Juergen Hahn

List of Publications by Year
in descending order

138 papers	3,522 citations	147801 31 h-index	161849 54 g-index
150 all docs	150 docs citations	150 times ranked	3392 citing authors

#	Article	IF	Citations
1	Regularized error-in-variable estimation for big data modeling and process analytics. Control Engineering Practice, 2022, 121, 105060.	5.5	2
2	Quantitative Assessment of Balance for Accurate Prediction of Return to Sport From Sport-Related Concussion. Sports Health, 2022, 14, 875-884.	2.7	2
3	Multivariate Analysis of Metabolomic and Nutritional Profiles among Children with Autism Spectrum Disorder. Journal of Personalized Medicine, 2022, 12, 923.	2.5	2
4	KIF3A accelerates KIF3C within the kinesin-2 heterodimer to generate symmetrical phosphate release rates for each processive step. Journal of Biological Chemistry, 2021, 296, 100020.	3.4	2
5	Cardiovascular Disease Risk Improves COVID-19 Patient Outcome Prediction. Lecture Notes in Computer Science, 2021, , 467-476.	1.3	0
6	Dividing-Wall Column Design: Analysis of Methodologies Tailored to Process Simulators. Processes, 2021, 9, 1189.	2.8	4
7	Pregnant Mothersâ€™ Medical Claims and Associated Risk of Their Children being Diagnosed with Autism Spectrum Disorder. Journal of Personalized Medicine, 2021, 11, 950.	2.5	3
8	Biomarker Identification of Complex Diseases/Disorders: Methodological Parallels to Parameter Estimation. Industrial & Engineering Chemistry Research, 2020, 59, 2366-2377.	3.7	1
9	Quadratic Autoencoder (Q-AE) for Low-Dose CT Denoising. IEEE Transactions on Medical Imaging, 2020, 39, 2035-2050.	8.9	72
10	Modeling inter-kingdom regulation of inflammatory signaling in human intestinal epithelial cells. Computers and Chemical Engineering, 2020, 140, 106954.	3.8	1
11	Multivariate Analysis of Fecal Metabolites from Children with Autism Spectrum Disorder and Gastrointestinal Symptoms before and after Microbiota Transfer Therapy. Journal of Personalized Medicine, 2020, 10, 152.	2.5	21
12	Distinct Fecal and Plasma Metabolites in Children with Autism Spectrum Disorders and Their Modulation after Microbiota Transfer Therapy. MSphere, 2020, 5, .	2.9	67
13	Classification of autism spectrum disorder from blood metabolites: Robustness to the presence of co-occurring conditions. Research in Autism Spectrum Disorders, 2020, 77, 101644.	1.5	3
14	Altered metabolism of mothers of young children with Autism Spectrum Disorder: a case control study. BMC Pediatrics, 2020, 20, 557.	1.7	14
15	Towards a Multivariate Biomarker-Based Diagnosis of Autism Spectrum Disorder: Review and Discussion of Recent Advancements. Seminars in Pediatric Neurology, 2020, 34, 100803.	2.0	17
16	Input Trajectory Design for the Enhancement of State Estimation through a Set-Theoretic Approach to Observability. Industrial & Engineering Chemistry Research, 2020, 59, 13631-13641.	3.7	0
17	Urinary essential elements of young children with autism spectrum disorder and their mothers. Research in Autism Spectrum Disorders, 2020, 72, 101518.	1.5	10
18	Clustering of coâ€occurring conditions in autism spectrum disorder during early childhood: A retrospective analysis of medical claims data. Autism Research, 2019, 12, 1272-1285.	3.8	42

