

Luis Javier GarcÃ-a Villalba

List of Publications by Year in descending order

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162
papers

1,913
citations

304368

22
h-index

360668

35
g-index

166
all docs

166
docs citations

166
times ranked

1862
citing authors

#	ARTICLE	IF	CITATIONS
1	Routing Protocols in Wireless Sensor Networks. <i>Sensors</i> , 2009, 9, 8399-8421.	2.1	171
2	Key Technologies in the Context of Future Networks: Operational and Management Requirements. <i>Future Internet</i> , 2017, 9, 1.	2.4	83
3	SDN: Evolution and Opportunities in the Development IoT Applications. <i>International Journal of Distributed Sensor Networks</i> , 2014, 10, 735142.	1.3	73
4	Adaptive artificial immune networks for mitigating DoS flooding attacks. <i>Swarm and Evolutionary Computation</i> , 2018, 38, 94-108.	4.5	69
5	Analysis of the GPS Spoofing Vulnerability in the Drone 3DR Solo. <i>IEEE Access</i> , 2019, 7, 51782-51789.	2.6	60
6	Using Twitter Data to Monitor Natural Disaster Social Dynamics: A Recurrent Neural Network Approach with Word Embeddings and Kernel Density Estimation. <i>Sensors</i> , 2019, 19, 1746.	2.1	47
7	Learning Perfectly Secure Cryptography to Protect Communications with Adversarial Neural Cryptography. <i>Sensors</i> , 2018, 18, 1306.	2.1	42
8	Smartphone image clustering. <i>Expert Systems With Applications</i> , 2015, 42, 1927-1940.	4.4	33
9	Set of Usability Heuristics for Quality Assessment of Mobile Applications on Smartphones. <i>IEEE Access</i> , 2019, 7, 116145-116161.	2.6	33
10	Distributed Data Service for Data Management in Internet of Things Middleware. <i>Sensors</i> , 2017, 17, 977.	2.1	32
11	Intelligent system for time series classification using support vector machines applied to supply-chain. <i>Expert Systems With Applications</i> , 2012, 39, 10590-10599.	4.4	30
12	A novel pattern recognition system for detecting Android malware by analyzing suspicious boot sequences. <i>Knowledge-Based Systems</i> , 2018, 150, 198-217.	4.0	30
13	A Methodology to Evaluate Standards and Platforms within Cyber Threat Intelligence. <i>Future Internet</i> , 2020, 12, 108.	2.4	29
14	Improving Real-Time Hand Gesture Recognition with Semantic Segmentation. <i>Sensors</i> , 2021, 21, 356.	2.1	29
15	Auto-Configuration Protocols in Mobile Ad Hoc Networks. <i>Sensors</i> , 2011, 11, 3652-3666.	2.1	28
16	Bio-inspired routing protocol for mobile ad hoc networks. <i>IET Communications</i> , 2010, 4, 2187.	1.5	27
17	Trends on virtualisation with software defined networking and network function virtualisation. <i>IET Networks</i> , 2015, 4, 255-263.	1.1	27
18	Distributed Dynamic Host Configuration Protocol (D2HCP). <i>Sensors</i> , 2011, 11, 4438-4461.	2.1	26

