Daniel E Rivera

List of Publications by Year
in descending order

156 papers	6,274 citations	147801 31 h-index	82547 72 g-index
163 all docs	163 docs citations	163 times ranked	5619 citing authors

#	Article	IF	Citations
1	A control‐based observer approach for estimating energy intake during pregnancy. International Journal of Robust and Nonlinear Control, 2023, 33, 5105-5127.	3.7	1
2	Optimizing behavioral interventions to regulate gestational weight gain with sequential decision policies using hybrid model predictive control. Computers and Chemical Engineering, 2022, 160, 107721.	3.8	2
3	Advancing Behavioral Intervention and Theory Development for Mobile Health: The HeartSteps II Protocol. International Journal of Environmental Research and Public Health, 2022, 19, 2267.	2.6	9
4	Underreporting of Energy Intake Increases over Pregnancy: An Intensive Longitudinal Study of Women with Overweight and Obesity. Nutrients, 2022, 14, 2326.	4.1	3
5	Un esquema de decisiones para intervenciones adaptativas comportamentales de actividad fÃsica basado en control predictivo por modelo hÃbrido: ilustraciÃ³n con Just Walk. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2022, 19, 297-308.	1.0	1
6	Adaptive, behavioral intervention impact on weight gain, physical activity, energy intake, and motivational determinants: results of a feasibility trial in pregnant women with overweight/obesity. Journal of Behavioral Medicine, 2021, 44, 605-621.	2.1	24
7	Goal setting and achievement for walking: A series of N-of-1 digital interventions.. Health Psychology, 2021, 40, 30-39.	1.6	13
8	Development of a Control-Oriented Model of Social Cognitive Theory for Optimized mHealth Behavioral Interventions. IEEE Transactions on Control Systems Technology, 2020, 28, 331-346.	5.2	25
9	System Identification of <i>Just Walk</i>: Using Matchable-Observable Linear Parametrizations. IEEE Transactions on Control Systems Technology, 2020, 28, 264-275.	5.2	3
10	System Identification Approaches for Energy Intake Estimation: Enhancing Interventions for Managing Gestational Weight Gain. IEEE Transactions on Control Systems Technology, 2020, 28, 63-78.	5.2	9
11	Foreword Identification and Control in Biomedical Applications. IEEE Transactions on Control Systems Technology, 2020, 28, 1-2.	5.2	3
12	Short Nighttime Sleep Duration and High Number of Nighttime Awakenings Explain Increases in Gestational Weight Gain and Decreases in Physical Activity but Not Energy Intake among Pregnant Women with Overweight/Obesity. Clocks & Sleep, 2020, 2, 487-501.	2.0	7
13	Identifying ActiGraph non-wear time in pregnant women with overweight or obesity. Journal of Science and Medicine in Sport, 2020, 23, 1197-1201.	1.3	2
14	Engineering Person-Specific Behavioral Interventions to Promote Physical Activity. Exercise and Sport Sciences Reviews, 2020, 48, 170-179.	3.0	21
15	An Adaptive Identification Test Monitoring Procedure for Nonlinear Behavioral Interventions. IFAC-PapersOnLine, 2020, 53, 16476-16481.	0.9	0
16	Uncontrolled Eating during Pregnancy Predicts Fetal Growth: The Healthy Mom Zone Trial. Nutrients, 2019, 11, 899.	4.1	8
17	Modeling individual differences: A case study of the application of system identification for personalizing a physical activity intervention. Journal of Biomedical Informatics, 2018, 79, 82-97.	4.3	37
18	Adaptive step goals and rewards: a longitudinal growth model of daily steps for a smartphone-based walking intervention. Journal of Behavioral Medicine, 2018, 41, 74-86.	2.1	83

