

Francis J Doyle

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

188
papers

9,644
citations

47
h-index

95
g-index

202
ext. papers

12,145
ext. citations

6.9
avg, IF

6.11
L-index

#	Paper	IF	Citations
188	Development of a Novel Insulin Sensor for Clinical Decision-Making.. <i>Journal of Diabetes Science and Technology</i> , 2022 , 19322968211071132	4.1	0
187	Intraperitoneal Insulin Delivery: Evidence of a Physiological Route for Artificial Pancreas From Compartmental Modeling.. <i>Journal of Diabetes Science and Technology</i> , 2022 , 19322968221076559	4.1	1
186	Clinical Evaluation of a Novel Insulin Immunosensor.. <i>Journal of Diabetes Science and Technology</i> , 2022 , 19322968221074406	4.1	0
185	An Anticipatory Scheme for the Model Predictive Control of Circadian Phase for Expected Environmental Light Changes 2022 , 6, 1616-1621		
184	A Glycemia Risk Index (GRI) of Hypoglycemia and Hyperglycemia for Continuous Glucose Monitoring Validated by Clinician Ratings.. <i>Journal of Diabetes Science and Technology</i> , 2022 , 19322968221085273	4.1	0
183	Safe Bayesian Optimization using Interior-Point Methods -Applied to Personalized Insulin Dose Guidance 2022 , 1-1		2
182	Epigenetic biotypes of post-traumatic stress disorder in war-zone exposed veteran and active duty males. <i>Molecular Psychiatry</i> , 2021 , 26, 4300-4314	15.1	5
181	A DNA methylation clock associated with age-related illnesses and mortality is accelerated in men with combat PTSD. <i>Molecular Psychiatry</i> , 2021 , 26, 4999-5009	15.1	12
180	Pre-deployment risk factors for PTSD in active-duty personnel deployed to Afghanistan: a machine-learning approach for analyzing multivariate predictors. <i>Molecular Psychiatry</i> , 2021 , 26, 5011-5022	15.1	21
179	Machine Learning-Based Anomaly Detection Algorithms to Alert Patients Using Sensor Augmented Pump of Infusion Site Failures. <i>Journal of Diabetes Science and Technology</i> , 2021 , 1932296821997854	4.1	0
178	Utilization of machine learning for identifying symptom severity military-related PTSD subtypes and their biological correlates. <i>Translational Psychiatry</i> , 2021 , 11, 227	8.6	1
177	A classification approach to estimating human circadian phase under circadian alignment from actigraphy and photometry data. <i>Journal of Pineal Research</i> , 2021 , 71, e12745	10.4	3
176	Serum brain-derived neurotrophic factor remains elevated after long term follow-up of combat veterans with chronic post-traumatic stress disorder. <i>Psychoneuroendocrinology</i> , 2021 , 134, 105360	5	1
175	Using Iterative Learning for Insulin Dosage Optimization in Multiple-Daily-Injections Therapy for People With Type 1 Diabetes. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , 68, 482-491	5	2
174	More Time in Glucose Range During Exercise Days than Sedentary Days in Adults Living with Type 1 Diabetes. <i>Diabetes Technology and Therapeutics</i> , 2021 , 23, 376-383	8.1	5
173	A review of biomarkers in the context of type 1 diabetes: Biological sensing for enhanced glucose control. <i>Bioengineering and Translational Medicine</i> , 2021 , 6, e10201	14.8	12
172	Assessing Mealtime Macronutrient Content: Patient Perceptions Versus Expert Analyses via a Novel Phone App. <i>Diabetes Technology and Therapeutics</i> , 2021 , 23, 85-94	8.1	3

