



Sistema Integral de Información Académica
Coordinación de Planeación, Evaluación y
Simplificación de la Gestión Institucional
Reporte individual



HECTOR RIOS BARAJAS

Datos Generales

Nombre: HECTOR RIOS BARAJAS

Máximo nivel de estudios: MAESTRÍA

Antigüedad académica en la UNAM: 2 años

Nombramientos

Último: AYUDANTE PROFESOR B TP No Definitivo
Facultad de Ingeniería
Desde 01-11-2013 hasta 15-08-2014

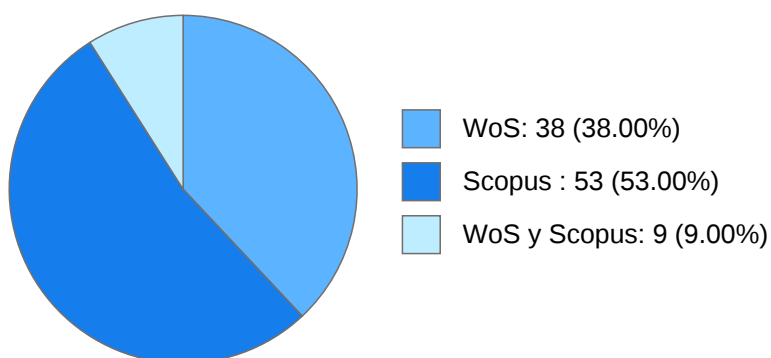
Estímulos, programas, premios y reconocimientos

SNI II 2023
SNI I 2016 - 2022

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DOCUMENTOS EN REVISTAS

Histórico de Documentos



#	Título	Autores	Revista	Año
1	Continuous Sliding-Mode Output-Feedback Control for Stabilization of a Class of Underactuated Systems	HECTOR RIOS BARAJAS LEONID FRIDMAN Luis Ovalle et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2022
2	A Robust Nonlinear Model Reference Adaptive Control for Disturbed Linear Systems: An LMI Approach	HECTOR RIOS BARAJAS DOLORES ALEJANDRA FERREIRA DE LOZA Franco R. et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2022
3	Model reference adaptive control: A finite-time approach	HECTOR RIOS BARAJAS DOLORES ALEJANDRA FERREIRA DE LOZA Franco R.	INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING	2022
4	Trajectory tracking for uncertain Unicycle Mobile Robots: A Super-Twisting approach	HECTOR RIOS BARAJAS Rochel P. Mera M. et al.	CONTROL ENGINEERING PRACTICE	2022

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5	Erratum: Output-feedback sliding-mode controller for blood glucose regulation in critically ill patients affected by type 1 diabetes (IEEE Transactions on Control Systems Technology (2021) 29:6 (2704-2711) DOI: 10.1109/TCST.2020.3046420)	DOLORES ALEJANDRA FERREIRA DE LOZA HECTOR RIOS BARAJAS Franco R. et al.	IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	2021
6	Output-Feedback Sliding-Mode Controller for Blood Glucose Regulation in Critically Ill Patients Affected by Type 1 Diabetes	DOLORES ALEJANDRA FERREIRA DE LOZA HECTOR RIOS BARAJAS Franco R. et al.	IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	2021
7	A robust H8 control approach for blood glucose regulation in type-1 diabetes	DOLORES ALEJANDRA FERREIRA DE LOZA HECTOR RIOS BARAJAS Cassany L. et al.	IFAC PAPERSONLINE	2021
8	An Actuator Fault Accommodation Sliding-Mode Control Approach for Trajectory Tracking in Quad-Rotors	HECTOR RIOS BARAJAS Falcon R. Dzul A.	IEEE Conference on Decision and Control	2021
9	Velocity Control of an Omnidirectional Wheeled Mobile Robot Using Computed Voltage Control with Visual Feedback: Experimental Results	HECTOR RIOS BARAJAS Saenz A. Santibañez V. et al.	INTERNATIONAL JOURNAL OF CONTROL AUTOMATION AND SYSTEMS	2021
10	Robust output-regulation for uncertain linear systems with input saturation	HECTOR RIOS BARAJAS Gutiérrez A. Mera M.	IET CONTROL THEORY AND APPLICATIONS	2020
11	Attractive Ellipsoid-Based Robust Control for Quadrotor Tracking	HECTOR RIOS BARAJAS Falcon R. Mera M. et al.	IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS	2020
12	Robust output-feedback control for uncertain linear sampled-data systems: A 2D impulsive system approach	HECTOR RIOS BARAJAS Hetel L. Efimov D.	NONLINEAR ANALYSIS-HYBRID SYSTEMS	2019
13	Omnidirectional mobile robot robust tracking: Sliding-mode output-based control approaches	HECTOR RIOS BARAJAS Ovalle L. Llama M. et al.	CONTROL ENGINEERING PRACTICE	2019
14	Robust output-feedback control for the cart/pole system: A coupled super-twisting sliding-mode approach	HECTOR RIOS BARAJAS Ovalle L. Llama M.	IET CONTROL THEORY AND APPLICATIONS	2019
15	Strong Observability for a Class of Linear Hybrid Systems	HECTOR RIOS BARAJAS Davila J. Teel A.R.	IEEE Conference on Decision and Control	2019

