

GÃ©rard Lachapelle

List of Publications by Year in descending order

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87
papers

2,526
citations

218381

26
h-index

214527

47
g-index

89
all docs

89
docs citations

89
times ranked

1888
citing authors

#	ARTICLE	IF	CITATIONS
1	Motion Mode Recognition and Step Detection Algorithms for Mobile Phone Users. Sensors, 2013, 13, 1539-1562.	2.1	204
2	Step Length Estimation Using Handheld Inertial Sensors. Sensors, 2012, 12, 8507-8525.	2.1	197
3	ASPeCT: Unambiguous sine-BOC(n,n) acquisition/tracking technique for navigation applications. IEEE Transactions on Aerospace and Electronic Systems, 2007, 43, 150-162.	2.6	186
4	GPS spoofer countermeasure effectiveness based on signal strength, noise power, and C/N ₀ measurements. International Journal of Satellite Communications and Networking, 2012, 30, 181-191.	1.2	115
5	Consideration of time-correlated errors in a Kalman filter applicable to GNSS. Journal of Geodesy, 2009, 83, 51-56.	1.6	101
6	Precise Calibration of a GNSS Antenna Array for Adaptive Beamforming Applications. Sensors, 2014, 14, 9669-9691.	2.1	91
7	Data Fusion Algorithms for Multiple Inertial Measurement Units. Sensors, 2011, 11, 6771-6798.	2.1	90
8	Overview of Spatial Processing Approaches for GNSS Structural Interference Detection and Mitigation. Proceedings of the IEEE, 2016, 104, 1246-1257.	16.4	83
9	Use of Earth's Magnetic Field for Mitigating Gyroscope Errors Regardless of Magnetic Perturbation. Sensors, 2011, 11, 11390-11414.	2.1	79
10	Choosing the coherent integration time for Kalman filter-based carrier-phase tracking of GNSS signals. GPS Solutions, 2011, 15, 345-356.	2.2	68
11	GNSS spoofing detection in handheld receivers based on signal spatial correlation. , 2012, , .		63
12	Architecture and Benefits of an Advanced GNSS Software Receiver. The Journal of Global Positioning Systems, 2008, 7, 156-168.	1.6	57
13	Spoofing detection, classification and cancelation (SDCC) receiver architecture for a moving GNSS receiver. GPS Solutions, 2015, 19, 475-487.	2.2	56
14	GNSS Spoofing Detection for Single Antenna Handheld Receivers. Navigation, Journal of the Institute of Navigation, 2011, 58, 335-344.	1.7	50
15	Magnetic field based heading estimation for pedestrian navigation environments. , 2011, , .		49
16	Spoofing Detection Using GNSS/INS/Odometer Coupling for Vehicular Navigation. Sensors, 2018, 18, 1305.	2.1	49
17	Position and velocity reliability testing in degraded GPS signal environments. GPS Solutions, 2004, 8, 226-237.	2.2	41
18	GNSS Space-Time Interference Mitigation and Attitude Determination in the Presence of Interference Signals. Sensors, 2015, 15, 12180-12204.	2.1	40

