# Michael Nikolaou

## List of Publications by Year
## in descending order

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|---|---|---|---|
| **63** papers | **1,854** citations | 331670 **21** h-index | 276875 **41** g-index |
| **67** all docs | **67** docs citations | **67** times ranked | **1326** citing authors |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 1 | Discerning in vitro pharmacodynamics from OD measurements: A model-based approach. Computers and Chemical Engineering, 2022, 158, 107617. | 3.8 | 6 |
| 2 | Revisiting the standard for modeling the spread of infectious diseases. Scientific Reports, 2022, 12, 7077. | 3.3 | 3 |
| 3 | Optimizing pharmacokinetics/pharmacodynamics of β-lactam/β-lactamase inhibitor combinations against high inocula of ESBL-producing bacteria. Journal of Antimicrobial Chemotherapy, 2021, 76, 179-183. | 3.0 | 18 |
| 4 | The Lambert function should be in the engineering mathematical toolbox. Computers and Chemical Engineering, 2021, 148, 107259. | 3.8 | 10 |
| 5 | Enhanced Geothermal System Model for Flow through a Stimulated Rock Volume. , 2021, , . |  | 2 |
| 6 | Simultaneous in vitro simulation of multiple antimicrobial agents with different elimination half-lives in a pre-clinical infection model. Computers and Chemical Engineering, 2021, 155, 107540. | 3.8 | 4 |
| 7 | Experimental Validation of a Mathematical Framework to Simulate Antibiotics with Distinct Half-Lives Concurrently in an In Vitro Model. Antibiotics, 2021, 10, 1256. | 3.7 | 2 |
| 8 | Ziegler and Nichols Meet Kermack and McKendrick: Parsimony in Dynamic Models for Epidemiology. Computers and Chemical Engineering, 2021, 157, 107615. | 3.8 | 2 |
| 9 | A data-driven modeling approach to zonal isolation of cemented gas wells. Journal of Natural Gas Science and Engineering, 2018, 59, 262-273. | 4.4 | 2 |
| 10 | Adaptive design of experiments for model order estimation in subspace identification. Computers and Chemical Engineering, 2017, 100, 119-138. | 3.8 | 15 |
| 11 | Improvement of zonal isolation in horizontal shale gas wells: A data-driven model-based approach. Journal of Natural Gas Science and Engineering, 2017, 47, 101-113. | 4.4 | 18 |
| 12 | Design of Experiments for Control-Relevant Multivariable Model Identification: An Overview of Some Basic Recent Developments. Processes, 2017, 5, 42. | 2.8 | 3 |
| 13 | Ensuring integral controllability for robust multivariable control. Computers and Chemical Engineering, 2016, 92, 172-179. | 3.8 | 1 |
| 14 | Experiment design for control-relevant identification of partially known stable multivariable systems. AICHE Journal, 2016, 62, 2986-3001. | 3.6 | 2 |
| 15 | Modeling heterogeneous bacterial populations exposed to antibiotics: The logistic-dynamics case. AICHE Journal, 2015, 61, 2385-2393. | 3.6 | 6 |
| 16 | Optimal Rules for Central Bank Interest Rates Subject to Zero Lower Bound. Economics, 2014, 8, . | 0.6 | 1 |
| 17 | Identification test design for multivariable model-based control: An industrial perspective. Control Engineering Practice, 2014, 22, 165-180. | 5.5 | 36 |
| 18 | Mathematical Model To Quantify the Effects of Risk Factors on Carbapenem-Resistant Acinetobacter baumannii. Antimicrobial Agents and Chemotherapy, 2014, 58, 5239-5244. | 3.2 | 1 |

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|---|---------|-----|-----------|
| 19 | Debottlenecking level control for tanks in series. Journal of Process Control, 2014, 24, 158-171. | 3.3 | 6 |
| 20 | Control of a process with unmeasured disturbances that change its steady-state gain sign. Journal of Process Control, 2013, 23, 294-305. | 3.3 | 2 |
| 21 | Evaluation of control methods for drilling operations with unexpected gas influx. Journal of Process Control, 2013, 23, 306-316. | 3.3 | 43 |
| 22 | Computer-aided process engineering in oil and gas production. Computers and Chemical Engineering, 2013, 51, 96-101. | 3.8 | 18 |
| 23 | Optimisation of Compressed Natural Gas Marine Transportation with Composite-Material Containers. , 2013, , . | | 2 |
| 24 | Drilling Automation: Presenting a Framework for Automated Operations. SPE Drilling and Completion, 2012, 27, 118-126. | 1.6 | 12 |
| 25 | MPC: Current practice and challenges. Control Engineering Practice, 2012, 20, 328-342. | 5.5 | 230 |
| 26 | Technologies for oil and gas production: Present and future. AICHE Journal, 2011, 57, 1974-1982. | 3.6 | 14 |
| 27 | Modelling biphasic killing of fluoroquinolones: guiding optimal dosing regimen design. Journal of Antimicrobial Chemotherapy, 2011, 66, 1079-1086. | 3.0 | 10 |
| 28 | A Novel Approach to Pharmacodynamic Assessment of Antimicrobial Agents: New Insights to Dosing Regimen Design. PLoS Computational Biology, 2011, 7, e1001043. | 3.2 | 32 |
| 29 | Managed Pressure Drilling: A Multi-Level Control Approach. , 2010, , . | | 15 |
| 30 | Optimizing the logistics of compressed natural gas transportation by marine vessels. Journal of Natural Gas Science and Engineering, 2010, 2, 1-20. | 4.4 | 13 |
| 31 | Mathematical Modeling To Characterize the Inoculum Effect. Antimicrobial Agents and Chemotherapy, 2010, 54, 4739-4743. | 3.2 | 17 |
| 32 | Automatic control of managed pressure drilling. , 2010, , . | | 15 |
| 33 | Multivariable system identification for integral controllability. Automatica, 2009, 45, 2194-2204. | 5.0 | 19 |
| 34 | Quantitative Assessment of Combination Antimicrobial Therapy against Multidrug-Resistant *Acinetobacter baumannii*. Antimicrobial Agents and Chemotherapy, 2008, 52, 2898-2904. | 3.2 | 31 |
| 35 | Pharmacodynamic Modeling of Aminoglycosides against *Pseudomonas aeruginosa* and *Acinetobacter baumannii* : Identifying Dosing Regimens To Suppress Resistance Development. Antimicrobial Agents and Chemotherapy, 2008, 52, 3987-3993. | 3.2 | 52 |
| 36 | Short-term Production Optimization by Automated Adaptive Modeling and Control. , 2008, , . | | 7 |

