

# Robert PichÃ©

## List of Publications by Year in descending order

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Version: 2024-02-01

109  
papers

2,490  
citations

361413

20  
h-index

315739

38  
g-index

113  
all docs

113  
docs citations

113  
times ranked

2339  
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards Semantic SLAM: 3D Position and Velocity Estimation by Fusing Image Semantic Information with Camera Motion Parameters for Traffic Scene Analysis. <i>Remote Sensing</i> , 2021, 13, 388.	4.0	3
2	Indirect Estimation of Vertical Ground Reaction Force from a Body-Mounted INS/GPS Using Machine Learning. <i>Sensors</i> , 2021, 21, 1553.	3.8	17
3	Gaussian mixture models for signal mapping and positioning. <i>Signal Processing</i> , 2020, 168, 107330.	3.7	12
4	Methods for Long-Term GNSS Clock Offset Prediction. , 2019, , .		1
5	Depth Estimation from Motion Parallax: Experimental Evaluation. , 2019, , .		4
6	On Computational Complexity Reduction Methods for Kalman Filter Extensions. <i>IEEE Aerospace and Electronic Systems Magazine</i> , 2019, 34, 2-19.	1.3	33
7	Relative Importance of Binocular Disparity and Motion Parallax for Depth Estimation: A Computer Vision Approach. <i>Remote Sensing</i> , 2019, 11, 1990.	4.0	18
8	Automatic numerical differentiation by maximum likelihood estimation of a linear Gaussian state space model. , 2019, , .		0
9	Nanosatellite attitude estimation using Kalman-type filters with non-Gaussian noise. <i>Aerospace Science and Technology</i> , 2019, 92, 66-76.	4.8	36
10	Continuous Analysis of Running Mechanics by Means of an Integrated INS/GPS Device. <i>Sensors</i> , 2019, 19, 1480.	3.8	19
11	Damped Posterior Linearization Filter. <i>IEEE Signal Processing Letters</i> , 2018, 25, 536-540.	3.6	10
12	Indoor Localisation using Aroma Fingerprints: Comparing Nearest Neighbour Classification Accuracy using Different Distance Measures. , 2018, , .		2
13	3D Angle-of-Arrival Positioning Using von Mises-Fisher Distribution. , 2018, , .		3
14	Kalman-Type Filters and Smoothers for Pedestrian Dead Reckoning. , 2018, , .		1
15	Skew- $t$ Filter and Smoother With Improved Covariance Matrix Approximation. <i>IEEE Transactions on Signal Processing</i> , 2018, 66, 5618-5633.	5.3	34
16	Analyzing the Acquisition and Management of Context. <i>International Journal of Interactive Communication Systems and Technologies</i> , 2018, 8, 1-12.	0.7	0
17	A Survey of Selected Indoor Positioning Methods for Smartphones. <i>IEEE Communications Surveys and Tutorials</i> , 2017, 19, 1347-1370.	39.4	382
18	Kullback-Leibler divergence approach to partitioned update Kalman filter. <i>Signal Processing</i> , 2017, 130, 289-298.	3.7	24

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19	Indoor localisation using aroma fingerprints: A first sniff. , 2017, , .		4
20	Gaussian flow sigma point filter for nonlinear Gaussian state-space models. , 2017, , .		2
21	A method for post-mission velocity and orientation estimation based on data fusion from MEMS-IMU and GNSS. , 2017, , .		1
22	Comprehensive survey of similarity measures for ranked based location fingerprinting algorithm. , 2017, , .		12
23	Latent force models in autonomous GNSS satellite orbit prediction. , 2017, , .		3
24	A Survey on Wireless Transmitter Localization Using Signal Strength Measurements. Wireless Communications and Mobile Computing, 2017, 2017, 1-12.	1.2	23
25	Semantic Labeling of User Location Context Based on Phone Usage Features. Mobile Information Systems, 2017, 2017, 1-21.	0.6	2
26	Parametrization and prediction of EGNOS GIVD values. , 2017, , .		0
27	Enabling Technologies for Smart Mobile Services. Mobile Information Systems, 2016, 2016, 1-3.	0.6	1
28	Extended prediction of QZSS orbit and clock. , 2016, , .		1
29	An Introduction to Twisted Particle Filters and Parameter Estimation in Non-Linear State-Space Models. IEEE Transactions on Signal Processing, 2016, 64, 4875-4890.	5.3	16
30	A survey of parametric fingerprint-positioning methods. Gyroscopy and Navigation, 2016, 7, 107-127.	1.3	6
31	Statistical Trilateration With Skew-t Distributed Errors in LTE Networks. IEEE Transactions on Wireless Communications, 2016, 15, 7114-7127.	9.2	17
32	A simplified Solar Radiation Pressure model for GNSS autonomous orbit prediction. , 2016, , .		1
33	Online tests of Kalman filter consistency. International Journal of Adaptive Control and Signal Processing, 2016, 30, 115-124.	4.1	25
34	Gaussian Scale Mixture Models for Robust Linear Multivariate Regression with Missing Data. Communications in Statistics Part B: Simulation and Computation, 2016, 45, 791-813.	1.2	9
35	Graph-based map matching for indoor positioning. , 2015, , .		4
36	Binomial Gaussian mixture filter. Eurasip Journal on Advances in Signal Processing, 2015, 2015, .	1.7	11

