# Morten Gram Pedersen

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3659405/publications.pdf

Version: 2024-02-01

| 70 | 1,950 | 257450 | 276875 |
|---|---|---|---|
| papers | citations | 24 h-index | 41 g-index |

| 75 | 75 | 75 | 2046 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Amplitude-modulated spiking as a novel route to bursting: Coupling-induced mixed-mode oscillations by symmetry breaking. Chaos, 2022, 32, 013121. | 2.5 | 15 |
| 2 | A Morphological Peak-Detector for Single-Unit Neural Recording Acquisition Systems. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11. | 4.7 | 1 |
| 3 | Human pancreatic islet miRNA-mRNA networks of altered miRNAs due to glycemic status. IScience, 2022, 25, 103995. | 4.1 | 7 |
| 4 | Data-driven estimation of change points reveals correlation between face mask use and accelerated curtailing of the first wave of the COVID-19 epidemic in Italy. Infectious Diseases, 2021, 53, 243-251. | 2.8 | 10 |
| 5 | Geometric analysis of mixed-mode oscillations in a model of electrical activity in human beta-cells. Nonlinear Dynamics, 2021, 104, 4445-4457. | 5.2 | 18 |
| 6 | Calcium Signaling in the Photodamaged Skin: In Vivo Experiments and Mathematical Modeling. Function, 2021, 3, zqab064. | 2.3 | 9 |
| 7 | Heterogeneous alpha-cell population modeling of glucose-induced inhibition of electrical activity. Journal of Theoretical Biology, 2020, 485, 110036. | 1.7 | 12 |
| 8 | Surging critical care capacity for COVID-19: Key now and in the future. Progress in Disaster Science, 2020, 8, 100136. | 2.7 | 11 |
| 9 | Stopping waves: geometric analysis of coupled bursters in an asymmetric excitation field. Nonlinear Dynamics, 2019, 96, 1927-1937. | 5.2 | 4 |
| 10 | From Local to Global Modeling for Characterizing Calcium Dynamics and Their Effects on Electrical Activity and Exocytosis in Excitable Cells. International Journal of Molecular Sciences, 2019, 20, 6057. | 4.1 | 2 |
| 11 | Calcium signaling and secretory granule pool dynamics underlie biphasic insulin secretion and its amplification by glucose: experiments and modeling. American Journal of Physiology - Endocrinology and Metabolism, 2019, 316, E475-E486. | 3.5 | 29 |
| 12 | Biological mechanisms beyond network analysis via mathematical modeling. Physics of Life Reviews, 2018, 24, 156-158. | 2.8 | 3 |
| 13 | Explicit Theoretical Analysis of How the Rate of Exocytosis Depends on Local Control by Ca<sup>2+</sup> Channels. Computational and Mathematical Methods in Medicine, 2018, 2018, 1-12. | 1.3 | 15 |
| 14 | Simultaneous stimulation and recording of cell activity with reference-less sensors: Is it feasible?. Organic Electronics, 2018, 62, 676-684. | 2.6 | 8 |
| 15 | TIPS-Pentacene as Biocompatible Material for Solution Processed High-Performance Electronics Operating in Water. IEEE Electron Device Letters, 2018, 39, 1401-1404. | 3.9 | 12 |
| 16 | Gap-junction coupling can prolong beta-cell burst period by an order of magnitude via phantom bursting. Chaos, 2018, 28, 063111. | 2.5 | 13 |
| 17 | Spatiotemporal Modeling of Triggering and Amplifying Pathways in GLP-1 Secreting Intestinal L Cells. Biophysical Journal, 2017, 112, 162-171. | 0.5 | 9 |
| 18 | Concise Whole-Cell Modeling of BK Ca -CaV Activity Controlled by Local Coupling and Stoichiometry. Biophysical Journal, 2017, 112, 2387-2396. | 0.5 | 13 |

