Francis J Doyle

List of Publications by Year
in descending order

199 papers	14,148 citations	34105 52 h-index	22832 112 g-index
202 all docs	202 docs citations	202 times ranked	10425 citing authors

#	Article	IF	Citations
1	Intraperitoneal Insulin Delivery: Evidence of a Physiological Route for Artificial Pancreas From Compartmental Modeling. Journal of Diabetes Science and Technology, 2023, 17, 751-756.	2.2	4
2	A Glycemia Risk Index (GRI) of Hypoglycemia and Hyperglycemia for Continuous Glucose Monitoring Validated by Clinician Ratings. Journal of Diabetes Science and Technology, 2023, 17, 1226-1242.	2.2	69
3	Machine Learning-Based Anomaly Detection Algorithms to Alert Patients Using Sensor Augmented Pump of Infusion Site Failures. Journal of Diabetes Science and Technology, 2022, 16, 641-648.	2.2	4
4	An Anticipatory Scheme for the Model Predictive Control of Circadian Phase for Expected Environmental Light Changes. , 2022, 6, 1616-1621.		0
5	Outpatient Randomized Crossover Automated Insulin Delivery Versus Conventional Therapy with Induced Stress Challenges. Diabetes Technology and Therapeutics, 2022, 24, 338-349.	4.4	2
6	Development of a Novel Insulin Sensor for Clinical Decision-Making. Journal of Diabetes Science and Technology, 2022, , 193229682110711.	2.2	3
7	Clinical Evaluation of a Novel Insulin Immunosensor. Journal of Diabetes Science and Technology, 2022, , 193229682210744.	2.2	3
8	Hypoglycemia in Prospective Multi-Center Study of Pregnancies with Pre-existing Type 1 Diabetes on Sensor Augmented Pump Therapy: The LOIS-P Study. Diabetes Technology and Therapeutics, 2022, , .	4.4	1
9	Feasibility of Closed-Loop Insulin Delivery with a Pregnancy-Specific Zone Model Predictive Control Algorithm. Diabetes Technology and Therapeutics, 2022, 24, 471-480.	4.4	10
10	Outpatient Randomized Crossover Comparison of Zone Model Predictive Control Automated Insulin Delivery with Weekly Data Driven Adaptation Versus Sensor-Augmented Pump: Results from the International Diabetes Closed-Loop Trial 4. Diabetes Technology and Therapeutics, 2022, 24, 635-642.	4.4	8
11	Safe Bayesian Optimization Using Interior-Point Methodsâ€"Applied to Personalized Insulin Dose Guidance. , 2022, 6, 2834-2839.		12
12	Microneedle Aptamer-Based Sensors for Continuous, Real-Time Therapeutic Drug Monitoring. Analytical Chemistry, 2022, 94, 8335-8345.	6.5	68
13	Concept of the â€œUniversal Slopeâ€• Toward Substantially Shorter Decentralized Insulin Immunoassays. Analytical Chemistry, 2022, 94, 9217-9225.	6.5	4
14	Epigenetic biotypes of post-traumatic stress disorder in war-zone exposed veteran and active duty males. Molecular Psychiatry, 2021, 26, 4300-4314.	7.9	22
15	A DNA methylation clock associated with age-related illnesses and mortality is accelerated in men with combat PTSD. Molecular Psychiatry, 2021, 26, 4999-5009.	7.9	52
16	Pre-deployment risk factors for PTSD in active-duty personnelÂdeployed to Afghanistan: a machine-learning approach for analyzing multivariate predictors. Molecular Psychiatry, 2021, 26, 5011-5022.	7.9	55
17	Using Iterative Learning for Insulin Dosage Optimization in Multiple-Daily-Injections Therapy for People With Type 1 Diabetes. IEEE Transactions on Biomedical Engineering, 2021, 68, 482-491.	4.2	9
18	More Time in Glucose Range During Exercise Days than Sedentary Days in Adults Living with Type 1 Diabetes. Diabetes Technology and Therapeutics, 2021, 23, 376-383.	4.4	27

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19	A review of biomarkers in the context of type 1 diabetes: Biological sensing for enhanced glucose control. Bioengineering and Translational Medicine, 2021, 6, e10201.	7.1	33
