



Sistema Integral de Información Académica

Coordinación de Planeación, Evaluación y Simplificación de la Gestión Institucional



Reporte individual

LEONID FRIDMAN

Datos Generales

Nombre: LEONID FRIDMAN

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Nombramientos

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Estímulos, programas, premios y reconocimientos

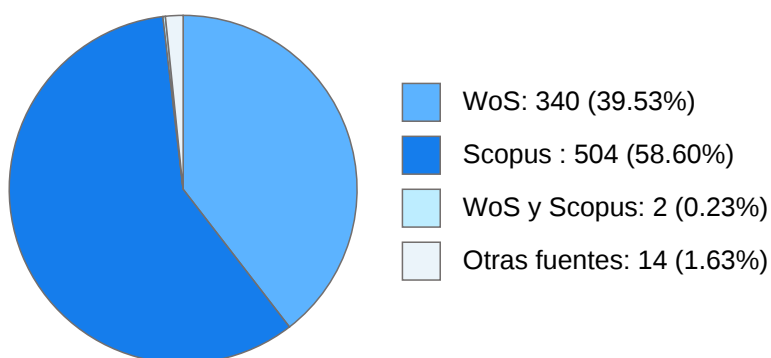
SNI Emérito 2022 - VIGENTE
SNI III 2010 - 2020
SNI II 2009
PRIDE D - 2024
PASPA Estancias Sabáticas 2017 - 2018
PASPA Estancias Sabáticas 2015
CATEDRA NABOR CARRILLO 2013
CATEDRA CARLOS RAMIREZ ULLOA 2010
CATEDRA AURELIO BENASSINI VIZCAINO 2009
PUN Investigación en ciencias exactas 2019

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DOCUMENTOS EN REVISTAS

Histórico de Documentos



#	Título	Autores	Revista	Año
1	Analysis of barrier function based adaptive sliding mode control in the presence of deterministic noise?	ANDRES GONZALEZ RODRIGUEZ LEONID FRIDMAN Luis Ovalle et al.	Automatica	2025
2	Barrier function-based adaptive continuous higher-order sliding mode controllers	LEONID FRIDMAN Yacine Chitour Hussein Obeid et al.	NONLINEAR ANALYSIS-HYBRID SYSTEMS	2025
3	Hydraulic actuator control based on continuous higher order sliding modes	MANUEL ALFREDO ESTRADA ANGULO OSCAR TEXIS LOAIZA LEONID FRIDMAN et al.	CONTROL ENGINEERING PRACTICE	2025
4	Robust Adaptive Fault-Tolerant Control for MAGLEV Train Systems: A Nonsingular Finite-Time Approach	LEONID FRIDMAN Najafi A. Mobayen S. et al.	IEEE Transactions on Transportation Electrification	2025
5	Output Feedback Control of Nonlinear Systems via Lipschitz Continuous Sliding Modes	OSCAR TEXIS LOAIZA JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN et al.	IEEE Control Systems Letters	2025

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6	Is it Reasonable to Implement Barrier Function Adaptation Under Sensor Noise?	LEONID FRIDMAN Andres Gonzalez Luis Ovalle	IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	2025
7	Super-Twisting gain maps based on parasitic dynamics identification	MATIAS IGLESIAS RIOS ULISES ARTURO PEREZ VENTURA LEONID FRIDMAN et al.	CONTROL ENGINEERING PRACTICE	2025
8	Final Set Adjustment in Barrier Function Adaptation Exploiting Properties of Signed Power-Based Controllers	LEONID FRIDMAN Gonzalez A. Ovalle L.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2024
9	Passive Fault-Tolerant Control via Sliding-Mode-Based Lyapunov Redesign	MANUEL ALFREDO ESTRADA ANGULO LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2024
10	Super-twisting based sliding mode control of hydraulic actuator without velocity state	LEONID FRIDMAN Manuel A. Estrada Michael Ruderman	CONTROL ENGINEERING PRACTICE	2024
11	Sliding mode control for systems with zero-crossing control gain under matched and mismatched disturbances	LEONID FRIDMAN Ovalle L.	Automatica	2024
12	BI-homogeneous sliding-mode observers for SISO linear time-varying systems with an unknown input	RENE MELENDEZ PEREZ JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS	2024
13	Unit Vector Control with Prescribed Performance via Monitoring and Barrier Functions	LEONID FRIDMAN Rodrigues V.H.P. Hsu L. et al.	Studies in Systems Decision and Control	2023
14	Adaptive Lyapunov redesign for a class of linear systems with delays in the state	LEONID FRIDMAN Cruz-Ancona C.D. Gomez M.A.	IFAC PAPERSONLINE	2023
15	Sliding Mode Controllers Design based on Control Lyapunov functions for uncertain LTI systems	MANUEL ALFREDO ESTRADA ANGULO JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	IFAC PAPERSONLINE	2023
16	A survey on High-Order Sliding-Mode control design using Lyapunov functions	LEONID FRIDMAN Moreno J.A.	IFAC PAPERSONLINE	2023
17	Preface	LEONID FRIDMAN Oliveira T.R. Hsu L.	Studies in Systems Decision and Control	2023

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18	Robust State Estimation for Linear Time-Varying Systems Using High-Order Sliding-Modes Observers	LEONID FRIDMAN Dávila J. Levant A.	Studies in Systems Decision and Control	2023
19	A uniform reaching phase strategy in adaptive sliding mode control	LEONID FRIDMAN CLAUDIA ALEJANDRA PEREZ PINACHO Cruz-Ancona C.D. et al.	Automatica	2023
20	Super Twisting Based Lyapunov Redesign for Uncertain Linear Delay Systems	LEONID FRIDMAN Gomez M.A. Cruz-Ancona C.D.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2023
21	An arbitrary-order exact differentiator with predefined convergence time bound for signals with exponential growth bound	MARCO TULIO ANGULO BALLESTEROS LEONID FRIDMAN Gómez-Gutiérrez D. et al.	Automatica	2023
22	Finite- and fixed-time observers for uncertain multiple-outputs linear systems with unknown inputs	LEONID FRIDMAN Hector Rios Jorge Davila	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2023
23	Bi-homogeneous observers for uncertain 1-DOF mechanical systems	OSCAR TEXIS LOAIZA JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2023
24	A multivariable super-twisting-based fault-tolerant control with control allocation for uncertain systems	LEONID FRIDMAN Ríos H. Mera M.	INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING	2023
25	On Stability of Homogeneous Systems in Presence of Parasitic Dynamics	JESUS MENDOZA AVILA LEONID FRIDMAN Efimov D. et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2023
26	Robust Stabilization of Furuta's pendulum based on Continuous High Order Sliding Mode Controllers	DIEGO GUTIERREZ ORIBIO LEONID FRIDMAN Ortega J.A. et al.	IEEE Conference on Decision and Control	2022
27	Barrier function-based stabilization of a perturbed chain of integrators with a predefined upperbound of the settling time	LEONID FRIDMAN Estrada M.A. Cruz-Ancona C.D. et al.	IEEE Conference on Decision and Control	2022