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16	Adaptive Estimation for Uncertain Nonlinear Systems: A Sliding-Mode Observer Approach	HECTOR RIOS BARAJAS Franco R. Efimov D. et al.	IEEE Conference on Decision and Control	2019
17	A Model Reference Adaptive Continuous Sliding-Mode Control	HECTOR RIOS BARAJAS DOLORES ALEJANDRA FERREIRA DE LOZA Franco R.	IEEE Conference on Decision and Control	2019
18	A Robust Tracking Control for Unicycle Mobile Robots: An Attractive Ellipsoid Approach	HECTOR RIOS BARAJAS MARIA JOVITA GONZALEZ SIERRA Martinez E.A. et al.	IEEE Conference on Decision and Control	2019
19	Continuous Sliding-Mode Control for a Class of Underactuated Systems	HECTOR RIOS BARAJAS Ovalle L. Llama M.	IEEE Conference on Decision and Control	2019
20	Second-order sliding-mode differentiators: an experimental comparative analysis using Van der Pol oscillator	HECTOR RIOS BARAJAS Ahmed H. Ayalew B. et al.	INTERNATIONAL JOURNAL OF CONTROL	2018
21	Experimental study of robust output-based continuous sliding-modes controllers for Van der Pol oscillator	HECTOR RIOS BARAJAS Ahmed H.	IET CONTROL THEORY AND APPLICATIONS	2018
22	Robust Continuous Sliding-Mode Control for Motion Coordination of a Team of Quad-Rotors	HECTOR RIOS BARAJAS Gonzalez-Sierra J. Dzul A.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
23	Quad-Rotor Robust Tracking: A Continuous Sliding-Mode Control Strategy	HECTOR RIOS BARAJAS Falcon R. Gonzalez O.A. et al.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
24	An adaptive sliding-mode observer for a class of uncertain nonlinear systems	HECTOR RIOS BARAJAS Efimov D. Perruquetti W.	INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING	2018
25	Robust synchronization of master-slave chaotic systems using approximate model: An experimental study	HECTOR RIOS BARAJAS Ahmed H. Salgado I.	ISA TRANSACTIONS	2018
26	A hybrid fixed-time observer for state estimation of linear systems	HECTOR RIOS BARAJAS Teel A.R.	Automatica	2018

