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	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
2	International Consensus on Use of Continuous Glucose Monitoring. Diabetes Care, 2017, 40, 1631-1640.	8.6	1,376
3	Intercellular Coupling Confers Robustness against Mutations in the SCN Circadian Clock Network. Cell, 2007, 129, 605-616.	28.9	676
4	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
5	Survey on iterative learning control, repetitive control, and run-to-run control. Journal of Process Control, 2009, 19, 1589-1600.	3.3	635
6	Identification of Small Molecule Activators of Cryptochrome. Science, 2012, 337, 1094-1097.	12.6	408
7	Fully Integrated Artificial Pancreas in Type 1 Diabetes. Diabetes, 2012, 61, 2230-2237.	0.6	343
8	Closed-Loop Artificial Pancreas Systems: Engineering the Algorithms. Diabetes Care, 2014, 37, 1191-1197.	8.6	339
9	Robustness properties of circadian clock architectures. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 13210-13215.	7.1	249
10	Guidelines for Genome-Scale Analysis of Biological Rhythms. Journal of Biological Rhythms, 2017, 32, 380-393.	2.6	237
11	A novel computational model of the circadian clock in Arabidopsis that incorporates PRR7 and PRR9. Molecular Systems Biology, 2006, 2, 58.	7.2	213
12	Outcome Measures for Artificial Pancreas Clinical Trials: A Consensus Report. Diabetes Care, 2016, 39, 1175-1179.	8.6	195
13	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
14	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
15	Safety of Outpatient Closed-Loop Control: First Randomized Crossover Trials of a Wearable Artificial Pancreas. Diabetes Care, 2014, 37, 1789-1796.	8.6	168
16	A Molecular Model for Intercellular Synchronization in the Mammalian Circadian Clock. Biophysical Journal, 2007, 92, 3792-3803.	0.5	144
17	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
18	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

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19	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
20	Control-Relevant Models for Glucose Control Using A Priori Patient Characteristics. IEEE Transactions on Biomedical Engineering, 2012, 59, 1839-1849.	4.2	133
21	Randomized Crossover Comparison of Personalized MPC and PID Control Algorithms for the Artificial Pancreas. Diabetes Care, 2016, 39, 1135-1142.	8.6	123
22	Real-Time Hypoglycemia Prediction Suite Using Continuous Glucose Monitoring. Diabetes Care, 2010, 33, 1249-1254.	8.6	120
23	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
24	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
25	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
26	Run-to-run control of blood glucose concentrations for people with type 1 diabetes mellitus. IEEE Transactions on Biomedical Engineering, 2006, 53, 996-1005.	4.2	113
27	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
28	Pilot Studies of Wearable Outpatient Artificial Pancreas in Type 1 Diabetes. Diabetes Care, 2012, 35, e65-e67.	8.6	108
29	Amplitude Metrics for Cellular Circadian Bioluminescence Reporters. Biophysical Journal, 2014, 107, 2712-2722.	0.5	106
30	A run-to-run control strategy to adjust basal insulin infusion rates in type 1 diabetes. Journal of Process Control, 2008, 18, 258-265.	3.3	104
31	Clinical Evaluation of a Personalized Artificial Pancreas. Diabetes Care, 2013, 36, 801-809.	8.6	97
32	Multinational Home Use of Closed-Loop Control Is Safe and Effective. Diabetes Care, 2016, 39, 1143-1150.	8.6	95
33	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
34	Entrainment of Circadian Rhythms Depends on Firing Rates and Neuropeptide Release of VIP SCN Neurons. Neuron, 2018, 99, 555-563.e5.	8.1	80
35	Modular Artificial Î²-Cell System: A Prototype for Clinical Research. Journal of Diabetes Science and Technology, 2008, 2, 863-872.	2.2	74
36	Velocity-weighting & velocity-penalty MPC of an artificial pancreas: Improved safety & performance. Automatica, 2018, 91, 105-117.	5.0	74