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19	A "Model-on-Demand" Methodology For Energy Intake Estimation to Improve Gestational Weight Control Interventions. IFAC-PapersOnLine, 2018, 51, 144-149.	0.9	4
20	A dynamical systems model of intrauterine fetal growth. Mathematical and Computer Modelling of Dynamical Systems, 2018, 24, 661-687.	2.2	1
21	Gestational Weight Gain Intervention Impacts Determinants of Healthy Eating and Exercise in Overweight/Obese Pregnant Women. Journal of Obesity, 2018, 2018, 1-12.	2.7	7
22	Intensively Adaptive Interventions Using Control Systems Engineering: Two Illustrative Examples. Statistics for Social and Behavioral Sciences, 2018, , 121-173.	0.3	10
23	Tutorial for Using Control Systems Engineering to Optimize Adaptive Mobile Health Interventions. Journal of Medical Internet Research, 2018, 20, e214.	4.3	109
24	Individually Tailored, Adaptive Intervention to Manage Gestational Weight Gain: Protocol for a Randomized Controlled Trial in Women With Overweight and Obesity. JMIR Research Protocols, 2018, 7, e150.	1.0	27
25	Control Systems Engineering for Optimizing Behavioral mHealth Interventions. , 2017, , 455-493.		7
26	System identification of Just Walk: A behavioral mHealth intervention for promoting physical activity. , 2017, , .		22
27	A MoliZoft System Identification Approach of the Just Walk Data. IFAC-PapersOnLine, 2017, 50, 12508-12513.	0.9	2
28	Control-Relevant Design of System Identification Experiments to Improve Behavioral Interventions. IFAC-PapersOnLine, 2017, 50, 15115-15120.	0.9	1
29	State Estimation Under Correlated Partial Measurement Losses: Implications for Weight Control Interventions * *Support for this work has been provided by the National Heart, Lung, and Blood Institute (NHLBI) through grant R01 HL119245. The opinions expressed in this article are the authors' own and do not necessarily reflect the views of NHLBI.. IFAC-PapersOnLine, 2017, 50, 13532-13537.	0.9	5
30	LPV system identification using the matchable observable linear identification approach. , 2017, , .		1
31	Modeling Opportunities in mHealth Cyber-Physical Systems. , 2017, , 443-453.		4
32	Lessons Learned in Development of a Behavior Modeling Tool for Health Intervention Design: BehaviorSim. Advances in Intelligent Systems and Computing, 2017, , 279-290.	0.6	0
33	Semi-physical identification and state estimation of energy intake for interventions to manage gestational weight gain. , 2016, 2016, 1271-1276.		11
34	An enhanced identification test monitoring procedure for MIMO systems relying on uncertainty estimates. , 2016, , .		4
35	ITTSAE: A Set of Interactive Software Tools for Time Series Analysis Education [Lecture Notes]. IEEE Control Systems, 2016, 36, 112-120.	0.8	4
36	Formalization of Computational Human Behavior Models for Contextual Persuasive Technology. Lecture Notes in Computer Science, 2016, , 150-161.	1.3	5

