

Curriculum Vitae

Eduardo Cerpa

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1 Personal Data

Name Eduardo Cerpa
Born October 23, 1979. Santiago, Chile
Nationality Chilean
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2 Academic Positions

Since 2020 Associate Professor, Institute for Mathematical and Computational Engineering, Pontificia Universidad Católica de Chile.
2016-2019 Associate Professor, Dep. Mathematics, Universidad Técnica Federico Santa María, Chile.
2012–2015 Assistant Professor, Dep. Mathematics, USM, Chile.
2009–2011 Research and teaching position, Dep. Mathematics, USM, Chile.
2008-2009 Postdoc with Miroslav Krstic, Dep. Mechanical and Aerospace Engineering, UCSD, USA.
2007-2008 Research and teaching position (ATER), Dep. Mathematics, Université 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), USM.
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 University Service

Since 2020 Director for Research and Graduate Studies, Faculty of Mathematics, UC.
2019 Director Joint PhD Program in Mathematics PUCV, UV, USM.
2017–2019 Responsible of Department of Mathematics in Campus Santiago, USM.
2016–2017 Member of the Master in Mathematics Committee, USM.
2014–2016 Responsible of Mathematical Engineering, CS, USM.
2015–2016 Member of *Comisión Universitaria*, CS, USM.
2015 Member of Hiring Committees for D. of Physics and D. of Mathematics, CS, USM.
2011–2013 Responsible of teaching activities at Math Department, CS, USM.
2009–2010 Organizer of the Seminar at Math Department, USM.

6 Scientific Community Service

Since 2021 Associate Editor for SIAM Journal on Control and Optimization.
Since 2020 Secretary of SIAM Activity Group on Control and Systems Theory.
Since 2020 Editor Newsletter SIAG/CST.
Since 2020 Associate Editor for Mathematics of Control, Signals, and Systems.
2020 Associate Editor for Computational and Applied Mathematics.
Since 2020 Member IFAC Technical Committee on Distributed Parameter System.
Since 2019 Associate Editor for Systems and Control Letters.
Since 2018 Associate Editor for Boletim da Sociedade Paranaense de Matemática.
2017 – 2021 Associate Editor for IEEE Transactions on Automatic Control.

2019	Associate Editor for Invited Sessions, 3rd IFAC Workshop on Control of Systems Governed by Partial Differential Equation, XI Workshop Control of Distributed Parameter Systems.
2017 – 2018	Coordinator of the Mathematical Sciences Committee for Graduate Fellowships, Conicyt.
2017	Member of Selection Committee, SIAM SIAG Control and Systems Theory Prize.
Since 2014	Reviewer of Grant Proposals for DFG (Germany), CONICYT, and NRF (South Africa).
Since 2014	Reviewer for Graduate Fellowships, Conicyt.
2014 – 2019	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 control conferences: ACC, IEEE CDC, and IFAC NOLCOS.
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, European Journal of Control, International Journal of Systems Science, Annals de IHP Analyse non linéaire, Journal of Functional Analysis, Journal of Differential Equations, Nonlinearity, Communications in Contemporary Mathematics, Journal of Optimization Theory and Applications, Acta Applicandae Mathematicae, Applicable Analysis, Mathematical Methods in the Applied Sciences, Journal of Mathematical Analysis and Applications, Archiv der Mathematik, ZAMP, Discrete and Continuous Dynamical Systems Series B, Nonlinear Analysis Real World Application, Applied Mathematics & Optimization, SēMA journal.

7 Teaching Experience at UC

First year courses in Engineering

- *Differential and Integral Calculus* in 2020/1.

Second year courses in Mathematics and Mathematical and Computational Engineering

- *Real Analysis* in 2020/2.

Third year courses in Mathematical and Computational Engineering

- *Control of Linear Systems* in 2020/2 and 2021/2.

Master and PhD courses in Mathematics

- *Control of Differential Equations* in 2021/1.

8 Previous Teaching Experience at USM

First year courses in Engineering

- *Differential Calculus* in 2018/1 (Coordinator), 2014/1, 2013/1, 2012/1, 2011/1.
- *Integral Calculus* in 2017/2, 2015/2, 2013/2 (Coordinator).