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37	Kalman filter with a linear state model for PDR+WLAN positioning and its application to assisting a particle filter. <i>Eurasip Journal on Advances in Signal Processing</i> , 2015, 2015, .	1.7	9
38	A NLOS-robust TOA positioning filter based on a skew-t measurement noise model. , 2015, , .		24
39	Gaussian filtering and variational approximations for Bayesian smoothing in continuous-discrete stochastic dynamic systems. <i>Signal Processing</i> , 2015, 111, 124-136.	3.7	36
40	Robust Inference for State-Space Models with Skewed Measurement Noise. <i>IEEE Signal Processing Letters</i> , 2015, 22, 1898-1902.	3.6	93
41	Statistical sensor fusion of ultra wide band ranging and real time kinematic satellite navigation. , 2015, , .		3
42	Received signal strength models for WLAN and BLE-based indoor positioning in multi-floor buildings. , 2015, , .		41
43	GNSS orbit prediction with enhanced force model. , 2015, , .		5
44	Statistical trilateration with skew-t errors. , 2015, , .		3
45	Evaluating the consistency of estimation. , 2014, , .		9
46	Motion model for positioning with graph-based indoor map. , 2014, , .		7
47	On convergence and accuracy of state-space approximations of squared exponential covariance functions. , 2014, , .		14
48	Semantic labeling of places based on phone usage features using supervised learning. , 2014, , .		5
49	Application of the Hill-Clohesy-Wiltshire equation in GNSS orbit prediction. , 2014, , .		2
50	Bayesian analysis of GUHA hypotheses. <i>Journal of Intelligent Information Systems</i> , 2014, 42, 47-73.	3.9	5
51	UWB Positioning with Generalized Gaussian Mixture Filters. <i>IEEE Transactions on Mobile Computing</i> , 2014, 13, 2406-2414.	5.8	35
52	A method to enforce map constraints in a particle filter's position estimate. , 2014, , .		2
53	SO-I: a surrogate model algorithm for expensive nonlinear integer programming problems including global optimization applications. <i>Journal of Global Optimization</i> , 2014, 59, 865-889.	1.8	44
54	Adaptive mobile tracking in unknown non-line-of-sight conditions with application to digital TV networks. <i>Eurasip Journal on Advances in Signal Processing</i> , 2014, 2014, .	1.7	15

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55	SO-MI: A surrogate model algorithm for computationally expensive nonlinear mixed-integer black-box global optimization problems. <i>Computers and Operations Research</i> , 2013, 40, 1383-1400.	4.0	147
56	Calibration of GARCH models using concurrent accelerated random search. <i>Applied Mathematics and Computation</i> , 2013, 221, 522-534.	2.2	0
57	Stock price dynamics and option valuations under volatility feedback effect. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013, 392, 722-740.	2.6	6
58	Particle filter and smoother for indoor localization. , 2013, , .		62
59	Device self-calibration in location systems using signal strength histograms. <i>Journal of Location Based Services</i> , 2013, 7, 165-181.	1.9	52
60	Bandwidth and storage reduction of radio maps for offline WLAN positioning. , 2013, , .		3
61	Statistical Path Loss Parameter Estimation and Positioning using RSS Measurements. <i>The Journal of Global Positioning Systems</i> , 2013, 12, 13-27.	1.6	6
62	Bayesian fault detection method for linear systems with outliers. , 2012, , .		1
63	Using unlocated fingerprints in generation of WLAN maps for indoor positioning. , 2012, , .		4
64	An empirical solar radiation pressure model for autonomous GNSS orbit prediction. , 2012, , .		9
65	Converting GNSS satellite orbit segments to GPS-compatible format. , 2012, , .		1
66	Recursive outlier-robust filtering and smoothing for nonlinear systems using the multivariate student-t distribution. , 2012, , .		93
67	Robust Kalman filter for positioning with wireless BS coverage areas. , 2012, , .		2
68	Gaussian mixture filter allowing negative weights and its application to positioning using signal strength measurements. , 2012, , .		6
69	Statistical path loss parameter estimation and positioning using RSS measurements in indoor wireless networks. , 2012, , .		32
70	Statistical path loss parameter estimation and positioning using RSS measurements. , 2012, , .		12
71	Outlier-robust estimation of GPS satellite clock offsets. , 2012, , .		7
72	Device signal strength self-calibration using histograms. , 2012, , .		24

