INFORMATIONS PERSONNELLES

Fernando Castaños Luna

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Date de naissance 1976 | Nationalité(s) Mexicaine

THÈMES DE RECHERCHE

Commande non linéaire, systèmes Hamiltoniens, systèmes implicites, génie neuromorphique, commande fondée sur la passivité, commande robuste et systèmes à structure variable

FORMATION

2006 – 2009

Doctorat : Physique, Science de l'Automatique

Thèse : Cyclo-passivité et contrôle par interconnexion
Encadré par Romeo Ortega

Université Paris-Sud XI (UPS) – Laboratoire des signaux et systèmes (L2S) – SUPÉLEC, France

2005 – 2006

Mastère Recherche : Automatique et traitement du signal et des images

Stage : Participation à un projet de recherche visant à développer des lois de commande basées sur la passivité
Encadré par Romeo Ortega

UPS – L2S – SUPÉLEC

2003 – 2004

Mastère : Génie Électrique, Contrôle Automatique

Thèse : Modes glissants avec un critère $\mathcal{H}_\infty$ et application à la commande décentralisée
Encadré par Leonid Fridman

Universidad Nacional Autónoma de México (UNAM). Mexique

1995 – 2002

Licence : Génie Électrique et Électronique, Traitement du Signal

Thèse : Soulevé et stabilisation d'un pendule inverse. Faculté d'Ingénierie, UNAM
Encadré par Rolando Carrera

Stage : Participation à un projet visant à détecter des fuites en utilisant des observateurs. Institut d'Ingénierie, UNAM

EXPÉRIENCE PROFESSIONNELLE

POSTES

2011 –

Chercheur

Département de Commande Automatique (DCA)
Centro de Investigación y de Estudios Avanzados del IPN (Cinvestav). Mexique

Promotion aux niveaux 3C (2017), 3B (2016) et 3A (2013)
Directeur des études (2015 – 2017)
Chercheur visiteur (2011 – 2014)

2009 – 2011

Boursier post-doctoral

McGill Center for Intelligent Machines (CIM), McGill University, Canada

Commande de locomotion chez les robots androïdes
Sous la direction de Hannah Michalska et Vincent Hayward

ÉVALUATIONS ET PARTICIPATIONS EN COMITÉS

2019 –

Éditeur

International Journal of Robust and Nonlinear Control, Wiley

Comités

Member of the program committee, International Conferences on Electrical Engineering, Computing Science and Automatic Control (CCE), Mexico, Mexique (2020, 2019, 2018, 2017, 2016, 2014)

Member of the organizing committee and member of the comittee for young author award, IFAC Conference on Modelling, Identification and Control of Nonlinear Systems (MICNON), Guadalajara, Mexique (2018)

Member of the program committee, Congreso Nacional de Control Automático, Mexique (2021, 2019, 2018, 2017)

Jury

1 thèse de doctorat internationale, Technischen Universität Ilmenau, Allemagne (2021)
Plus de 30 thèses nationales de doctorat
Plus de 20 thèses nationales de master

COURS ENSEIGNÉS

Cinvestav, cycles supérieurs

Systèmes Non Linéaires (2022, 2016, 2015, 2013)
Commande par Modes Glissantes (2021, 2017)
Commande Robuste (2020, 2019, 2018)
Systèmes Homogènes et Systèmes à Retards (2019)
Commande Optimale (2023, 2017, 2016, 2015, 2014)
Commande Numérique (2013)
Théorie de Commande II (2012)
Algèbre Linéaire, Prérequis (2014, 2016, 2022)

McGill University

Conception de Projets I et II, licence (2011)
Optimisation et Commande Optimale (ECSE 507), master (2011)
Systèmes de Commande (ECSE 404), licence (2010)

ÉTUDIANTS GRADUÉS

Doctorat

Gian Gómez. Modes glissantes et représentations géométriques : commande des corps rigides, codirigé avec Jorge Dávila (ESIME-IPN, Mexique) (2020)

Félix Miranda. Techniques de commande robuste par analyse convexe non lisse (2016)