First year courses in Mathematical Engineering

- *Introduction to Mathematical Engineering* in 2015/1, 2014/1.

Second year courses in Engineering

- *Ordinary Differential Equations* in 2017/1 (Coordinator), 2015/1, 2013/1.
- *Vector Calculus* in 2012/2, 2009/1.

Second year courses in Mathematical Engineering

- *Linear Algebra* in 2016/1, 2011/1.
- *Real Analysis* in 2018/2, 2017/2.

Third year courses in Mathematical Engineering

- *Complex Analysis* in 2016/2.
- *Analysis I* (Metric Spaces) in 2019/1.
- *Analysis II* (Measure Theory) in 2019/2.

Fourth year courses in Mathematical Engineering

- *Control of ODE* in 2010/2, 2009/2.
- *Functional Analysis* in 2010/2.

Fifth year courses in Mathematical Engineering

- *Calculus of Variations and Optimal Control* in 2014/1, 2012/1.

Master and PhD courses in Mathematics

- *Control of PDE* in 2019/1, 2016/1, 2014/1, 2011/2.

9 Students and Postdocs

Students

Since 2021	Gonzalo Arias, PhD in Mathematics, UC.
Since 2021	Felipe Silva, Master in Electrical Engineering, UC.
Since 2019	Nelson Cifuentes, Master in Mathematics, USM.
Since 2017	Esteban Hernández, PhD in Mathematics, USM and Université Grenoble-Alpes. Co-direction with Christophe Prieur.
Jan 2021	Gonzalo Arias, Master in Mathematics and Mathematical Engineering, USM. Thesis: Stabilization of a microbeam model with distributed disturbance. Co-direction with Patricio Guzmán.
Sep 2020	Hugo Parada, Master in Mathematics and Mathematical Engineering, USM. Thesis: Feedback stabilization of some unstable elliptic-parabolic systems. Co-direction with Patricio Guzmán.
Aug 2020	Claudia Moreno, PhD in Mathematics, USM and Université Paris Saclay. Thesis: Control of partial differential equations systems of dispersive type. Co-direction with Emmanuelle Crépeau.
Aug 2017	Patricio Guzmán, PhD in Mathematics, USM. Thesis: Contribution to the control of high-order partial differential equations.
Mar 2017	Esteban Hernández, Master in Mathematics, USM. Thesis: Adaptive control for a 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.
May 2015	Esteban Hernández, Mathematical Engineering, USM. Thesis: Adaptive control of bioprocess associated to microalgae models. Co-direction with Francis Mairet.
Nov 2013	Esteban Paduro, Master in Mathematics and Mathematical Engineering, USM. Thesis: Approximate controllability for the Two-Trapped ions system. Co-direction with Alberto Mercado.
Aug 2012	Patricio Guzmán, Master in Mathematics, USM. Thesis: Analysis and control of the Kuramoto-Sivashinsky equation. Co-direction with Alberto Mercado.
Dec 2011	Patricio Guzmán, Mathematical Engineering, USM. Thesis: Lipschitz stability for inverse problems for the Kuramoto-Sivashinsky equation. Co-direction with Alberto Mercado.

Postdocs

2018–2021	Cristhian Montoya, funded by Postdoc Fondecyt No. 3180100.
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.

