Uwe Kruger

List of Publications by Year in descending order

118 papers	4,118 citations	136950 32 h-index	123424 61 g-index
129 all docs	129 docs citations	129 times ranked	3494 citing authors

#	Article	IF	Citations
1	Deep learning in medical image registration: a survey. Machine Vision and Applications, 2020, 31, 1.	2.7	343
2	3-D Convolutional Encoder-Decoder Network for Low-Dose CT via Transfer Learning From a 2-D Trained Network. IEEE Transactions on Medical Imaging, 2018, 37, 1522-1534.	8.9	303
3	Process Monitoring Approach Using Fast Moving Window PCA. Industrial & Engineering Chemistry Research, 2005, 44, 5691-5702.	3.7	281
4	Competitive performance of a modularized deep neural network compared to commercial algorithms for low-dose CT image reconstruction. Nature Machine Intelligence, 2019, 1, 269-276.	16.0	256
5	Moving window kernel PCA for adaptive monitoring of nonlinear processes. Chemometrics and Intelligent Laboratory Systems, 2009, 96, 132-143.	3.5	172
6	Recursive partial least squares algorithms for monitoring complex industrial processes. Control Engineering Practice, 2003, 11, 613-632.	5.5	167
7	Statisticalâ€based monitoring of multivariate nonâ€Gaussian systems. AICHE Journal, 2008, 54, 2379-2391.	3.6	102
8	Learning deep similarity metric for 3D MRâ€“TRUS image registration. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 417-425.	2.8	101
9	Detecting abnormal situations using the Kullbackâ€“Leibler divergence. Automatica, 2014, 50, 2777-2786.	5.0	91
10	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
11	Cointegration Testing Method for Monitoring Nonstationary Processes. Industrial & Engineering Chemistry Research, 2009, 48, 3533-3543.	3.7	89
12	Diagnosis of process faults in chemical systems using a local partial least squares approach. AICHE Journal, 2008, 54, 2581-2596.	3.6	86
13	Improved principal component monitoring of large-scale processes. Journal of Process Control, 2004, 14, 879-888.	3.3	84
14	Improved principal component monitoring using the local approach. Automatica, 2007, 43, 1532-1542.	5.0	84
15	Nonlinear PCA With the Local Approach for Diesel Engine Fault Detection and Diagnosis. IEEE Transactions on Control Systems Technology, 2008, 16, 122-129.	5.2	80
16	Extended PLS approach for enhanced condition monitoring of industrial processes. AICHE Journal, 2001, 47, 2076-2091.	3.6	75
17	Synthesis of T2 and Q statistics for process monitoring. Control Engineering Practice, 2004, 12, 745-755.	5.5	75
18	DETECTION OF INCIPIENT TOOTH DEFECT IN HELICAL GEARS USING MULTIVARIATE STATISTICS. Mechanical Systems and Signal Processing, 2001, 15, 303-321.	8.0	67

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19	Modeling and performance monitoring of multivariate multimodal processes. AICHE Journal, 2013, 59, 1557-1569.	3.6	59
20	Assessing bimanual motor skills with optical neuroimaging. Science Advances, 2018, 4, eaat3807.	10.3	59
21	Dynamic multivariate statistical process control using subspace identification. Journal of Process Control, 2004, 14, 279-292.	3.3	53
22	Fault detection in non-Gaussian vibration systems using dynamic statistical-based approaches. Mechanical Systems and Signal Processing, 2010, 24, 2972-2984.	8.0	52
23	Regularised kernel density estimation for clustered process data. Control Engineering Practice, 2004, 12, 267-274.	5.5	50
24	Local ICA for multivariate statistical fault diagnosis in systems with unknown signal and error distributions. AICHE Journal, 2012, 58, 2357-2372.	3.6	46
25	Fault detection in dynamic systems using the Kullbackâ€“Leibler divergence. Control Engineering Practice, 2015, 43, 39-48.	5.5	46
26	Intravenous immunoglobulin for the treatment of autoimmune encephalopathy in children with autism. Translational Psychiatry, 2018, 8, 148.	4.8	45
27	Improved reliability in diagnosing faults using multivariate statistics. Computers and Chemical Engineering, 2006, 30, 901-912.	3.8	41
28	Seasonal Analysis and Prediction of Wind Energy Using Random Forests and ARX Model Structures. IEEE Transactions on Control Systems Technology, 2015, 23, 1994-2002.	5.2	38
29	Introduction of a nonlinearity measure for principal component models. Computers and Chemical Engineering, 2005, 29, 2355-2362.	3.8	36
30	Sensor fault identification and isolation for multivariate non-Gaussian processes. Journal of Process Control, 2009, 19, 1707-1715.	3.3	35
31	Adaptive KPCA Modeling of Nonlinear Systems. IEEE Transactions on Signal Processing, 2015, 63, 2364-2376.	5.3	34
32	Block adaptive kernel principal component analysis for nonlinear process monitoring. AICHE Journal, 2016, 62, 4334-4345.	3.6	33
33	Statistical Monitoring of Dynamic Multivariate Processes Part 1. Modeling Autocorrelation and Cross-correlation. Industrial & Engineering Chemistry Research, 2006, 45, 1659-1676.	3.7	32
34	Adaptive Constraint K-Segment Principal Curves for Intelligent Transportation Systems. IEEE Transactions on Intelligent Transportation Systems, 2008, 9, 666-677.	8.0	32
35	Robust partial least squares regression: Part I, algorithmic developments. Journal of Chemometrics, 2008, 22, 1-13.	1.3	31
36	Unified model-based fault diagnosis for three industrial application studies. Control Engineering Practice, 2011, 19, 479-490.	5.5	31