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19	Announcing the 2019 Processes Travel Awards for Post-Doctoral Fellows and Ph.D. Students. Processes, 2019, 7, 19.	2.8	0
20	Multivariate Analysis of Plasma Metabolites in Children with Autism Spectrum Disorder and Gastrointestinal Symptoms Before and After Microbiota Transfer Therapy. Processes, 2019, 7, 806.	2.8	11
21	Gastrointestinal Symptoms and Oral Antibiotic Use in Children with Autism Spectrum Disorder: Retrospective Analysis of a Privately Insured U.S. Population. Journal of Autism and Developmental Disorders, 2019, 49, 647-659.	2.7	31
22	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
23	Differences in fecal microbial metabolites and microbiota of children with autism spectrum disorders. Anaerobe, 2018, 49, 121-131.	2.1	249
24	Erythrocyte fatty acid profiles in children are not predictive of autism spectrum disorder status: a case control study. Biomarker Research, 2018, 6, 12.	6.8	9
25	Investigating plasma amino acids for differentiating individuals with autism spectrum disorder and typically developing peers. Research in Autism Spectrum Disorders, 2018, 50, 60-72.	1.5	15
26	Dynamic optimal experimental design yields marginal improvement over steady‐state results for computational maximisation of regulatory T‐cell induction in ex vivo culture. IET Systems Biology, 2018, 12, 241-246.	1.5	1
27	Comparison of Three Clinical Trial Treatments for Autism Spectrum Disorder Through Multivariate Analysis of Changes in Metabolic Profiles and Adaptive Behavior. Frontiers in Cellular Neuroscience, 2018, 12, 503.	3.7	19
28	Maternal metabolic profile predicts high or low risk of an autism pregnancy outcome. Research in Autism Spectrum Disorders, 2018, 56, 72-82.	1.5	18
29	Kinesin-2 heterodimerization alters entry into a processive run along the microtubule but not stepping within the run. Journal of Biological Chemistry, 2018, 293, 13389-13400.	3.4	6
30	Intravenous immunoglobulin for the treatment of autoimmune encephalopathy in children with autism. Translational Psychiatry, 2018, 8, 148.	4.8	45
31	Multivariate techniques enable a biochemical classification of children with autism spectrum disorder versus typically‐developing peers: A comparison and validation study. Bioengineering and Translational Medicine, 2018, 3, 156-165.	7.1	37
32	Dividing-wall columns: Design and control of a kaibel and a satellite distillation column for BTX separation. Chemical Engineering and Processing: Process Intensification, 2017, 114, 1-15.	3.6	41
33	Design of an energy-efficient side-stream extractive distillation system. Computers and Chemical Engineering, 2017, 102, 17-25.	3.8	93
34	Cross-validatory framework for optimal parameter estimation of KPCA and KPLS models. Chemometrics and Intelligent Laboratory Systems, 2017, 167, 196-207.	3.5	16
35	Mathematical modeling of the methionine cycle and transsulfuration pathway in individuals with autism spectrum disorder. Journal of Theoretical Biology, 2017, 416, 28-37.	1.7	19
36	Empirical modeling of T cell activation predicts interplay of host cytokines and bacterial indole. Biotechnology and Bioengineering, 2017, 114, 2660-2667.	3.3	13

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37	On the Use of Multivariate Methods for Analysis of Data from Biological Networks. Processes, 2017, 5, 36.	2.8	14
38	Optimal Experimental Design for Parameter Estimation of an IL-6 Signaling Model. Processes, 2017, 5, 49.	2.8	16
39	Continuous Glucose Monitoring Enables the Detection of Losses in Infusion Set Actuation (LISAs). Sensors, 2017, 17, 161.	3.8	21
40	Classification and adaptive behavior prediction of children with autism spectrum disorder based upon multivariate data analysis of markers of oxidative stress and DNA methylation. PLoS Computational Biology, 2017, 13, e1005385.	3.2	90
41	Significant Association of Urinary Toxic Metals and Autism-Related Symptomsâ€"A Nonlinear Statistical Analysis with Cross Validation. PLoS ONE, 2017, 12, e0169526.	2.5	30
42	Model predictive control of reactive distillation for benzene hydrogenation. Control Engineering Practice, 2016, 52, 103-113.	5.5	23
43	Regularization Techniques to Overcome Overparameterization of Complex Biochemical Reaction Networks. IEEE Life Sciences Letters, 2016, 2, 31-34.	1.2	9
44	Experimental and computational optimization of an Escherichia coli co-culture for the efficient production of flavonoids. Metabolic Engineering, 2016, 35, 55-63.	7.0	210
45	Entity linking for biomedical literature. BMC Medical Informatics and Decision Making, 2015, 15, S4.	3.0	34
46	Mathematical Modeling of Pro- and Anti-Inflammatory Signaling in Macrophages. Processes, 2015, 3, 1-18.	2.8	34
47	Special Issue on â€œModeling and Analysis of Signal Transduction Networksâ€•in the Journal Processes. Processes, 2015, 3, 540-540.	2.8	0
48	Optimal experimental design using partial least squares regression. , 2015, , .		0
49	In silico identification of potential transcriptional regulators associated with human MAPK signaling. , 2015, , .		0
50	Neural networks elucidate T cell priming conditions for adoptive transfer. , 2015, , .		0
51	Sensitivity analysis-based time gate selection procedure for biexponential fluorescence imaging. , 2015, , .		0
52	<i>Drosophila</i> Ncd reveals an evolutionarily conserved powerstroke mechanism for homodimeric and heterodimeric kinesin-14s. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6359-6364.	7.1	12
53	Temporal Data Set Reduction Based on D-Optimality for Quantitative FLIM-FRET Imaging. PLoS ONE, 2015, 10, e0144421.	2.5	3
54	Analysis of Multi-Loop Control Structures of Dividing-Wall Distillation Columns Using a Fundamental Model. Processes, 2014, 2, 180-199.	2.8	13