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37	Advancing Models and Theories for Digital Behavior Change Interventions. American Journal of Preventive Medicine, 2016, 51, 825-832.	3.0	132
38	A decision framework for an adaptive behavioral intervention for physical activity using hybrid model predictive control. , 2016, , .		16
39	A control engineering approach for optimizing physical activity behavioral interventions. , 2016, , .		3
40	Evaluating Digital Health Interventions. American Journal of Preventive Medicine, 2016, 51, 843-851.	3.0	553
41	Agile science: creating useful products for behavior change in the real world. Translational Behavioral Medicine, 2016, 6, 317-328.	2.4	171
42	Development of a dynamic computational model of social cognitive theory. Translational Behavioral Medicine, 2016, 6, 483-495.	2.4	47
43	Design of Informative Identification Experiments for Behavioral Interventions. IFAC-PapersOnLine, 2015, 48, 1325-1330.	0.9	11
44	An identification test monitoring procedure for MIMO systems based on statistical uncertainty estimation. , 2015, , .		10
45	Understanding closed-loop identification with ITCLI. IFAC-PapersOnLine, 2015, 48, 739-744.	0.9	4
46	Interactive Education for Time-Domain Time Series Analysis using ITTSAE. IFAC-PapersOnLine, 2015, 48, 751-756.	0.9	1
47	A system identification approach for improving behavioral interventions based on Social Cognitive Theory. , 2015, , .		20
48	Building new computational models to support health behavior change and maintenance: new opportunities in behavioral research. Translational Behavioral Medicine, 2015, 5, 335-346.	2.4	185
49	Guest Editorial: Special Issue on Relaxation Methods in Identification and Estimation Problems. IEEE Transactions on Automatic Control, 2014, 59, 2869-2870.	5.7	4
50	Constrained Optimal Input Signal Design for Data-Centric Estimation Methods. IEEE Transactions on Automatic Control, 2014, 59, 2990-2995.	5.7	4
51	Data-centric input signal design for highly interactive dynamical systems. , 2014, , .		0
52	Towards data-centric input signal design using sparse polynomial optimization. , 2014, , .		0
53	LPV system identification using a separable least squares support vector machines approach. , 2014, , .		9
54	The importance of behavior theory in control system modeling of physical activity sensor data. , 2014, 2014, 6880-3.		15

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55	Optimized treatment of fibromyalgia using system identification and hybrid model predictive control. Control Engineering Practice, 2014, 33, 161-173.	5.5	22
56	A Hybrid Model Predictive Control strategy for optimizing a smoking cessation intervention. , 2014, 2014, 2389-2394.		15
57	A control systems engineering approach for adaptive behavioral interventions: illustration with a fibromyalgia intervention. Translational Behavioral Medicine, 2014, 4, 275-289.	2.4	19
58	Hybrid model predictive control for sequential decision policies in adaptive behavioral interventions. , 2014, 2014, 4198-4203.		12
59	Leveraging intensive longitudinal data to better understand health behaviors. , 2014, 2014, 6888-91.		4
60	Methodologies for optimizing behavioral interventions: introduction to special section. Translational Behavioral Medicine, 2014, 4, 234-237.	2.4	27
61	A dynamical systems model of Social Cognitive Theory. , 2014, , .		48
62	A Personalized and Control Systems Engineering Conceptual Approach to Target Childhood Anxiety in the Contexts of Cultural Diversity. Journal of Clinical Child and Adolescent Psychology, 2014, 43, 442-453.	3.4	8
63	Continuous-time system identification of a smoking cessation intervention. International Journal of Control, 2014, 87, 1423-1437.	1.9	18
64	A control-relevant approach to demand modeling for supply chain management. Computers and Chemical Engineering, 2014, 70, 78-90.	3.8	3
65	Functional data analysis for dynamical system identification of behavioral processes.. Psychological Methods, 2014, 19, 175-187.	3.5	22
66	Control Systems Engineering for Optimizing a Prenatal Weight Gain Intervention to Regulate Infant Birth Weight. American Journal of Public Health, 2014, 104, 1247-1254.	2.7	20
67	Perspectives on control-relevant identification through the use of interactive tools. Control Engineering Practice, 2013, 21, 171-183.	5.5	15
68	Systems Modeling of Behavior Change: Two Illustrations from Optimized Interventions for Improved Health Outcomes. IEEE Pulse, 2013, 4, 41-47.	0.3	21
69	An Improved Formulation of Hybrid Model Predictive Control With Application to Production-Inventory Systems. IEEE Transactions on Control Systems Technology, 2013, 21, 121-135.	5.2	51
70	A Dynamical Systems Approach to Understanding Self-Regulation in Smoking Cessation Behavior Change. Nicotine and Tobacco Research, 2013, 16, S159-S168.	2.6	28
71	Exploring Behavioral Markers of Long-Term Physical Activity Maintenance. Health Education and Behavior, 2013, 40, 51S-62S.	2.5	35
72	Control systems engineering for understanding and optimizing smoking cessation interventions. , 2013, , 1964-1969.		14