20	Assessing Mealtime Macronutrient Content: Patient Perceptions Versus Expert Analyses via a Novel Phone App. Diabetes Technology and Therapeutics, 2021, 23, 85-94.	4.4	9
21	Utilization of machine learning for identifying symptom severity military-related PTSD subtypes and their biological correlates. Translational Psychiatry, 2021, 11, 227.	4.8	11
22	A classification approach to estimating human circadian phase under circadian alignment from actigraphy and photometry data. Journal of Pineal Research, 2021, 71, e12745.	7.4	9
23	Serum brain-derived neurotrophic factor remains elevated after long term follow-up of combat veterans with chronic post-traumatic stress disorder. Psychoneuroendocrinology, 2021, 134, 105360.	2.7	6
24	Modeling the Influence of Chronic Sleep Restriction on Cortisol Circadian Rhythms, with Implications for Metabolic Disorders. Metabolites, 2021, 11, 483.	2.9	9
25	Longitudinal Observation of Insulin Use and Glucose Sensor Metrics in Pregnant Women with Type 1 Diabetes Using Continuous Glucose Monitors and Insulin Pumps: The LOIS-P Study. Diabetes Technology and Therapeutics, 2021, 23, 807-817.	4.4	18
26	Review of automated insulin delivery systems for individuals with type 1 diabetes: tailored solutions for subpopulations. Current Opinion in Biomedical Engineering, 2021, 19, 100312.	3.4	19
27	Control of Drug Delivery for Type 1 Diabetes Mellitus. , 2021, , 312-320.		0
28	Control of Drug Delivery for Type 1 Diabetes Mellitus. , 2021, , 1-9.		0
29	Zone-MPC Automated Insulin Delivery Algorithm Tuned for Pregnancy Complicated by Type 1 Diabetes. Frontiers in Endocrinology, 2021, 12, 768639.	3.5	7
30	Embedded Model Predictive Control for a Wearable Artificial Pancreas. IEEE Transactions on Control Systems Technology, 2020, 28, 2600-2607.	5.2	14
31	Multi-omic biomarker identification and validation for diagnosing warzone-related post-traumatic stress disorder. Molecular Psychiatry, 2020, 25, 3337-3349.	7.9	68
32	A Randomized, Placebo-Controlled Double-Blind Trial of a Closed-Loop Glucagon System for Postbariatric Hypoglycemia. Journal of Clinical Endocrinology and Metabolism, 2020, 105, e1260-e1271.	3.6	29
33	Dual-Color Single-Cell Imaging of the Suprachiasmatic Nucleus Reveals a Circadian Role in Network Synchrony. Neuron, 2020, 108, 164-179.e7.	8.1	54
34	Role of enhanced glucocorticoid receptor sensitivity in inflammation in PTSD: insights from computational model for circadian-neuroendocrine-immune interactions. American Journal of Physiology - Endocrinology and Metabolism, 2020, 319, E48-E66.	3.5	28
35	Glycemic Outcomes of Use of CLC Versus PLGS in Type 1 Diabetes: A Randomized Controlled Trial. Diabetes Care, 2020, 43, 1822-1828.	8.6	34
36	Novel Pharmacological Targets for Combat PTSDâ€"Metabolism, Inflammation, The Gut Microbiome, and Mitochondrial Dysfunction. Military Medicine, 2020, 185, 311-318.	0.8	24

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37	Effect of Combat Exposure and Posttraumatic Stress Disorder on Telomere Length and Amygdala Volume. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2020, 5, 678-687.	1.5	10
38	Randomized Controlled Trial of Mobile Closed-Loop Control. Diabetes Care, 2020, 43, 607-615.	8.6	40
39	A dual-feedback loop model of the mammalian circadian clock for multi-input control of circadian phase. PLoS Computational Biology, 2020, 16, e1008459.	3.2	17
40	63-OR: Towards Point-of-Care Devices: First Evaluation of an Insulin Immunosensor for Type 1 Diabetes. Diabetes, 2020, 69, .	0.6	1