171	Modeling the Influence of Chronic Sleep Restriction on Cortisol Circadian Rhythms, with Implications for Metabolic Disorders. <i>Metabolites</i> , 2021 , 11,	5.6	3
170	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. <i>Diabetes Technology and Therapeutics</i> , 2021 , 23, 807-817	8.1	5
169	Review of Automated Insulin Delivery Systems for Individuals with Type 1 Diabetes: Tailored Solutions for Subpopulations. <i>Current Opinion in Biomedical Engineering</i> , 2021 , 19,	4.4	3
168	Zone-MPC Automated Insulin Delivery Algorithm Tuned for Pregnancy Complicated by Type 1 Diabetes.. <i>Frontiers in Endocrinology</i> , 2021 , 12, 768639	5.7	0
167	Role of enhanced glucocorticoid receptor sensitivity in inflammation in PTSD: insights from computational model for circadian-neuroendocrine-immune interactions. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2020 , 319, E48-E66	6	10
166	Glycemic Outcomes of Use of CLC Versus PLGS in Type 1 Diabetes: A Randomized Controlled Trial. <i>Diabetes Care</i> , 2020 , 43, 1822-1828	14.6	11
165	Novel Pharmacological Targets for Combat PTSD-Metabolism, Inflammation, The Gut Microbiome, and Mitochondrial Dysfunction. <i>Military Medicine</i> , 2020 , 185, 311-318	1.3	12
164	A dual-feedback loop model of the mammalian circadian clock for multi-input control of circadian phase. <i>PLoS Computational Biology</i> , 2020 , 16, e1008459	5	8
163	63-OR: Towards Point-of-Care Devices: First Evaluation of an Insulin Immunosensor for Type 1 Diabetes. <i>Diabetes</i> , 2020 , 69, 63-OR	0.9	1
162	Average Measures of Phase and Synchrony in Inhomogeneous Populations of Circadian Oscillators. <i>IFAC-PapersOnLine</i> , 2020 , 53, 15892-15897	0.7	
161	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. <i>Diabetes Technology and Therapeutics</i> , 2020 , 22, 865-874	8.1	3
160	An Adaptive Disturbance Rejection Controller for Artificial Pancreas. <i>IFAC-PapersOnLine</i> , 2020 , 53, 16372-16379	16.372-16379	
159	A Randomized, Placebo-Controlled Double-Blind Trial of a Closed-Loop Glucagon System for Postbariatric Hypoglycemia. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2020 , 105,	5.6	13
158	Dual-Color Single-Cell Imaging of the Suprachiasmatic Nucleus Reveals a Circadian Role in Network Synchrony. <i>Neuron</i> , 2020 , 108, 164-179.e7	13.9	26
157	Embedded Model Predictive Control for a Wearable Artificial Pancreas. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 2600-2607	4.8	4
156	Multi-omic biomarker identification and validation for diagnosing warzone-related post-traumatic stress disorder. <i>Molecular Psychiatry</i> , 2020 , 25, 3337-3349	15.1	34
155	Effect of Combat Exposure and Posttraumatic Stress Disorder on Telomere Length and Amygdala Volume. <i>Biological Psychiatry: Cognitive Neuroscience and Neuroimaging</i> , 2020 , 5, 678-687	3.4	4
154	Randomized Controlled Trial of Mobile Closed-Loop Control. <i>Diabetes Care</i> , 2020 , 43, 607-615	14.6	19

153	Compensating for Sensor Error in the Model Predictive Control of Circadian Clock Phase 2019 , 3, 853-858	2
152	Clinical Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range. <i>Diabetes Care</i> , 2019 , 42, 1593-1603	14.6 998
151	Polygenic risk associated with post-traumatic stress disorder onset and severity. <i>Translational Psychiatry</i> , 2019 , 9, 165	8.6 12
150	Feedback control algorithms for automated glucose management in T1DM: the state of the art 2019 , 1-27	1
149	Getting IoT-ready: The face of next generation artificial pancreas systems 2019 , 29-57	5
148	Metabolomic analysis of male combat veterans with post traumatic stress disorder. <i>PLoS ONE</i> , 2019 , 14, e0213839	3.7 26
147	Adaptive Zone Model Predictive Control of Artificial Pancreas Based on Glucose- and Velocity-Dependent Control Penalties. <i>IEEE Transactions on Biomedical Engineering</i> , 2019 , 66, 1045-1054 ⁵	27
146	Mechanistic inferences on metabolic dysfunction in posttraumatic stress disorder from an integrated model and multiomic analysis: role of glucocorticoid receptor sensitivity. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2019 , 317, E879-E898	6 11
145	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. <i>Diabetes Technology and Therapeutics</i> , 2019 , 21, 485-492	8.1 9
144	Reply to Furlan et al.: The role of SIRT1 in cell autonomous clock function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 13173	11.5
143	Six-Month Randomized, Multicenter Trial of Closed-Loop Control in Type 1 Diabetes. <i>New England Journal of Medicine</i> , 2019 , 381, 1707-1717	59.2 318
142	A New Animal Model of Insulin-Glucose Dynamics in the Intraperitoneal Space Enhances Closed-Loop Control Performance. <i>Journal of Process Control</i> , 2019 , 76, 62-73	3.9 4
141	Iterative Learning Control with Sparse Measurements for Long-Acting Insulin Injections in People with Type 1 Diabetes 2019 ,	1
140	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. <i>Diabetes Technology and Therapeutics</i> , 2019 , 21, 35-43	8.1 24
139	Pharmaceutical-based entrainment of circadian phase via nonlinear model predictive control. <i>Automatica</i> , 2019 , 100, 336-348	5.7 11
138	The International Diabetes Closed-Loop Study: Testing Artificial Pancreas Component Interoperability. <i>Diabetes Technology and Therapeutics</i> , 2019 , 21, 73-80	8.1 9
137	Identifying Disease Network Dysregulation Through Expression Mean, Variance, and Distribution Changes 2019 , 3, 332-337	
136	Multivariate learning framework for long-term adaptation in the artificial pancreas. <i>Bioengineering and Translational Medicine</i> , 2019 , 4, 61-74	14.8 8