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37	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
38	Event-Triggered Model Predictive Control for Embedded Artificial Pancreas Systems. IEEE Transactions on Biomedical Engineering, 2018, 65, 575-586.	4.2	73
39	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
40	Prandial Insulin Dosing Using Run-to-Run Control: Application of clinical data and medical expertise to define a suitable performance metric. Diabetes Care, 2007, 30, 1131-1136.	8.6	69
41	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
42	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
43	Multi-omic biomarker identification and validation for diagnosing warzone-related post-traumatic stress disorder. Molecular Psychiatry, 2020, 25, 3337-3349.	7.9	68
44	Microneedle Aptamer-Based Sensors for Continuous, Real-Time Therapeutic Drug Monitoring. Analytical Chemistry, 2022, 94, 8335-8345.	6.5	68
45	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
46	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
47	Ontogeny of Circadian Rhythms and Synchrony in the Suprachiasmatic Nucleus. Journal of Neuroscience, 2018, 38, 1326-1334.	3.6	66
48	Effect of input excitation on the quality of empirical dynamic models for type 1 diabetes. AICHE Journal, 2009, 55, 1135-1146.	3.6	65
49	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
50	Cybernetic Model Predictive Control of a Continuous Bioreactor with Cell Recycle. Biotechnology Progress, 2003, 19, 1487-1497.	2.6	59
51	Sensitivity Measures for Oscillating Systems: Application to Mammalian Circadian Gene Network. IEEE Transactions on Automatic Control, 2008, 53, 177-188.	5.7	59
52	Glucose Estimation and Prediction through Meal Responses Using Ambulatory Subject Data for Advisory Mode Model Predictive Control. Journal of Diabetes Science and Technology, 2007, 1, 825-833.	2.2	58
53	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
54	Core module biomarker identification with network exploration for breast cancer metastasis. BMC Bioinformatics, 2012, 13, 12.	2.6	57

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55	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
56	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
57	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
58	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
59	Metabolomic analysis of male combat veterans with post traumatic stress disorder. PLoS ONE, 2019, 14, e0213839.	2.5	54
60	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
61	Glucose control design using nonlinearity assessment techniques. AICHE Journal, 2005, 51, 544-554.	3.6	53
62	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
63	Circadian Phase Resetting via Single and Multiple Control Targets. PLoS Computational Biology, 2008, 4, e1000104.	3.2	50
64	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
65	Weakly Circadian Cells Improve Resynchrony. PLoS Computational Biology, 2012, 8, e1002787.	3.2	48
66	Reducing Risks in Type 1 Diabetes Using ${cal H}_infty$ Control. IEEE Transactions on Biomedical Engineering, 2014, 61, 2939-2947.	4.2	48
67	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
68	Dynamic Insulin on Board: Incorporation of Circadian Insulin Sensitivity Variation. Journal of Diabetes Science and Technology, 2013, 7, 928-940.	2.2	46
69	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
70	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
71	Glucose Sensing in the Peritoneal Space Offers Faster Kinetics Than Sensing in the Subcutaneous Space. Diabetes, 2014, 63, 2498-2505.	0.6	43
72	Quantitative performance metrics for robustness in circadian rhythms. Bioinformatics, 2007, 23, 358-364.	4.1	42