Debbie Hernández. Debbie Hernández. Commande des systèmes implicites par modes glissants, codirigé avec Alexander Poznyak (Cinvestav) (2015)

Master

José Alberto Padilla Chavez. Analyse de bifurcations pour un système climatique non linéaire, codirigé avec Marco Tulio Angulo (UNAM) (2023)

Bryan Rojas. Mise au point des observateurs–prédicteurs pour systèmes non linéaires à retards sur l'entrée, codirigé avec Sabine Mondié (Cinvestav) (2021)

Carlos Tovar. Conception de circuits neuromorphiques en utilisant la théorie de singularités, co-dirigé avec Alessio Franci (UNAM) (2016)

Pedro Flores. Commande d'un quadrirotor dans un environement non structuré, codirigé avec Pedro Castillo (Heudyasic, France) (2015)

Cristopher Cruz. Coordination d'agents par aménagement de reference, codirigé avec Jorge Dávila (2014)

Edgar Estrada. Edgar Estrada. Approche passivité pour la commande de systèmes à retards, codirigé avec Sabine Mondié (2013)

Félix Miranda. Félix Miranda. Commande LQ optimale pour une classe de systèmes aux entrées constantes par morceaux, codirigé avec Vadim Azhmyakov (Cinvestav) (2012)

SÉJOURS SCIENTIFIQUES

Dmitry Gromov. Systèmes Hamiltonians implicites à ports. Saint Petersburg State University, St. Petersburg, Russie (2018, 2015)

Emmanuel Nuño. Commande fondée sur la passivité en utilisant des fonctions multi valuées. University of Guadalajara, Guadalajara, Mexique (2017)

Alessio Franci. Realisation de comportements nonlinéaires complexes par theorie de singularités. Departement d'Ingenierie, University of Cambridge, Royaume Uni (2014)

Cristian Kunusch. Minimisation de la consommation d'hydrogène dans les piles à combustible. Institut de Robòtica i Informàtica Industrial. Barcelona, Espagne (2012, 2013)

Riyanto Bambang. Commande de puissance pour le véhicules électriques. Institute of Technology Bandung. Bandung, Indonésie (2009)

David Hill and Jun Zhao. Applications de la théorie de la dissipativité des systèmes à commutations. Australian National University. Canberra, Australie (2008)

Bayu Jayawardhana, Arjan van der Schaft and Jacquelien Scherpen. Modèles fondés sur la puissance ; commande par interconnexion. University of Groningen. Groningen, Pays-Bas (2008)

Ravi Banavar and Arun Mahindrakar. Commande par interconnexion dans le cas de dimension infinie. Indian Institute of Technology. Mumbai et Chennai, Inde (2007)

Jacquelien Scherpen and Dimitri Jeltsema. Passivité relative appliquée à la conception de convertisseurs de puissance. Delft University of Technology. Delft, Pays-Bas (2006)

Arjan van der Schaft. Systèmes Hamiltonians à commutation. University of Groningen (2006)

PROJETS

Power flow control of fuel-cell powered vehicles (auteur). NUSANTARA, budget € 5,000 (2009)

Transient Stability of Power Systems. FAST, budget € 6,800 (2008)

Control of Active Filters considering Dynamic Loads. LAFMAA, budget € 13,950 (2006)

ASSOCIATIONS PROFESSIONNELLES

IEEE Institute of Electrical and Electronics Engineers, Control Systems Society, depuis 2006

SIAM Society for Industrial and Applied Mathematics, depuis 2007

COMPÉTENCES ET ACQUIS PERSONNELS

FORMATIONS COMPLÉMENTAIRES

HYCON-EECI

The Behavioral Approach to Modeling and Control. Paolo Rapisarda and Jan C. Willems (2009)

Nonlinear Output Regulation. Alberto Isidori (2009)

Robotics, Geometry and Control. Ravi Banavar (2008)

Modeling Analisys and Design of Hybrid Control Systems. Joao Pedro Hespanha (2007)

Nonlinear Adaptive Control with Applications. Alessandro Astolfi (2007)