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28	Multivariable binary adaptive control using higher-order sliding modes applied to inertially stabilized platforms	LEONID FRIDMAN Battistel A. Oliveira T.R. et al.	EUROPEAN JOURNAL OF CONTROL	2022
29	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
30	Conditions of Self-Oscillations in Generalized Persidskii Systems	JESUS MENDOZA AVILA LEONID FRIDMAN Wang J. et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2022
31	Robust Multi-Model Predictive Control via Integral Sliding Modes	LEONID FRIDMAN Galvan-Guerra R. Incremona G.P. et al.	IEEE Control Systems Letters	2022
32	Finite-Time State Observer for a Class of Linear Time-Varying Systems With Unknown Inputs	JORGE ANGEL DAVILA MONTOYA LEONID FRIDMAN Markus Tranninger	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2022
33	Adaptive sliding mode control with guaranteed performance based on monitoring and barrier functions	LEONID FRIDMAN Víctor Hugo Pereira Rodrigues Liu Hsu et al.	INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING	2022
34	A Lipschitz continuous sliding mode control for implicit systems	LEONID FRIDMAN Praveen S. Babu Debbie Hernandez et al.	EUROPEAN JOURNAL OF CONTROL	2022
35	Bi-Homogeneous Observers for Uncertain 2-DOF Mechanical Systems	OSCAR TEXIS LOAIZA LEONID FRIDMAN Rene Melendez-Perez et al.	IEEE Control Systems Letters	2022
36	Barrier Function-Based Adaptive Lyapunov Redesign for Systems Without A Priori Bounded Perturbations	LEONID FRIDMAN Christopher D. Cruz-Ancona Manuel A. Estrada	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2022
37	Dissipativity Based Global Sliding Mode Observer for Uncertain Mechanical Systems	WILLY ALEJANDRO APAZA PEREZ LEONID FRIDMAN Moreno J.A.	Studies in Systems Decision and Control	2022
38	Output-Based Asymptotic Controller for a Class of Nonlinear Systems via High-Order Sliding-Modes	DOLORES ALEJANDRA FERREIRA DE LOZA LEONID FRIDMAN Aguilar L.T.	Studies in Systems Decision and Control	2022

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39	On Robustification Based on Continuous Integral Sliding Modes	LEONID FRIDMAN Velázquez-Velázquez J.-E. Galván-Guerra R. et al.	Studies in Systems Decision and Control	2022
40	Generalized Super-Twisting for Control Under Time- and State-Dependent Perturbations: Breaking the Algebraic Loop	LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ Hernan Haimovich	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2022
41	Analysis of relay-based feedback compensation of Coulomb friction	LEONID FRIDMAN Ruderman M.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2022
42	Control por modos deslizantes de orden superior basado en funciones de Lyapunov	JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	REVISTA IBEROAMERICANA DE AUTOMATICA E INFORMATICA INDUSTRIAL	2022
43	Multivariable Super-Twisting Algorithm for Systems With Uncertain Input Matrix and Perturbations	JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN Rios H. et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2022
44	An Analysis of Convergence Properties of Finite-Time Homogeneous Controllers Through Its Implementation in a Flexible-Joint Robot	LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ Mendoza-Avila J. et al.	IEEE Conference on Decision and Control	2022
45	Reaction wheel pendulum control using fourth-order discontinuous integral algorithm	DIEGO GUTIERREZ ORIBIO JOSE ANGEL MERCADO URIBE JAIME ALBERTO MORENO PEREZ et al.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021
46	A polytopic strategy for improved non-asymptotic robust control via implicit Lyapunov functions	LEONID FRIDMAN Alan Tapia Denis Efimov et al.	NONLINEAR ANALYSIS-HYBRID SYSTEMS	2021
47	Barrier function-based adaptive higher order sliding mode controllers ?	LEONID FRIDMAN Salah Laghrouche Mohamed Harmouche et al.	Automatica	2021
48	A Lyapunov based Saturated Super-Twisting Algorithm	LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ Castillo I. et al.	Studies in Systems Decision and Control	2021

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49	Robust Stabilization of a Class of Underactuated Mechanical Systems of 2 DOF via Continuous Higher-Order Sliding-Modes	DIEGO GUTIERREZ ORIBIO JOSE ANGEL MERCADO URIBE JAIME ALBERTO MORENO PEREZ et al.	Studies in Systems Decision and Control	2021
50	Model-Free Sliding-Mode-Based Detection and Estimation of Backlash in Drives With Single Encoder	LEONID FRIDMAN Michael Ruderman	IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	2021
51	Robust output trajectory linearisation control for a class of linear time-varying systems	LEONID FRIDMAN RAFAEL IRIARTE VIVAR BALDERRAMA Rosalba Galvan Guerra et al.	IET CONTROL THEORY AND APPLICATIONS	2021
52	Joint swing-up and stabilization of the Reaction Wheel Pendulum using Discontinuous Integral algorithm	DIEGO GUTIERREZ ORIBIO JOSE ANGEL MERCADO URIBE JAIME ALBERTO MORENO PEREZ et al.	NONLINEAR ANALYSIS-HYBRID SYSTEMS	2021
53	Editorial	LEONID FRIDMAN Denis Efimov Salah Laghrouche	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021
54	Output-feedback Lyapunov redesign of uncertain systems with delayed measurements	LEONID FRIDMAN Jing Xu Emilia Fridman et al.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021
55	Design of a proportional integral derivative-like continuous sliding mode controller	ULISES ARTURO PEREZ VENTURA JESUS MENDOZA AVILA LEONID FRIDMAN	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021
56	Dual layer barrier functions based adaptive higher order sliding mode control	LEONID FRIDMAN Hussein Obeid Salah Laghrouche	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021
57	Chattering analysis for Lipschitz continuous sliding-mode controllers	CARLOS ARTURO MARTINEZ FUENTES ULISES ARTURO PEREZ VENTURA LEONID FRIDMAN	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021