135	Controlling Biological Time: Nonlinear Model Predictive Control for Populations of Circadian Oscillators. <i>Lecture Notes in Control and Information Sciences - Proceedings</i> , 2018 , 123-138	0.2	4
134	Real-Time Detection of Infusion Site Failures in a Closed-Loop Artificial Pancreas. <i>Journal of Diabetes Science and Technology</i> , 2018 , 12, 599-607	4.1	13
133	Body Mass Index Effect on Differing Responses to Psychological Stress in Blood Glucose Dynamics in Patients With Type 1 Diabetes. <i>Journal of Diabetes Science and Technology</i> , 2018 , 12, 657-664	4.1	3
132	Design and Clinical Evaluation of a Novel Low-Glucose Prediction Algorithm with Mini-Dose Stable Glucagon Delivery in Post-Bariatric Hypoglycemia. <i>Diabetes Technology and Therapeutics</i> , 2018 , 20, 127-139	8.1	15
131	Extremum Seeking Control for Personalized Zone Adaptation in Model Predictive Control for Type 1 Diabetes. <i>IEEE Transactions on Biomedical Engineering</i> , 2018 , 65, 1859-1870	5	15
130	Velocity-weighting & velocity-penalty MPC of an artificial pancreas: Improved safety & performance. <i>Automatica</i> , 2018 , 91, 105-117	5.7	38
129	Event-Triggered Model Predictive Control for Embedded Artificial Pancreas Systems. <i>IEEE Transactions on Biomedical Engineering</i> , 2018 , 65, 575-586	5	51
128	Ontogeny of Circadian Rhythms and Synchrony in the Suprachiasmatic Nucleus. <i>Journal of Neuroscience</i> , 2018 , 38, 1326-1334	6.6	36
127	Evaluation of an Artificial Pancreas with Enhanced Model Predictive Control and a Glucose Prediction Trust Index with Unannounced Exercise. <i>Diabetes Technology and Therapeutics</i> , 2018 , 20, 455-464	8.1	23
126	Entrainment of Circadian Rhythms Depends on Firing Rates and Neuropeptide Release of VIP SCN Neurons. <i>Neuron</i> , 2018 , 99, 555-563.e5	13.9	48
125	Accuracy of Wrist-Worn Activity Monitors During Common Daily Physical Activities and Types of Structured Exercise: Evaluation Study. <i>JMIR MHealth and UHealth</i> , 2018 , 6, e10338	5.5	64
124	Toward Multi-Input Control: A Dual-Feedback Loop Model of the Mammalian Circadian Clock. <i>IFAC-PapersOnLine</i> , 2018 , 51, 24-27	0.7	1
123	Computational and experimental insights into the circadian effects of SIRT1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 11643-11648	11.5	28
122	Pulse-coupled time synchronization for distributed acoustic event detection using wireless sensor networks. <i>Control Engineering Practice</i> , 2017 , 60, 106-117	3.9	18
121	Response to Comment on Pinsky et al. Randomized Crossover Comparison of Personalized MPC and PID Control Algorithms for the Artificial Pancreas. <i>Diabetes Care</i> 2016;39:1135-1142. <i>Diabetes Care</i> , 2017 , 40, e4-e5	14.6	22
120	Intraperitoneal insulin delivery provides superior glycaemic regulation to subcutaneous insulin delivery in model predictive control-based fully-automated artificial pancreas in patients with type 1 diabetes: a pilot study. <i>Diabetes, Obesity and Metabolism</i> , 2017 , 19, 1698-1705	6.7	50
119	Outpatient Closed-Loop Control with Unannounced Moderate Exercise in Adolescents Using Zone Model Predictive Control. <i>Diabetes Technology and Therapeutics</i> , 2017 , 19, 331-339	8.1	48
118	An Enhanced Model Predictive Control for the Artificial Pancreas Using a Confidence Index Based on Residual Analysis of Past Predictions. <i>Journal of Diabetes Science and Technology</i> , 2017 , 11, 537-544	4.1	18