Switched Systems and Control. Daniel Liberzon (2007)

CTS-HYCON

Stability and Stabilisation of Time-Varying Systems. Antoine Chaillet (2006)

Optimality, Stabilization and Feedback in Nonlinear Control. Francis Clarke (2006)

Hybrid Control Systems. Christophe Prieur (2006)

Langue(s) maternelle(s) Espagnol

Autres langues

Anglais 277 / 300 TOEFL

Français TCF 536 / 699 niveau 5 C1

RECONNAISSANCES

Membre du Système National de Chercheurs (SNI), Chercheur Niveau II, Mexique (2022 –)

Membre du SNI, Chercheur Niveau I (2011 – 2021)

Félicitations du jury pour les thèses de doctorat et de master (2009, 2005)

Bourse du *Programa de Alto Rendimiento Académico* de la Faculté d'Ingénierie (UNAM), dont l'un des buts est de créer des conditions de haute concurrence académique (1995 – 1997)

Troisième place au concours à Mexico de la Septième Olympiade Nationale de Mathématiques. Donnée par l'Académie de la Recherche Scientifique et la Société Mathématique Mexicaine (1993)

PUBLICATIONS

Revues

1 IEEE TIE, 5 Automatica, 5 IEEE TAC, 2 SIAM SICON, 1 SIAM SIADS, 5 Syst. Control Ltt., 2 Int. J. Robust Nonlin., 2 Int. J. Control, 2 EJC, 1 Circuits Syst. Signal Process., 1 IMA J. Math. Control. Info., 1 Neurocomputing, 1 J. R. Soc. Interface, 1 RIAI

Félix Miranda, Fernando Castaños, and Alessio Franci. Equivalence of linear complementarity problems : Theory and application to nonsmooth bifurcations. *IEEE Trans. Autom. Control*, 2024

Fernando Castaños. Control multivaluado de sistemas hamiltonianos con puerto. *Revista Iberoamericana de Automática e Informática Industrial*, 19 :419 – 429, 2022

Emanuel Rocha, Fernando Castaños, and Jaime A. Moreno. Robust finite-time stabilisation of an arbitrary-order nonholonomic system in chained form. *Automatica*, 135 :109956, January 2022

Fernando Castaños and Sabine Mondié. Observer-based predictor for a susceptible-infectious-recovered model with delays : An optimal-control case study. *Int. J. Robust Nonlinear Control*, 31 :5118 – 5133, July 2021

Marco Tulio Angulo, Fernando Castaños, Rodrigo Moreno-Morton, Jorge X. Velasco-Hernández, and Jaime A. Moreno. A simple criterion to design optimal non-pharmaceutical interventions for mitigating epidemic outbreaks. *J. R. Soc. Interface*, 18 :20200803, 2021

Dmitry Gromov and Fernando Castaños. Sensitivity analysis of limit cycles in an alpha stirling engine : A bifurcation-theory approach. *SIAM J. Appl. Dyn. Sys.*, 19 :1865 – 1883, August 2020

Félix Miranda, Fernando Castaños, and Bernard Brogliato. Continuous and discrete-time stability of a robust set-valued nested controller. *Automatica*, 107 :406 – 417, September 2019. Nominated by the editor

Fernando Castaños, Edgar Estrada, Sabine Mondié, and Adrián Ramírez. Passivity-based PI control of first-order systems with I/O communication delays : a frequency domain analysis. *Int. J. Control*, 91 :2549 – 2562, November 2018

Félix Miranda, Bernard Brogliato, and Fernando Castaños. Set-valued sliding-mode control of uncertain linear systems : Continuous and discrete-time analysis. *SIAM J. Control Optim.*, 56 :1756 – 1793, May 2018

Félix Miranda, Bernard Brogliato, and Fernando Castaños. Multivalued robust tracking control of Lagrange systems : Continuous and discrete-time algorithms. *IEEE Trans. Autom. Control*, 62 :4436 – 4450, September 2017

Fernando Castaños and Alessio Franci. Implementing robust neuromodulation in neuromorphic circuits. *Neurocomputing*, 233 :3 – 13, April 2017