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58	Robust global stabilization of a class of underactuated mechanical systems of two degrees of freedom	DIEGO GUTIERREZ ORIBIO JOSE ANGEL MERCADO URIBE JAIME ALBERTO MORENO PEREZ et al.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021
59	Output global oscillatory synchronisation of heterogeneous systems	LEONID FRIDMAN Ahmed H. Ushirobira R. et al.	INTERNATIONAL JOURNAL OF CONTROL	2021
60	Saturated Lipschitz Continuous Sliding Mode Controller for Perturbed Systems With Uncertain Control Coefficient	CARLOS ARTURO MARTINEZ FUENTES LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2021
61	Robust exact differentiators with predefined convergence time	LEONID FRIDMAN Seeber R. Haimovich H. et al.	Automatica	2021
62	Robust orbital stabilization: A Floquet theory?based approach	LEONID FRIDMAN Sætre C.F. Shiriaev A.S. et al.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2021
63	Lyapunov redesign for a class of uncertain systems with delays	LEONID FRIDMAN Marco A. Gomez Christopher D. Cruz-Ancona	NONLINEAR ANALYSIS-HYBRID SYSTEMS	2021
64	Authors? Reply To: (CI 20-0229) Comments on Design of controllers with arbitrary convergence time	LEONID FRIDMAN Pal A.K. Kamal S. et al.	Automatica	2020
65	Barrier Function-Based Adaptive Super-Twisting Controller	LEONID FRIDMAN Obeid H. Laghrouche S. et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2020
66	A New Varying-Gain-Exponent-Based Differentiator/Observer: An Efficient Balance Between Linear and Sliding-Mode Algorithms	LEONID FRIDMAN Malek Ghanes Jean-Pierre Barbot et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2020
67	Static Sliding Mode Control of Systems With Arbitrary Relative Degree by Using Artificial Delay	LEONID FRIDMAN Jing Xu Emilia Fridman et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2020

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68	A New Class of Uniform Continuous Higher-Order Sliding Mode Controllers	LEONID FRIDMAN Shyam Kamal P. Ramesh Kumar et al.	JOURNAL OF DYNAMIC SYSTEMS MEASUREMENT AND CONTROL-TRANSACTIONS OF THE ASME	2020
69	Semiglobal Finite-Time Trajectory Tracking Realization for Disturbed Nonlinear Systems via Higher-Order Sliding Modes	LEONID FRIDMAN Chuanlin Zhang Jun Yang et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2020
70	Zero dynamics assignment and its applications to the stabilization of linear time-varying systems	LEONID FRIDMAN Hernández D. Vázquez E.A. et al.	Automatica	2020
71	Wheel Slip Control for the Electric Vehicle With In-Wheel Motors: Variable Structure and Sliding Mode Methods	LEONID FRIDMAN Dzmitry Savitski Valentin Ivanov et al.	IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS	2020
72	Continuous Twisting Algorithm for Third-Order Systems	JESUS MENDOZA AVILA JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2020
73	Fault tolerant control based on continuous twisting algorithms of a 3-DoF helicopter prototype	ULISES ARTURO PEREZ VENTURA LEONID FRIDMAN E. Capello et al.	CONTROL ENGINEERING PRACTICE	2020
74	Adaptive Continuous Controllers Ensuring Prescribed Ultimate Bound for Uncertain Dynamical Systems	MANUEL ALFREDO ESTRADA ANGULO LEONID FRIDMAN Cruz-Ancona C.D. et al.	IFAC PAPERSONLINE	2020
75	Analysis of Singular Perturbations for a Class of Interconnected Homogeneous Systems: Input-to-State Stability Approach	JESUS MENDOZA AVILA JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN et al.	IFAC PAPERSONLINE	2020
76	Control of Fully Actuated Mechanical Systems via Super-twisting Based Lyapunov Redesign	MANUEL ALFREDO ESTRADA ANGULO LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ	IFAC PAPERSONLINE	2020
77	Robust Global Stabilization of the Third Order Reaction Wheel Pendulum System	DIEGO GUTIERREZ ORIBIO JOSE ANGEL MERCADO URIBE JAIME ALBERTO MORENO PEREZ et al.	IFAC PAPERSONLINE	2020
78	On existence of oscillations in Persidskii systems	JESUS MENDOZA AVILA LEONID FRIDMAN Wang J. et al.	IFAC PAPERSONLINE	2020
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80	On adaptive sliding mode control without a priori bounded uncertainty	LEONID FRIDMAN Roy S. Baldi S.	Automatica	2020
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82	Discrete-Time Implementation of Homogeneous Differentiators	LEONID FRIDMAN Stefan Koch Markus Reichhartinger et al.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2020
83	Saturated Feedback Control Using Different Higher-Order Sliding-Mode Algorithms	LEONID FRIDMAN Golkani M.A. Koch S. et al.	Studies in Systems Decision and Control	2020
84	Chattering Comparison Between Continuous and Discontinuous Sliding-Mode Controllers	ULISES ARTURO PEREZ VENTURA LEONID FRIDMAN	Studies in Systems Decision and Control	2020
85	Preface	LEONID FRIDMAN Steinberger M. Horn M.	Studies in Systems Decision and Control	2020
86	Global sliding mode observers for some uncertain mechanical systems	WILLY ALEJANDRO APAZA PEREZ JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2020
87	A Barrier Function Based-Adaptive Super-Twisting Controller for Wind Energy Conversion System	LEONID FRIDMAN Obeid H. Laghrouche S.	IEEE Conference on Decision and Control	2019
88	Semi-implicit Discretization of the Uniform Robust Exact Differentiator	LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ Wetzlinger M. et al.	IEEE Conference on Decision and Control	2019
89	Stabilization of systems with switchings on the axis of their coordinates and its input-to-state properties	ANDREA APARICIO MARTINEZ LEONID FRIDMAN Denis Efimov	NONLINEAR ANALYSIS-HYBRID SYSTEMS	2019
90	High-order sliding-mode observer?based input-output linearization	LEONID FRIDMAN RAFAEL IRIARTE VIVAR BALDERRAMA Ferreira de Loza A. et al.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2019