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19	Future mode of operations for 5G – The SELFNET approach enabled by SDN/NFV. Computer Standards and Interfaces, 2017, 54, 229-246.	3.8	25
20	A PRNU-based counter-forensic method to manipulate smartphone image source identification techniques. Future Generation Computer Systems, 2017, 76, 418-427.	4.9	25
21	Cybersecurity and Network Forensics: Analysis of Malicious Traffic towards a Honeynet with Deep Packet Inspection. Applied Sciences (Switzerland), 2017, 7, 1082.	1.3	25
22	A security framework for Ethereum smart contracts. Computer Communications, 2021, 172, 119-129.	3.1	25
23	Dynamic multi-objective routing algorithm: a multi-objective routing algorithm for the simple hybrid routing protocol on wireless sensor networks. IET Communications, 2010, 4, 1732.	1.5	22
24	SELFNET Framework self-healing capabilities for 5G mobile networks. Transactions on Emerging Telecommunications Technologies, 2016, 27, 1225-1232.	2.6	20
25	Identification of smartphone brand and model via forensic video analysis. Expert Systems With Applications, 2016, 55, 59-69.	4.4	20
26	An Analysis of Smart Contracts Security Threats Alongside Existing Solutions. Entropy, 2020, 22, 203.	1.1	20
27	Hierarchical Neighbor Discovery Scheme for Handover Optimization. IEEE Communications Letters, 2010, 14, 1020-1022.	2.5	18
28	Online masquerade detection resistant to mimicry. Expert Systems With Applications, 2016, 61, 162-180.	4.4	18
29	Alert correlation framework for malware detection by anomaly-based packet payload analysis. Journal of Network and Computer Applications, 2017, 97, 11-22.	5.8	17
30	Towards Incidence Management in 5G Based on Situational Awareness. Future Internet, 2017, 9, 3.	2.4	17
31	Digital Image Tamper Detection Technique Based on Spectrum Analysis of CFA Artifacts. Sensors, 2018, 18, 2804.	2.1	17
32	Digital Images Authentication Technique Based on DWT, DCT and Local Binary Patterns. Sensors, 2018, 18, 3372.	2.1	17
33	Copy-move forgery detection technique based on discrete cosine transform blocks features. Neural Computing and Applications, 2021, 33, 4713-4727.	3.2	17
34	A Methodological Approach for Assessing Amplified Reflection Distributed Denial of Service on the Internet of Things. Sensors, 2016, 16, 1855.	2.1	16
35	Software Defined Networks in Wireless Sensor Architectures. Entropy, 2018, 20, 225.	1.1	16
36	An Energy Balanced Flooding Algorithm for a BLE Mesh Network. IEEE Access, 2020, 8, 97946-97958.	2.6	16

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37	Digital Video Source Identification Based on Container's Structure Analysis. IEEE Access, 2020, 8, 36363-36375.	2.6	16
38	Malware Detection System by Payload Analysis of Network Traffic. IEEE Latin America Transactions, 2015, 13, 850-855.	1.2	15
39	Leveraging information security and computational trust for cybersecurity. Journal of Supercomputing, 2016, 72, 3729-3763.	2.4	15
40	Entropy-Based Economic Denial of Sustainability Detection. Entropy, 2017, 19, 649.	1.1	15
41	Outdoor Location of Mobile Devices Using Trilateration Algorithms for Emergency Services. IEEE Access, 2019, 7, 52052-52059.	2.6	15
42	Monitoring and Discovery for Self-Organized Network Management in Virtualized and Software Defined Networks. Sensors, 2017, 17, 731.	2.1	14
43	Passive Image Forgery Detection Based on the Demosaicing Algorithm and JPEG Compression. IEEE Access, 2020, 8, 11815-11823.	2.6	14
44	An efficient algorithm to generate binary sequences for cryptographic purposes. Theoretical Computer Science, 2001, 259, 679-688.	0.5	13
45	A proposal of a wireless sensor network routing protocol. Telecommunication Systems, 2008, 38, 61-68.	1.6	13
46	Design and Evaluation of a Services Interface for the Internet of Things. Wireless Personal Communications, 2016, 91, 1711-1748.	1.8	13
47	A machine learning forensics technique to detect post-processing in digital videos. Future Generation Computer Systems, 2020, 111, 199-212.	4.9	13
48	IEEE 802.21 Information Services deployment for heterogeneous mobile environments. IET Communications, 2011, 5, 2721-2729.	1.5	12
49	Framework for optimized multimedia routing over software defined networks. Computer Networks, 2015, 92, 369-379.	3.2	12
50	Enlargement of vulnerable web applications for testing. Journal of Supercomputing, 2018, 74, 6598-6617.	2.4	12
51	New DoS Defense Method Based on Strong Designated Verifier Signatures. Sensors, 2018, 18, 2813.	2.1	12
52	Vehicle Counting in Video Sequences: An Incremental Subspace Learning Approach. Sensors, 2019, 19, 2848.	2.1	12
53	Anonymous Real-Time Analytics Monitoring Solution for Decision Making Supported by Sentiment Analysis. Sensors, 2020, 20, 4557.	2.1	12
54	A Dense Neural Network Approach for Detecting Clone ID Attacks on the RPL Protocol of the IoT. Sensors, 2021, 21, 3173.	2.1	12