Félix Miranda and Fernando Castaños. Robust output regulation of strongly passive linear systems with multivalued maximally monotone controls. *IEEE Trans. Autom. Control*, 62 :238 – 249, January 2017

Debbie Hernández-Zárate, Fernando Castaños, and Leonid Fridman. Zero-dynamics design and its application to the stabilization of implicit systems. *Systems and Control Lett.*, 98 :74 – 78, December 2016

Andrea Aparicio Martínez, Fernando Castaños, and Leonid Fridman. Output feedback sliding-mode control with unmatched disturbances, an ISS approach. *Int. J. Robust Nonlinear Control*, 26 :4056 – 4071, December 2016

Félix Miranda, Fernando Castaños, and Alexander Poznyak. Min–max piecewise constant optimal control for multi-model linear systems. *IMA J Math Control Info*, 33 :1157 – 1176, December 2016

Fernando Castaños and Dmitry Gromov. Passivity-based control of implicit port-Hamiltonian systems with holonomic constraints. *Systems and Control Lett.*, 94 :11 – 18, August 2016

Fernando Castaños and Cristian Kunusch. Ditherless extremum seeking for hydrogen minimization in PEM fuel cells. *IEEE Trans. Ind. Electron.*, 62 :5218 – 5226, August 2015

Manuel Mera, Fernando Castaños, and Alexander Poznyak. Quantised and sampled output feedback for nonlinear systems. *Int. J. Control*, 87 :2475 – 2487, December 2014

Fernando Castaños, Debbie Hernández-Zárate, and Leonid Fridman. Integral sliding-mode control for linear time-invariant implicit systems. *Automatica*, 50 :971 – 975, March 2014

Fernando Castaños, Dmitry Gromov, Vincent Hayward, and Hannah Michalska. Implicit and explicit representations of continuous-time port-Hamiltonian systems. *Systems and Control Lett.*, 62 :324 – 330, April 2013

Matteo Rubagotti, Antonio Estrada, Fernando Castaños, Antonella Ferrara, and Leonid Fridman. Integral sliding mode control for nonlinear systems with matched and unmatched perturbations. *IEEE Trans. Autom. Control*, 56 :2699 – 2704, November 2011

Fernando Castaños and Leonid Fridman. Dynamic switching surfaces for output sliding mode control : An $\mathcal{H}_\infty$ approach. *Automatica*, 47 :1957–1961, September 2011

Fernando Castaños. Discussion on : “Energy shaping of port-Hamiltonian systems by using alternate passive input-output pairs”. *European Journal of Control*, 16 :678 – 679, December 2010

Fernando Castaños and Romeo Ortega. Energy-balancing passivity-based control is equivalent to dissipation and output invariance. *Systems and Control Lett.*, 58 :553 – 560, August 2009

Fernando Castaños, Romeo Ortega, Arjan J. van der Schaft, and Alessandro Astolfi. Asymptotic stabilization via control by interconnection of port-Hamiltonian systems. *Automatica*, 45 :1611 – 1618, July 2009

Fernando Castaños, Bayu Jayawardhana, Romeo Ortega, and Eloísa García-Canseco. Proportional plus integral control for set-point regulation of a class of nonlinear RLC circuits. *Circuits Syst. Signal Process.*, 28 :609 – 623, August 2009

Romeo Ortega, Arjan J. van der Schaft, Fernando Castaños, and Alessandro Astolfi. Control by interconnection and standard passivity-based control of port-Hamiltonian systems. *IEEE Trans. Autom. Control*, 53 :2527 – 2542, December 2008

Eugenii Shustin, Leonid Fridman, Emilia Fridman, and Fernando Castaños. Robust semiglobal stabilization of the second order system by relay feedback with an uncertain variable time delay. *SIAM J. Control Optim.*, 47 :196 – 217, January 2008

Bayu Jayawardhana, Romeo Ortega, Eloísa García-Canseco, and Fernando Castaños. Passivity of nonlinear incremental systems : Application to PI stabilization of nonlinear RLC circuits. *Systems and Control Lett.*, 56 :618 – 622, September 2007