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73	A data-centric system identification approach to input signal design for Hammerstein systems. , 2013, , .		6
74	Hybrid model predictive control for optimizing gestational weight gain behavioral interventions. , 2013, , 1970-1975.		16
75	Optimal input signal design for data-centric estimation methods. , 2013, , 3924-3929.		7
76	Identification of affine linear parameter varying models for adaptive interventions in fibromyalgia treatment. , 2013, 2013, 1976-1981.		1
77	Identification of LPV State Space systems by a separable least squares approach. , 2013, , .		0
78	A dynamical systems model for improving gestational weight gain behavioral interventions. , 2012, , 4059-4064.		19
79	Dynamic energy-balance model predicting gestational weight gain. American Journal of Clinical Nutrition, 2012, 95, 115-122.	4.7	64
80	Towards Patient-Friendly Input Signal Design for Optimized Pain Treatment Interventions*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1311-1316.	0.4	10
81	Optimized behavioral interventions: what does system identification and control engineering have to offer?. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 882-893.	0.4	16
82	System Identification Modeling of a Smoking Cessation Intervention*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 786-791.	0.4	3
83	System identification: A Wiener-Hammerstein benchmark. Control Engineering Practice, 2012, 20, 1095-1096.	5.5	19
84	An interactive software tool for system identification. Advances in Engineering Software, 2012, 45, 115-123.	3.8	36
85	A control engineering framework for managing whole hospital occupancy. Mathematical and Computer Modelling, 2012, 55, 1401-1417.	2.0	5
86	Plant-Friendly Signal Generation for System Identification Using a Modified Simultaneous Perturbation Stochastic Approximation (SPSA) Methodology. IEEE Transactions on Control Systems Technology, 2011, 19, 1604-1612.	5.2	7
87	Guest Editorial Special Issue on Applied LPV Modeling and Identification. IEEE Transactions on Control Systems Technology, 2011, 19, 1-4.	5.2	34
88	Hybrid Model Predictive Control Applied to Production-Inventory Systems*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 7328-7333.	0.4	1
89	Health behavior models in the age of mobile interventions: are our theories up to the task?. Translational Behavioral Medicine, 2011, 1, 53-71.	2.4	876
90	A control engineering approach for designing an optimized treatment plan for fibromyalgia. , 2011, 2011, 4798-4803.		22

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91	A Risk-Based Model Predictive Control Approach to Adaptive Interventions in Behavioral Health. IEEE Transactions on Control Systems Technology, 2011, 19, 891-901.	5.2	19
92	A dynamical model for describing behavioural interventions for weight loss and body composition change. Mathematical and Computer Modelling of Dynamical Systems, 2011, 17, 183-203.	2.2	73
93	A process control approach to tactical inventory management in production-inventory systems. International Journal of Production Economics, 2010, 125, 111-124.	8.9	66
94	Probabilistic uncertainty description for an ETFE estimated plant using a sequence of multi-sinusoidal signals. , 2010, , .		2
95	A novel model predictive control formulation for hybrid systems with application to adaptive behavioral interventions. , 2010, 2010, 6286-6292.		10
96	Model-on-Demand predictive control for nonlinear hybrid systems with application to adaptive behavioral interventions. , 2010, 2010, 6113-6118.		8
97	A Dynamical Systems Model for Understanding Behavioral Interventions for Weight Loss. Lecture Notes in Computer Science, 2010, , 170-179.	1.3	5
98	Control-relevant estimation of demand models for closed-loop control of a production-inventory system. , 2009, , .		2
99	Plant-friendly signal generation for system identification using a modified SPSA methodology. , 2009, , .		1
100	Inner and outer loop optimization in semiconductor manufacturing supply chain management. Computational Management Science, 2009, 6, 411-434.	1.3	3
101	Constrained multisine input signals for plant-friendly identification of chemical process systems. Journal of Process Control, 2009, 19, 623-635.	3.3	79
102	Application of robustified Model Predictive Control to a production-inventory system. , 2009, , .		7
103	Control-Relevant Demand Forecasting for Tactical Decision-Making in Semiconductor Manufacturing Supply Chain Management. IEEE Transactions on Semiconductor Manufacturing, 2009, 22, 154-163.	1.7	12
104	Simulation of Semiconductor Manufacturing Supply-Chain Systems With DEVS, MPC, and KIB. IEEE Transactions on Semiconductor Manufacturing, 2009, 22, 164-174.	1.7	21
105	A System Identification Approach to PDE Modeling of a Semiconductor Manufacturing Process. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 964-969.	0.4	2
106	Model Predictive Control for Tactical Decision-Making in Semiconductor Manufacturing Supply Chain Management. IEEE Transactions on Control Systems Technology, 2008, 16, 841-855.	5.2	71
107	Control-relevant demand forecasting for management of a production-inventory system. , 2008, , .		1
108	Optimization-based Design of Plant-Friendly Input Signals for Model-on-Demand Estimation and Model Predictive Control. Proceedings of the American Control Conference, 2007, , .	0.0	1

