

Jorge Otávio Trierweiler

List of Publications by Year in descending order

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122
papers

1,678
citations

331670

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35
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123
all docs

123
docs citations

123
times ranked

1666
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Fast microwave assisted pyrolysis of biomass using microwave absorbent. Bioresource Technology, 2014, 156, 267-274. | 9.6 | 166 |
| 2 | Fast microwave-assisted pyrolysis of microalgae using microwave absorbent and HZSM-5 catalyst. Bioresource Technology, 2014, 166, 518-526. | 9.6 | 137 |
| 3 | Optimal heat exchanger network synthesis: A case study comparison. Applied Thermal Engineering, 2013, 51, 801-826. | 6.0 | 102 |
| 4 | Simultaneous synthesis of heat exchanger networks with operability considerations: Flexibility and controllability. Computers and Chemical Engineering, 2013, 55, 158-180. | 3.8 | 58 |
| 5 | RPN tuning strategy for model predictive control. Journal of Process Control, 2003, 13, 591-598. | 3.3 | 54 |
| 6 | Food waste biorefinery advocating circular economy: Bioethanol and distilled beverage from sweet potato. Journal of Cleaner Production, 2020, 268, 121788. | 9.3 | 41 |
| 7 | Growth of microalgae <i>Scenedesmus</i> sp in ethanol vinasse. Brazilian Archives of Biology and Technology, 2014, 57, 630-635. | 0.5 | 40 |
| 8 | Wheat flour characterization using NIR and spectral filter based on Ant Colony Optimization. Chemometrics and Intelligent Laboratory Systems, 2014, 132, 133-140. | 3.5 | 37 |
| 9 | Water reuse in tannery beamhouse process. Journal of Cleaner Production, 2010, 18, 1545-1552. | 9.3 | 35 |
| 10 | Aspects concerning the use of biosensors for process control: experimental and simulation investigations. Computers and Chemical Engineering, 2003, 27, 1165-1173. | 3.8 | 34 |
| 11 | Fluidized Bed Catalytic Pyrolysis of Eucalyptus over HZSM-5: Effect of Acid Density and Gallium Modification on Catalyst Deactivation. Energy & Fuels, 2018, 32, 1771-1778. | 5.1 | 34 |
| 12 | Oscillation detection in process industries – Part I: Review of the detection methods. Journal of Process Control, 2019, 78, 108-123. | 3.3 | 33 |
| 13 | Methodology for Detecting Model-Plant Mismatches Affecting Model Predictive Control Performance. Industrial & Engineering Chemistry Research, 2015, 54, 12072-12085. | 3.7 | 32 |
| 14 | A feedforward-feedback substrate controller based on a Kalman filter for a fed-batch cultivation of <i>Escherichia coli</i> producing phytase. Computers and Chemical Engineering, 2005, 29, 1113-1120. | 3.8 | 30 |
| 15 | Simultaneous cold hydrolysis and fermentation of fresh sweet potato. Biomass and Bioenergy, 2014, 70, 174-183. | 5.7 | 30 |
| 16 | Valve stiction estimation using global optimisation. Control Engineering Practice, 2012, 20, 379-385. | 5.5 | 28 |
| 17 | A heuristic Lagrangean approach for the synthesis of multiperiod heat exchanger networks. Applied Thermal Engineering, 2014, 63, 177-191. | 6.0 | 28 |
| 18 | Development of a quantitative approach using Raman spectroscopy for carotenoids determination in processed sweet potato. Food Chemistry, 2018, 245, 1224-1231. | 8.2 | 27 |