117	Application of Zone Model Predictive Control Artificial Pancreas During Extended Use of Infusion Set and Sensor: A Randomized Crossover-Controlled Home-Use Trial. <i>Diabetes Care</i> , 2017 , 40, 1096-1102	14.6	38
116	Feasibility of Long-Term Closed-Loop Control: A Multicenter 6-Month Trial of 24/7 Automated Insulin Delivery. <i>Diabetes Technology and Therapeutics</i> , 2017 , 19, 18-24	8.1	97
115	2017 ,		5
114	Twelve-Week 24/7 Ambulatory Artificial Pancreas With Weekly Adaptation of Insulin Delivery Settings: Effect on Hemoglobin A and Hypoglycemia. <i>Diabetes Care</i> , 2017 , 40, 1719-1726	14.6	50
113	A Personalized Week-to-Week Updating Algorithm to Improve Continuous Glucose Monitoring Performance. <i>Journal of Diabetes Science and Technology</i> , 2017 , 11, 1070-1079	4.1	5
112	Reducing controller updates via event-triggered model predictive control in an embedded artificial pancreas 2017 ,		2
111	A kernel module for pulse-coupled time synchronization of sensor networks. <i>Computer Networks</i> , 2017 , 127, 161-172	5.4	2
110	International Consensus on Use of Continuous Glucose Monitoring. <i>Diabetes Care</i> , 2017 , 40, 1631-1640	14.6	872
109	Guidelines for Genome-Scale Analysis of Biological Rhythms. <i>Journal of Biological Rhythms</i> , 2017 , 32, 380-393	3.2	127
108	Nonlinear Model Predictive Control For Circadian Entrainment Using Small-Molecule Pharmaceuticals. <i>IFAC-PapersOnLine</i> , 2017 , 50, 9864-9870	0.7	4
107	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.. <i>IFAC-PapersOnLine</i> , 2017 , 50, 15074-15079	0.7	2
106	Gaussian process-based model predictive control of blood glucose for patients with type 1 diabetes mellitus 2017 ,		5
105	Periodic zone-MPC with asymmetric costs for outpatient-ready safety of an artificial pancreas to treat type 1 diabetes. <i>Automatica</i> , 2016 , 71, 237-246	5.7	102
104	Shaping the MPC Cost Function for Superior Automated Glucose Control. <i>IFAC-PapersOnLine</i> , 2016 , 49, 779-784	0.7	2
103	Enhanced Model Predictive Control (eMPC) Strategy for Automated Glucose Control. <i>Industrial & Engineering Chemistry Research</i> , 2016 , 55, 11857-11868	3.9	26
102	Randomized Crossover Comparison of Personalized MPC and PID Control Algorithms for the Artificial Pancreas. <i>Diabetes Care</i> , 2016 , 39, 1135-42	14.6	93
101	Embedded Control in Wearable Medical Devices: Application to the Artificial Pancreas. <i>Processes</i> , 2016 , 4, 35	2.9	18
100	Outcome Measures for Artificial Pancreas Clinical Trials: A Consensus Report. <i>Diabetes Care</i> , 2016 , 39, 1175-9	14.6	149