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55	Mathematical Modeling and Analysis of Crosstalk between MAPK Pathway and Smad-Dependent TGF-β Signal Transduction. Processes, 2014, 2, 570-595.	2.8	2
56	Effect of loading frequency on trans-endplate nutrition across the intervertebral disc: A force-controlled unconfined compression experiment. , 2014, , .		0
57	Estimation of transcription factor profiles from fluorescent protein reporter systems. , 2014, , .		0
58	Entity Linking for Biomedical Literature. , 2014, , .		11
59	Reconstruction of transcription factor profiles from fluorescent protein reporter systems via dynamic optimization and <scp>T</scp>ikhonov regularization. AICHE Journal, 2014, 60, 3754-3761.	3.6	1
60	Reduced temporal sampling effect on accuracy of time-domain fluorescence lifetime Förster resonance energy transfer. Journal of Biomedical Optics, 2014, 19, 086023.	2.6	20
61	Modeling and dynamic optimization of fuel-grade ethanol fermentation using fed-batch process. Control Engineering Practice, 2014, 22, 231-241.	5.5	21
62	Parameter set selection for dynamic systems under uncertainty via dynamic optimization and hierarchical clustering. AICHE Journal, 2014, 60, 181-192.	3.6	11
63	Dynamics and control of benzene hydrogenation via reactive distillation. Journal of Process Control, 2014, 24, 113-124.	3.3	14
64	Optimization of Membrane Separation Processes for Protein Fractionation. Industrial & Engineering Chemistry Research, 2014, 53, 5103-5109.	3.7	8
65	Control analysis of an extractive dividing-wall column used for ethanol dehydration. Chemical Engineering and Processing: Process Intensification, 2014, 82, 88-100.	3.6	93
66	Parameter Set Selection for Signal Transduction Pathway Models including Uncertainties. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 815-820.	0.4	3
67	Selection of Temporal Gates for Bi-Exponential Fluorescence Lifetime Imaging. , 2013, , .		1
68	Experimental design of systems involving multiple fluorescent protein reporters. Chemical Engineering Science, 2013, 101, 191-198.	3.8	2
69	Fault detection approach for systems involving soft sensors. Journal of Loss Prevention in the Process Industries, 2013, 26, 443-452.	3.3	12
70	Advances and selected recent developments in state and parameter estimation. Computers and Chemical Engineering, 2013, 51, 111-123.	3.8	135
71	Sensor location for nonlinear dynamic systems via observability analysis and MAX-DET optimization. Computers and Chemical Engineering, 2013, 48, 105-112.	3.8	30
72	Necessary condition for applying experimental design criteria to global sensitivity analysis results. Computers and Chemical Engineering, 2013, 48, 280-292.	3.8	16