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91	Two relay control robustification by continuous switched integral sliding modes	LEONID FRIDMAN RAFAEL IRIARTE VIVAR BALDERRAMA Velázquez-Velázquez J.-E. et al.	IET CONTROL THEORY AND APPLICATIONS	2019
92	Generalized Model Reference Adaptive Control by Means of Global HOSM Differentiators	LEONID FRIDMAN Tiago Roux Oliveira Victor Hugo Pereira Rodrigues	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2019
93	When is it reasonable to implement the discontinuous sliding-mode controllers instead of the continuous ones? Frequency domain criteria	ULISES ARTURO PEREZ VENTURA LEONID FRIDMAN	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2019
94	Finite frequency H-infinity control of singularly perturbed Euler-Lagrange systems: An artificial delay approach	LEONID FRIDMAN Xu J. Niu Y. et al.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2019
95	On the strong observability in linear time-varying singular systems	FRANCISCO JAVIER BEJARANO RODRIGUEZ JORGE ANGEL DAVILA MONTOYA LEONID FRIDMAN et al.	Automatica	2019
96	Design of super-twisting control gains: A describing function based methodology	ULISES ARTURO PEREZ VENTURA LEONID FRIDMAN	Automatica	2019
97	Editorial	LEONID FRIDMAN	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2019
98	15th International Workshop on Variable Structure Systems and Sliding Mode Control (VSS18)	LEONID FRIDMAN Steinberger M. Horn M.	IEEE CONTROL SYSTEMS MAGAZINE	2019
99	Multivariable extension of global finite-time HOSM based differentiator for output-feedback unit vector and smooth binary control	LEONID FRIDMAN Oliveira T.R. Rodrigues V.H.P. et al.	ASIAN JOURNAL OF CONTROL	2019
100	Finite-Time Continuous Robust Generation of Self-Oscillation: A Switched Approach	LEONID FRIDMAN Galvan-Guerra R. Velazquez-Velazquez J.-E.	IEEE Conference on Decision and Control	2019
101	Higher-Order Sliding-Mode Control for Linear Time-Varying Systems	LEONID FRIDMAN Hernandez D. Vazquez E.A.	IEEE Conference on Decision and Control	2019
102	Barrier Function-Based Adaptive Integral Sliding Mode Control	LEONID FRIDMAN Obeid H. Laghrouche S. et al.	IEEE Conference on Decision and Control	2019

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103	Sliding Mode Tangent Space Observer for LTV Systems with Unknown Inputs	LEONID FRIDMAN Tranninger M. Zhuk S. et al.	IEEE Conference on Decision and Control	2019
104	Virtual sensing of load forces in hydraulic actuators using second- and higher-order sliding modes	LEONID FRIDMAN Ruderman M. Pasolli P.	CONTROL ENGINEERING PRACTICE	2019
105	Dissipative approach to sliding mode observers design for uncertain mechanical systems	WILLY ALEJANDRO APAZA PEREZ JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	Automatica	2018
106	Barrier Function-Based Adaptive Integral Sliding Mode Control	LEONID FRIDMAN Hussein Obeid Salah Laghrouche et al.	IEEE Conference on Decision and Control	2018
107	Finite-Time Continuous Robust Generation of Self-Oscillation: a Switched Approach	LEONID FRIDMAN Rosalba Galvan-Guerra Juan-Eduardo Velazquez-Velazquez	IEEE Conference on Decision and Control	2018
108	Sliding Mode Tangent Space Observer for LTV Systems with Unknown Inputs	LEONID FRIDMAN Markus Tranninger Sergiy Zhuk et al.	IEEE Conference on Decision and Control	2018
109	Higher-Order Sliding-Mode Control for Linear Time-Varying Systems	LEONID FRIDMAN Debbie Hernandez Eli Abraham Vazquez	IEEE Conference on Decision and Control	2018
110	Closing Gaps for Aircraft Attitude Higher Order Sliding Mode Control Certification via Practical Stability Margins Identification	JOSE ANTONIO ROSALES MARTINEZ LEONID FRIDMAN Chandrasekhara Bharath Panathula et al.	IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	2018
111	Higher order sliding-mode observers with scaled dissipative stabilisers	WILLY ALEJANDRO APAZA PEREZ LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ	INTERNATIONAL JOURNAL OF CONTROL	2018
112	Super-Twisting Algorithm in presence of time and state dependent perturbations	LEONID FRIDMAN JAIME ALBERTO MORENO PEREZ I Castillo	INTERNATIONAL JOURNAL OF CONTROL	2018
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114	Continuous sliding-mode control for singular systems	LEONID FRIDMAN D. Hernandez M. Golkani	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2018

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115	Lyapunov-based design for a class of variable-gain 2nd-sliding controllers with the desired convergence rate	JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN Cruz-Zavala E.	INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	2018
116	Output feedback Continuous Twisting Algorithm	TONAMETL SANCHEZ RAMIREZ JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	Automatica	2018
117	Special issue on differentiators	LEONID FRIDMAN Reichhartinger M. Efimov D.	INTERNATIONAL JOURNAL OF CONTROL	2018
118	Technical Committee on Variable Structure and Sliding Mode Control	LEONID FRIDMAN	IEEE CONTROL SYSTEMS MAGAZINE	2018
119	Anti-Chattering Strategy using Twisting Controller	CARLOS ARTURO MARTINEZ FUENTES JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	IFAC PAPERSONLINE	2018
120	Practical stability phase and gain margins concept	LEONID FRIDMAN Shtessel, Y. Rosales, A. et al.	Studies in Systems Decision and Control	2018
121	The 2017 Summer School on Sliding Mode Control	LEONID FRIDMAN Steinberger M. Horn M.	IEEE CONTROL SYSTEMS MAGAZINE	2018
122	INTEGRAL SLIDING-MODE OBSERVATION AND CONTROL FOR SWITCHED UNCERTAIN LINEAR TIME INVARIANT SYSTEMS: A ROBUSTIFYING STRATEGY	LEONID FRIDMAN RAFAEL IRIARTE VIVAR BALDERRAMA Galván-Guerra R. et al.	ASIAN JOURNAL OF CONTROL	2018
123	Output-feedback variable gain super-twisting algorithm for arbitrary relative degree systems	LEONID FRIDMAN Oliveira T.R. Rodrigues V.H.P. et al.	INTERNATIONAL JOURNAL OF CONTROL	2018
124	Adaptation of Levant's differentiator based on barrier function	LEONID FRIDMAN Obeid H. Laghrouche S. et al.	INTERNATIONAL JOURNAL OF CONTROL	2018
125	Novel Method to Estimate the Reaching Time of the Super-Twisting Algorithm	LEONID FRIDMAN Seeber R. Horn M.	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	2018
126	Barrier function-based adaptive sliding mode control	LEONID FRIDMAN Obeid H. Laghrouche S. et al.	Automatica	2018

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127	Adaptive Continuous Twisting Algorithm of Third Order	JESUS MENDOZA AVILA JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
128	Barrier Function-Based Adaptive Twisting Controller	LEONID FRIDMAN Obeid H. Laghrouche S. et al.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
129	Global Multivariable HOSM Differentiator for Output-Feedback Unit Vector Control of Nonuniform Relative Degree Systems	LEONID FRIDMAN Oliveira T.R. Rodrigues V.H.P. et al.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
130	Robust State Estimation for Linear Time Varying Lateral Vehicle Dynamics with Unknown Road Curvature	LEONID FRIDMAN Tranninger M. Steinberger M. et al.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
131	Fault Detection and Isolation for a 3-DOF Helicopter with Sliding Mode Strategies	LEONID FRIDMAN Perez U. Capello E. et al.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
132	On Parametric Uncertainty in Dynamically Perturbed Sliding Mode Controlled Systems	LEONID FRIDMAN Rosales A. Ibarra L. et al.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018
133	Use of second-order sliding mode observer for low-accuracy sensing in hydraulic machines	LEONID FRIDMAN Ruderman M.	IEEE PES Innovative Smart Grid Technologies Conference Europe	2018