99	A Multimetric Evaluation of Stratified Random Sampling for Classification: A Case Study. <i>IEEE Life Sciences Letters</i> , 2016 , 2, 43-46		1
98	Reducing Glucose Variability Due to Meals and Postprandial Exercise in T1DM Using Switched LPV Control: In Silico Studies. <i>Journal of Diabetes Science and Technology</i> , 2016 , 10, 744-53	4.1	18
97	Functional network inference of the suprachiasmatic nucleus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 4512-7	11.5	39
96	Preliminary Evaluation of a Long-Term Intraperitoneal Glucose Sensor With Flushing Mechanism. <i>Journal of Diabetes Science and Technology</i> , 2016 , 10, 1192-4	4.1	9
95	Multinational Home Use of Closed-Loop Control Is Safe and Effective. <i>Diabetes Care</i> , 2016 , 39, 1143-50	14.6	83
94	A systems theoretic approach to analysis and control of mammalian circadian dynamics. <i>Chemical Engineering Research and Design</i> , 2016 , 116, 48-60	5.5	15
93	Minority groups and the artificial pancreas: who is (not) in line?. <i>Lancet Diabetes and Endocrinology</i> , 2016 , 4, 880-881	18.1	8
92	Design and Evaluation of a Robust PID Controller for a Fully Implantable Artificial Pancreas. <i>Industrial & Engineering Chemistry Research</i> , 2015 , 54, 10311-10321	3.9	38
91	Synchronization of Pulse-Coupled Oscillators on (Strongly) Connected Graphs. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 1710-1715	5.9	26
90	Velocity-weighting to prevent controller-induced hypoglycemia in MPC of an artificial pancreas to treat T1DM. <i>Proceedings of the American Control Conference</i> , 2015 , 2015, 1635-1640	1.2	11
89	Adjustment of Open-Loop Settings to Improve Closed-Loop Results in Type 1 Diabetes: A Multicenter Randomized Trial. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2015 , 100, 3878-86	5.6	58
88	Early Detection of Physical Activity for People With Type 1 Diabetes Mellitus. <i>Journal of Diabetes Science and Technology</i> , 2015 , 9, 1236-45	4.1	26
87	Modeling the inflammatory response in the hypothalamus ensuing heat stroke: iterative cycle of model calibration, identifiability analysis, experimental design and data collection. <i>Mathematical Biosciences</i> , 2015 , 260, 35-46	3.9	3
86	Quantifying Stochastic Noise in Cultured Circadian Reporter Cells. <i>PLoS Computational Biology</i> , 2015 , 11, e1004451	5	11
85	Empirical Dynamic Model Identification for Blood-Glucose Dynamics in Response to Physical Activity 2015 , 2015, 3834-3839	1.3	5
84	A Coupled Stochastic Model Explains Differences in Cry Knockout Behavior. <i>IEEE Life Sciences Letters</i> , 2015 , 1, 3-6		6
83	Tackling problem nonlinearities & delays via asymmetric, state-dependent objective costs in MPC of an artificial pancreas. <i>IFAC-PapersOnLine</i> , 2015 , 48, 154-159	0.7	9
82	Systems biology approach to understanding post-traumatic stress disorder. <i>Molecular BioSystems</i> , 2015 , 11, 980-93		19