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27	Robust Output Tracking Control for Van der Pol Oscillator: A Sliding-Mode Differentiator Approach	HECTOR RIOS BARAJAS Ahmed H. Ayalew B. et al.	Proceedings of the American Control Conference	2018
28	Fault detection and isolation for nonlinear non-affine uncertain systems via sliding-mode techniques	LEONID FRIDMAN HECTOR RIOS BARAJAS Punta E.	INTERNATIONAL JOURNAL OF CONTROL	2017
29	Finite and Fixed-Time State Estimation: Pendulum-Cart System	DIEGO GUTIERREZ ORIBIO HECTOR RIOS BARAJAS J. A. Rosales et al.	IFAC PAPERSONLINE	2017
30	Robust tracking output-control for a quad-rotor: A continuous sliding-mode approach	HECTOR RIOS BARAJAS González-Sierra J. Dzul A.	JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS	2017
31	Robust output-control for uncertain linear systems: Homogeneous differentiator-based observer approach	HECTOR RIOS BARAJAS Mera M. Efimov D. et al.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2017
32	A Discontinuous Adaptive Sliding-Mode Observer for a Class of Uncertain Nonlinear Systems	HECTOR RIOS BARAJAS Efimov D. Perruquetti W.	IFAC PAPERSONLINE	2017
33	Nonlinear impulsive systems: 2D stability analysis approach	HECTOR RIOS BARAJAS Hetel L. Efimov D.	Automatica	2017
34	Homogeneous Time-Varying Systems: Robustness Analysis	HECTOR RIOS BARAJAS Efimov D. Polyakov A. et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2016
35	Finite-Time Identification Algorithm based on Time-Varying Homogeneity and Lyapunov Approach	JAIME ALBERTO MORENO PEREZ HECTOR RIOS BARAJAS Efimov, D. et al.	IFAC PAPERSONLINE	2016
36	Homogeneity Based Uniform Stability Analysis for Time-Varying Systems	LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ HECTOR RIOS BARAJAS et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2016
37	State estimation on switching systems via High-Order sliding modes	LEONID FRIDMAN HECTOR RIOS BARAJAS Davila J.	LECT NOTES CONTR INF	2015
38	Fault tolerant control allocation via continuous integral sliding-modes: A HOSM-Observer approach	HECTOR RIOS BARAJAS LEONID FRIDMAN Kamal, Shyam et al.	Automatica	2015

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39	Vector lyapunov function based stability for a class of impulsive systems	HECTOR RIOS BARAJAS Hetel L. Efimov D.	IEEE Conference on Decision and Control	2015
40	Non-minimum phase switched systems: HOSM-based fault detection and fault identification via Volterra integral equation	LEONID FRIDMAN HECTOR RIOS BARAJAS Efimov, D. et al.	INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING	2014
41	Discrete state estimation for switched LPV systems using parameter identification	HECTOR RIOS BARAJAS JORGE ANGEL DAVILA MONTOYA Mincarelli D. et al.	Proceedings of the American Control Conference	2014
42	High-order sliding modes observers for linear autonomous-switched systems with unknown inputs	LEONID FRIDMAN HECTOR RIOS BARAJAS Davila J.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2012
43	State estimation and fault detection for linear switched systems with unstable internal dynamics	LEONID FRIDMAN HECTOR RIOS BARAJAS Efimov D. et al.	IFAC Proceedings Volumes (IFAC-PapersOnline)	2012
44	Fault detection and isolation for nonlinear systems via HOSM multiple-observer	LEONID FRIDMAN HECTOR RIOS BARAJAS Edwards C. et al.	IFAC Proceedings Volumes (IFAC-PapersOnline)	2012
45	Discrete state reconstruction for mechanical switched systems using high-order sliding-mode identification techniques	LEONID FRIDMAN HECTOR RIOS BARAJAS Davila J.	IEEE Conference on Decision and Control	2012
46	State observation for nonlinear switched systems using nonhomogeneous high-order sliding mode observers	HECTOR RIOS BARAJAS LEONID FRIDMAN Davila, J.	ASIAN JOURNAL OF CONTROL	2012
47	State estimation for linear switched systems with unstable invariant zeros and unknown inputs	LEONID FRIDMAN HECTOR RIOS BARAJAS Davila J. et al.	IEEE Conference on Decision and Control	2012