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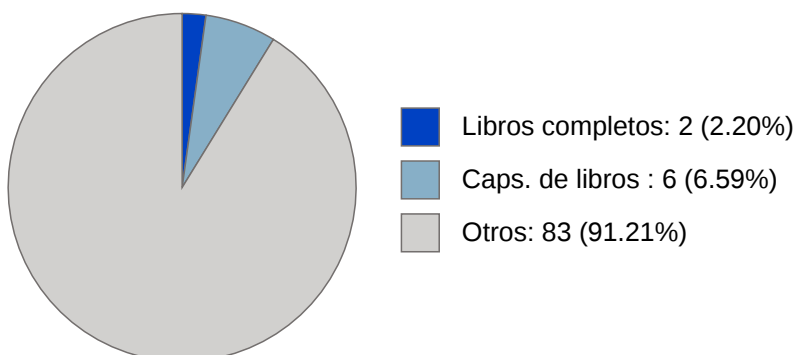
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5	Finite-time convergence analysis for	LEONID FRIDMAN JAIME	Conferenc	2010	9781424458318
9	"Twisting" controller via a strict Lyapunov function	ALBERTO MORENO PEREZ Santiesteban R.	e Paper		
6	Finite-time parameter identification via	LEONID FRIDMAN Davila	Conferenc	2010	9781424474264
0	high-order sliding mode observer	J. Basin M.	e Paper		
61	Variable gains super-twisting algorithm: A Lyapunov based design	JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN Dávila A.	Conferenc e Paper	2010	9781424474264
6	Design of variable gain super-twisting observer for nonlinear systems with sampled output	JAIME ALBERTO MORENO PEREZ LEONID FRIDMAN Saigado I. et al.	Conferenc e Paper	2010	9781424473120
6	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
6	Higher order sliding mode observers for actuator faults diagnosis in robot manipulators	DOLORES ALEJANDRA FERREIRA DE LOZA LEONID FRIDMAN Capisani L.M. et al.	Conferenc e Paper	2010	9781424463916
6	Modified super-twisting interception strategy with a maximal capture zone	LEONID FRIDMAN Glizer V.Y. Turetsky V. et al.	Conferenc e Paper	2010	9780791844175
6	Third-order quasi-Continuo control of induction motor	LEONID FRIDMAN Cañedo J.M. Loukianov A.G. et al.	Conferenc e Paper	2009	9781424446896
6	State observation for quasi-linear uncertain systems by nested high-order sliding mode observer	LEONID FRIDMAN Davila J. Pisano A. et al.	Conferenc e Paper	2009	9781424446025
6	Identification based generation of self-excited oscillations for underactuated mechanical systems via two-relay algorithm	LEONID FRIDMAN DOLORES ALEJANDRA FERREIRA DE LOZA Luis T. Aguilar et al.	Proceedin gs Paper	2008	9781424421992
6	Quasi-continuous HOSM control for systems with unmatched perturbations	LEONID FRIDMAN Antonio Estrada	Proceedin gs Paper	2008	9781424421992
7	High-order sliding modes observation	LEONID FRIDMAN JORGE ANGEL DAVILA MONTOYA Arie Levant	Proceedin gs Paper	2008	9781424421992
71	Cascade control of PM-DC drives via second-order sliding mode technique	LEONID FRIDMAN Alessandro Pisano Alejandro Davila et al.	Proceedin gs Paper	2008	9781424421992
72	Finite-time state observation for nonlinear systems with application to compressor surge detection: A high order sliding-mode approach	LEONID FRIDMAN Davila J. Pisano A. et al.	Conferenc e Paper	2008	9781424422005

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7 3	Super-twisting sliding mode control for unified power flow controller in power systems	LEONID FRIDMAN Robles-Aguirre F. Cañedo J.M. et al.	Conferenc e Paper	2008	9781424424993
7 4	Super-twisting sliding mode control for unified power flow controller in power systems	LEONID FRIDMAN Robles-Aguirre F. Cañedo J.M. et al.	Conferenc e Paper	2008	1424424089
7 5	High-order sliding observation and fault detection	JORGE ANGEL DAVILA MONTTOYA LEONID FRIDMAN Levant A.	Conferenc e Paper	2008	9781424425051
7 6	Estimation of the unknown inputs and vertical forces of the heavy vehicle via higher order sliding mode observer	LEONID FRIDMAN Imine H.	Conferenc e Paper	2007	1424410681
77	Robust nash strategies based on integral sliding mode control for a two players uncertain LQ game	LEONID FRIDMAN Jiménez-Lizárraga M.	Conferenc e Paper	2007	0769528821
7 8	Estimation of performance of heavy vehicles by sliding modes observers	LEONID FRIDMAN M'Sirdi N.K. Boubezoul A. et al.	Conferenc e Paper	2006	9728865600
7 9	Output excitation via second-order sliding-modes to generate periodic motion for underactuated systems	LEONID FRIDMAN RAFAEL IRIARTE VIVAR BALDERRAMA Aguilar L.T. et al.	Conferenc e Paper	2006	1424402085
8 0	Absolute orientation estimation based on high order sliding mode observer for a five link walking biped robot	LEONID FRIDMAN Lebastard V. Aoustin Y. et al.	Conferenc e Paper	2006	1424402085
81	Design of integral sliding manifolds for multi-model uncertain systems via LMI	LEONID FRIDMAN Castaños F.	Conferenc e Paper	2006	1424402085
8 2	Estimation and analysis of the tire pressure effects on the comportment of the vehicle center of gravity	LEONID FRIDMAN Shraim H. Rabhi A. et al.	Conferenc e Paper	2006	1424402085
8 3	Feedback linearization and high order sliding mode observer for a quadrotor UAV	LEONID FRIDMAN Benallegue A. Mokhtari A.	Conferenc e Paper	2006	1424402085
8 4	Observation and estimation of dynamics performance of heavy vehicle via second order sliding modes	JORGE ANGEL DAVILA MONTTOYA LEONID FRIDMAN Bouteldja M. et al.	Conferenc e Paper	2006	1424402085
8 5	Observation and identification of mechanical systems via second order sliding modes	JORGE ANGEL DAVILA MONTTOYA LEONID FRIDMAN Poznyak A.	Conferenc e Paper	2006	1424402085
8 6	Observer for linear time invariant systems with unknown inputs based on the hierarchical super-twisting concept	FRANCISCO JAVIER BEJARANO RODRIGUEZ LEONID FRIDMAN Poznyak A.	Conferenc e Paper	2006	1424402085

