 2014.
3. A. Smyshlyaev, E. Cerpa, M. Krstic, *Boundary stabilization of an anti-stable wave equation with in-domain anti-damping*, IEEE Conference on Decision and Control, Shanghai, 2009.
2. E. Crépeau, E. Cerpa, *Rapid stabilization of a linear Korteweg de Vries equation*, IFAC Workshop on Control of Distributed Parameter Systems, Toulouse, 2009.
1. E. Crépeau, E. Cerpa, *Controllability of the nonlinear Korteweg-de Vries equation for critical spatial lengths*, IFAC Workshop on Control of Distributed Parameter Systems, Namur, 2007.

## Other articles written by students under my direction

5. P. Guzmán, *Local exact controllability to the trajectories of the Cahn-Hilliard equation*, under review.
4. N. Carreño, P. Guzmán, *On the cost of null controllability of a fourth order parabolic equation*, J. Differential Equations, Vol. 261, No. 11, 2016, pp. 6485-6520.
3. E. Paduro, M. Sigalotti, *Approximate controllability of the two trapped ions system*, Quantum Information Processing, Vol. 14, No. 7, 2015, pp. 2397-2418.
2. P. Guzmán, J. Zhu, *Exact boundary controllability of a microbeam model*, J. Math. Anal. Appl., Vol. 425, No. 2, 2015, pp. 655-665.
1. P. Guzmán, *Lipschitz stability in an inverse problem for the main coefficient of a Kuramoto-Sivashinsky type equation*, J. Math. Anal. Appl., Vol. 408, No. 1, 2013, pp. 275-290.

## 10 Organization Workshops / Schools

- |          |   |
|----------|---|
| Jul 2017 | Parallel Session, Mathematical Congress of the Americas, Montreal, Canada.  |
| Jul 2017 | SIAM Conference on Control and Its Applications, Pittsburgh, USA.   |
| Jun 2016 | Nonlinear Partial Differential Equations and Applications. A conference in the honor of Jean-Michel Coron for his 60th birthday, Paris, France. |
| Jan 2016 | Mini-Workshop on Control and Inverse Problems of PDEs, Valparaíso, Chile.   |
| Jan 2015 | Workshop on Control Systems and Identification Problems, Valparaíso, Chile.   |
| Dec 2014 | Parallel session "Problemas Inversos y Control de EDP", LXXXIII Encuentro SOMACHI, Quinamávida, Chile.  |
| Oct 2014 | School <i>3a Escuela de Verano en Matemática</i> , Valparaíso, Chile.   |
| Oct 2014 | Spring School: <i>Modelling and control of complex physical systems</i> , Valparaíso, Chile.  |
| Nov 2013 | School <i>Escuela de Control y Optimización</i> , Quito, Ecuador.   |
| Nov 2013 | School <i>2a Escuela de Verano en Matemática</i> , Valparaíso, Chile.   |
| Jan 2012 | School <i>PASI - Inverse Problems and PDE Control</i> , Santiago, Chile.  |
| Jan 2012 | 3rd LAWOC, <i>Latin American Workshop on Optimization and Control</i> , Valparaíso, Chile.  |
| Jan 2010 | School <i>CIMPA Summer School on Inverse Problems</i> , Santiago, Chile.  |
| Jan 2010 | <i>Workshop on Inverse Problems and Applications</i> , Valparaíso, Chile.   |
| Dec 2006 | Workshop <i>Journée des doctorants en théorie du contrôle</i> , Université Paris Sud, Francia.  |

## 11 Advance / Research Short Courses

- |          |  |
|----------|--|
| Jan 2017 | <i>PDE Control Methods</i> , Gipsa-lab, Grenoble, France.  |
| Nov 2016 | <i>Control and stabilization of the pendulum</i> , II Encuentro Nacional de Ingeniería Matemática, UTFSM, Valparaíso, Chile.                             |
| Oct 2015 | (With P. Gajardo) <i>Control and optimization of dynamical systems</i> , Escuela de Doctorado, Valparaíso, Chile.  |
| Dec 2014 | <i>Control Theory: the pendulum</i> , Jornadas de Matemática, Universidad de Valparaíso, Chile.  |
| Oct 2013 | (With A. Mercado) <i>Inverse Problems</i> , Escuela de Control y Optimización, Escuela Politécnica Nacional, Quito, Ecuador.                             |
| Sep 2012 | <i>Stabilization methods for the Korteweg-de Vries equation</i> , Summer School on Automatic Control, Gipsa-lab, Grenoble, France.                       |
| Jan 2012 | <i>Control and stabilization of the KdV equation</i> , PASI Inverse Problems and PDE Control, Pontificia Universidad Católica de Chile, Santiago, Chile. |
| Oct 2010 | <i>Introduction to Control Theory</i> , Semana de la Matemática, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile.                       |