Evaluation Committees

- Apr 2021 Martín Hernández, Master in Mathematics, USM. Advisor: Rodrigo Lecaros and Sebastián Zamorano.
- Mar 2021 Cristóbal Loyola, Master in Mathematics, USM. Advisor: Nicolás Carreño.
- Mar 2021 Juan Pablo Mena, Master in Electrical Engineering, UC. Advisor: F. Nuñez.
- Nov 2020 Mohammad Ghousein, PhD in Automatic Control, U. Grenoble. Advisor: E. Witrant.
- Apr 2020 Cristian Vega, Mathematical Engineering, USM. Advisor: L. Briceño.
- Dec 2019 Rodrigo Vejar, PhD in Applied Mathematics, U. de Concepción. Advisor: M. Sepúlveda.
- Sep 2019 Pamela Godoy, Master in Mathematics, USM. Advisor: A. Mercado.
- Jul 2019 Roberto Morales, PhD in Applied Mathematics, U. de Chile. Advisors: A. Osses and N. Carreño.
- Apr 2019 Iván Rosas, BS in Mathematics, USM. Advisor: A. Rojas.
- Mar 2019 Christopher Maulen, Qualifying Exams, PhD in Applied Mathematics. Advisor: C. Muñoz.
- Aug 2018 Gina Sierra, PhD in Electrical Engineering, U. de Chile. Advisor: M. Orchard.
- Aug 2018 Christophe Roman, PhD in Automatic Control, U. Grenoble. Advisors: D. Bresch-Pietri, C. Prieur, and O. Sename.
- Mar 2018 Matías Benavides, Master in Electrical Engineering, U. de Chile. Advisor: M. Orchard.
- Sep 2017 Diego Vicencio, Qualifying Exams, PhD in Mathematics, USM. Advisor: P. Gajardo.
- Sep 2017 Swann Marx, PhD in Automatic Control, U. Grenoble. Advisors: C. Prieur and V. Andrieu.
- Jan 2017 Bojan Mavkov, PhD in Automatic Control, U. Grenoble. Advisors: C. Prieur and E. Witrant.
- Sep 2016 Alejandro Rojas-Palma, PhD in Applied Mathematics, U. de Chile & U. de Montpellier. Advisors: H. Ramírez and A. Rapaport.
- Jun 2015 Andrei Rodríguez, Qualifying Exams, PhD in Mathematics, USM. 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 Diego Araujo de Souza, Qualifying Exams, PhD in Mathematics, Universidade Federal da Paraíba, Brasil. Advisor: F. Araruna.
- Jun 2011 Omar Risco Pedraza, BS in Mathematics, USM. Advisor: P. Gajardo.

10 Journal Publications

34. R. Capistrano-Filho, E. Cerpa, F. Gallego, *Rapid exponential stabilization of a Boussinesq system of KdV-KdV type*, submitted.
33. H. Parada, K. Morris, E. Cerpa, *Feedback control of an unstable parabolic-elliptic system with input delay*, submitted.
32. C. Kitsos, E. Cerpa, G. Besançon, C. Prieur, *Output feedback control of a cascade system of linear Korteweg- de Vries equations*, submitted.
31. E. Hernández, C. Prieur, E. Cerpa, *Boundary null controllability of a parabolic-elliptic system*, submitted.
30. E. Hernández, C. Prieur, E. Cerpa, *A tracking problem for the State of Charge in an Electrochemical Li-ion battery model*, Math. Control Relat. Fields, accepted.
29. E. Cerpa, E. Crépeau, J. Valein, *Boundary controllability of the Korteweg-de Vries equation on a tree-shaped network*, Evol. Equ. Control Theory, Vol. 9, No. 3, 2020, pp. 673-692.
28. N. Carreño, E. Cerpa, E. Crépeau, *Internal null controllability of the generalized Hirota-Satsuma system*, ESAIM Control Optim. Calc. Var., Vol. 26, 2020, Art. 75.
27. E. Cerpa, C. Prieur, *Singular perturbation analysis of a coupled system involving the wave equation*, IEEE Trans. Automat. Control, Vol. 65, No. 11, 2020, pp. 4846-4853.
26. E. Cerpa, C. Montoya, B.-Y. Zhang, *Local exact controllability to the trajectories of the Korteweg-de Vries-Burgers equation on a bounded domain with mixed boundary conditions*, J. Differential Equations, Vol. 268, No. 9, 2020, pp. 4945-4972.