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109	Applications Of System Identification. IEEE Control Systems, 2007, 27, 24-26.	0.8	6
110	Using engineering control principles to inform the design of adaptive interventions: A conceptual introduction. Drug and Alcohol Dependence, 2007, 88, S31-S40.	3.2	127
111	High-Purity Distillation. IEEE Control Systems, 2007, 27, 72-89.	0.8	52
112	Multi-Objective Control-Relevant Demand Modeling for Production and Inventory Control. , 2007, , .		0
113	Managing risk in semiconductor manufacturing: A stochastic predictive control approach. Control Engineering Practice, 2007, 15, 969-984.	5.5	17
114	Model predictive control strategies for supply chain management in semiconductor manufacturing. International Journal of Production Economics, 2007, 107, 56-77.	8.9	101
115	Optimization-based design of plant-friendly multisine signals using geometric discrepancy criteria. Computational Optimization and Applications, 2007, 38, 173-190.	1.6	6
116	CONTROL-RELEVANT DEMAND MODELING FOR SUPPLY CHAIN MANAGEMENT. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 267-272.	0.4	6
117	CR-IDENT: A MATLAB TOOLBOX FOR MULTIVARIABLE CONTROL-RELEVANT SYSTEM IDENTIFICATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 708-713.	0.4	4
118	PROCESS CONTROL EDUCATION USING INVENTORY MANAGEMENT IN SUPPLY CHAINS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 631-636.	0.4	0
119	Simulation-based optimization of process control policies for inventory management in supply chains. Automatica, 2006, 42, 1311-1320.	5.0	131
120	Flexible Experimentation and Analysis for Hybrid DEVS and MPC Models. , 2006, , .		4
121	Modeling and simulation of the Michigan Aerospace autonomous satellite docking system II. , 2005, , .		4
122	Events, actors and interaction of hybrid entities in virtual reality. , 2005, , .		0
123	A Model Predictive Control framework for robust management of multi-product, multi-echelon demand networks. Annual Reviews in Control, 2003, 27, 229-245.	7.9	135
124	A hierarchical approach to production control of reentrant semiconductor manufacturing lines. IEEE Transactions on Control Systems Technology, 2003, 11, 578-587.	5.2	61
125	"Plant-Friendly" system identification: a challenge for the process industries. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 891-896.	0.4	39
126	Constrained minimum crest factor multisine signals for "Plant-Friendly" identification of highly interactive systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 915-920.	0.4	9