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|---|---------|----|-----------|
| 37 | Combating Microbial Resistance to Antimicrobial Agents through Dosing Regimen Optimization. Engineering and Management Innovation, 2008, , . | 0.1 | 0 |
| 38 | Modeling of Microbial Population Responses to Time-Periodic Concentrations of Antimicrobial Agents. Annals of Biomedical Engineering, 2007, 35, 1458-1470. | 2.5 | 21 |
| 39 | A New Modeling Approach to the Effect of Antimicrobial Agents on Heterogeneous Microbial Populations. Journal of Mathematical Biology, 2006, 52, 154-182. | 1.9 | 43 |
| 40 | Complexity in semiconductor manufacturing, activity of antimicrobial agents, and drilling of hydrocarbon wells: Common themes and case studies. Computers and Chemical Engineering, 2005, 29, 2266-2289. | 3.8 | 7 |
| 41 | Self-Learning Reservoir Management. SPE Reservoir Evaluation and Engineering, 2005, 8, 534-547. | 1.8 | 51 |
| 42 | Input design for model order determination in subspace identification. AICHE Journal, 2003, 49, 2124-2132. | 3.6 | 22 |
| 43 | Development of a data-driven dynamic model for a plasma etching reactor. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 891. | 1.6 | 1 |
| 44 | Linear control of nonlinear systems: Interplay between nonlinearity and feedback. AICHE Journal, 2002, 48, 1957-1980. | 3.6 | 47 |
| 45 | Effect of on-line optimization techniques on model predictive control and identification (MPCI). Computers and Chemical Engineering, 2002, 26, 1241-1252. | 3.8 | 22 |
| 46 | Model predictive controllers: A critical synthesis of theory and industrial needs. Advances in Chemical Engineering, 2001, 26, 131-204. | 0.9 | 67 |
| 47 | Integration of Computer-Aided High-Intensity Design with Reservoir Exploitation of Remote and Offshore Locations. , 2000, , . |  | 15 |
| 48 | Chance-constrained model predictive control. AICHE Journal, 1999, 45, 1743-1752. | 3.6 | 270 |
| 49 | Simultaneous Constrained Model Predictive Control and Identification of DARX Processes. Automatica, 1998, 34, 1521-1530. | 5.0 | 58 |
| 50 | FIR model identification: Parsimony through kernel compression with wavelets. AICHE Journal, 1998, 44, 141-150. | 3.6 | 48 |
| 51 | NONLINEARITY QUANTIFICATION AND ITS APPLICATION TO NONLINEAR SYSTEM IDENTIFICATION. Chemical Engineering Communications, 1998, 166, 1-33. | 2.6 | 18 |
| 52 | Constrained MPCI: A weak persistent excitation approach. AICHE Journal, 1997, 43, 2279-2288. | 3.6 | 12 |
| 53 | The Use of Wavelet Transforms in the Solution of Two-Phase Flow Problems. SPE Journal, 1996, 1, 169-178. | 3.1 | 6 |
| 54 | Design of robust nonsquare constrained model-predictive control. AICHE Journal, 1996, 42, 2582-2593. | 3.6 | 9 |

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|---|---------|----|-----------| 
| 55 | New approach to constrained predictive control with simultaneous model identification. AICHE Journal, 1996, 42, 2857-2868. | 3.6 | 102 |
| 56 | Performance bounds for robust quadratic dynamic matrix control with end condition. AICHE Journal, 1995, 41, 2083-2097. | 3.6 | 32 |
| 57 | Design of robust constrained model-predictive controllers with volterra series. AICHE Journal, 1995, 41, 2098-2107. | 3.6 | 53 |
| 58 | Saccharification, fermentation, and protein recovery from low-temperature AFEX-treated coastal bermudagrass. Biotechnology and Bioengineering, 1994, 44, 1122-1131. | 3.3 | 36 |
| 59 | Dynamic process modeling with recurrent neural networks. AICHE Journal, 1993, 39, 1654-1667. | 3.6 | 52 |
| 60 | Control of nonlinear dynamical systems modeled by recurrent neural networks. AICHE Journal, 1993, 39, 1890-1894. | 3.6 | 29 |
| 61 | Robust stability analysis of constrained l1-norm model predictive control. AICHE Journal, 1993, 39, 1954-1965. | 3.6 | 135 |
| 62 | When is Nonlinear Dynamic Modeling Necessary?. , 1993, , . | | 23 |
| 63 | Establishing Performance Targets for Model Predictive Control Systems through off-line Optimization. , 1991, , . | | 0 |