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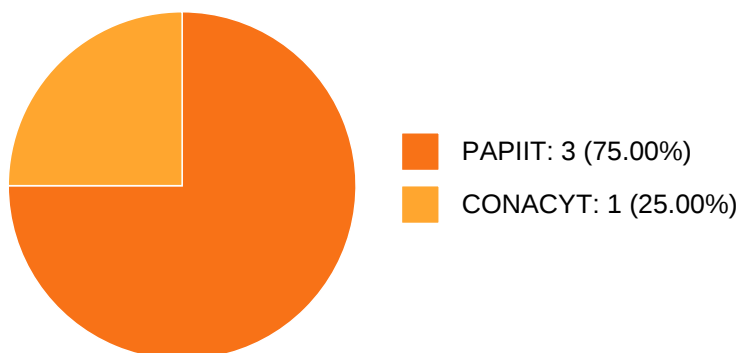
8	Estimation of road profile using second	LEONID FRIDMAN Rabhi	Conferenc	2006	9728865600
7	order sliding mode observer	A. M'Sirdi N.K. et al.	e Paper		
8	Second order sliding mode observer for	LEONID FRIDMAN Rabhi	Conferenc	2006	1424402085
8	estimation of road profile	A. M'sirdi N.K. et al.	e Paper		
8	Integral sliding mode controller design	LEONID FRIDMAN Basin	Conferenc	2005	0780395689
9	for stochastic time-delay systems	M. Rodriguez-Gonzalez J. et al.	e Paper		
9	Homogeneous sliding modes in the	LEONID FRIDMAN Levant	Conferenc	2005	0780395689
0	presence of fast actuators	A.	e Paper		
91	Robust design criteria for integral sliding	LEONID FRIDMAN	Conferenc	2005	0780395689
	surfaces	Castaños F.	e Paper		

Reporte individual

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PARTICIPACIÓN EN PROYECTOS

Histórico de participación en proyectos



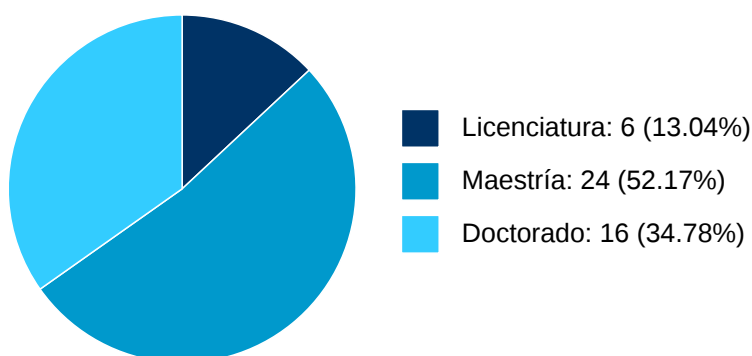
#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Algoritmos continuos de modos deslizantes de quinta generación	LEONID FRIDMAN	Recursos PAPIIT	01-01-2016	31-12-2018
2	Diseño de controladores por modos deslizantes de orden superior continuos.	LEONID FRIDMAN	Recursos CONACYT	23-03-2018	28-02-2023
3	Diseño e investigación de propiedades de algoritmos continuos de modos deslizantes.	LEONID FRIDMAN	Recursos PAPIIT	01-01-2019	31-12-2021
4	Rediseño basado en las funciones de Lyapunov utilizando métodos modernos de la teoría de modos deslizantes	LEONID FRIDMAN	Recursos PAPIIT	01-01-2022	31-12-2024

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LEONID FRIDMAN

PARTICIPACIÓN EN TESIS

Histórico de Colaboraciones en Tesis



#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Cálculo e implementación de ganancias de controladores homogéneos de alto orden mediante funciones de Lyapunov de control en Matlab	Tesis de Maestría	LEONID FRIDMAN,	Iglesias Ríos, Matías,	Facultad de Ingeniería,	2023
2	Global bi-homogeneous observers for nonlinear systems with application to Euler-Lagrange Systems	Tesis de Doctorado	LEONID FRIDMAN,	Taxis Loaiza, Oscar,	Facultad de Ingeniería,	2023
3	BI-homogeneous sliding-mode observers design for mimo linear systems	Tesis de Maestría	LEONID FRIDMAN,	Meléndez Pérez, René,	Facultad de Ingeniería,	2022
4	Diseño de algoritmos continuos por modos deslizantes multidimensionales	Tesis de Maestría	JESUS ALVAREZ CALDERON,	MARCO ANTONIO ARTEAGA PEREZ, LEONID FRIDMAN, et al.	Facultad de Filosofía y Letras, Facultad de Ingeniería,	2022

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5	Control of 2 classes of underactuated mechanical systems of 2 DoF via continuous higher-order sliding-modes	Tesis de Doctorado	LEONID FRIDMAN,	JAIME MORALES, Gutiérrez Oribio, Diego,	Facultad de Filosofía y Letras, Facultad de Ingeniería,	2021
6	Stability analysis of nonlinear systems and design of continuous higher-order sliding-mode controllers from a homogeneous point of view	Tesis de Doctorado	LEONID FRIDMAN,	JAIME MORALES, Mendoza Ávila, Jesús,	Facultad de Filosofía y Letras, Facultad de Ingeniería,	2021
7	Diferenciadores distribuidos en problemas de sistemas multiagente	Tesis de Maestría	LEONID FRIDMAN,	Leal Villavicencio, Héctor Javier,	Facultad de Ingeniería,	2021
8	Rediseño basado en funciones de Lyapunov vía modos deslizantes	Tesis de Maestría	LEONID FRIDMAN,	Estrada Angulo, Manuel Alfredo,	Facultad de Ingeniería,	2020
9	Observadores por modos deslizantes basados en disipatividad para sistemas no lineales de orden 2	Tesis de Maestría	LEONID FRIDMAN,	Taxis Loaiza, Oscar,	Facultad de Ingeniería,	2019
10	Nonlinear sliding mode control design via convex optimization techniques	Tesis de Doctorado	LEONID FRIDMAN,	Tapia Hernández, Humberto Alan,	Facultad de Ingeniería,	2018
11	Global sliding mode observers for some uncertain nonlinear systems : dissipative approach	Tesis de Doctorado	LEONID FRIDMAN,	JAIME MORALES, Apaza Pérez, Willy Alejandro,	Facultad de Filosofía y Letras, Facultad de Ingeniería,	2018
12	Continuous higher-order sliding mode control : implementation issues	Tesis de Doctorado	LEONID FRIDMAN,	JAIME ALBERTO MORENO PEREZ, Castillo López, Alberto Ismael,	Facultad de Ingeniería, Instituto de Ingeniería,	2017