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127	Application of minimum crest factor multisinusoidal signals for "plant-friendly" identification of nonlinear process systems. Control Engineering Practice, 2002, 10, 301-313.	5.5	48
128	A model predictive control approach for real-time optimization of reentrant manufacturing lines. Computers in Industry, 2001, 45, 45-57.	9.9	33
129	A methodology for control-relevant nonlinear system identification using restricted complexity models. Journal of Process Control, 2001, 11, 209-222.	3.3	9
130	A 'Model-on-Demand' identification methodology for non-linear process systems. International Journal of Control, 2001, 74, 1708-1717.	1.9	74
131	pIDtune TM : A Graphical Package for Integrated System Identification and PID Controller Design. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 681-686.	0.4	4
132	Multilayer optimization and scheduling using model predictive control: application to reentrant semiconductor manufacturing lines. Computers and Chemical Engineering, 2000, 24, 2009-2021.	3.8	37
133	On adaptive smoothing of empirical transfer function estimates. Control Engineering Practice, 2000, 8, 1309-1315.	5.5	25
134	An integrated identification and control design methodology for multivariable process system applications. IEEE Control Systems, 2000, 20, 25-37.	0.8	46
135	Control relevant model reduction of Volterra series models. Journal of Process Control, 1998, 8, 79-88.	3.3	32
136	Integrated MIMO identification and robust PID controller design through loop shaping. , 1998, , .		8
137	A Control-Relevant Multivariable System Identification Methodology Based on Orthogonal Multifrequency Input Perturbations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 573-578.	0.4	4
138	High-Order ARX Estimation and its Application to Decentralized, Decoupled and Full Multivariable Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 559-564.	0.4	0
139	Multivariable frequency-response curve fitting with application to control-relevant parameter estimation. Automatica, 1997, 33, 1169-1174.	5.0	15
140	Restricted Complexity Approximation of Nonlinear Processes Using a Control-Relevant Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 6019-6024.	0.4	3
141	Digital PID controller design using ARX estimation. Computers and Chemical Engineering, 1996, 20, 1317-1334.	3.8	14
142	A computer-aided design tool for robustness analysis and control-relevant identification of Horizon Predictive Control with application to a binary distillation column. Journal of Process Control, 1996, 6, 177-186.	3.3	7
143	Systematic techniques for determining modelling requirements for SISO and MIMO feedback control. Journal of Process Control, 1995, 5, 213-224.	3.3	28
144	Closed-Loop System Identification of Restricted Complexity Models Using Iterative Refinement. , 1993, , .		4

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145	Experimental Design for Robust Process Control Using Schroeder-Phased Input Signals. , 1993, , .		10
146	Plant and controller reduction problems for closed-loop performance. IEEE Transactions on Automatic Control, 1992, 37, 398-404.	5.7	11
147	Control-relevant prefiltering: a systematic design approach and case study. IEEE Transactions on Automatic Control, 1992, 37, 964-974.	5.7	76
148	Modeling for Control Design in Combined Feedback/Feedforward Control. , 1992, , .		3
149	Control-Relevant Parameter Estimation: A Systematic Procedure for Prefilter Design. , 1991, , .		12
150	Low-order SISO controller tuning methods for the H2, Hâˆž and Î¼ objective functions. Automatica, 1990, 26, 361-369.	5.0	21
151	Control-relevant model reduction problems for SISO H2, Hâˆž, and Î¼-controller synthesis. International Journal of Control, 1987, 46, 505-527.	1.9	60
152	Smith predictor design for robust performance. International Journal of Control, 1987, 46, 477-504.	1.9	118
153	Consydâ€"Integrated software for computer aided control system design and analysis. Computers and Chemical Engineering, 1987, 11, 187-203.	3.8	15
154	Internal model control: PID controller design. Industrial & Engineering Chemistry Process Design and Development, 1986, 25, 252-265.	0.6	1,247
155	Evaluating PID Control for Supply Chain Management: A Freshman Design Project. , 0, , .		5
156	Hybrid Discrete Event Simulation with Model Predictive Control for Semiconductor Supply-chain Manufacturing. , 0, , .		14