41	Average Measures of Phase and Synchrony in Inhomogeneous Populations of Circadian Oscillators. IFAC-PapersOnLine, 2020, 53, 15892-15897.	0.9	0
42	Randomized Crossover Comparison of Automated Insulin Delivery Versus Conventional Therapy Using an Unlocked Smartphone with Scheduled Pasta and Rice Meal Challenges in the Outpatient Setting. Diabetes Technology and Therapeutics, 2020, 22, 865-874.	4.4	8
43	An Adaptive Disturbance Rejection Controller for Artificial Pancreas. IFAC-PapersOnLine, 2020, 53, 16372-16379.	0.9	3
44	Adaptive Zone Model Predictive Control of Artificial Pancreas Based on Glucose- and Velocity-Dependent Control Penalties. IEEE Transactions on Biomedical Engineering, 2019, 66, 1045-1054.	4.2	58
45	Mechanistic inferences on metabolic dysfunction in posttraumatic stress disorder from an integrated model and multiomic analysis: role of glucocorticoid receptor sensitivity. American Journal of Physiology - Endocrinology and Metabolism, 2019, 317, E879-E898.	3.5	22
46	The Effect of Two Types of Pasta Versus White Rice on Postprandial Blood Glucose Levels in Adults with Type 1 Diabetes: A Randomized Crossover Trial. Diabetes Technology and Therapeutics, 2019, 21, 485-492.	4.4	20
47	Reply to Furlan et al.: The role of SIRT1 in cell autonomous clock function. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13173-13173.	7.1	0
48	Six-Month Randomized, Multicenter Trial of Closed-Loop Control in Type 1 Diabetes. New England Journal of Medicine, 2019, 381, 1707-1717.	27.0	643
49	Compensating for Sensor Error in the Model Predictive Control of Circadian Clock Phase. , 2019, 3, 853-858.		2
50	Clinical Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range. Diabetes Care, 2019, 42, 1593-1603.	8.6	2,101
51	Polygenic risk associated with post-traumatic stress disorder onset and severity. Translational Psychiatry, 2019, 9, 165.	4.8	23
52	Feedback control algorithms for automated glucose management in T1DM: the state of the art. , 2019, , 1-27.		1
53	Getting IoT-ready. , 2019, , 29-57.		6
54	Metabolomic analysis of male combat veterans with post traumatic stress disorder. PLoS ONE, 2019, 14, e0213839.	2.5	54

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55	A new animal model of insulin-glucose dynamics in the intraperitoneal space enhances closed-loop control performance. Journal of Process Control, 2019, 76, 62-73.	3.3	12
56	Automated Insulin Delivery for Type 1 Diabetes Mellitus Patients using Gaussian Process-based Model Predictive Control. , 2019, , .		5
57	Iterative Learning Control with Sparse Measurements for Long-Acting Insulin Injections in People with Type 1 Diabetes. , 2019, , .		2
58	Design and Clinical Evaluation of the Interoperable Artificial Pancreas System (iAPS) Smartphone App: Interoperable Components with Modular Design for Progressive Artificial Pancreas Research and Development. Diabetes Technology and Therapeutics, 2019, 21, 35-43.	4.4	42
59	Pharmaceutical-based entrainment of circadian phase via nonlinear model predictive control. Automatica, 2019, 100, 336-348.	5.0	19
60	The International Diabetes Closed-Loop Study: Testing Artificial Pancreas Component Interoperability. Diabetes Technology and Therapeutics, 2019, 21, 73-80.	4.4	13
61	Identifying Disease Network Dysregulation Through Expression Mean, Variance, and Distribution Changes. , 2019, 3, 332-337.		0
62	Multivariate learning framework for longâ€term adaptation in the artificial pancreas. Bioengineering and Translational Medicine, 2019, 4, 61-74.	7.1	22