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73	Global Sensitivity Analysis. , 2013, , 841-842.		0
74	Optimal Experiment Design, Signal Transduction Pathways. , 2013, , 1588-1593.		0
75	Quasilinearization. , 2013, , 1807-1808.		0
76	Optimal Experiment Design. , 2013, , 1572-1573.		0
77	Local Sensitivity Analysis. , 2013, , 1141-1141.		0
78	Computing optimal operating condition profiles for fed-batch fermentation of fuel-grade ethanol. , 2013, , .		0
79	Relative impact of form-induced stress vs. uniaxial alignment on multipotent stem cell myogenesis. Acta Biomaterialia, 2012, 8, 3974-3981.	8.3	6
80	Determining transcription factor profiles from fluorescent reporter systems involving regularization of inverse problems. , 2012, , .		3
81	Generalization of a parameter set selection procedure based on orthogonal projections and the <i>D</i>â€‰optimality criterion. AICHE Journal, 2012, 58, 2085-2096.	3.6	16
82	Regularization of inverse problems to determine transcription factor profiles from fluorescent reporter systems. AICHE Journal, 2012, 58, 3751-3762.	3.6	5
83	Computing transcription factor distribution profiles from green fluorescent protein reporter data. Chemical Engineering Science, 2012, 68, 340-354.	3.8	2
84	Global Sensitivity Analysis Procedure Accounting for Effect of Available Experimental Data. Industrial & Engineering Chemistry Research, 2011, 50, 1294-1304.	3.7	3
85	HIV Epidemic Model with Heterogeneous Infected Class. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14159-14164.	0.4	0
86	Investigation of IL-6 and IL-10 signalling via mathematical modelling. IET Systems Biology, 2011, 5, 15-26.	1.5	76
87	State-preserving nonlinear model reduction procedure. Chemical Engineering Science, 2011, 66, 3907-3913.	3.8	15
88	Generalisation of a procedure for computing transcription factor profiles. IET Systems Biology, 2010, 4, 108-118.	1.5	2
89	A kinematic model coupling stress fiber dynamics with JNK activation in response to matrix stretching. Journal of Theoretical Biology, 2010, 264, 593-603.	1.7	13
90	Model simplification procedure for signal transduction pathway models: An application to IL-6 signaling. Chemical Engineering Science, 2010, 65, 1964-1975.	3.8	19

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91	Derivation of simplified signal transduction pathway models: Application to IL-6 signaling. , 2010, , .		0
92	Quantitative Optimal Experimental Design Using Global Sensitivity Analysis via Quasi-Linearization. Industrial & Engineering Chemistry Research, 2010, 49, 7782-7794.	3.7	14
93	Using the Tet-On system to develop a procedure for extracting transcription factor activation dynamics. Molecular BioSystems, 2010, 6, 1883.	2.9	5
94	Solution of inverse problems for obtaining protein concentrations from fluorescent microscopy images. , 2009, , .		0
95	Multivariate statistical analysis applied to an IL6 signal transduction model in hepatocytes. Statistics in Medicine, 2009, 28, 2401-2434.	1.6	6
96	Process monitoring and parameter estimation via unscented Kalman filtering. Journal of Loss Prevention in the Process Industries, 2009, 22, 703-709.	3.3	29
97	Computation of arrival cost for moving horizon estimation via unscented Kalman filtering. Journal of Process Control, 2009, 19, 358-363.	3.3	80
98	Fuzzy modeling of signal transduction networks. Chemical Engineering Science, 2009, 64, 2044-2056.	3.8	19
99	Improving prediction capabilities of complex dynamic models via parameter selection and estimation. Chemical Engineering Science, 2009, 64, 4178-4185.	3.8	31
100	Parameter Set Selection via Clustering of Parameters into Pairwise Indistinguishable Groups of Parameters. Industrial & Engineering Chemistry Research, 2009, 48, 6000-6009.	3.7	95
101	A Kinematic Model Coupling Cytoskeletal Dynamics With JNK Activation in Response to Matrix Stretching. , 2009, , .		0
102	Integrating parameter selection with experimental design under uncertainty for nonlinear dynamic systems. AICHE Journal, 2008, 54, 2310-2320.	3.6	34
103	On the use of bifurcation analysis for robust controller tuning for nonlinear systems. Journal of Process Control, 2008, 18, 408-420.	3.3	15
104	Integrated modeling and experimental approach for determining transcription factor profiles from fluorescent reporter data. BMC Systems Biology, 2008, 2, 64.	3.0	21
105	Selection of Parameter Subsets and Design of Experiments for Estimation of Nonlinear Dynamic Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 5545-5550.	0.4	1
106	Fuzzy Modeling of Signal Transduction Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 15867-15872.	0.4	1
107	EFFECT OF FINITE-DIMENSIONAL APPROXIMATIONS ON OBSERVABILITY ANALYSIS OF DISTRIBUTED PARAMETER MODELS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 197-202.	0.4	5
108	Parameter sensitivity analysis of IL-6 signalling pathways. IET Systems Biology, 2007, 1, 342-352.	1.5	31