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73	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
74	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
75	Enhanced Model Predictive Control (eMPC) Strategy for Automated Glucose Control. Industrial & Engineering Chemistry Research, 2016, 55, 11857-11868.	3.7	40
76	Randomized Controlled Trial of Mobile Closed-Loop Control. Diabetes Care, 2020, 43, 607-615.	8.6	40
77	Model predictive control with learningâ€type setâ€point: Application to artificial pancreatic Î²â€cell. AICHE Journal, 2010, 56, 1510-1518.	3.6	39
78	Multicenter Closed-Loop/Hybrid Meal Bolus Insulin Delivery with Type 1 Diabetes. Diabetes Technology and Therapeutics, 2014, 16, 623-632.	4.4	38
79	Oscillator Model Reduction Preserving the Phase Response: Application to the Circadian Clock. Biophysical Journal, 2008, 95, 1658-1673.	0.5	35
80	Synchrony and entrainment properties of robust circadian oscillators. Journal of the Royal Society Interface, 2008, 5, S17-28.	3.4	35
81	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
82	In Silico Evaluation Platform for Artificial Pancreatic Î²-Cell Developmentâ€"A Dynamic Simulator for Closed-Loop Control with Hardware-in-the-Loop. Diabetes Technology and Therapeutics, 2009, 11, 187-194.	4.4	34
83	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
84	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
85	Quantity and accessibility for specific targeting of receptors in tumours. Scientific Reports, 2014, 4, 5232.	3.3	33
86	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
87	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
88	Synchronization of Pulse-Coupled Oscillators on (Strongly) Connected Graphs. IEEE Transactions on Automatic Control, 2015, 60, 1710-1715.	5.7	31
89	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
90	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

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91	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
92	Embedded Control in Wearable Medical Devices: Application to the Artificial Pancreas. Processes, 2016, 4, 35.	2.8	27
93	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
94	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
95	Closed-Loop Control and Advisory Mode Evaluation of an Artificial Pancreatic Î² Cell: Use of Proportional-Integral-Derivative Equivalent Model-Based Controllers. Journal of Diabetes Science and Technology, 2008, 2, 636-644.	2.2	24
96	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
97	Novel Pharmacological Targets for Combat PTSDâ€"Metabolism, Inflammation, The Gut Microbiome, and Mitochondrial Dysfunction. Military Medicine, 2020, 185, 311-318.	0.8	24
98	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
99	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
100	Polygenic risk associated with post-traumatic stress disorder onset and severity. Translational Psychiatry, 2019, 9, 165.	4.8	23
101	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
102	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
103	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
104	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
105	Multivariate learning framework for longâ€term adaptation in the artificial pancreas. Bioengineering and Translational Medicine, 2019, 4, 61-74.	7.1	22
106	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
107	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
108	MPC design for rapid pump-attenuation and expedited hyperglycemia response to treat T1DM with an Artificial Pancreas. , 2014, 2014, 4224-4230.		21

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109	Pulse-coupled time synchronization for distributed acoustic event detection using wireless sensor networks. Control Engineering Practice, 2017, 60, 106-117.	5.5	21
110	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
111	Automatic Bolus and Adaptive Basal Algorithm for the Artificial Pancreatic Î²-Cell. Diabetes Technology and Therapeutics, 2010, 12, 879-887.	4.4	20
112	Systems biology approach to understanding post-traumatic stress disorder. Molecular BioSystems, 2015, 11, 980-993.	2.9	20
113	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
114	Circadian rhythm: A natural, robust, multi-scale control system. Computers and Chemical Engineering, 2006, 30, 1700-1711.	3.8	19
115	Pharmaceutical-based entrainment of circadian phase via nonlinear model predictive control. Automatica, 2019, 100, 336-348.	5.0	19
116	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
117	Statistical Analysis of the Pulse-Coupled Synchronization Strategy for Wireless Sensor Networks. IEEE Transactions on Signal Processing, 2013, 61, 5193-5204.	5.3	18
118	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
119	Modeling the <i>Drosophila melanogaster</i> Circadian Oscillator via Phase Optimization. Journal of Biological Rhythms, 2008, 23, 525-537.	2.6	17
120	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
121	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
122	Velocity-weighting to prevent controller-induced hypoglycemia in MPC of an artificial pancreas to treat T1DM. , 2015, 2015, 1635-1640.		15
123	A systems theoretic approach to analysis and control of mammalian circadian dynamics. Chemical Engineering Research and Design, 2016, 116, 48-60.	5.6	15
124	Batchâ€toâ€batch control of characteristic points on the PSD in experimental emulsion polymerization. AIChE Journal, 2008, 54, 3171-3187.	3.6	14
125	Quantifying Stochastic Noise in Cultured Circadian Reporter Cells. PLoS Computational Biology, 2015, 11, e1004451.	3.2	14
126	Embedded Model Predictive Control for a Wearable Artificial Pancreas. IEEE Transactions on Control Systems Technology, 2020, 28, 2600-2607.	5.2	14