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|---|---|---|---|
| 19 | CFTR is involved in the regulation of glucagon secretion in human and rodent alpha cells. Scientific Reports, 2017, 7, 90. | 3.3 | 48 |
| 20 | Recent advances in mathematical modeling and statistical analysis of exocytosis in endocrine cells. Mathematical Biosciences, 2017, 283, 60-70. | 1.9 | 11 |
| 21 | Ca2+ channel clustering with insulin-containing granules is disturbed in type 2 diabetes. Journal of Clinical Investigation, 2017, 127, 2353-2364. | 8.2 | 70 |
| 22 | Heterogeneity and nearest-neighbor coupling can explain small-worldness and wave properties in pancreatic islets. Chaos, 2016, 26, 053103. | 2.5 | 40 |
| 23 | Is Bursting More Effective than Spiking in Evoking Pituitary Hormone Secretion? A Spatiotemporal Simulation Study of Calcium Diffusion and Exocytosis. Biophysical Journal, 2016, 110, 432a. | 0.5 | 0 |
| 24 | Mathematical Modeling of Human Pancreatic Alpha-Cells: Insight into the Role of SGLT2 in Glucagon Secretion. Biophysical Journal, 2016, 110, 452a. | 0.5 | 0 |
| 25 | Dapagliflozin stimulates glucagon secretion at high glucose: experiments and mathematical simulations of human A-cells. Scientific Reports, 2016, 6, 31214. | 3.3 | 50 |
| 26 | Is bursting more effective than spiking in evoking pituitary hormone secretion? A spatiotemporal simulation study of calcium and granule dynamics. American Journal of Physiology - Endocrinology and Metabolism, 2016, 310, E515-E525. | 3.5 | 27 |
| 27 | Statistical Frailty Modeling for Quantitative Analysis of Exocytotic Events Recorded by Live Cell Imaging: Rapid Release of Insulin-Containing Granules Is Impaired in Human Diabetic Î²-cells. PLoS ONE, 2016, 11, e0167282. | 2.5 | 3 |
| 28 | Mathematical modelling of local calcium and regulated exocytosis during inhibition and stimulation of glucagon secretion from pancreatic alphaâ€cells. Journal of Physiology, 2015, 593, 4519-4530. | 2.9 | 28 |
| 29 | Reactive oxygen and nitrogen species disturb Ca2+ oscillations in insulin-secreting MIN6 Î²-cells. Islets, 2015, 7, e1107255. | 1.8 | 4 |
| 30 | Inwardly rectifying Kir2.1 currents in human Î²-cells control electrical activity: Characterisation and mathematical modelling. Biochemical and Biophysical Research Communications, 2015, 459, 284-287. | 2.1 | 15 |
| 31 | Mathematical modeling of gap junction coupling and electrical activity in humanÎ²-cells. Physical Biology, 2015, 12, 066002. | 1.8 | 36 |
| 32 | New trends and perspectives in nonlinear intracellular dynamics: one century from Michaelisâ€“Menten paper. Continuum Mechanics and Thermodynamics, 2015, 27, 659-684. | 2.2 | 38 |
| 33 | Mathematical Modeling of Interacting Glucose-Sensing Mechanisms and Electrical Activity Underlying Glucagon-Like Peptide 1 Secretion. PLoS Computational Biology, 2015, 11, e1004600. | 3.2 | 9 |
| 34 | Calcium Current Inactivation Rather than Pool Depletion Explains Reduced Exocytotic Rate with Prolonged Stimulation in Insulin-Secreting INS-1 832/13 Cells. PLoS ONE, 2014, 9, e103874. | 2.5 | 4 |
| 35 | Mathematical Modeling of Heterogeneous Electrophysiological Responses in Human Î²-Cells. PLoS Computational Biology, 2014, 10, e1003389. | 3.2 | 63 |
| 36 | Insulin Modelling. , 2014, , 333-353. | | 0 |

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|---|---|---|---|
| 37 | Advancing Our Understanding of the Glucose System via Modeling: A Perspective. IEEE Transactions on Biomedical Engineering, 2014, 61, 1577-1592. | 4.2 | 38 |
| 38 | Minimal modeling of insulin secretion in the perfused rat pancreas: a drug effect case study. American Journal of Physiology - Endocrinology and Metabolism, 2014, 306, E627-E634. | 3.5 | 8 |
| 39 | Modeling Electrical Activity in Intestinal L-Cells. Biophysical Journal, 2014, 106, 376a. | 0.5 | 0 |
| 40 | Multiscale modelling of insulin secretion during an intravenous glucose tolerance test. Interface Focus, 2013, 3, 20120085. | 3.0 | 7 |
| 41 | Modeling SK-Channels and Electrical Activity in Human Beta-Cells. Biophysical Journal, 2013, 104, 474a-475a. | 0.5 | 0 |
| 42 | Complex Patterns of Metabolic and Ca2+ Entrainment in Pancreatic Islets by Oscillatory Glucose. Biophysical Journal, 2013, 105, 29-39. | 0.5 | 40 |
| 43 | Reduced Insulin Exocytosis in Human Pancreatic Î²-Cells With Gene Variants Linked to Type 2 Diabetes. Diabetes, 2012, 61, 1726-1733. | 0.6 | 204 |
| 44 | Prediabetes: Evaluation of Î²-Cell Function. Diabetes, 2012, 61, 270-271. | 0.6 | 10 |
| 45 | On Depolarization-Evoked Exocytosis as a Function of Calcium Entry: Possibilities and Pitfalls. Biophysical Journal, 2011, 101, 793-802. | 0.5 | 11 |
| 46 | Multiscale Modeling of Insulin Secretion. IEEE Transactions on Biomedical Engineering, 2011, 58, 3020-3023. | 4.2 | 18 |
| 47 | Mathematical modeling and statistical analysis of calcium-regulated insulin granule exocytosis in Î²-cells from mice and humans. Progress in Biophysics and Molecular Biology, 2011, 107, 257-264. | 2.9 | 27 |
| 48 | Glucose-dependent docking and SNARE protein-mediated exocytosis in mouse pancreatic alpha-cell. Pflugers Archiv European Journal of Physiology, 2011, 462, 443-454. | 2.8 | 35 |
| 49 | Whole-Body and Cellular Models of Glucose-Stimulated Insulin Secretion. , 2011, , 489-503. | | 1 |
| 50 | Introducing total substrates simplifies theoretical analysis at non-negligible enzyme concentrations: pseudo first-order kinetics and the loss of zero-order ultrasensitivity. Journal of Mathematical Biology, 2010, 60, 267-283. | 1.9 | 27 |
| 51 | Modeling Mechanisms of Cell Secretion. Acta Biotheoretica, 2010, 58, 315-327. | 1.5 | 13 |
| 52 | Insulin Secretory Granules Enter a Highly Calciumâ€Sensitive State following Palmitateâ€Induced Dissociation from Calcium Channels: A Theoretical Study. Journal of Neuroendocrinology, 2010, 22, 1315-1324. | 2.6 | 7 |
| 53 | Cellular modeling: insight into oral minimal models of insulin secretion. American Journal of Physiology - Endocrinology and Metabolism, 2010, 298, E597-E601. | 3.5 | 34 |
| 54 | A Biophysical Model of Electrical Activity in Human Î²-Cells. Biophysical Journal, 2010, 99, 3200-3207. | 0.5 | 54 |