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|----|--|-----|-----------|
| 19 | Deoxygenation of Biomass Pyrolysis Vapors via in Situ and ex Situ Thermal and Biochar Promoted Upgrading. Energy & Fuels, 2019, 33, 2197-2207. | 5.1 | 26 |
| 20 | A dynamic model for a FCC UOP stacked converter unit. Computers and Chemical Engineering, 2001, 25, 851-858. | 3.8 | 24 |
| 21 | Data-Based Method To Diagnose Valve Stiction with Variable Reference Signal. Industrial & Engineering Chemistry Research, 2016, 55, 10316-10327. | 3.7 | 24 |
| 22 | Conversion of furan over gallium and zinc promoted ZSM-5: The effect of metal and acid sites. Fuel Processing Technology, 2020, 201, 106319. | 7.2 | 24 |
| 23 | A case study for control structure selection: air separation plant. Journal of Process Control, 2000, 10, 237-243. | 3.3 | 22 |
| 24 | The Effect of Water on Furan Conversion over ZSM-5. ChemCatChem, 2014, 6, 2497-2500. | 3.7 | 22 |
| 25 | Ethanol production from sweet potato: The effect of ripening, comparison of two heating methods, and cost analysis. Canadian Journal of Chemical Engineering, 2016, 94, 716-724. | 1.7 | 20 |
| 26 | Comparison of linear and nonlinear model predictive control of wind turbines using LIDAR. , 2014, , . | | 19 |
| 27 | Oil production increase in unstable gas lift systems through nonlinear model predictive control. Journal of Process Control, 2018, 69, 58-69. | 3.3 | 19 |
| 28 | Dynamic Behavior and Control in an Industrial Fluidized-Bed Polymerization Reactor. Industrial & Engineering Chemistry Research, 2008, 47, 6058-6069. | 3.7 | 18 |
| 29 | Multivariable PID controller design for chemical processes by frequency response approximation. Chemical Engineering Science, 2013, 88, 1-15. | 3.8 | 18 |
| 30 | Fast Offshore Wells Model (FOWM): A practical dynamic model for multiphase oil production systems in deepwater and ultra-deepwater scenarios. Computers and Chemical Engineering, 2017, 99, 304-313. | 3.8 | 18 |
| 31 | Determination of the concentration of total phenolic compounds in aged cachaça using two-dimensional fluorescence and mid-infrared spectroscopy. Food Chemistry, 2020, 329, 127142. | 8.2 | 17 |
| 32 | Simulation and optimization of an industrial PSA unit. Brazilian Journal of Chemical Engineering, 2000, 17, 695-704. | 1.3 | 15 |
| 33 | Oscillation Detection and Diagnosis in Process Industries by Pattern Recognition Technique. IFAC-PapersOnLine, 2019, 52, 299-304. | 0.9 | 14 |
| 34 | Laboratory apparatus to evaluate microalgae production. Brazilian Journal of Chemical Engineering, 2013, 30, 487-497. | 1.3 | 13 |
| 35 | Perspectives and challenges in performance assessment of model predictive control. Canadian Journal of Chemical Engineering, 2016, 94, 1225-1241. | 1.7 | 13 |
| 36 | Raman spectroscopy for monitoring carotenoids in processed Bunchosia glandulifera pulps. Food Chemistry, 2019, 294, 565-571. | 8.2 | 13 |