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37	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
38	Developments and Applications of Nonlinear Principal Component Analysis â€“ a Review. Lecture Notes in Computational Science and Engineering, 2008, , 1-43.	0.3	28
39	Monitoring Nonstationary Dynamic Systems Using Cointegration and Common-Trends Analysis. Industrial & Engineering Chemistry Research, 2017, 56, 8895-8905.	3.7	28
40	Improved fault diagnosis in multivariate systems using regression-based reconstruction. Control Engineering Practice, 2009, 17, 478-493.	5.5	25
41	Optimized collusion prevention for online exams during social distancing. Npj Science of Learning, 2021, 6, 5.	2.8	25
42	Knowledge-Based Analysis for Mortality Prediction From CT Images. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 457-464.	6.3	23
43	Monitoring Nonstationary Processes Using Stationary Subspace Analysis and Fractional Integration Order Estimation. Industrial & Engineering Chemistry Research, 2019, 58, 6486-6504.	3.7	21
44	Association of AI quantified COVID-19 chest CT and patient outcome. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 435-445.	2.8	21
45	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
46	Deep neural networks for the assessment of surgical skills: A systematic review. Journal of Defense Modeling and Simulation, 2022, 19, 159-171.	1.7	19
47	A unified statistical framework for monitoring multivariate systems with unknown source and error signals. Chemometrics and Intelligent Laboratory Systems, 2010, 104, 223-232.	3.5	18
48	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
49	Burn-related Collagen Conformational Changes in ex vivo Porcine Skin using Raman Spectroscopy. Scientific Reports, 2019, 9, 19138.	3.3	18
50	A machine learning approach to predict surgical learning curves. Surgery, 2020, 167, 321-327.	1.9	18
51	Nonparametric Density Estimation of Hierarchical Probabilistic Graph Models for Assumption-Free Monitoring. Industrial & Engineering Chemistry Research, 2017, 56, 1278-1287.	3.7	17
52	Functional Brain Imaging Reliably Predicts Bimanual Motor Skill Performance in a Standardized Surgical Task. IEEE Transactions on Biomedical Engineering, 2021, 68, 2058-2066.	4.2	17
53	Cross-validatory framework for optimal parameter estimation of KPCA and KPLS models. Chemometrics and Intelligent Laboratory Systems, 2017, 167, 196-207.	3.5	16
54	Identification of dynamic systems under closed-loop control. International Journal of Systems Science, 2006, 37, 181-195.	5.5	15