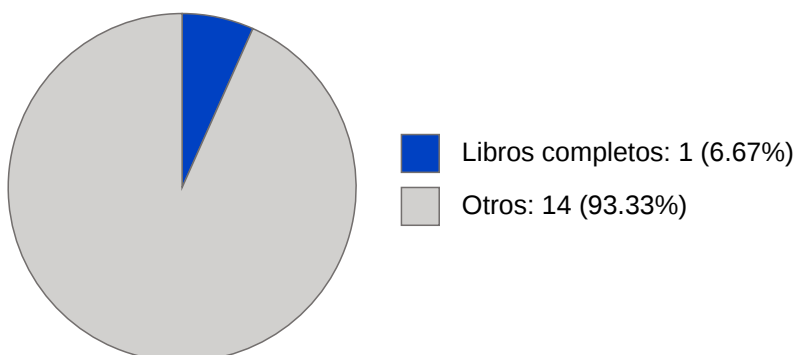
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48	State estimation for linear switched systems with unknown inputs	LEONID FRIDMAN HECTOR RIOS BARAJAS Efimov D. et al.	IFAC Proceedings Volumes (IFAC-PapersOnline)	2012
49	Robust regulation for a 3-DOF helicopter via sliding-mode observation and identification	A. Rosales HECTOR RIOS BARAJAS Ferreira de Loza, A.	JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS	2012
50	High-order sliding mode observers for nonlinear autonomous switched systems with unknown inputs	HECTOR RIOS BARAJAS Davila, Jorge Fridman, Leonid	JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS	2012
51	State observation for non-linear switched systems using non-homogeneous HOSM observers	LEONID FRIDMAN HECTOR RIOS BARAJAS Davila J.	IEEE Conference on Decision and Control	2010
52	Prevalence of human papillomavirus infection among women in Concordia, Argentina: A population-based study	HECTOR RIOS BARAJAS Matos E. Loria D. et al.	SEX TRANSM DIS	2003
53	State estimation for linear hybrid systems with periodic jumps and unknown inputs	HECTOR RIOS BARAJAS JORGE ANGEL DAVILA MONTOYA Teel A.R.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	

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LIBROS Y CAPITULOS CON ISBN

Obras con registro ISBN



#	Título	Autores	Alcance	Año	ISBN
1	Active Fault Tolerant Control for a Quad-Rotor in case of a Rotor Failure	HECTOR RIOS BARAJAS Falcon R. Dzul A.	Conferenc e Paper	2021	9781665438254
2	A Robust Control solution for Glycaemia Regulation of Type-1 Diabetes Mellitus	DOLORES ALEJANDRA FERREIRA DE LOZA HECTOR RIOS BARAJAS Cassany L. et al.	Conferenc e Paper	2021	9789463842365
3	State and mode estimation for piecewise linear systems	HECTOR RIOS BARAJAS FRANCISCO JAVIER BEJARANO RODRIGUEZ Mera M.	Conferenc e Paper	2019	9783907144008
4	A Robust Output-Feedback Control for the Cart-Pole System: A Super-Twisting Sliding-Mode approach	HECTOR RIOS BARAJAS Ovalle L. Llama M.	Conferenc e Paper	2019	9781538692202
5	Output-based Robust Control for Quad-Rotor Tracking: An Attractive Ellipsoid Approach	HECTOR RIOS BARAJAS Falcon R. Mera M. et al.	Conferenc e Paper	2019	9781538692202
6	Robótica y computación.	HECTOR RIOS BARAJAS	Libro Completo	2018	9786079712877
7	State estimation and parameter identification via sliding-mode techniques: pendulum-cart system	HECTOR RIOS BARAJAS RAFAEL IRIARTE VIVAR BALDERRAMA Diego Gutierrez et al.	Article	2017	9781785613210

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8	Leader-follower robust formation control for Quad-Rotors via continuous sliding-modes	HECTOR RIOS BARAJAS Gonzalez-Sierra J. Dzul A.	Conferenc e Paper	2017	9781509044948
9	A hybrid observer for fixed-time state estimation of linear systems	HECTOR RIOS BARAJAS Teel A.R.	Conferenc e Paper	2016	9781509018376
10	Observer-based control for linear sampled-data systems: An impulsive system approach	HECTOR RIOS BARAJAS Hetel L. Efimov D.	Conferenc e Paper	2016	9781509018376
11	Robustness of homogeneous systems with respect to time-varying perturbations	HECTOR RIOS BARAJAS Efimov D. Polyakov A. et al.	Conferenc e Paper	2016	9781509025916
12	Unknown input reconstruction for nonlinear autonomous switched systems via high-order sliding modes observers	LEONID FRIDMAN HECTOR RIOS BARAJAS Davila J.	Conferenc e Paper	2011	9781612849720
13	Robust regulation for a 3-DOF helicopter via sliding-modes control and observation techniques	JOSE ANTONIO ROSALES MARTINEZ DOLORES ALEJANDRA FERREIRA DE LOZA HECTOR RIOS BARAJAS et al.	Conferenc e Paper	2010	9781424474264
14	Observation for non-linear uncertain systems with multiple outputs via non-homogeneous high-order sliding modes	LEONID FRIDMAN HECTOR RIOS BARAJAS Dávila J.	Conferenc e Paper	2010	9781424458318
15	Global non-homogeneous quasi-continuous controller for a 3-DOF helicopter	JOSE ANTONIO ROSALES MARTINEZ HECTOR RIOS BARAJAS Dávila A.	Conferenc e Paper	2010	9781424458318