63	Controlling Biological Time: Nonlinear Model Predictive Control for Populations of Circadian Oscillators. Lecture Notes in Control and Information Sciences - Proceedings, 2018, , 123-138.	0.1	6
64	Real-Time Detection of Infusion Site Failures in a Closed-Loop Artificial Pancreas. Journal of Diabetes Science and Technology, 2018, 12, 599-607.	2.2	21
65	Body Mass Index Effect on Differing Responses to Psychological Stress in Blood Glucose Dynamics in Patients With Type 1 Diabetes. Journal of Diabetes Science and Technology, 2018, 12, 657-664.	2.2	5
66	Design and Clinical Evaluation of a Novel Low-Glucose Prediction Algorithm with Mini-Dose Stable Glucagon Delivery in Post-Bariatric Hypoglycemia. Diabetes Technology and Therapeutics, 2018, 20, 127-139.	4.4	22
67	Extremum Seeking Control for Personalized Zone Adaptation in Model Predictive Control for Type 1 Diabetes. IEEE Transactions on Biomedical Engineering, 2018, 65, 1859-1870.	4.2	22
68	Velocity-weighting & velocity-penalty MPC of an artificial pancreas: Improved safety & performance. Automatica, 2018, 91, 105-117.	5.0	74
69	Event-Triggered Model Predictive Control for Embedded Artificial Pancreas Systems. IEEE Transactions on Biomedical Engineering, 2018, 65, 575-586.	4.2	73
70	Ontogeny of Circadian Rhythms and Synchrony in the Suprachiasmatic Nucleus. Journal of Neuroscience, 2018, 38, 1326-1334.	3.6	66
71	A Multivariate Bayesian Optimization Framework for Long-Term Controller Adaptation in Artificial Pancreas. , 2018, , .		3
72	Toward Multi-Input Control: A Dual-Feedback Loop Model of the Mammalian Circadian Clock. IFAC-PapersOnLine, 2018, 51, 24-27.	0.9	1

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73	Computational and experimental insights into the circadian effects of SIRT1. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11643-11648.	7.1	49
74	Evaluation of an Artificial Pancreas with Enhanced Model Predictive Control and a Glucose Prediction Trust Index with Unannounced Exercise. Diabetes Technology and Therapeutics, 2018, 20, 455-464.	4.4	34
75	Entrainment of Circadian Rhythms Depends on Firing Rates and Neuropeptide Release of VIP SCN Neurons. Neuron, 2018, 99, 555-563.e5.	8.1	80
76	Accuracy of Wrist-Worn Activity Monitors During Common Daily Physical Activities and Types of Structured Exercise: Evaluation Study. JMIR MHealth and UHealth, 2018, 6, e10338.	3.7	117
77	Pulse-coupled time synchronization for distributed acoustic event detection using wireless sensor networks. Control Engineering Practice, 2017, 60, 106-117.	5.5	21
78	Response to Comment on Pinsker et al. Randomized Crossover Comparison of Personalized MPC and PID Control Algorithms for the Artificial Pancreas. Diabetes Care 2016;39:1135â€“1142. Diabetes Care, 2017, 40, e4-e5.	8.6	22
79	Intraperitoneal insulin delivery provides superior glycaemic regulation to subcutaneous insulin delivery in model predictive controlâ€based fullyâ€automated artificial pancreas in patients with type 1 diabetes: <scp>a</scp> pilot study. Diabetes, Obesity and Metabolism, 2017, 19, 1698-1705.	4.4	72
80	Outpatient Closed-Loop Control with Unannounced Moderate Exercise in Adolescents Using Zone Model Predictive Control. Diabetes Technology and Therapeutics, 2017, 19, 331-339.	4.4	56
81	An Enhanced Model Predictive Control for the Artificial Pancreas Using a Confidence Index Based on Residual Analysis of Past Predictions. Journal of Diabetes Science and Technology, 2017, 11, 537-544.	2.2	25