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|----|--|-----|-----------|
| 37 | Model Update Based on Transient Measurements for Model Predictive Control and Hybrid Real-Time Optimization. Industrial & Engineering Chemistry Research, 2021, 60, 3056-3065. | 3.7 | 13 |
| 38 | Application of the RPN methodology for quantification of the operability of the quadruple-tank process. Brazilian Journal of Chemical Engineering, 2002, 19, 195-206. | 1.3 | 12 |
| 39 | Observability analysis and model formulation for nonlinear state estimation. Applied Mathematical Modelling, 2014, 38, 5407-5420. | 4.2 | 12 |
| 40 | Oscillation Detection in Process Industries by a Machine Learning-Based Approach. Industrial & Engineering Chemistry Research, 2019, 58, 14180-14192. | 3.7 | 11 |
| 41 | Robust Tuning for Classical MPC through the Multi-scenarios Approach. Industrial & Engineering Chemistry Research, 2019, 58, 3146-3158. | 3.7 | 11 |
| 42 | Production of Partially Deoxygenated Pyrolysis Oil from Switchgrass via $\text{Ca}(\text{OH})_2$, CaO , and $\text{Ca}(\text{COOH})_2$ Cofeeding. Energy & Fuels, 2020, 34, 12616-12625. | 5.1 | 11 |
| 43 | Analysis of total phenolic compounds and caffeine in teas using variable selection approach with two-dimensional fluorescence and infrared spectroscopy. Microchemical Journal, 2021, 169, 106570. | 4.5 | 11 |
| 44 | Tanneries: from waste to sustainability. Brazilian Archives of Biology and Technology, 2005, 48, 281-289. | 0.5 | 10 |
| 45 | NIR pre-selection data using modified changeable size moving window partial least squares and pure spectral chemometrical modeling with ant colony optimization for wheat flour characterization. Chemometrics and Intelligent Laboratory Systems, 2015, 142, 78-86. | 3.5 | 10 |
| 46 | A SIMPLE EQUATION FOR TOTAL REDUCING SUGARS (TRS) ESTIMATION ON SWEET POTATO AND ETHANOL YIELD POTENTIAL. Brazilian Journal of Chemical Engineering, 2019, 36, 33-41. | 1.3 | 10 |
| 47 | Heat integration of an Olefins Plant: Pinch Analysis and mathematical optimization working together. Brazilian Journal of Chemical Engineering, 2011, 28, 101-116. | 1.3 | 9 |
| 48 | Development of Ant Colony Optimization (ACO) Algorithms Based on Statistical Analysis and Hypothesis Testing for Variable Selection. IFAC-PapersOnLine, 2015, 48, 900-905. | 0.9 | 9 |
| 49 | Orange-Fleshed Sweet Potato Flour Obtained by Drying in Microwave and Hot Air. Journal of Food Processing and Preservation, 2017, 41, e12744. | 2.0 | 9 |
| 50 | Signal Preprocessing for Stiction Detection Methods. Industrial & Engineering Chemistry Research, 2018, 57, 302-315. | 3.7 | 9 |
| 51 | 10% increase in oil production through a field applied APC in a Petrobras ultra-deepwater well. Control Engineering Practice, 2019, 91, 104108. | 5.5 | 9 |
| 52 | Multivariable control strategy based on bifurcation analysis of an industrial gas-phase polymerization reactor. Journal of Process Control, 2009, 19, 530-538. | 3.3 | 8 |
| 53 | Diagnosis of Poor Performance in Model Predictive Controllers: Unmeasured Disturbance versus Model-Plant Mismatch. Industrial & Engineering Chemistry Research, 2016, 55, 11566-11582. | 3.7 | 8 |
| 54 | Slugging attenuation using Nonlinear Model Predictive Control in offshore oil production. Journal of Petroleum Science and Engineering, 2018, 165, 187-198. | 4.2 | 8 |