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13	Pruebas in silico de dosificación de propofol por un algoritmo de modos deslizantes de quinta generación	Tesis de Maestría	LEONID FRIDMAN,	Eslava Escobar, Aldo Jonathan,	Facultad de Ingeniería,	2017
14	Output-feedback sliding-mode control with input-to-state stability	Tesis de Doctorado	LEONID FRIDMAN,	Aparicio Martínez, Andrea,	Facultad de Ingeniería,	2017
15	Continuous sliding mode control of differential drive robot	Tesis de Maestría	LEONID FRIDMAN,	Rojas Contreras, Frida Gail,	Facultad de Ingeniería,	2017
16	Sintonización de controladores continuos por modos deslizantes de orden superior para sistemas de grado relativo tres	Tesis de Maestría	LEONID FRIDMAN,	Mendoza Ávila, Jesús,	Facultad de Ingeniería,	2017
17	Seguimiento de trayectorias para un robot bípedo por modos deslizantes continuos	Tesis de Maestría	LEONID FRIDMAN,	Vázquez Alberto, Lauro Fernando,	Facultad de Ingeniería,	2016
18	Generación de oscilaciones con algoritmo sub-optimal	Tesis de Maestría	LEONID FRIDMAN,	Gutiérrez Oribio, Diego,	Facultad de Ingeniería,	2016
19	Análisis en el dominio de la frecuencia de algoritmos continuos de control por modos deslizantes de orden superior para sistemas mecánicos y electromecánicos	Tesis de Maestría	LEONID FRIDMAN,	Pérez Ventura, Ulises Arturo,	Facultad de Ingeniería,	2016
20	Derivador de ganancia variable en un motor de corriente directa	Tesis de Maestría	LEONID FRIDMAN,	Camacho Ramírez, Adrián,	Facultad de Ingeniería,	2015
21	Control robustecido basado en l_q singular y controladores por modos deslizantes aplicado en un carro-péndulo	Tesis de Licenciatura	LEONID FRIDMAN,	Mendoza Ávila, Jesús,	Facultad de Ingeniería,	2015
22	Algoritmo twisting continuo	Tesis de Maestría	LEONID FRIDMAN,	Torres González, Víctor Manuel,	Facultad de Ingeniería,	2015

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23	Observador para sistemas ITV con entradas desconocidas basado en modos deslizantes de orden superior	Tesis de Maestría	LEONID FRIDMAN,	Lugo Segura, Rafael,	Facultad de Ingeniería,	2014
24	Análisis y diseño de modos deslizantes en el dominio de la frecuencia basado en márgenes de tolerancia	Tesis de Doctorado	LEONID FRIDMAN,	Rosales Martínez, José Antonio,	Facultad de Ingeniería,	2014
25	Diferenciador de ganancias variables aplicado a un motor de dc	Tesis de Licenciatura	LEONID FRIDMAN,	Martínez Fuentes, Carlos Arturo,	Facultad de Ingeniería,	2014
26	Métodos de diseño de superficies de deslizamiento para controladores por modos deslizantes de orden superior	Tesis de Licenciatura	LEONID FRIDMAN,	Pérez Ventura, Ulises Arturo,	Facultad de Ingeniería,	2014
27	Observación de estados y reconstrucción de entradas desconocidas para ciertas clases de sistemas conmutados	Tesis de Doctorado	LEONID FRIDMAN,	Ríos Barajas, Héctor,	Facultad de Ingeniería,	2014
28	Implementación de controladores por modos deslizantes de alto orden en un robot paralelo	Tesis de Licenciatura	LEONID FRIDMAN,	Hernández Mendoza, Pablo Antonio,	Facultad de Ingeniería,	2014
29	Implementación de controladores continuos por modos deslizantes aplicados a un robot de 2-gdl	Tesis de Maestría	LEONID FRIDMAN,	Ruiz Gasca, Marco Antonio,	Facultad de Ingeniería,	2014
30	Diseño de superficies por modos deslizantes de alto orden: enfoque LQ singular	Tesis de Maestría	LEONID FRIDMAN,	Castillo López, Alberto Ismael,	Facultad de Ingeniería,	2013
31	Estimación del gradiente usando el derivador super - twisting con convergencia robusta y uniforme	Tesis de Maestría	LEONID FRIDMAN,	Juárez López, Betuel,	Facultad de Ingeniería,	2013

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LEONID FRIDMAN

32	Robustez y fragilidad en presencia de perturbación y ruido	Tesis de Doctorado	LEONID FRIDMAN,	Angulo Ballesteros, Marco Tulio,	Facultad de Ingeniería,	2012
33	Controladores adaptables por modos deslizantes de orden superior	Tesis de Maestría	LEONID FRIDMAN,	Negrete Chavez, Danielyitzjak,	Facultad de Ingeniería,	2012
34	Control de glucosa en sangre	Tesis de Doctorado	LEONID FRIDMAN,	SERGIO AGUSTIN ISLAS ANDRADE, Gallardo Hernández, Ana Gabriela,	Facultad de Ingeniería,	2011
35	Controlador de glucosa en sangre	Tesis de Doctorado	LEONID FRIDMAN,	SERGIO AGUSTIN ISLAS ANDRADE, Gallardo Hernández, Ana Gabriela,	Facultad de Ingeniería,	2011
36	Compensación de perturbaciones desacopladas usando modos deslizantes de alto orden	Tesis de Doctorado	LEONID FRIDMAN,	Estrada Torres, José Antonio,	Facultad de Ingeniería,	2011
37	Observación y control por modos deslizantes de una máquina de presión	Tesis de Maestría	LEONID FRIDMAN,	González Rojas, Tenoch,	Facultad de Ingeniería,	2011
38	Diseño y análisis de observadores por modos deslizantes para sistemas no lineales con salida muestreada	Tesis de Maestría	LEONID FRIDMAN,	Salgado Ramos, Iván de Jesús,	Facultad de Ingeniería,	2010
39	Control por retroalimentación de salida para sistemas con incertidumbres usando observadores vía modos deslizantes de orden superior	Tesis de Doctorado	LEONID FRIDMAN,	Ferreira de Loza, Dolores Alejandra,	Facultad de Ingeniería,	2010