82	Application of Zone Model Predictive Control Artificial Pancreas During Extended Use of Infusion Set and Sensor: A Randomized Crossover-Controlled Home-Use Trial. Diabetes Care, 2017, 40, 1096-1102.	8.6	46
83	Feasibility of Long-Term Closed-Loop Control: A Multicenter 6-Month Trial of 24/7 Automated Insulin Delivery. Diabetes Technology and Therapeutics, 2017, 19, 18-24.	4.4	120
84	Model predictive control with event-triggered communication for an embedded artificial pancreas. , 2017, , .		6
85	Twelve-Week 24/7 Ambulatory Artificial Pancreas With Weekly Adaptation of Insulin Delivery Settings: Effect on Hemoglobin A1c and Hypoglycemia. Diabetes Care, 2017, 40, 1719-1726.	8.6	68
86	A Personalized Week-to-Week Updating Algorithm to Improve Continuous Glucose Monitoring Performance. Journal of Diabetes Science and Technology, 2017, 11, 1070-1079.	2.2	6
87	Reducing controller updates via event-triggered model predictive control in an embedded artificial pancreas. , 2017, , .		2
88	A kernel module for pulse-coupled time synchronization of sensor networks. Computer Networks, 2017, 127, 161-172.	5.1	3
89	International Consensus on Use of Continuous Glucose Monitoring. Diabetes Care, 2017, 40, 1631-1640.	8.6	1,376
90	Guidelines for Genome-Scale Analysis of Biological Rhythms. Journal of Biological Rhythms, 2017, 32, 380-393.	2.6	237

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91	Nonlinear Model Predictive Control For Circadian Entrainment Using Small-Molecule Pharmaceuticals. IFAC-PapersOnLine, 2017, 50, 9864-9870.	0.9	4
92	Extremum Seeking Control Based Zone Adaptation for Zone Model Predictive Control in Type 1 Diabetes * *This work is supported by the National Institutes of Health Grants DP3DK094331, DP3DK104057 and UC4DK108483.. IFAC-PapersOnLine, 2017, 50, 15074-15079.	0.9	5
93	Gaussian process-based model predictive control of blood glucose for patients with type 1 diabetes mellitus. , 2017, , .		9
94	Cover Image, Volume 19, Issue 12. Diabetes, Obesity and Metabolism, 2017, 19, i.	4.4	0
95	Embedded Control in Wearable Medical Devices: Application to the Artificial Pancreas. Processes, 2016, 4, 35.	2.8	27
96	Outcome Measures for Artificial Pancreas Clinical Trials: A Consensus Report. Diabetes Care, 2016, 39, 1175-1179.	8.6	195
97	A Multimetric Evaluation of Stratified Random Sampling for Classification: A Case Study. IEEE Life Sciences Letters, 2016, 2, 43-46.	1.2	3
98	Reducing Glucose Variability Due to Meals and Postprandial Exercise in T1DM Using Switched LPV Control. Journal of Diabetes Science and Technology, 2016, 10, 744-753.	2.2	23
99	Functional network inference of the suprachiasmatic nucleus. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4512-4517.	7.1	64
100	Preliminary Evaluation of a Long-Term Intraperitoneal Glucose Sensor With Flushing Mechanism. Journal of Diabetes Science and Technology, 2016, 10, 1192-1194.	2.2	11
101	Multinational Home Use of Closed-Loop Control Is Safe and Effective. Diabetes Care, 2016, 39, 1143-1150.	8.6	95
102	A systems theoretic approach to analysis and control of mammalian circadian dynamics. Chemical Engineering Research and Design, 2016, 116, 48-60.	5.6	15
103	Minority groups and the artificial pancreas: who is (not) in line?. Lancet Diabetes and Endocrinology,the, 2016, 4, 880-881.	11.4	10
104	Periodic zone-MPC with asymmetric costs for outpatient-ready safety of an artificial pancreas to treat type 1 diabetes. Automatica, 2016, 71, 237-246.	5.0	134
105	Shaping the MPC Cost Function for Superior Automated Glucose Control. IFAC-PapersOnLine, 2016, 49, 779-784.	0.9	4