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109	Sensor Network Design via Observability Analysis and Principal Component Analysis. Industrial & Engineering Chemistry Research, 2007, 46, 8026-8032.	3.7	10
110	Analysis of IL6 Signal Transduction Model using Reduced Rank Regression. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	0
111	Parameter set selection for estimation of nonlinear dynamic systems. AICHE Journal, 2007, 53, 2858-2870.	3.6	59
112	Sensor fault diagnosis for nonlinear processes with parametric uncertaintiesâ˜†. Journal of Hazardous Materials, 2006, 130, 1-8.	12.4	26
113	Sensor Location for Stable Nonlinear Dynamic Systems:Â Multiple Sensor Case. Industrial & Engineering Chemistry Research, 2006, 45, 3615-3623.	3.7	51
114	Parameter reduction for stable dynamical systems based on Hankel singular values and sensitivity analysis. Chemical Engineering Science, 2006, 61, 5393-5403.	3.8	31
115	Model reduction in the presence of uncertainty in model parameters. Journal of Process Control, 2006, 16, 645-649.	3.3	12
116	Process monitoring based on classification tree and discriminant analysis. Reliability Engineering and System Safety, 2006, 91, 546-555.	8.9	16
117	Modeling regulatory mechanisms in IL-6 signal transduction in hepatocytes. Biotechnology and Bioengineering, 2006, 95, 850-862.	3.3	67
118	Effect of process nonlinearity on linear quadratic regulator performance. Journal of Process Control, 2005, 15, 113-124.	3.3	15
119	Reduction of stable differentialâ€"algebraic equation systems via projections and system identification. Journal of Process Control, 2005, 15, 639-650.	3.3	28
120	State estimation for high-dimensional chemical processes. Computers and Chemical Engineering, 2005, 29, 2326-2334.	3.8	24
121	Introduction of a nonlinearity measure for principal component models. Computers and Chemical Engineering, 2005, 29, 2355-2362.	3.8	36
122	Genetic/quadratic search algorithm for plant economic optimizations using a process simulator. Computers and Chemical Engineering, 2005, 30, 285-294.	3.8	38
123	Determining Optimal Sensor Locations for State and Parameter Estimation for Stable Nonlinear Systems. Industrial & Engineering Chemistry Research, 2005, 44, 5645-5659.	3.7	93
124	A method for robustness analysis of controlled nonlinear systems. Chemical Engineering Science, 2004, 59, 4325-4338.	3.8	24
125	A Methodology for Fault Detection, Isolation, and Identification for Nonlinear Processes with Parametric Uncertainties. Industrial & Engineering Chemistry Research, 2004, 43, 6774-6786.	3.7	32
126	Fault detection and classification in chemical processes based on neural networks with feature extraction. ISA Transactions, 2003, 42, 651-664.	5.7	33

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127	Controllability and observability covariance matrices for the analysis and order reduction of stable nonlinear systems. Journal of Process Control, 2003, 13, 115-127.	3.3	60
128	Drug dosage adjustment via run-to-run control. , 2002, , .		3
129	APPLICATION OF MODEL REDUCTION FOR MODEL PREDICTIVE CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 393-398.	0.4	2
130	Balancing Approach to Minimal Realization and Model Reduction of Stable Nonlinear Systems. Industrial & Engineering Chemistry Research, 2002, 41, 2204-2212.	3.7	49
131	Nonlinear balanced model residualization via neural networks. AICHE Journal, 2002, 48, 1353-1357.	3.6	5
132	Adaptive IMC control for drug infusion for biological systems. Control Engineering Practice, 2002, 10, 45-56.	5.5	30
133	An improved method for nonlinear model reduction using balancing of empirical gramians. Computers and Chemical Engineering, 2002, 26, 1379-1397.	3.8	183
134	A Gramian Based Approach to Nonlinearity Quantification and Model Classification. Industrial & Engineering Chemistry Research, 2001, 40, 5724-5731.	3.7	45
135	Automatic control in microelectronics manufacturing: Practices, challenges, and possibilities. Automatica, 2000, 36, 1567-1603.	5.0	185
136	On the use of partial least squares (PLS) and balancing for nonlinear model reduction. , 0, , .		0
137	A parametric approach to robust state and parameter estimation for a certain class of nonlinear systems. , 0, , .		2
138	On the use of empirical gramians for controllability and observability analysis. , 0, , .		16