25. E. Cerpa, E. Crépeau, C. Moreno, *On the boundary controllability of the Korteweg-de Vries equation on a star-shaped network*, IMA Journal of Math. Control and Information, Vol. 37, No. 1, 2020, pp. 226-240.
24. N. Carreño, E. Cerpa, A. Mercado, *Boundary controllability of a cascade system coupling fourth- and second-order parabolic equations*, Systems and Control Letters, Vol. 133, 2019, art. 104542.
23. E. Cerpa, I. Rivas, *On the controllability of the Boussinesq equation in low regularity*, Journal of Evolution Equations, Vol. 18, No. 3, 2018, pp. 1501-1519.
22. E. Cerpa, E. Crépeau, *On the control of the improved Boussinesq equation*, SIAM J. Control Optim., Vol. 56, No. 4, 2018, pp. 3021-3034.
21. C. Roman, D. Bresch-Pietri, E. Cerpa, C. Prieur and O. Sename, *Backstepping control of a wave PDE with unstable source terms and dynamic boundary*, IEEE Control Systems Letters, Vol. 2, No. 3, 2018, pp. 459-464.
20. S. Marx, E. Cerpa, *Output feedback stabilization of the Korteweg-de Vries equation*, Automatica, Vol. 87, 2018, pp. 210-217.
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., Vol. 55, 2017, pp. 1452-1480.
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.

11 Conference papers and others

11. P. Guzmán, S. Marx, E. Cerpa, *Stabilization of the linear Kuramoto-Sivashinsky equation with a delayed boundary control*, IFAC Workshop on Control of Systems Governed by Partial Differential Equations, Oaxaca, 2019.
10. C. Roman, D. Bresch-Pietri, E. Cerpa, C. Prieur and O. Sename, *Backstepping control of a wave PDE with unstable source terms and dynamic boundary*, IEEE Conf. on Decision and Control, Miami, 2018.
9. E. Cerpa and C. Prieur, *Effect of time scales on stability of coupled systems involving the wave equation*, IEEE Conference on Decision and Control, Melbourne, 2017.
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.

12 Organization of Scientific Events

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|----------|---|
| Sep 2022 | Program Committee 25th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2022), Bayreuth, Germany. |
| Jul 2021 | Organizing Committee SIAM Conference on Control and Its Applications, Spokane, USA. |
| Sep 2020 | Organizer Virtual <i>Doctoral School on Applied Mathematics</i> , UC, Chile. |
| Jul 2020 | Organizer Parallel Session, VI Congreso Latinoamericano de Matemáticos, Montevideo, Uruguay (Cancelled). |
| Nov 2019 | Scientific Committee, School <i>Escuela del Doctorado en Matemática</i> , Valparaíso, Chile (Cancelled). |
| Nov 2019 | Organizer Parallel Session, French Latin American Conference on New Trends in Applied Math, Santiago, Chile. |
| Sep 2019 | Scientific Committee, Encuentro Conjunto Somachi-UMA, Mendoza, Argentina. |
| May 2019 | Organizer Parallel Sessions and Program Committee, IFAC Workshop on Control of Systems Governed by PDE, Oaxaca, Mexico. |
| Dec 2018 | Organizer, Workshop on Inverse and control problems for physical systems, Valparaíso. |
| May 2018 | Organizing Committee and Program Committee, IFAC Workshop on Lagrangian and Hamiltonian Methods for Nonlinear Control, Chile. |
| Jan 2018 | Organizer, Mini-Workshop on Control and Inverse Problems of PDEs, Valparaíso, Chile. |
| Jul 2017 | Organizer Parallel Session, Mathematical Congress of the Americas, Montreal, Canada. |
| Jul 2017 | Organizing Committee, SIAM Conference on Control and Its Applications, Pittsburgh, USA. |
| Jun 2016 | Organizing Committee, Nonlinear Partial Differential Equations and Applications. A conference in the honor of Jean-Michel Coron for his 60th birthday, Paris, France. |