106	Enhanced Model Predictive Control (eMPC) Strategy for Automated Glucose Control. Industrial & Engineering Chemistry Research, 2016, 55, 11857-11868.	3.7	40
107	Randomized Crossover Comparison of Personalized MPC and PID Control Algorithms for the Artificial Pancreas. Diabetes Care, 2016, 39, 1135-1142.	8.6	123
108	Quantifying Stochastic Noise in Cultured Circadian Reporter Cells. PLoS Computational Biology, 2015, 11, e1004451.	3.2	14

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109	Empirical dynamic model identification for blood-glucose dynamics in response to physical activity. , 2015, 2015, 3834-3839.		6
110	A Coupled Stochastic Model Explains Differences in Cry Knockout Behavior. IEEE Life Sciences Letters, 2015, 1, 3-6.	1.2	6
111	Tackling problem nonlinearities & delays via asymmetric, state-dependent objective costs in MPC of an artificial pancreas. IFAC-PapersOnLine, 2015, 48, 154-159.	0.9	12
112	Systems biology approach to understanding post-traumatic stress disorder. Molecular BioSystems, 2015, 11, 980-993.	2.9	20
113	Design and Evaluation of a Robust PID Controller for a Fully Implantable Artificial Pancreas. Industrial & Engineering Chemistry Research, 2015, 54, 10311-10321.	3.7	73
114	Synchronization of Pulse-Coupled Oscillators on (Strongly) Connected Graphs. IEEE Transactions on Automatic Control, 2015, 60, 1710-1715.	5.7	31
115	Velocity-weighting to prevent controller-induced hypoglycemia in MPC of an artificial pancreas to treat T1DM. , 2015, 2015, 1635-1640.		15
116	Adjustment of Open-Loop Settings to Improve Closed-Loop Results in Type 1 Diabetes: A Multicenter Randomized Trial. Journal of Clinical Endocrinology and Metabolism, 2015, 100, 3878-3886.	3.6	67
117	Early Detection of Physical Activity for People With Type 1 Diabetes Mellitus. Journal of Diabetes Science and Technology, 2015, 9, 1236-1245.	2.2	35
118	Modeling the inflammatory response in the hypothalamus ensuing heat stroke: Iterative cycle of model calibration, identifiability analysis, experimental design and data collection. Mathematical Biosciences, 2015, 260, 35-46.	1.9	4
119	Glucose Sensing in the Peritoneal Space Offers Faster Kinetics Than Sensing in the Subcutaneous Space. Diabetes, 2014, 63, 2498-2505.	0.6	43
120	Closed-Loop Control Performance of the Hypoglycemia-Hyperglycemia Minimizer (HHM) System in a Feasibility Study. Journal of Diabetes Science and Technology, 2014, 8, 35-42.	2.2	13
121	Reducing Risks in Type 1 Diabetes Using ${cal H}_infty$ Control. IEEE Transactions on Biomedical Engineering, 2014, 61, 2939-2947.	4.2	48
122	Response to Comment on Doyle et al. Closed-Loop Artificial Pancreas Systems: Engineering the Algorithms. Diabetes Care 2014;37:1191â€“1197. Diabetes Care, 2014, 37, e228-e228.	8.6	1
123	Design of an artificial pancreas using zone model predictive control with a Moving Horizon State Estimator. , 2014, 2014, 6975-6980.		11
124	Novel Insulin Delivery Profiles for Mixed Meals for Sensor-Augmented Pump and Closed-Loop Artificial Pancreas Therapy for Type 1 Diabetes Mellitus. Journal of Diabetes Science and Technology, 2014, 8, 957-968.	2.2	17
125	Spatiotemporal separation of PER and CRY posttranslational regulation in the mammalian circadian clock. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2040-2045.	7.1	55
126	Amplitude Metrics for Cellular Circadian Bioluminescence Reporters. Biophysical Journal, 2014, 107, 2712-2722.	0.5	106

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127	MPC design for rapid pump-attenuation and expedited hyperglycemia response to treat T1DM with an Artificial Pancreas. , 2014, 2014, 4224-4230.		21