#	ARTICLE	IF	CITATIONS
19	High-precision GPS navigation with emphasis on carrier-phase ambiguity resolution. <i>Marine Geodesy</i> , 1992, 15, 253-269.	0.9	38
20	Design and Testing of a Multi-Sensor Pedestrian Location and Navigation Platform. <i>Sensors</i> , 2012, 12, 3720-3738.	2.1	36
21	Differential combining for acquiring weak GPS signals. <i>Signal Processing</i> , 2007, 87, 824-840.	2.1	35
22	Evaluation of GPS-based methods of relative positioning for automotive safety applications. <i>Transportation Research Part C: Emerging Technologies</i> , 2012, 23, 98-108.	3.9	34
23	Multiantenna GNSS and Inertial Sensors/Odometer Coupling for Robust Vehicular Navigation. <i>IEEE Internet of Things Journal</i> , 2018, 5, 4816-4828.	5.5	34
24	Pre-Despreading Authenticity Verification for GPS L1 C/A Signals. <i>Navigation, Journal of the Institute of Navigation</i> , 2014, 61, 1-11.	1.7	33
25	Evaluation of a Low Cost Hand Held Unit with GNSS Raw Data Capability and Comparison with an Android Smartphone. <i>Sensors</i> , 2018, 18, 4185.	2.1	32
26	DGPS Kinematic Carrier Phase Signal Simulation Analysis for Precise Velocity and Position Determination. <i>Navigation, Journal of the Institute of Navigation</i> , 1997, 44, 231-245.	1.7	29
27	A non-coherent architecture for GNSS digital tracking loops. <i>Annales Des Telecommunications/Annals of Telecommunications</i> , 2009, 64, 601-614.	1.6	28
28	Use of High Sensitivity GNSS Receiver Doppler Measurements for Indoor Pedestrian Dead Reckoning. <i>Sensors</i> , 2013, 13, 4303-4326.	2.1	27
29	Investigating GPS Signals Indoors with Extreme High-Sensitivity Detection Techniques. <i>Navigation, Journal of the Institute of Navigation</i> , 2005, 52, 199-213.	1.7	26
30	Pedestrian navigation with high sensitivity GPS receivers and MEMS. <i>Personal and Ubiquitous Computing</i> , 2007, 11, 481-488.	1.9	25
31	Assessment of Measurement Distortions in GNSS Antenna Array Space-Time Processing. <i>International Journal of Antennas and Propagation</i> , 2016, 2016, 1-17.	0.7	25
32	Characterization of Signal Quality Monitoring Techniques for Multipath Detection in GNSS Applications. <i>Sensors</i> , 2017, 17, 1579.	2.1	25
33	Performance analysis of GNSS multipath mitigation using antenna arrays. <i>The Journal of Global Positioning Systems</i> , 2016, 14, .	1.6	24
34	Interference and multipath mitigation utilising a two-stage beamformer for global navigation satellite systems applications. <i>IET Radar, Sonar and Navigation</i> , 2013, 7, 55-66.	0.9	23
35	Measuring Aircraft Carrier Flexure in Support of Autonomous Aircraft Landings. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2009, 45, 523-535.	2.6	22
36	Methodology for comparing two carrier phase tracking techniques. <i>GPS Solutions</i> , 2012, 16, 197-207.	2.2	22

#	ARTICLE	IF	CITATIONS
37	Integration of GNSS and INS with a phased array antenna. GPS Solutions, 2018, 22, 1.	2.2	22
38	SATLSim: a Semi-Analytic framework for fast GNSS tracking loop simulations. GPS Solutions, 2011, 15, 427-431.	2.2	21
39	Development of an Integrated Low-Cost GPS/Rate Gyro System for Attitude Determination. Journal of Navigation, 2004, 57, 85-101.	1.0	20
40	Estimating MEMS gyroscope g-sensitivity errors in foot mounted navigation. , 2012, , .		20
41	GNSS Code Multipath Mitigation by Cascading Measurement Monitoring Techniques. Sensors, 2018, 18, 1967.	2.1	18
42	Effects of the 2012â€“2013 solar maximum on GNSS signals in Brazil. GPS Solutions, 2015, 19, 309-319.	2.2	16
43	Heading and Pitch Determination Using GPS/GLONASS. GPS Solutions, 2000, 3, 26-36.	2.2	15
44	A New Approach for Improving Reliability of Personal Navigation Devices under Harsh GNSS Signal Conditions. Sensors, 2013, 13, 15221-15241.	2.1	15
45	Activity and environment classification using foot mounted navigation sensors. , 2012, , .		14
46	GNSS Precise Point Positioning with Android Smartphones and Comparison with High Performance Receivers. , 2019, , .		14
47	Self-Contained Antenna Array Calibration using GNSS Signals. Navigation, Journal of the Institute of Navigation, 2012, 59, 209-220.	1.7	13
48	Enhanced Detection Performance of Indoor GNSS Signals Based on Synthetic Aperture. IEEE Transactions on Vehicular Technology, 2010, 59, 2711-2724.	3.9	12
49	Use of magnetic quasi static field (QSF) updates for pedestrian navigation. , 2012, , .		12
50	Doppler Characterization of a Mobile GNSS Receiver in Multipath Fading Channels. Journal of Navigation, 2012, 65, 477-494.	1.0	11
51	Combined Acquisition and Tracking Methods for GPS L1 C/A and L1C Signals. International Journal of Navigation and Observation, 2010, 2010, 1-19.	0.8	10
52	Millimetre Level Accuracy GNSS Positioning with the Blind Adaptive Beamforming Method in Interference Environments. Sensors, 2016, 16, 1824.	2.1	10
53	Effect of camera characteristics on the accuracy of a visual gyroscope for indoor pedestrian navigation. , 2012, , .		9
54	Mitigation of attitude and gyro errors through vision aiding. , 2012, , .		9