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PARTICIPACIÓN EN PROYECTOS

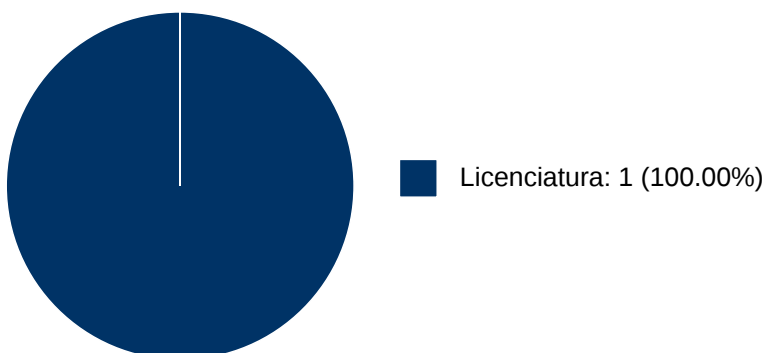
No se encuentran registros en la base de datos de SISEPRO asociados a:

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PARTICIPACIÓN EN TESIS

Histórico de Colaboraciones en Tesis

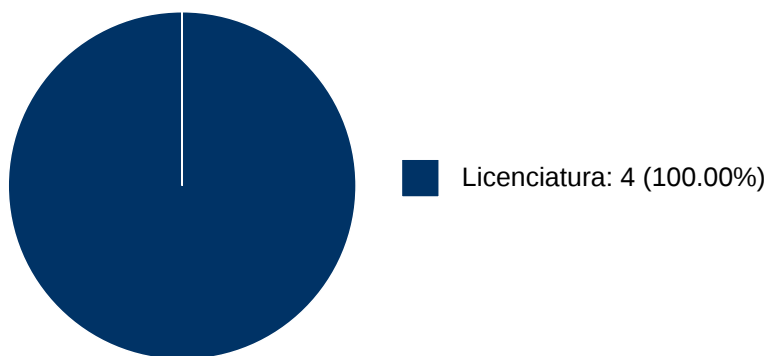


#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Observación e identificación de sistemas mecánicos por modos deslizantes	Tesis de Licenciatura	HECTOR RIOS BARAJAS,	Gutiérrez Oribio, Diego,		2013

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DOCENCIA IMPARTIDA

Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Licenciatura	PROYECTO DE INGENIERIA	Facultad de Ingeniería	1	2013-2
2	Licenciatura	CONTROL AUTOMATICO	Facultad de Ingeniería	10	2012-2
3	Licenciatura	CONTROL AUTOMATICO	Facultad de Ingeniería	21	2011-2
4	Licenciatura	CONTROL AUTOMATICO	Facultad de Ingeniería	5	2011-1



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PATENTES

No se encuentran registros en la base de datos de patentes asociados a:

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FUENTES DE INFORMACIÓN

Internos

#	Información	Fuente	Sistema	Periodo
1	Grupos ordinarios y resumen de historias académicas	DGAE	SIAE	2008-2025
2	Nombramientos, datos generales, estímulos, premios y reconocimientos	DGAPA	RUPA	2008-2025
3	Producción Académica	CH	Humanindex	2008-2021
4	Producción Académica	CIC	SCIC	2000-2017
5	Proyectos	DGPO	SISEPRO	2018-2022
6	Tesis	DGB	TESIUNAM	2008-2025
7	Tutorías en Posgrado	CGEP	SIIPosgrado	2008-2021

Externos

#	Información	Fuente	Sistema	Periodo
8	Documentos Indexados	Elsevier	Scopus	2008-2025
9	Documentos Indexados	Thomson Reuters	WoS	2008-2025
10	Obras con registro ISBN	INDAUTOR	Agencia ISBN	2008-2025
11	Patentes	IMPI	SIGA	2008-2024