128	Moving-horizon-like state estimation via continuous glucose monitor feedback in MPC of an artificial pancreas for type 1 diabetes. , 2014, 2014, 310-315.		9
129	Safety of Outpatient Closed-Loop Control: First Randomized Crossover Trials of a Wearable Artificial Pancreas. Diabetes Care, 2014, 37, 1789-1796.	8.6	168
130	Online prediction of subcutaneous glucose concentration for type 1 diabetes using empirical models and frequencyâ€band separation. AIChE Journal, 2014, 60, 574-584.	3.6	24
131	Clinical Evaluation of an Automated Artificial Pancreas Using Zone-Model Predictive Control and Health Monitoring System. Diabetes Technology and Therapeutics, 2014, 16, 348-357.	4.4	57
132	Closed-Loop Artificial Pancreas Systems: Engineering the Algorithms. Diabetes Care, 2014, 37, 1191-1197.	8.6	339
133	Multicenter Closed-Loop/Hybrid Meal Bolus Insulin Delivery with Type 1 Diabetes. Diabetes Technology and Therapeutics, 2014, 16, 623-632.	4.4	38
134	State Estimation with Sensor Recalibrations and Asynchronous Measurements for MPC of an Artificial Pancreas to Treat T1DM. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 224-230.	0.4	3
135	Quantity and accessibility for specific targeting of receptors in tumours. Scientific Reports, 2014, 4, 5232.	3.3	33
136	Estimating confidence intervals in predicted responses for oscillatory biological models. BMC Systems Biology, 2013, 7, 71.	3.0	10
137	A neuropeptide speeds circadian entrainment by reducing intercellular synchrony. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E4355-61.	7.1	117
138	Increasing Sync Rate of Pulse-Coupled Oscillators via Phase Response Function Design: Theory and Application to Wireless Networks. IEEE Transactions on Control Systems Technology, 2013, 21, 1455-1462.	5.2	27
139	Clinical Evaluation of a Personalized Artificial Pancreas. Diabetes Care, 2013, 36, 801-809.	8.6	97
140	Statistical Analysis of the Pulse-Coupled Synchronization Strategy for Wireless Sensor Networks. IEEE Transactions on Signal Processing, 2013, 61, 5193-5204.	5.3	18
141	Periodic-Zone Model Predictive Control for Diurnal Closed-Loop Operation of an Artificial Pancreas. Journal of Diabetes Science and Technology, 2013, 7, 1446-1460.	2.2	66
142	Dynamic Insulin on Board: Incorporation of Circadian Insulin Sensitivity Variation. Journal of Diabetes Science and Technology, 2013, 7, 928-940.	2.2	46
143	Modeling the Intra- and Extracellular Cytokine Signaling Pathway under Heat Stroke in the Liver. PLoS ONE, 2013, 8, e73393.	2.5	14
144	Weakly Circadian Cells Improve Resynchrony. PLoS Computational Biology, 2012, 8, e1002787.	3.2	48

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145	Modeling Cortisol Dynamics in the Neuro-endocrine Axis Distinguishes Normal, Depression, and Post-traumatic Stress Disorder (PTSD) in Humans. PLoS Computational Biology, 2012, 8, e1002379.	3.2	111
146	Pilot Studies of Wearable Outpatient Artificial Pancreas in Type 1 Diabetes. Diabetes Care, 2012, 35, e65-e67.	8.6	108
147	Design of the Health Monitoring System for the Artificial Pancreas: Low Glucose Prediction Module. Journal of Diabetes Science and Technology, 2012, 6, 1345-1354.	2.2	45
148	Bio-inspired hybrid control of pulse-coupled oscillators and application to synchronization of a wireless network. , 2012, , .		7
149	Bio-inspired Synchronization of Non-Identical Pulse-Coupled Oscillators Subject to a Global Cue and Local Interactions*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 115-120.	0.4	4