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55	Semisupervised Pedestrian Counting With Temporal and Spatial Consistencies. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 1705-1715.	8.0	15
56	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
57	Monitoring nonstationary and dynamic trends for practical process fault diagnosis. Control Engineering Practice, 2019, 84, 139-158.	5.5	15
58	Objective assessment of surgical skill transfer using non-invasive brain imaging. Surgical Endoscopy and Other Interventional Techniques, 2019, 33, 2485-2494.	2.4	15
59	Decreasing the Surgical Errors by Neurostimulation of Primary Motor Cortex and the Associated Brain Activation via Neuroimaging. Frontiers in Neuroscience, 2021, 15, 651192.	2.8	15
60	Altered metabolism of mothers of young children with Autism Spectrum Disorder: a case control study. BMC Pediatrics, 2020, 20, 557.	1.7	14
61	Real-time Burn Classification using Ultrasound Imaging. Scientific Reports, 2020, 10, 5829.	3.3	14
62	Ultrasound elastography reliably identifies altered mechanical properties of burned soft tissues. Burns, 2018, 44, 1521-1530.	1.9	13
63	Improved process monitoring using nonlinear principal component models. International Journal of Intelligent Systems, 2008, 23, 520-544.	5.7	12
64	Principal Curve Algorithms for Partitioning High-Dimensional Data Spaces. IEEE Transactions on Neural Networks, 2011, 22, 367-380.	4.2	12
65	A recursive rule base adjustment algorithm for a fuzzy logic controller. Fuzzy Sets and Systems, 2005, 156, 267-284.	2.7	11
66	A non-Gaussian regression algorithm based on mutual information maximization. Chemometrics and Intelligent Laboratory Systems, 2012, 111, 1-19.	3.5	11
67	Input reconstruction for statistical€based fault detection and isolation. AICHE Journal, 2012, 58, 1513-1523.	3.6	10
68	Deep learning-based motion artifact removal in functional near-infrared spectroscopy. Neurophotonics, 2022, 9, 041406.	3.3	10
69	Statistical Monitoring of Dynamic Multivariate Processes â˜' Part 2. Identifying Fault Magnitude and Signature. Industrial & Engineering Chemistry Research, 2006, 45, 1677-1688.	3.7	9
70	Robust partial least squares regression: Part II, new algorithm and benchmark studies. Journal of Chemometrics, 2008, 22, 14-22.	1.3	9
71	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
72	An Auto-Adjustable and Time-Consistent Model for Determining Coagulant Dosage Based on Operatorsâ€™ Experience. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 5614-5625.	9.3	9

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73	Prediction of Coronary Calcification and Stenosis: Role of Radiomics From Low-Dose CT. Academic Radiology, 2021, 28, 972-979.	2.5	9
74	Regressionâ€based analysis of multivariate nonâ€Gaussian datasets for diagnosing abnormal situations in chemical processes. AICHE Journal, 2014, 60, 148-159.	3.6	8
75	Zonal variation of MRI-measurable parameters classifies cartilage degradation. Journal of Biomechanics, 2017, 65, 176-184.	2.1	8
76	Increased separability of K-edge nanoparticles by photon-counting detectors for spectral micro-CT. Journal of X-Ray Science and Technology, 2018, 26, 707-726.	1.0	8
77	Structured sequential Gaussian graphical models for monitoring time-varying process. Control Engineering Practice, 2019, 91, 104099.	5.5	8
78	A novel transfer learning framework for low-dose CT. , 2019, , .		8
79	Correction for â€œ3D Convolutional Encoder-Decoder Network for Low-Dose CT via Transfer Learning From a 2D Trained Networkâ€•[Jun 18 1522-1534]. IEEE Transactions on Medical Imaging, 2018, 37, 2750-2750.	8.9	7
80	Multivariate statistical analysis applied to an IL6 signal transduction model in hepatocytes. Statistics in Medicine, 2009, 28, 2401-2434.	1.6	6
81	Surgeons With Five or More Actual Cricothyrotomies Perform Significantly Better on a Virtual Reality Simulator. Journal of Surgical Research, 2020, 252, 247-254.	1.6	6
82	Modeling of moral decisions with deep learning. Visual Computing for Industry, Biomedicine, and Art, 2020, 3, 27.	3.7	6
83	Deflation based nonlinear canonical correlation analysis. Chemometrics and Intelligent Laboratory Systems, 2006, 83, 34-43.	3.5	5
84	Robust partial least squares regressionâ€”part III, outlier analysis and application studies. Journal of Chemometrics, 2008, 22, 323-334.	1.3	5
85	A RIEMANNIAN DISTANCE APPROACH FOR CONSTRUCTING PRINCIPAL CURVES. International Journal of Neural Systems, 2010, 20, 209-218.	5.2	4
86	An error-in-variable projection to latent structure framework for monitoring technical systems with orthogonal signal components. Chemometrics and Intelligent Laboratory Systems, 2014, 133, 70-83.	3.5	4
87	Efficient cross-validatory algorithm for identifying dynamic nonlinear process models. Control Engineering Practice, 2021, 111, 104787.	5.5	4
88	Thermally damaged porcine skin is not a surrogate mechanical model of human skin. Scientific Reports, 2022, 12, 4565.	3.3	4
89	NONLINEAR PCA FOR PROCESS MONITORING USING THE LOCAL APPROACH. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 96-101.	0.4	3
90	In Vivo Layer-Specific Mechanical Characterization of Porcine Stomach Tissue Using a Customized Ultrasound Elastography System. Journal of Biomechanical Engineering, 2019, 141, .	1.3	3