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127	Modeling the Intra- and Extracellular Cytokine Signaling Pathway under Heat Stroke in the Liver. PLoS ONE, 2013, 8, e73393.	2.5	14
128	Vulnerabilities in the Tau Network and the Role of Ultrasensitive Points in Tau Pathophysiology. PLoS Computational Biology, 2010, 6, e1000997.	3.2	13
129	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
130	The International Diabetes Closed-Loop Study: Testing Artificial Pancreas Component Interoperability. Diabetes Technology and Therapeutics, 2019, 21, 73-80.	4.4	13
131	Hybrid approach to polymer grade transition control. AICHE Journal, 2004, 50, 2502-2513.	3.6	12
132	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
133	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
134	Safe Bayesian Optimization Using Interior-Point Methodsâ€"Applied to Personalized Insulin Dose Guidance. , 2022, 6, 2834-2839.		12
135	Reachability of particle size distribution in semibatch emulsion polymerization. AICHE Journal, 2004, 50, 3049-3059.	3.6	11
136	Design of an artificial pancreas using zone model predictive control with a Moving Horizon State Estimator. , 2014, 2014, 6975-6980.		11
137	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
138	Utilization of machine learning for identifying symptom severity military-related PTSD subtypes and their biological correlates. Translational Psychiatry, 2021, 11, 227.	4.8	11
139	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
140	Estimating confidence intervals in predicted responses for oscillatory biological models. BMC Systems Biology, 2013, 7, 71.	3.0	10
141	Minority groups and the artificial pancreas: who is (not) in line?. Lancet Diabetes and Endocrinology,the, 2016, 4, 880-881.	11.4	10
142	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
143	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
144	Mass and heat transfer modeling of a physical vapor deposition effusion source. AICHE Journal, 2005, 51, 878-894.	3.6	9

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145	Modeling and Sensitivity Analysis of Particle Size Distribution and Chain Length Distribution in a Semibatch Emulsion Copolymerization Reactor. Macromolecular Theory and Simulations, 2005, 14, 474-490.	1.4	9
146	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
147	Gaussian process-based model predictive control of blood glucose for patients with type 1 diabetes mellitus. , 2017, , .		9
148	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
149	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
150	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
151	Modeling the Influence of Chronic Sleep Restriction on Cortisol Circadian Rhythms, with Implications for Metabolic Disorders. Metabolites, 2021, 11, 483.	2.9	9
152	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
153	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
154	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
155	Bio-inspired hybrid control of pulse-coupled oscillators and application to synchronization of a wireless network. , 2012, , .		7
156	Zone-MPC Automated Insulin Delivery Algorithm Tuned for Pregnancy Complicated by Type 1 Diabetes. Frontiers in Endocrinology, 2021, 12, 768639.	3.5	7
157	Empirical dynamic model identification for blood-glucose dynamics in response to physical activity. , 2015, 2015, 3834-3839.		6
158	A Coupled Stochastic Model Explains Differences in Cry Knockout Behavior. IEEE Life Sciences Letters, 2015, 1, 3-6.	1.2	6
159	Model predictive control with event-triggered communication for an embedded artificial pancreas. , 2017, , .		6
160	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
161	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
162	Getting IoT-ready. , 2019, , 29-57.		6

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163	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
164	Theoretical analysis of insulinâ€dependent glucose uptake heterogeneity in 3D bioreactor cell culture. Biotechnology Progress, 2012, 28, 833-845.	2.6	5
165	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
166	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
167	Automated Insulin Delivery for Type 1 Diabetes Mellitus Patients using Gaussian Process-based Model Predictive Control. , 2019, , .		5
168	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
169	Bio-inspired synchronization of wireless sensor networks for acoustic event detection systems. , 2012, , .		4
170	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
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