Fernando Castaños and Leonid Fridman. Analysis and design of integral sliding manifolds for systems with unmatched perturbations. *IEEE Trans. Autom. Control*, 51 :853 – 858, May 2006

Yuri Orlov, Leonid Fridman, and Fernando Castaños. Discussion on : "Dynamic sliding mode control for a class of systems with mismatched uncertainty". *European Journal of Control*, pages 11–18, 2005

Chapitres de livres

Ismael Castillo, Fernando Castaños, and Leonid Fridman. Sliding surface design for higher-order sliding modes. In Leonid Fridman, Jean-Pierre Barbot, and Franck Plestan, editors, *Recent Trends in Sliding Mode Control*, chapter 1.2, pages 29 – 57. The Institution of Engineering and Technology, Herts, United Kingdom, 2016

Fernando Castaños, Jian-Xin Xu, and Leonid Fridman. Integral sliding modes for systems with matched and unmatched uncertainties. In Christopher Edwards, Enric Fossas Colet, and Leonid Fridman, editors, *Advances in Variable Structure and Sliding Mode Control*, chapter 11, pages 227 – 246. Springer–Verlag, Berlin, 2006

Congrès

8 CDC (IEEE, international), 12 IFAC (international), 1 ACC (international), 1 CCE (IEEE, international), 1 ICUAS (international), 1 IFAC (régional), 4 ECC (régional), 5 VSS (IEEE-IFAC, international), 1 CDC-ECC (international), 1 SICE-ISCS (international), 6 AMCA (national)

Bryan Rojas-Ricca, Fernando Castaños, and Sabine Mondié. High-gain observer-based predictor for a flexible joint robot with input delay. In *Congreso Nacional de Control Automático*, Acapulco, Mexico, October 2023

Bryan Rojas-Ricca, Fernando Castaños, and Sabine Mondié. A predictor tuning by root multiplicity-induced dominance for position control of a quadrotor. In *Congreso Nacional de Control Automático*, pages 178 – 183, Tuxtla Gutiérrez, Mexico, October 2022

Bryan Rojas-Ricca, Fernando Castaños, and Sabine Mondié. Multiplicity-induced dominance in stabilization of state predictors for time-delay systems. In *Proc. IFAC Workshop on Time Delay Systems*, pages 1 – 6, Montreal, Canada, September 2022

Fernando Castaños and Dmitry Gromov. Limit cycles in locally Hamiltonian systems with dissipation. In *Proc. IFAC Workshop on Lagrangian and Hamiltonian Methods for Nonlinear Control*, pages 201 – 206, Berlin, Germany, November 2021

Fernando Castaños, Félix Miranda, and Alessio Franci. A notion of equivalence for linear complementarity problems with application to the design of non-smooth bifurcations. In *Proc. IFAC World Congress*, pages ID–1340, Berlin, July 2020

Oscar B. Cieza, Fernando Castaños, and Johann Regger. Implicit IDA-PBC for underactuated mechanical systems : An LMI-based approach. In *Proc. Conference on Decision and Control*, pages 7770 – 7775, Nice, France, December 2019

Gian Carlo Gómez-Cortés, Fernando Castaños, and Jorge Dávila. Sliding motions on SO(3), sliding subgroups. In *Proc. Conference on Decision and Control*, pages 6954 – 6958, Nice, France, December 2019

Gian Carlo Gómez-Cortés, Fernando Castaños, and Jorge Dávila. Control en la esfera S^2 usando modos deslizantes. In *Congreso Nacional de Control Automático*, pages 778 – 784, Puebla, Mexico, October 2019

Pedro Flores-Palmeros, Pedro Castillo, and Fernando Castaños. Backstepping-based controller for flight formation. In *International Conference on Unmanned Aircraft Systems*, pages 254 – 260, Atlanta, GA, June 2019