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|----|--|-----|-----------|
| 55 | A Novel Tool for Multi-Model PID Controller Design. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 251-256. | 0.4 | 7 |
| 56 | State estimators for better bioprocesses operation. Computer Aided Chemical Engineering, 2012, , 1267-1271. | 0.5 | 7 |
| 57 | Classification of Diesel Fuel Using Two-Dimensional Fluorescence Spectroscopy. Energy & Fuels, 2017, 31, 8942-8950. | 5.1 | 7 |
| 58 | Model Predictive Control Tuning Strategy for Non-Square Systems and Range Controlled Variables Based on Multi-Scenarios Approach. Industrial & Engineering Chemistry Research, 2017, 56, 11496-11506. | 3.7 | 7 |
| 59 | Tuning of Fractional Order PID Controllers based on the Frequency Response Approximation Method. IFAC-PapersOnLine, 2019, 52, 982-987. | 0.9 | 7 |
| 60 | Oscillation detection in process industries “ Part II: Industrial application. Journal of Process Control, 2019, 78, 139-154. | 3.3 | 7 |
| 61 | Model assessment of MPCs with control ranges: An industrial application in a delayed coking unit. Control Engineering Practice, 2019, 84, 261-273. | 5.5 | 7 |
| 62 | Prediction of sulfur content in diesel fuel using fluorescence spectroscopy and a hybrid ant colony - Tabu Search algorithm with polynomial bases expansion. Chemometrics and Intelligent Laboratory Systems, 2020, 206, 104161. | 3.5 | 7 |
| 63 | A New Approach for Practical Identifiability Analysis Applied to Dynamic Phenomenological Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 691-696. | 0.4 | 6 |
| 64 | Evaluation of wavelength selection methods for 2D fluorescence spectra applied to bioprocesses characterization. Brazilian Journal of Chemical Engineering, 2013, 30, 289-298. | 1.3 | 6 |
| 65 | The Importance of Nominal Operating Point Selection in Self-Optimizing Control. Industrial & Engineering Chemistry Research, 2016, 55, 7381-7393. | 3.7 | 6 |
| 66 | Preheating Followed by Simultaneous Viscosity Reduction, Hydrolysis, and Fermentation: Simplifying the Process of Ethanol Production from Sweet Potato. Bioenergy Research, 2019, 12, 94-102. | 3.9 | 6 |
| 67 | Continuous fast pyrolysis of rice husk in a fluidized bed reactor with high feed rates. Chemical Engineering Communications, 2021, 208, 1553-1563. | 2.6 | 6 |
| 68 | Sulfur Determination in Diesel using 2D Fluorescence Spectroscopy and Linear Models. IFAC-PapersOnLine, 2015, 48, 415-420. | 0.9 | 5 |
| 69 | Assessment of Model-Plant Mismatch by the Nominal Sensitivity Function for Unconstrained MPC. IFAC-PapersOnLine, 2015, 48, 753-758. | 0.9 | 5 |
| 70 | Are complex black-box models for Permanent Downhole Gauge pressure estimation necessary?. Journal of Petroleum Science and Engineering, 2019, 173, 715-732. | 4.2 | 5 |
| 71 | MILP Formulation for Solving and Initializing MINLP Problems Applied to Retrofit and Synthesis of Hydrogen Networks. Processes, 2020, 8, 1102. | 2.8 | 5 |
| 72 | Industrial datasets and a tool for SISO control loops data visualization and analysis. Computers and Chemical Engineering, 2021, 146, 107198. | 3.8 | 5 |