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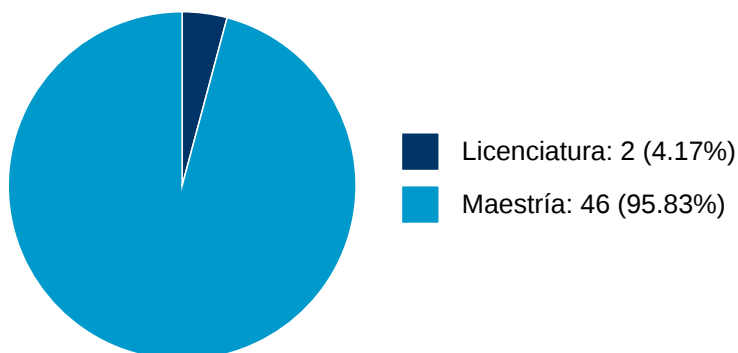
40	Análisis de modos deslizantes de segundo orden en el dominio de la frecuencia	Tesis de Doctorado	LEONID FRIDMAN,	Castellanos García, Manuel Iván,	Facultad de Ingeniería,	2008
41	Control robusto de sistemas con incertidumbres no acopladas mediante modos deslizantes de orden superior	Tesis de Maestría	LEONID FRIDMAN,	Estrada Torres, José Antonio,	Facultad de Ingeniería,	2008
42	Control en cascada para el amplificador de potencia de un motor de corriente directa empleando modos deslizantes de segundo orden	Tesis de Maestría	LEONID FRIDMAN,	Dávila Mérida, Israel Alejandro,	Facultad de Ingeniería,	2008
43	Observación de sistemas vía modos deslizantes de alto orden	Tesis de Doctorado	LEONID FRIDMAN,	Dávila Montoya, Jorge Ángel,	Facultad de Ingeniería,	2008
44	Control por retroalimentación de salida para sistemas con incertidumbres usando observadores via modos deslizantes de orden superior	Tesis de Maestría	LEONID FRIDMAN,	Ferreira de Loza, Dolores Alejandra,		2007
45	Control de modos deslizantes en un motor de corriente directa	Tesis de Licenciatura	LEONID FRIDMAN,	Mata Ledesma, José Luis,		2005
46	Implementación del algoritmo cuasi-continuo de modos deslizantes en un motor de corriente directa	Tesis de Licenciatura	LEONID FRIDMAN,	Hernandez López, Ariatne Adriana,		2005

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LEONID FRIDMAN

DOCENCIA IMPARTIDA

Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Licenciatura	FUNDAMENTOS DE CONTROL	Facultad de Ingeniería	11	2025-2
2	Licenciatura	CONTROL DE SISTEMAS NO LINEALES	Facultad de Ingeniería	4	2025-1
3	Maestría	TEMAS AVANZADOS DE INGENIERIA ELECTRICA	Facultad de Ingeniería	7	2016-2
4	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2016-2
5	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2016-2
6	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2016-2
7	Maestría	PROYECTO DE INVESTIGACION I	Facultad de Ingeniería	2	2016-1
8	Maestría	PROYECTO DE INVESTIGACION II	Facultad de Ingeniería	2	2016-1
9	Maestría	PROYECTO DE INVESTIGACION III	Facultad de Ingeniería	1	2016-1
10	Maestría	PROYECTO DE INVESTIGACION II	Facultad de Ingeniería	1	2015-2
11	Maestría	TEMAS AVANZADOS DE INGENIERIA ELECTRICA	Facultad de Ingeniería	10	2015-2
12	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2015-2
13	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2015-2
14	Maestría	PROYECTO DE INVESTIGACION I	Facultad de Ingeniería	1	2015-1
15	Maestría	PROYECTO DE INVESTIGACION II	Facultad de Ingeniería	2	2015-1

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16	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2015-1
17	Maestría	PROYECTO DE INVESTIGACION I	Facultad de Ingeniería	2	2015-1
18	Maestría	MATEMATICAS APLICADAS	Facultad de Ingeniería	17	2015-1
19	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2014-2
20	Maestría	TEMAS SELECTOS DE CONTROL	Facultad de Ingeniería	5	2014-2
21	Maestría	MATEMATICAS APLICADAS	Facultad de Ingeniería	17	2014-1
22	Maestría	PROYECTO DE INVESTIGACION I	Facultad de Ingeniería	2	2014-1
23	Maestría	PROYECTO DE INVESTIGACION II	Facultad de Ingeniería	2	2014-1
24	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2013-2
25	Maestría	ACTIVIDADES ACADEMICAS ORIENTADAS A LA GRADUACION	Facultad de Ingeniería	1	2013-2
26	Maestría	TEMAS AVANZADOS DE INGENIERIA ELECTRICA	Facultad de Ingeniería	9	2013-2
27	Maestría	PROYECTO DE INVESTIGACION II	Facultad de Ingeniería	1	2013-1
28	Maestría	PROYECTO DE INVESTIGACION I	Facultad de Ingeniería	1	2013-1
29	Maestría	MATEMATICAS APLICADAS	Facultad de Ingeniería	25	2013-1
30	Maestría	TEMAS AVANZADOS DE INGENIERIA ELECTRICA	Facultad de Ingeniería	6	2012-2
31	Maestría	TRABAJO DE INVESTIGACION I	Facultad de Ingeniería	5	2012-1
32	Maestría	TRABAJO DE INVESTIGACION II	Facultad de Ingeniería	5	2012-1
33	Maestría	TEMAS SELECTOS DE CONTROL	Facultad de Ingeniería	10	2011-2
34	Maestría	TRABAJO DE INVESTIGACION II	Facultad de Ingeniería	2	2011-1
35	Maestría	MATEMATICAS APLICADAS	Facultad de Ingeniería	31	2011-1
36	Maestría	TRABAJO DE INVESTIGACION I	Facultad de Ingeniería	2	2011-1
37	Maestría	TEMAS SELECTOS DE CONTROL	Facultad de Ingeniería	9	2010-2
38	Maestría	MATEMATICAS APLICADAS	Facultad de Ingeniería	21	2010-1
39	Maestría	TRABAJO DE INVESTIGACION II	Facultad de Ingeniería	4	2010-1
40	Maestría	TRABAJO DE INVESTIGACION I	Facultad de Ingeniería	4	2010-1
41	Maestría	TEMAS SELECTOS DE CONTROL	Facultad de Ingeniería	6	2009-2
42	Maestría	TRABAJO DE INVESTIGACION I	Facultad de Ingeniería	1	2009-1
43	Maestría	TRABAJO DE INVESTIGACION II	Facultad de Ingeniería	1	2009-1
44	Maestría	MATEMATICAS APLICADAS	Facultad de Ingeniería	15	2009-1
45	Maestría	TEMAS SELECTOS DE CONTROL	Facultad de Ingeniería	7	2008-2
46	Maestría	MATEMATICAS APLICADAS	Facultad de Ingeniería	11	2008-1
47	Maestría	TRABAJO DE INVESTIGACION II	Facultad de Ingeniería	2	2008-1
48	Maestría	TRABAJO DE INVESTIGACION I	Facultad de Ingeniería	2	2008-1



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



LEONID FRIDMAN

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