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91	Raman spectroscopy accurately classifies burn severity in an ex vivo model. Burns, 2021, 47, 812-820.	1.9	3
92	Semi-physical Neural Network Model in Detecting Engine Transient Faults using the Local Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 7086-7090.	0.4	2
93	Fast Moving Window Algorithm for QR and Cholesky Decompositions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 10106-10111.	0.4	2
94	A Novel Bayesian Robust Model and Its Application for Fault Detection and Automatic Supervision of Nonlinear Process. Industrial & Engineering Chemistry Research, 2015, 54, 5048-5061.	3.7	2
95	Framework of Randomized Distribution Features for Visual Representation and Categorization. IEEE Transactions on Cybernetics, 2019, 49, 3599-3606.	9.5	2
96	A deep learning approach to remove motion artifacts in fNIRS data analysis. , 2020, , .		2
97	Low-dose CT simulation with a generative adversarial network. , 2019, , .		2
98	Regularized error-in-variable estimation for big data modeling and process analytics. Control Engineering Practice, 2022, 121, 105060.	5.5	2
99	PROCESS FAULT DIAGNOSIS USING RECURSIVE MULTIVARIATE STATISTICAL PROCESS CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 287-292.	0.4	1
100	REGRESSION-BASED VARIABLE RECONSTRUCTION IN MULTIVARIATE SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 402-407.	0.4	1
101	Process monitoring based on Kullback Leibler divergence. , 2013, , .		1
102	Learning Linear Representation of Space Partitioning Trees Based on Unsupervised Kernel Dimension Reduction. IEEE Transactions on Cybernetics, 2016, 46, 3427-3438.	9.5	1
103	Process monitoring using probabilistic graphical models via nonparametric density estimation * *The authors would like to thank financial support from the National Natural Science Foundation of China (Grant No. 61203088, 61563018), the Natural Science Foundation of Jiangxi (Grant) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T 5 Industry(Jiangnan University), Ministry of Education.. IFAC-PapersOnLine, 2017, 50, 13886-13891.		1
104	Practical Considerations on Nonparametric Methods for Estimating Intrinsic Dimensions of Nonlinear Data Structures. International Journal of Pattern Recognition and Artificial Intelligence, 2020, 34, 2058010.	1.2	1
105	Hierarchical density decompositions for abnormal event diagnosis in serially correlated non-Gaussian systems. Control Engineering Practice, 2020, 96, 104295.	5.5	1
106	Regression-Based Variable Reconstruction in Multivariate Systems. , 2007, , 402-407.		1
107	Nonlinear PCA for Process Monitoring Using the Local Approach. , 2007, , 96-101.		1
108	Multivariate analysis reveals topography dependent relationships amongst neurite morphological features from dorsal root ganglia neurons. Journal of Neural Engineering, 2022, , .	3.5	1

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109	SUBSPACE METHOD IDENTIFICATION FOR DYNAMIC MULTIVARIATE STATISTICAL PROCESS CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 93-98.	0.4	0
110	Application of Auto-Associative Neural Networks to Transient Fault Detection in an IC Engine. , 2007, , 555.		0
111	Analysis of IL6 Signal Transduction Model using Reduced Rank Regression. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	0
112	Comparison Between Statistical and Observer-Based Approaches for Fault Detection and Isolation in a Chemical Process. Computer Aided Chemical Engineering, 2009, 27, 1257-1262.	0.5	0
113	Input Reconstruction for Statistically Enhanced Fault Detection and Isolation. Computer Aided Chemical Engineering, 2010, 28, 193-198.	0.5	0
114	Statistical Monitoring of Industrial Process Faults Using Local Independent Component Regression. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2833-2838.	0.4	0
115	Diagnosis of incipient fault conditions in batch processes using estimated data covariance structures. IFAC-PapersOnLine, 2017, 50, 12779-12784.	0.9	0
116	Monitoring of dynamic process using hierarchical probability density decomposition. , 2017, , .		0
117	Increased Sensitivity in Discriminating Surgical Motor Skills Using Prefrontal Cortex Activation over Established Metrics. , 2017, , .		0
118	Monitoring the effect of transcranial Electric current Stimulation (tES) during a bimanual motor task via functional Near-InfraRed Spectroscopy (fNIRS). , 2020, , .		0