150	Energy-Efficient Pulse-Coupled Synchronization Strategy Design for Wireless Sensor Networks Through Reduced Idle Listening. IEEE Transactions on Signal Processing, 2012, 60, 5293-5306.	5.3	83
151	Bio-inspired synchronization of wireless sensor networks for acoustic event detection systems. , 2012, , .		4
152	Fully Integrated Artificial Pancreas in Type 1 Diabetes. Diabetes, 2012, 61, 2230-2237.	0.6	343
153	Core module biomarker identification with network exploration for breast cancer metastasis. BMC Bioinformatics, 2012, 13, 12.	2.6	57
154	Computational Modeling of Glucose Transport in Pancreatic Î²-Cells Identifies Metabolic Thresholds and Therapeutic Targets in Diabetes. PLoS ONE, 2012, 7, e53130.	2.5	21
155	Optimal Phase Response Functions for Fast Pulse-Coupled Synchronization in Wireless Sensor Networks. IEEE Transactions on Signal Processing, 2012, 60, 5583-5588.	5.3	47
156	A Detailed Modular Analysis of Heat-Shock Protein Dynamics under Acute and Chronic Stress and Its Implication in Anxiety Disorders. PLoS ONE, 2012, 7, e42958.	2.5	23
157	Novel global sensitivity analysis methodology accounting for the crucial role of the distribution of input parameters: application to systems biology models. International Journal of Robust and Nonlinear Control, 2012, 22, 1082-1102.	3.7	40
158	Identification of Small Molecule Activators of Cryptochrome. Science, 2012, 337, 1094-1097.	12.6	408
159	Theoretical analysis of insulinâ€dependent glucose uptake heterogeneity in 3D bioreactor cell culture. Biotechnology Progress, 2012, 28, 833-845.	2.6	5
160	Control-Relevant Models for Glucose Control Using A Priori Patient Characteristics. IEEE Transactions on Biomedical Engineering, 2012, 59, 1839-1849.	4.2	133
161	Robust multiâ€drug therapy design and application to insulin resistance in type 2 diabetes. International Journal of Robust and Nonlinear Control, 2011, 21, 1730-1741.	3.7	8
162	Closed-Loop Control of Artificial Pancreatic eta -Cell in Type 1 Diabetes Mellitus Using Model Predictive Iterative Learning Control. IEEE Transactions on Biomedical Engineering, 2010, 57, 211-219.	4.2	133

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163	Model predictive control with learningâ€type setâ€point: Application to artificial pancreatic Î²â€cell. AIChE Journal, 2010, 56, 1510-1518.	3.6	39
164	Real-Time Hypoglycemia Prediction Suite Using Continuous Glucose Monitoring. Diabetes Care, 2010, 33, 1249-1254.	8.6	120
165	Automatic Bolus and Adaptive Basal Algorithm for the Artificial Pancreatic Î²-Cell. Diabetes Technology and Therapeutics, 2010, 12, 879-887.	4.4	20
166	Vulnerabilities in the Tau Network and the Role of Ultrasensitive Points in Tau Pathophysiology. PLoS Computational Biology, 2010, 6, e1000997.	3.2	13
167	An Advisory Protocol for Rapid- and Slow-Acting Insulin Therapy Based on a Run-to-Run Methodology. Diabetes Technology and Therapeutics, 2010, 12, 555-565.	4.4	10
168	Zone Model Predictive Control: A Strategy to Minimize Hyper- and Hypoglycemic Events. Journal of Diabetes Science and Technology, 2010, 4, 961-975.	2.2	177
169	A model of the cell-autonomous mammalian circadian clock. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 11107-11112.	7.1	183
170	Clinical Update on Optimal Prandial Insulin Dosing Using a Refined Run-to-Run Control Algorithm. Journal of Diabetes Science and Technology, 2009, 3, 487-491.	2.2	32
171	Safety Constraints in an Artificial Pancreatic Î² Cell: An Implementation of Model Predictive Control with Insulin on Board. Journal of Diabetes Science and Technology, 2009, 3, 536-544.	2.2	134
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