81	Quantity and accessibility for specific targeting of receptors in tumours. <i>Scientific Reports</i> , 2014 , 4, 52324.9	29
80	Online prediction of subcutaneous glucose concentration for type 1 diabetes using empirical models and frequency-band separation. <i>AIChE Journal</i> , 2014 , 60, 574-584	3.6 18
79	Clinical evaluation of an automated artificial pancreas using zone-model predictive control and health monitoring system. <i>Diabetes Technology and Therapeutics</i> , 2014 , 16, 348-57	8.1 50
78	Closed-loop artificial pancreas systems: engineering the algorithms. <i>Diabetes Care</i> , 2014 , 37, 1191-7	14.6 268
77	Multicenter closed-loop/hybrid meal bolus insulin delivery with type 1 diabetes. <i>Diabetes Technology and Therapeutics</i> , 2014 , 16, 623-32	8.1 33
76	State Estimation with Sensor Recalibrations and Asynchronous Measurements for MPC of an Artificial Pancreas to Treat T1DM. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014 , 47, 224-230	2
75	Glucose sensing in the peritoneal space offers faster kinetics than sensing in the subcutaneous space. <i>Diabetes</i> , 2014 , 63, 2498-505	0.9 37
74	Closed-Loop Control Performance of the Hypoglycemia-Hyperglycemia Minimizer (HHM) System in a Feasibility Study. <i>Journal of Diabetes Science and Technology</i> , 2014 , 8, 35-42	4.1 10
73	Reducing risks in type 1 diabetes using H _∞ control. <i>IEEE Transactions on Biomedical Engineering</i> , 2014 , 61, 2939-47	5 34
72	Response to comment on Doyle et al. Closed-loop artificial pancreas systems: engineering the algorithms. <i>Diabetes Care</i> 2014;37:1191-1197. <i>Diabetes Care</i> , 2014 , 37, e228	14.6 1
71	Design of an Artificial Pancreas using Zone Model Predictive Control with a Moving Horizon State Estimator 2014 , 2014, 6975-6980	1.3 7
70	Novel insulin delivery profiles for mixed meals for sensor-augmented pump and closed-loop artificial pancreas therapy for type 1 diabetes mellitus. <i>Journal of Diabetes Science and Technology</i> , 2014 , 8, 957-68	4.1 17
69	Spatiotemporal separation of PER and CRY posttranslational regulation in the mammalian circadian clock. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 2040-5	11.5 40
68	Amplitude metrics for cellular circadian bioluminescence reporters. <i>Biophysical Journal</i> , 2014 , 107, 2712-23	60
67	MPC Design for Rapid Pump-Attenuation and Expedited Hyperglycemia Response to Treat T1DM with an Artificial Pancreas. <i>Proceedings of the American Control Conference</i> , 2014 , 2014, 4224-4230	1.2 18
66	Moving-horizon-like state estimation via continuous glucose monitor feedback in MPC of an artificial pancreas for type 1 diabetes 2014 , 2014, 310-315	1.3 6
65	Safety of outpatient closed-loop control: first randomized crossover trials of a wearable artificial pancreas. <i>Diabetes Care</i> , 2014 , 37, 1789-96	14.6 144
64	Estimating confidence intervals in predicted responses for oscillatory biological models. <i>BMC Systems Biology</i> , 2013 , 7, 71	3.5 9

63	A neuropeptide speeds circadian entrainment by reducing intercellular synchrony. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E4355-61	11.5	95
62	Clinical evaluation of a personalized artificial pancreas. <i>Diabetes Care</i> , 2013 , 36, 801-9	14.6	91
61	Statistical analysis of the pulse-coupled synchronization strategy for wireless sensor networks. <i>IEEE Transactions on Signal Processing</i> , 2013 , 61,	4.8	17
60	Periodic-zone model predictive control for diurnal closed-loop operation of an artificial pancreas. <i>Journal of Diabetes Science and Technology</i> , 2013 , 7, 1446-60	4.1	59
59	Dynamic insulin on board: incorporation of circadian insulin sensitivity variation. <i>Journal of Diabetes Science and Technology</i> , 2013 , 7, 928-40	4.1	34
58	Modeling the intra- and extracellular cytokine signaling pathway under heat stroke in the liver. <i>PLoS ONE</i> , 2013 , 8, e73393	3.7	13
57	Control-relevant models for glucose control using a priori patient characteristics. <i>IEEE Transactions on Biomedical Engineering</i> , 2012 , 59, 1839-49	5	115
56	Bio-inspired Synchronization of Non-Identical Pulse-Coupled Oscillators Subject to a Global Cue and Local Interactions*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012 , 45, 115-120		2
55	Energy-efficient pulse-coupled synchronization strategy design for wireless sensor networks through reduced idle listening. <i>IEEE Transactions on Signal Processing</i> , 2012 , 60,	4.8	71
54	Bio-inspired synchronization of wireless sensor networks for acoustic event detection systems 2012 ,		2
53	Fully integrated artificial pancreas in type 1 diabetes: modular closed-loop glucose control maintains near normoglycemia. <i>Diabetes</i> , 2012 , 61, 2230-7	0.9	271
52	Core module biomarker identification with network exploration for breast cancer metastasis. <i>BMC Bioinformatics</i> , 2012 , 13, 12	3.6	31
51	Computational modeling of glucose transport in pancreatic β cells identifies metabolic thresholds and therapeutic targets in diabetes. <i>PLoS ONE</i> , 2012 , 7, e53130	3.7	20
50	Optimal phase response functions for fast pulse-coupled synchronization in wireless sensor networks. <i>IEEE Transactions on Signal Processing</i> , 2012 , 60,	4.8	40
49	A detailed modular analysis of heat-shock protein dynamics under acute and chronic stress and its implication in anxiety disorders. <i>PLoS ONE</i> , 2012 , 7, e42958	3.7	19
48	Novel global sensitivity analysis methodology accounting for the crucial role of the distribution of input parameters: application to systems biology models. <i>International Journal of Robust and Nonlinear Control</i> , 2012 , 22, 1082-1102	3.6	33
47	Identification of small molecule activators of cryptochrome. <i>Science</i> , 2012 , 337, 1094-7	33.3	320
46	Theoretical analysis of insulin-dependent glucose uptake heterogeneity in 3D bioreactor cell culture. <i>Biotechnology Progress</i> , 2012 , 28, 833-45	2.8	5