- Jan 2016 Organizer, Mini-Workshop on Control and Inverse Problems of PDEs, Valparaíso, Chile.
Jan 2015 Organizer Committee, Workshop on Control Systems and Identification Problems, Valparaíso, Chile.
Dec 2014 Organizer Parallel session "Problemas Inversos y Control de EDP", LXXXIII Encuentro SOMACHI, Quinamávida, Chile.
Oct 2014 Organizing Committee, School *3a Escuela de Verano en Matemática*, Valparaíso, Chile.
Oct 2014 Organizing Committee, Spring School: *Modelling and control of complex physical systems*, Valparaíso, Chile.
Nov 2013 Organizing Committee, School *Escuela de Control y Optimización*, Quito, Ecuador.
Nov 2013 Organizing Committee, School *2a Escuela de Verano en Matemática*, Valparaíso, Chile.
Jan 2012 Organizing Committee, School *PASI - Inverse Problems and PDE Control*, Santiago, Chile.
Jan 2012 Organizing Committee, 3rd LAWOC, *Latin American Workshop on Optimization and Control*, Valparaíso, Chile.
Jan 2010 Organizing Committee, *CIMPA Summer School on Inverse Problems*, Santiago, Chile.
Jan 2010 Organizing Committee, *Workshop on Inverse Problems and Applications*, Valparaíso, Chile.
Dec 2006 Organizer, *Journée des doctorants en théorie du contrôle*, Université Paris Sud, Francia.

13 Research Seminars and Talks

- Jan 2021 Seminar (online), Seminario de EDP e Matemática Aplicada, Brazil.
Jan 2021 Seminar (online), Seminario de Investigación del Modemat de la EPN, Ecuador.
Jan 2021 Seminar (online), Interdisciplinary Workshop in Engineering, Santiago, Chile.
Sep 2020 Seminar (online), Webinar on PDE and Related Areas, India.
Jul 2020 Seminar (online), Seminario Control en Tiempos de Crisis, Chile-España-México.
May 2020 Seminar (online), Institute for Mathematical and Computational Engineering, UC.
Nov 2019 Invited speaker, Feedback Control (Special Semester in Optimization), Linz, Austria.
Aug 2019 Colloquium, Departamento de Ingeniería Matemática, Universidad de Concepción, Chile.
Apr 2019 Parallel Session, JMZS, Punta Arenas, Chile.
Dec 2018 Parallel Session, SOMACHI, Rancagua, Chile.
Nov 2018 Invited speaker, GAFEVOL, Santiago, Chile.
Jul 2018 Parallel Session, COMCA, Antofagasta, Chile.
Aug 2017 Parallel Session, COMCA, Arica, Chile.
Jul 2017 Parallel Session, II Mathematical Congress of the Americas, Montreal, Canada.
Jun 2017 Colloquium, Universidad Austral, Valdivia, Chile.
April 2017 Control Theory Seminar, University of Waterloo, Waterloo, Canada.
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, <i>Control Theory Group</i> , 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.

14 Short Courses

Jan 2021	<i>Control and stabilization of the pendulum</i> , UC, Chile.
Jan 2020	<i>PDE Control Methods</i> , Gipsa-lab, Grenoble, France.
Nov 2018	<i>Control of PDE</i> , Universidad de Buenos Aires, Argentina.
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, USM, 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.

15 Outreach Talks

- Oct 2019 Feria Científica at Semana Explora, Chépica, Chile.
- Oct 2017 Explora Program at high school *Colegio Elena Bettini*, Independencia, Chile.
- Oct 2017 Explora Program at high school *Colegio El Bosque*, Puente Alto, Chile.
- Oct 2016 Explora Program at high school *Colegio Los Aromos*, Puente Alto, Chile.
- Oct 2016 Explora Program at high school *Colegio Santo Cura de Ars*, San Miguel, 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*, Recoleta, Chile.

16 Research Grants

- 2020 – 2023 Director, *Millennium Nucleus for Applied Control and Inverse Problems* NCN19_161.
- 2021 – 2022 Coordinator in Chile, Project Stic-AmSud C-CAIT (Brazil-France-Chile).
- 2018 – 2022 Responsible, Fondecyt Regular No. 1180528.
- 2014 – 2024 Associate Researcher, Basal Project FB0008 *Advanced Center for Electrical and Electronic Engineering*.
- 2018 – 2021 Tutor, Fondecyt Postdoc No. 3180100. Responsible: Cristhian Montoya.
- 2017 – 2019 Coordinator in Chile, Project ECOS-CONICYT C16E06 (France-Chile).
- 2017 – 2018 Associate Researcher, Project Math-AmSud 17-MATH-04 (France-Chile-Colombia).
- 2014 – 2018 Responsible, Fondecyt Regular No. 1140741.
- 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 Grencore (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).