Emanuel Rocha, Jaime A. Moreno, and Fernando Castaños. Homogeneous generalisation of the Lur'e problem and the circle criterion. In *Proc. IFAC Conf. on Modelling, Identification and Control of Nonlinear Systems*, pages 514 – 519, Guadalajara, Mexico, June 2018

Dmitry Gromov, Fernando Castaños, and Alexander L. Fradkov. Projected dynamics of constrained Hamiltonian systems. In *Proc. European Control Conference*, pages 1277 – 1281, Limassol, Cyprus, June 2018

Dmitry Gromov and Fernando Castaños. Control of driftless systems using piecewise constant inputs. In *Control Systems (SICE ISCS), 2018 International Symposium on*, pages 226 – 231, Tokyo, Japan, March 2018

Emanuel Rocha, Jaime A. Moreno, and Fernando Castaños. Generalización homogénea del problema de Lur'e y del criterio del círculo. In *Congreso Anual de la AMCA*, pages 96 – 101, Monterrey, Mexico, October 2017

Félix Miranda, Fernando Castaños, and Bernard Brogliato. A set-valued nested sliding-mode controller. In *Proc. IFAC World Congress*, pages 3026 – 3031, Toulouse, France, July 2017

Félix Miranda, Bernard Brogliato, and Fernando Castaños. Set-valued discrete-time sliding-mode control of uncertain linear systems. In *Proc. IFAC World Congress*, pages 10017 – 10022, Toulouse, France, July 2017

Dmitry Gromov and Fernando Castaños. The geometric structure of interconnected thermomechanical systems. In *Proc. IFAC World Congress*, pages 584 – 589, Toulouse, France, July 2017

Félix Miranda and Fernando Castaños. Robust output regulation of linear passive systems using maximally monotone controls. In *Proc. Conference on Decision and Control*, pages 6897 – 6902, Osaka, Japan, December 2015

Fernando Castaños and Alessio Franci. The transition between tonic spiking and bursting in a six-transistor neuromorphic device. In *Proc. Int. Conf. on Electrical Eng., Computing Science and Automatic Control*, pages 1 – 6, Mexico City, Mexico, December 2015

Andrea Aparicio Martínez, Fernando Castaños, and Leonid Fridman. ISS properties of sliding-mode controllers for systems with matched and unmatched disturbances. In *Proc. European Control Conference*, pages 2870–2875, Linz, Austria, July 2015

Fernando Castaños and Dmitry Gromov. Interconnection and damping assignment for implicit port-Hamiltonian systems. In *Proc. IFAC Conf. on Modelling, Identification and Control of Nonlinear Systems*, pages 1016 – 1021, Saint Petersburg, Russia, June 2015

Andrea Aparicio Martínez, Fernando Castaños, and Leonid Fridman. ISS-Lyapunov functions for output feedback sliding modes. In *Proc. Conference on Decision and Control*, pages 5536 – 5541, Los Angeles, California, USA, December 2014

Debbie Hernández-Zárate, Fernando Castaños, and Leonid Fridman. Pole-placement in higher-order sliding-mode control. In *Proc. IFAC World Congress*, pages 1386 – 1391, Cape Town, South Africa, August 2014

Félix Miranda and Fernando Castaños. Robust output regulation of variable structure systems with multivalued controls. In *Proc. Variable Structure Systems Workshop*, Nantes, Francia, June 2014

Andrea Aparicio Martínez, Fernando Castaños, and Leonid Fridman. Dynamic surface for output feedback sliding modes, the case of relative degree two. In *Proc. Conference on Decision and Control*, pages 3578 – 3583, Florence, Italy, December 2013

Andrea Aparicio Martínez and Fernando Castaños. Control por modos deslizantes por retroalimentación de salida con grado relativo dos. In *Congreso Anual de la AMCA*, pages 544 – 549, Ensenada, Mexico, October 2013

Edgar Estrada, Fernando Castaños, and Sabine Mondié. σ-estabilidad de sistemas de control basados en pasividad con retardos en la comunicación. In *Congreso Anual de la AMCA*, pages 129 – 134, Ensenada, Mexico, October 2013