45	Increasing sync rate of pulse-coupled oscillators via phase response function design: theory and application to wireless networks. <i>IEEE Transactions on Control Systems Technology</i> , 2012 , 21,	4.8	22
44	Weakly circadian cells improve resynchrony. <i>PLoS Computational Biology</i> , 2012 , 8, e1002787	5	39
43	Modeling cortisol dynamics in the neuro-endocrine axis distinguishes normal, depression, and post-traumatic stress disorder (PTSD) in humans. <i>PLoS Computational Biology</i> , 2012 , 8, e1002379	5	85
42	Pilot studies of wearable outpatient artificial pancreas in type 1 diabetes. <i>Diabetes Care</i> , 2012 , 35, e65-71	14.6	89
41	Design of the health monitoring system for the artificial pancreas: low glucose prediction module. <i>Journal of Diabetes Science and Technology</i> , 2012 , 6, 1345-54	4.1	37
40	Bio-inspired hybrid control of pulse-coupled oscillators and application to synchronization of a wireless network 2012 ,		6
39	Methods for In Silico Biology: Model Construction and Analysis 2011 , 7-36		
38	Robust multi-drug therapy design and application to insulin resistance in type 2 diabetes. <i>International Journal of Robust and Nonlinear Control</i> , 2011 , 21, 1730-1741	3.6	8
37	Real-Time hypoglycemia prediction suite using continuous glucose monitoring: a safety net for the artificial pancreas. <i>Diabetes Care</i> , 2010 , 33, 1249-54	14.6	104
36	Automatic bolus and adaptive basal algorithm for the artificial pancreatic β cell. <i>Diabetes Technology and Therapeutics</i> , 2010 , 12, 879-87	8.1	17
35	Vulnerabilities in the tau network and the role of ultrasensitive points in tau pathophysiology. <i>PLoS Computational Biology</i> , 2010 , 6, e1000997	5	12
34	An advisory protocol for rapid- and slow-acting insulin therapy based on a run-to-run methodology. <i>Diabetes Technology and Therapeutics</i> , 2010 , 12, 555-65	8.1	9
33	Zone model predictive control: a strategy to minimize hyper- and hypoglycemic events. <i>Journal of Diabetes Science and Technology</i> , 2010 , 4, 961-75	4.1	154
32	Closed-loop control of artificial pancreatic Beta -cell in type 1 diabetes mellitus using model predictive iterative learning control. <i>IEEE Transactions on Biomedical Engineering</i> , 2010 , 57, 211-9	5	114
31	Model predictive control with learning-type set-point: Application to artificial pancreatic β cell. <i>AIChE Journal</i> , 2010 , 56, 1510-1518	3.6	31
30	A model of the cell-autonomous mammalian circadian clock. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 11107-12	11.5	153
29	Clinical update on optimal prandial insulin dosing using a refined run-to-run control algorithm. <i>Journal of Diabetes Science and Technology</i> , 2009 , 3, 487-91	4.1	28
28	Safety constraints in an artificial pancreatic beta cell: an implementation of model predictive control with insulin on board. <i>Journal of Diabetes Science and Technology</i> , 2009 , 3, 536-44	4.1	111

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