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| 55 | Contributions of Mathematical Modeling of Beta Cells to the Understanding of Beta-Cell Oscillations and Insulin Secretion. Journal of Diabetes Science and Technology, 2009, 3, 12-20. | 2.2 | 33 |
| 56 | Newcomer insulin secretory granules as a highly calcium-sensitive pool. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7432-7436. | 7.1 | 94 |
| 57 | Wave-Block Due to a Threshold Gradient Underlies Limited Coordination in Pancreatic Islets. Journal of Biological Physics, 2008, 34, 425-432. | 1.5 | 11 |
| 58 | Quasi steady-state approximations in complex intracellular signal transduction networks â€“ a word of caution. Journal of Mathematical Chemistry, 2008, 43, 1318-1344. | 1.5 | 42 |
| 59 | The total quasi-steady-state approximation for complex enzyme reactions. Mathematics and Computers in Simulation, 2008, 79, 1010-1019. | 4.4 | 32 |
| 60 | A subcellular model of glucose-stimulated pancreatic insulin secretion. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 3525-3543. | 3.4 | 45 |
| 61 | The Effect of Noise on Î²â€Cell Burst Period. SIAM Journal on Applied Mathematics, 2007, 67, 530-542. | 1.8 | 24 |
| 62 | Interaction of Glycolysis and Mitochondrial Respiration in Metabolic Oscillations of Pancreatic Islets. Biophysical Journal, 2007, 92, 1544-1555. | 0.5 | 104 |
| 63 | Phantom bursting is highly sensitive to noise and unlikely to account for slow bursting in -cells: Considerations in favor of metabolically driven oscillations. Journal of Theoretical Biology, 2007, 248, 391-400. | 1.7 | 22 |
| 64 | The Total Quasi-Steady-State Approximation for Fully Competitive Enzyme Reactions. Bulletin of Mathematical Biology, 2007, 69, 433-457. | 1.9 | 33 |
| 65 | A simplified model for mitochondrial ATP production. Journal of Theoretical Biology, 2006, 243, 575-586. | 1.7 | 145 |
| 66 | A comment on noise enhanced bursting in pancreatic -cells. Journal of Theoretical Biology, 2005, 235, 1-3. | 1.7 | 19 |
| 67 | Wave speeds of density dependent Nagumo diffusion equations â€“ inspired by oscillating gap-junction conductance in the islets of Langerhans. Journal of Mathematical Biology, 2005, 50, 683-698. | 1.9 | 12 |
| 68 | Intra- and Inter-Islet Synchronization of Metabolically Driven Insulin Secretion. Biophysical Journal, 2005, 89, 107-119. | 0.5 | 129 |
| 69 | Modeling Serum Creatinine in Septic ICU Patients. Cardiovascular Engineering (Dordrecht,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T | 1.0 | 1 |
| 70 | Homogenization of Heterogeneously Coupled Bistable ODE'sâ€”Applied to Excitation Waves in Pancreatic Islets of Langerhans. Journal of Biological Physics, 2004, 30, 285-303. | 1.5 | 14 |