## 12 Research Talks / Seminars

- Dec 2016 Plenary Talk, I Encuentro Conjunto, SOMACHI y UMA, Valparaíso, Chile.  
Nov 2016 Invited speaker, GAFEVOL, Santiago, Chile.  
Sep 2016 Colloquium, Departamento de Ingeniería Matemática, Universidad de Concepción, Chile.  
Jul 2016 Parallel Session, UMALCA, Barranquilla, Colombia.  
Ene 2016 Seminar, Departamento de Matemáticas, Universidad del Valle, Cali, Colombia.  
Dec 2015 Invited Speaker, Escuela de Control y Optimización, Santiago, Chile.  
Dec 2015 Parallel Session, SIAM Conference on Analysis of PDEs, Scottsdale, USA.  
Nov 2015 Parallel Session, Encuentro SOMACHI, Pucón, Chile.  
Oct 2015 Colloquium, Department of Applied Mathematics, University of Waterloo, Canada.  
Oct 2015 Invited speaker, Semana de la Matemática, Valparaíso, Chile.  
Aug 2015 Parallel Session, COMCA, Iquique, Chile.  
Jul 2015 Plenary Talk, SIAM Conference on Control and its Applications, Paris, France.  
Jun 2015 Seminar V-Coloquio, Pontificia Universidad Católica de Valparaíso, Chile.  
May 2015 Seminar CAPDE, Universidad de Chile, Chile.  
Dec 2014 Parallel Session, 53rd IEEE Conference on Decision and Control, Los Angeles, USA.  
Jul 2014 Invited speaker, Encontro de controle de EDPs e aplicacoes, Joao Pessoa, Brazil.  
Jul 2014 Parallel Session, 10th Conference AIMS, Madrid, Spain  
Mar 2014 Invited speaker, Workshop Control of PDEs, Paris, France.  
Nov 2013 Parallel Session, Encuentro SOMACHI, Olmué, Chile.  
Aug 2013 Parallel Session Control and Stabilization of PDE, MCA2013, Guanajuato, México.  
Jun 2013 Seminar, Departamento de Matemáticas, Universidad de Chile, Chile.  
May 2013 Seminar, ModeMat, Escuela Politécnica Nacional de Quito, Ecuador.  
Dec 2012 Invited speaker, GAFEVOL, Santiago, Chile.  
Nov 2012 Invited speaker, Encuentro SOMACHI, Olmué, Chile.  
Mar 2012 Colloquium, Departamento de Ingeniería Matemática, Universidad de Concepción, Chile.  
Nov 2011 Invited speaker, Conference “Control of Partial Differential Equations”, Marsella, France.  
Sep 2011 Seminar, *Control Theory Group*, Université Pierre et Marie Curie, Paris, France.  
Sep 2011 Invited speaker, Workshop Control of dispersive equations, Maringa, Brazil.  
Apr 2011 Parallel Session EDP, Jornadas de la Zona Sur, Pucón, Chile.  
Feb 2011 Seminar, Departamento de Ecuaciones Dif. y An. Num., Universidad de Sevilla, Spain.  
Dec 2010 Parallel Session, First Joint Meeting AMS-SOMACHI, Pucón, Chile.  
Nov 2010 Invited Speaker, Workshop on Control of Dispersive Equations, Paris, France.  
Jul 2010 Seminar, Instituto de Matematica, Universidade Federal Rio de Janeiro, Brazil.  
Jun 2010 Seminar, Department of Mathematical Sciences, University of Cincinnati, USA.  
Sep 2009 Seminar, Control Theory Group, Université Pierre et Marie Curie, France.  
Jun 2009 Parallel Session, Conference on System Modelling and Optimization, Buenos Aires.  
Jan 2009 Invited Speaker, Workshop in honor of Professor A.V. Balakrishnan, Los Angeles, USA.  
Nov 2008 Invited Speaker, 16th Southern California Nonlinear Control Workshop, San Diego, USA.  
Oct 2008 Seminar, Department of Mathematical Sciences, University of Cincinnati, USA.  
Oct 2007 Invited Speaker, Workshop Dispersive long waves models, Vienna, Austria.  
Jun 2007 Parallel Session, Workshop Analysis and Control of PDE, Pont à Mousson, France.  
Apr 2008 Seminar, Departamento de Matemáticas, Universidad de Chile, Chile.  
Apr 2008 Seminar, Departamento de Matemáticas y CC, Universidad de Santiago, Chile.  
Mar 2008 Invited Speaker, Workshop Méthodes et problèmes de contrôle en EDP, Nancy, France.  
Mar 2006 Parallel Session, International Congress Applications of Mathematics, Santiago, Chile.

## 13 Outreach Talks

- Oct 2016 Explora Program at high school *Colegio Los Aromos*, Santiago, Chile.  
Oct 2016 Explora Program at high school *Colegio Santo Cura de Ars*, Santiago, Chile.  
Sep 2016 *Viernes de Cultura + Ciencia* at museum *Museo Fonck*, Valparaíso, Chile.  
Oct 2015 Explora Program at high school *Juanita Fernández Solar B-39*, Santiago, Chile.

## 14 Research Grants

### External grants

- 2017 – 2019 Coordinator in Chile, Project ECOS-CONICYT C16E06 (France-Chile).
- 2014 – 2018 Responsible, Fondecyt Regular No. 1140741.
- 2014 – 2019 Associate Researcher, Proyecto Basal FB0008 *Advanced Center for Electrical and Electronic Engineering*.
- 2014 – 2016 Tutor, Fondecyt Postdoc No. 3150089. Responsible: Nicolás Carreño.
- 2015 – 2016 Associate Researcher, REDES14018 (Chile-Ecuador), CONICYT.
- 2014 – 2016 Associate Researcher, INRIA Associated Team Greencore (France-Chile).
- 2014 – 2015 Coordinator in Chile, Project Math-AmSud 14MATH-03 COSIP (France-Brazil-Chile).
- 2013 – 2016 Tutor, Fondecyt Postdoc No. 3140059. Responsible: Mamadou Gueye.
- 2012 – 2015 Main Researcher, Project Anillo ACT 1106 (Chile).
- 2009 – 2013 Responsible, Fondecyt Iniciación, No. 11090161.
- 2009 – 2011 Associate Researcher, Project Math-AmSud 08MATH-04 CIP-PDE (France-Brazil-Chile).
- 2007 – 2008 PhD student, Project ANR C-QUID (France).

### UTFSM grants

- 2015 Co-Researcher, Grant 12-15-68.
- 2013 – 2014 Main researcher, Grant 12-13-04.
- 2011 – 2012 Co-Researcher, Grant 12-11-58.