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|----|--|-----|-----------|
| 73 | Control Strategy for a <i>Zymomonas mobilis</i> Bioreactor Used in Ethanol Production. Computer Aided Chemical Engineering, 2009, 27, 1605-1610. | 0.5 | 4 |
| 74 | Bypass Design for Control and Optimization of Heat Exchanger Networks. Computer Aided Chemical Engineering, 2009, 27, 1665-1670. | 0.5 | 4 |
| 75 | Industrial Production of Polymeric Nanoparticles: Alternatives and Economic Analysis. , 2011, , 123-138. | | 4 |
| 76 | Influence of NaNO ₃ concentration and incident light intensity on <i>Nannochloropsis oculata</i> lipid accumulation. Brazilian Archives of Biology and Technology, 2013, 56, 673-678. | 0.5 | 4 |
| 77 | MPC Model Assessment of Highly Coupled Systems. Industrial & Engineering Chemistry Research, 2016, 55, 12880-12895. | 3.7 | 4 |
| 78 | The Effect of the Sampling Period on Stiction Detection Methods. IFAC-PapersOnLine, 2017, 50, 2848-2853. | 0.9 | 4 |
| 79 | Determination of Remaining Useful Life in Cyclic Processes. Industrial & Engineering Chemistry Research, 2019, 58, 22048-22063. | 3.7 | 4 |
| 80 | Locating poor models in MPC applications. Computers and Chemical Engineering, 2019, 130, 106545. | 3.8 | 4 |
| 81 | K-RANK: AN EVOLUTION OF Y-RANK FOR MULTIPLE SOLUTIONS PROBLEM. Brazilian Journal of Chemical Engineering, 2019, 36, 409-419. | 1.3 | 4 |
| 82 | A novel PID autotuning approach: how to correct bad tuning by closed-loop performance assessment. IFAC-PapersOnLine, 2019, 52, 184-189. | 0.9 | 4 |
| 83 | Robust extended Kalman filter estimation with moving window through a quadratic programming formulation. Computers and Chemical Engineering, 2021, 152, 107372. | 3.8 | 4 |
| 84 | Numerical Pitfalls by State Covariance Computation. Computer Aided Chemical Engineering, 2009, 27, 1215-1220. | 0.5 | 3 |
| 85 | Local Thermodynamic Models Networks for Dynamic Process Simulation. Industrial & Engineering Chemistry Research, 2009, 48, 8529-8541. | 3.7 | 3 |
| 86 | SynFlex. Computer Aided Chemical Engineering, 2011, 29, 1924-1928. | 0.5 | 3 |
| 87 | Estimation of Kinetic Parameters of a Polymerization Reactor using Real Data. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 685-690. | 0.4 | 3 |
| 88 | Systematic Approaches for PI System's Data Compression Tuning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 309-313. | 0.4 | 3 |
| 89 | Fluorescence Spectroscopy as a Tool for Ethanol Fermentation On-line Monitoring. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 940-945. | 0.4 | 3 |
| 90 | Model Performance Assessment of a Predictive Controller for Propylene/Propane Separation. IFAC-PapersOnLine, 2016, 49, 978-983. | 0.9 | 3 |

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|-----|---|-----|-----------|
| 91 | Stiction detection in low sampling rate signals. Canadian Journal of Chemical Engineering, 2018, 96, 1735-1745. | 1.7 | 3 |
| 92 | Parameter estimation of models with limit cycle based on the reformulation of the objective function. Computers and Chemical Engineering, 2018, 109, 236-248. | 3.8 | 3 |
| 93 | Comparison of Kalman filter-based approaches for permanent downhole gauge pressure estimation in offshore oil production. Journal of Petroleum Science and Engineering, 2019, 182, 106254. | 4.2 | 3 |
| 94 | Study of three drying methods in production of nutritious flours from the fermentation slurry of orange-fleshed sweet potato. Journal of Food Processing and Preservation, 2020, 44, e14658. | 2.0 | 3 |
| 95 | Alternative Process for Production of Sweet Potato Distilled Beverage. Brazilian Archives of Biology and Technology, 0, 63, . | 0.5 | 3 |
| 96 | A Novel Technique to Estimate Valve Stiction Based on Pattern Recognition. Computer Aided Chemical Engineering, 2009, , 1191-1196. | 0.5 | 2 |
| 97 | Analysis, Control, and Operational Optimization of a Zymomonas mobilis Reactor with Equilibrium Multiplicity. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 159-164. | 0.4 | 2 |
| 98 | State estimation of chemical engineering systems tending to multiple solutions. Brazilian Journal of Chemical Engineering, 2014, 31, 771-785. | 1.3 | 2 |
| 99 | PDG Pressure Estimation in Offshore Oil Well: Extended Kalman Filter vs. Artificial Neural Networks. IFAC-PapersOnLine, 2019, 52, 508-513. | 0.9 | 2 |
| 100 | MIMO PID tuning for nonminimum phase systems: setting attainable limits for a stable behaviour. IFAC-PapersOnLine, 2019, 52, 964-969. | 0.9 | 2 |
| 101 | Channel oriented approach for multivariable model updating using historical data. Computers and Chemical Engineering, 2020, 143, 107085. | 3.8 | 2 |
| 102 | MPC model monitoring and diagnosis for non-square systems. Journal of Process Control, 2021, 97, 26-44. | 3.3 | 2 |
| 103 | Dynamic behaviour and control of an industrial fluidised-bed polymerisation reactor. Computer Aided Chemical Engineering, 2005, , 409-414. | 0.5 | 1 |
| 104 | Data treatment and analysis for on-line dynamic process optimization. Computer Aided Chemical Engineering, 2008, 25, 519-524. | 0.5 | 1 |
| 105 | New methodology for parameter estimation of offshore slug models with Hopf bifurcation. Computers and Chemical Engineering, 2018, 117, 247-255. | 3.8 | 1 |
| 106 | A new approach to estimate the Minimum Variance Control law for Nonminimum phase Multivariable Systems. IFAC-PapersOnLine, 2019, 52, 886-891. | 0.9 | 1 |
| 107 | Reliable and straightforward PID tuning rules for highly underdamped systems. Brazilian Journal of Chemical Engineering, 0, , 1. | 1.3 | 1 |
| 108 | Anti-slug control design: Combining first principle modeling with a data-driven approach to obtain an easy-to-fit model-based control. Journal of Petroleum Science and Engineering, 2021, 207, 109096. | 4.2 | 1 |