#	ARTICLE	IF	CITATIONS
55	Coherent integration time limit of a mobile receiver for indoor GNSS applications. GPS Solutions, 2012, 16, 157-167.	2.2	9
56	Analysis of Multi-Antenna GNSS Receiver Performance under Jamming Attacks. Sensors, 2016, 16, 1937.	2.1	9
57	Design of Short Synchronization Codes for Use in Future GNSS System. International Journal of Navigation and Observation, 2008, 2008, 1-14.	0.8	8
58	Multiple sensors integration for pedestrian indoor navigation. , 2015, , .		8
59	Benefits of GNSS IF data recording. , 2016, , .		8
60	Design and Implementation of an RTK-Based Vector Phase Locked Loop. Sensors, 2018, 18, 845.	2.1	8
61	User-level reliability monitoring in urban personal satellite-navigation. IEEE Transactions on Aerospace and Electronic Systems, 2007, 43, 1305-1318.	2.6	8
62	Controlled GPS Signal Simulation for Indoors. Journal of Navigation, 2007, 60, 265-280.	1.0	7
63	Spatial Characterization of GNSS Multipath Channels. International Journal of Antennas and Propagation, 2012, 2012, 1-15.	0.7	7
64	INS Assisted Fuzzy Tracking Loop for GPS-Guided Missiles and Vehicular Applications. International Journal of Navigation and Observation, 2013, 2013, 1-17.	0.8	7
65	Kinematic Zenith Tropospheric Delay Estimation with GNSS PPP in Mountainous Areas. Sensors, 2021, 21, 5709.	2.1	7
66	GPS on the Web. GPS Solutions, 2000, 3, 70-70.	2.2	6
67	Effects of building materials on UHF ranging signals. GPS Solutions, 2004, 8, 1-8.	2.2	6
68	Pseudolite interference mitigation and signal enhancements using an antenna array. , 2015, , .		6
69	Comparing detection performance of polarization and spatial diversity for indoor GNSS applications. , 2010, , .		5
70	Combined L1/L2 Kalman filter-based tracking scheme for weak signal environments. GPS Solutions, 2011, 15, 403-414.	2.2	5
71	Characterization of Range and Time Performance of Indoor GNSS Signals. , 2018, , .		4
72	Galileo L1 Civil Receiver Tracking Loops' Architecture. , 2007, , .		3

#	ARTICLE	IF	CITATIONS
73	High Resolution GNSS Delay Estimation for Vehicular Navigation Utilizing a Doppler Combining Technique. Journal of Navigation, 2014, 67, 579-602.	1.0	2
74	A weighted combining method for GPS antenna diversity. , 2012, , .		1
75	Symbol Timing Acquisition for Collaborative OFDM WLAN-Based A-GPS. International Journal of Wireless Information Networks, 2013, 20, 281-293.	1.8	1
76	Enhanced pedestrian attitude estimation using vision aiding. Journal of Location Based Services, 2013, 7, 209-222.	1.4	1
77	Improving the reliability of personal navigation devices in harsh environments. , 2015, , .		1
78	Galileo E1/E5 Measurement Monitoring - Theory, Testing and Analysis. , 2018, , .		1
79	GPS on the Web. GPS Solutions, 2000, 3, 69-69.	2.2	0
80	GPS on the Web. GPS Solutions, 2000, 4, 79-79.	2.2	0
81	GPS on the Web. GPS Solutions, 2000, 4, 83-83.	2.2	0
82	GPS on the Web. GPS Solutions, 2001, 4, 55-56.	2.2	0
83	GPS on the Web. GPS Solutions, 2001, 5, 70-70.	2.2	0
84	GPS on the Web. GPS Solutions, 2001, 5, 90-90.	2.2	0
85	Letter from the Guest Editors: The GPS Wireless Special Issue. GPS Solutions, 2002, 6, 137-137.	2.2	0
86	Future GNSS Signals. International Journal of Navigation and Observation, 2008, 2008, 1-1.	0.8	0
87	GLRT signal detection performance of a synthetic array. , 2010, , .		0