Cristian Kunusch and Fernando Castaños. On the implementation of an adaptive extremum seeking algorithm for hydrogen minimization in PEM fuel cell based systems. In *Proc. European Control Conference*, pages 2501 – 2506, Zürich, Switzerland, July 2013

Cristian Kunusch and Fernando Castaños. Extremum seeking algorithms for minimal hydrogen consumption in PEM fuel cells. In *Proc. American Control Conference*, pages 1146 – 1151, Washington, DC, USA, June 2013

Fernando Castaños, Debbie Hernández-Zárate, and Leonid Fridman. Integral sliding-mode control for linear time-invariant implicit descriptions. In *Proc. Conference on Decision and Control*, pages 6442 – 6447, Maui, Hawaii, December 2012

Matteo Rubagotti, Antonio Estrada, Fernando Castaños, Antonella Ferrara, and Leonid Fridman. Optimal disturbance rejection by integral sliding mode control for systems in regular form. In *Proc. Variable Structure Systems Workshop*, pages 78 – 82, Mexico City, Mexico, June 2010

Fernando Castaños and Romeo Ortega. Energy-balancing passivity-based control is equivalent to dissipation and output invariance. In *Proc. European Control Conference*, page WeC2.4, Budapest, Hungary, August 2009

Eugenii Shustin, Leonid Fridman, Emilia Fridman, and Fernando Castaños. Robust semiglobal stabilization of the second order system by relay feedback with an uncertain variable time delay. In *Proc. Conference on Decision and Control*, pages 2716 – 2721, Cancún, México, December 2008

Fernando Castaños, Romeo Ortega, Arjan J. van der Schaft, and Alessandro Astolfi. Asymptotic stabilization via control by interconnection of port-Hamiltonian systems. In *Congreso Latinoamericano de Control Automático*, Mérida, Venezuela, November 2008

Fernando Castaños, Bayu Jayawardhana, Romeo Ortega, and Eloísa García-Canseco. A class of nonlinear RLC circuits globally stabilizable by proportional plus integral controllers. In *Proc. IFAC World Congress*, pages 6202 – 6207, Seoul, Korea, June 2008

Romeo Ortega, Arjan J. van der Schaft, Fernando Castaños, and Alessandro Astolfi. Control by (state-modulated) interconnection of port-Hamiltonian systems. In *Proc. IFAC Symposium on Nonlinear Control Systems*, pages 47 – 54, Pretoria, South Africa, August 2007

Bayu Jayawardhana, Romeo Ortega, Eloísa García-Canseco, and Fernando Castaños. Passivity of nonlinear incremental systems : Application to PI stabilization of nonlinear RLC circuits. In *Proc. Conference on Decision and Control*, page ThIP2.17, San Diego, December 2006

Fernando Castaños and Leonid Fridman. Design of integral sliding manifolds for multi-model uncertain systems via LMI. In *Proc. Variable Structure Systems Workshop*, pages 63–67, Alghero, Italy, June 2006

Fernando Castaños and Leonid Fridman. Robust design criteria for integral sliding surfaces. In *Proc. Conference on Decision and Control, and European Control Conference*, pages 1976–1981, Seville, Spain, December 2005

Fernando Castaños and Leonid Fridman. Integral sliding surface design using an $\mathcal{H}_\infty$ criterion for decentralized control. In *Proc. IFAC World Congress*, pages Th–A09–T0/2, Prague, July 2005

Fernando Castaños and Leonid Fridman. Measurement sliding mode-$\mathcal{H}_\infty$ control with application to decentralized systems. In *Proc. Variable Structure Systems Workshop*, Vilanova i la Geltrú, Spain, September 2004

Leonid Fridman, Fernando Castaños, N. M'Sirdi, and Khraef. Decomposition and robustness properties of integral sliding mode controllers. In *Proc. Variable Structure Systems Workshop*, Vilanova i la Geltrú, Spain, September 2004

Fernando Castaños and Leonid Fridman. Control descentralizado por modos deslizantes. In *Congreso Anual de la AMCA*, pages 253–258, México, D.F., 2004

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