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73	Autonomous Prediction of GPS and GLONASS Satellite Orbits. Navigation, Journal of the Institute of Navigation, 2012, 59, 119-134.	2.8	28
74	Mobile Tracking in Mixed Line-of-Sight/Non-Line-of-Sight Conditions: Algorithm and Theoretical Lower Bound. Wireless Personal Communications, 2012, 65, 753-771.	2.7	25
75	A monocular camera gyroscope. Gyroscopy and Navigation, 2012, 3, 124-131.	1.3	9
76	Robust estimation of a reception region from location fingerprints. , 2011, , .		5
77	Forecasting the Diffusion of Innovation: A Stochastic Bass Model With Log-Normal and Mean-Reverting Error Process. IEEE Transactions on Engineering Management, 2011, 58, 228-249.	3.5	13
78	Mixture surrogate models based on Dempster-Shafer theory for global optimization problems. Journal of Global Optimization, 2011, 51, 79-104.	1.8	82
79	Rank based fingerprinting algorithm for indoor positioning. , 2011, , .		79
80	Mobile tracking in unknown non-line-of-sight conditions. , 2010, , .		2
81	Indoor positioning using WLAN coverage area estimates. , 2010, , .		28
82	Positioning with coverage area estimates generated from location fingerprints. , 2010, , .		16
83	Bayesian Assaying of GUHA Nuggets. Communications in Computer and Information Science, 2010, , 348-355.	0.5	0
84	Uninterrupted portable car navigation system using GPS, map and inertial sensors data. , 2009, , .		12
85	A comparative survey of WLAN location fingerprinting methods. , 2009, , .		366
86	Fingerprint Kalman Filter in indoor positioning applications. , 2009, , .		26
87	Use of distributed computing in derivative pricing. International Journal of Electronic Finance, 2009, 3, 270.	0.2	11
88	Matrix-based numerical modelling of financial differential equations. International Journal of Mathematical Modelling and Numerical Optimisation, 2009, 1, 88.	0.2	2
89	PNaFF: A modular software platform for testing hybrid position estimation algorithms. , 2008, , .		2
90	A Comparison of Particle Filters for Personal Positioning. , 2008, , 173-178.		1

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91	RECURRENCE QUANTIFICATION ANALYSIS OF ELECTROCHEMICAL NOISE DATA DURING PIT DEVELOPMENT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 3725-3728.	1.7	12
92	Robust Extended Kalman Filtering in Hybrid Positioning Applications. , 2007, , .		40
93	Benchmarking Nonlinear Filters. , 2006, , .		3
94	Distance of Sample Measurement Points to Prototype Catalog Curve. Journal of Physics: Conference Series, 2006, 52, 27-35.	0.4	0
95	Prediction of rotating stall within an impeller of a centrifugal pump based on spectral analysis of pressure and velocity data. Journal of Physics: Conference Series, 2006, 52, 36-45.	0.4	28
96	Supplement to the paper "Bounds for the extreme eigenvalues of symmetric matrices". ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2005, 85, 76-76.	1.6	0
97	Nonnegative color spectrum analysis filters from principal component analysis characteristic spectra. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2002, 19, 1946.	1.5	22
98	Quasi stage order conditions for SDIRK methods. Applied Numerical Mathematics, 2002, 42, 61-75.	2.1	14
99	A Two Regime Orifice Flow Formula for Numerical Simulation. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1999, 121, 721-724.	1.6	24
100	Variable step size time integration methods for transient eddy current problems. IEEE Transactions on Magnetics, 1998, 34, 3319-3322.	2.1	30
101	An L-stable Rosenbrock method for step-by-step time integration in structural dynamics. Computer Methods in Applied Mechanics and Engineering, 1995, 126, 343-354.	6.6	20
102	Bounds for the maximum deflection and curvature of nonuniform beam-columns. International Journal of Solids and Structures, 1993, 30, 1565-1577.	2.7	2
103	Lower Bounds for Critical Buckling Load Using Matrix Norms. Journal of Engineering Mechanics - ASCE, 1993, 119, 1100-1107.	2.9	0
104	Noise-filtering properties of numerical methods for the inverse Abel transform. IEEE Transactions on Instrumentation and Measurement, 1992, 41, 517-522.	4.7	5
105	Inversion of Laplace transforms using polynomial series. International Journal of Systems Science, 1991, 22, 507-510.	5.5	0
106	Nyquist-type stability test for undamped elastic structures. International Journal of Control, 1990, 51, 1309-1318.	1.9	0
107	Comments on "An improved approximation for settling time of second-order linear systems". IEEE Transactions on Automatic Control, 1987, 32, 747-748.	5.7	6
108	Deflection Estimates Using the Virtual Work Principle. Transactions of the Canadian Society for Mechanical Engineering, 1984, 8, 133-137.	0.8	0

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109	Stability of Follower-Force Rods with Weight. Journal of Engineering Mechanics - ASCE, 1984, 110, 367-379.	2.9	12