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| 109 | ESTUDO COMPARATIVO DE METODOLOGIAS PARA AVALIAÇÃO DE MODELOS DE CONTROLADORES PREDITIVOS APLICADAS A UMA UNIDADE DE COQUEAMENTO RETARDADO (COMPARATIVE STUDY OF) Tj ETQq1 1,0,784314 rgBT /Ove Engevista, 2015, 17, 463. | 0.1 | 1 |
| 110 | A Case Study for Control Structure Selection: Linde Air Separation Plant. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 93-98. | 0.4 | 0 |
| 111 | A SIMPLE WAY TO GENERATE DYNAMIC MODELS FROM STATIC SIMULATIONS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 421-426. | 0.4 | 0 |
| 112 | Title is missing!. Journal of Process Control, 2007, 17, 189. | 3.3 | 0 |
| 113 | Modeling and Simulation of Nanoparticles Formation Process: A Diffusive Approach. Computer Aided Chemical Engineering, 2009, 27, 999-1004. | 0.5 | 0 |
| 114 | Spline Dynamic Matrix: a Novel Representation of Dynamic Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 632-637. | 0.4 | 0 |
| 115 | PLANTWIDE PERIODICAL DISTURBANCES ISOLATION AND ELIMINATION IN A PETROCHEMICAL UNIT. Brazilian Journal of Chemical Engineering, 2015, 32, 919-927. | 1.3 | 0 |
| 116 | Variability Reduction Estimation for SISO Systems through Unmeasured Disturbance Estimation. IFAC-PapersOnLine, 2016, 49, 377-382. | 0.9 | 0 |
| 117 | STATSCANDLEPLOT: A NEW WAY OF MONITORING OPERATIONAL PERFORMANCE INDICATORS. Brazilian Journal of Chemical Engineering, 2019, 36, 393-408. | 1.3 | 0 |
| 118 | Economic performance tracking for nonsquare <scp>MPCs</scp> based on a two-layer approach. Canadian Journal of Chemical Engineering, 2021, 99, . | 1.7 | 0 |
| 119 | MTX-LAB controlled by Multi-SISO PID controllers. IFAC-PapersOnLine, 2021, 54, 457-462. | 0.9 | 0 |
| 120 | Application of linear and nonlinear mathematical programming to retrofit hydrogen networks. Brazilian Journal of Chemical Engineering, 0, , 1. | 1.3 | 0 |
| 121 | Practical aspects on nonlinear state estimation. Computer Aided Chemical Engineering, 2012, 30, 1272-1276. | 0.5 | 0 |
| 122 | ROBUST DECENTRALIZED CONTROL OF A CSTR WITH COMPLEX REACTION SCHEME. , 1995, , 69-74. | | 0 |