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55	On the linear complexity of the sequences generated by nonlinear filterings. Information Processing Letters, 2000, 76, 67-73.	0.4	11
56	Evolution and Challenges of Software Defined Networking. , 2013, , .		11
57	Reasoning and Knowledge Acquisition Framework for 5G Network Analytics. Sensors, 2017, 17, 2405.	2.1	11
58	Authentication and integrity of smartphone videos through multimedia container structure analysis. Future Generation Computer Systems, 2020, 108, 15-33.	4.9	11
59	Source identification for mobile devices, based on wavelet transforms combined with sensor imperfections. Computing (Vienna/New York), 2014, 96, 829-841.	3.2	10
60	Analysis of errors in exif metadata on mobile devices. Multimedia Tools and Applications, 2015, 74, 4735-4763.	2.6	10
61	Image source acquisition identification of mobile devices based on the use of features. Multimedia Tools and Applications, 2016, 75, 7087-7111.	2.6	10
62	An Approach to Data Analysis in 5G Networks. Entropy, 2017, 19, 74.	1.1	10
63	Analyzing the traffic of penetration testing tools with an IDS. Journal of Supercomputing, 2018, 74, 6454-6469.	2.4	10
64	Ransomware Automatic Data Acquisition Tool. IEEE Access, 2018, 6, 55043-55052.	2.6	10
65	EBVBF: Energy Balanced Vector Based Forwarding Protocol. IEEE Access, 2019, 7, 54273-54284.	2.6	10
66	QoS Management and Flexible Traffic Detection Architecture for 5G Mobile Networks. Sensors, 2019, 19, 1335.	2.1	10
67	Recommendations on Statistical Randomness Test Batteries for Cryptographic Purposes. ACM Computing Surveys, 2021, 54, 1-34.	16.1	10
68	Methodological Framework to Collect, Process, Analyze and Visualize Cyber Threat Intelligence Data. Applied Sciences (Switzerland), 2022, 12, 1205.	1.3	10
69	Hybrid ACO Routing Protocol for Mobile Ad Hoc Networks. International Journal of Distributed Sensor Networks, 2013, 9, 265485.	1.3	9
70	Security Architecture and Protocol for Trust Verifications Regarding the Integrity of Files Stored in Cloud Services. Sensors, 2018, 18, 753.	2.1	9
71	Early Fire Detection on Video Using LBP and Spread Ascending of Smoke. Sustainability, 2019, 11, 3261.	1.6	9
72	Detecting Cryptojacking Web Threats: An Approach with Autoencoders and Deep Dense Neural Networks. Applied Sciences (Switzerland), 2022, 12, 3234.	1.3	9

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73	Smartphone image acquisition forensics using sensor fingerprint. IET Computer Vision, 2015, 9, 723-731.	1.3	8
74	Virtual learning communities: unsolved troubles. Multimedia Tools and Applications, 2015, 74, 8505-8519.	2.6	8
75	Advanced Payload Analyzer Preprocessor. Future Generation Computer Systems, 2017, 76, 474-485.	4.9	8
76	Methodology for Forensics Data Reconstruction on Mobile Devices with Android Operating System Applying In-System Programming and Combination Firmware. Applied Sciences (Switzerland), 2020, 10, 4231.	1.3	8
77	Image tampering detection by estimating interpolation patterns. Future Generation Computer Systems, 2020, 107, 229-237.	4.9	8
78	On the Efficiency of Shortened Cyclic Single-Burst-Correcting Codes. IEEE Transactions on Information Theory, 2010, 56, 3290-3296.	1.5	7
79	E-D2HCP: enhanced distributed dynamic host configuration protocol. Computing (Vienna/New York), 2014, 96, 777-791.	3.2	7
80	A Family of ACO Routing Protocols for Mobile Ad Hoc Networks. Sensors, 2017, 17, 1179.	2.1	7
81	A novel Self-Organizing Network solution towards Crypto-ransomware Mitigation. , 2018, , .		7
82	Advantages of identity certificate segregation in P2PSIP systems. IET Communications, 2011, 5, 879-889.	1.5	6
83	Security Issues in Mobile Ad Hoc Networks. International Journal of Distributed Sensor Networks, 2012, 8, 818054.	1.3	6
84	A Layered Trust Information Security Architecture. Sensors, 2014, 14, 22754-22772.	2.1	6
85	Advanced Technologies and Communication Solutions for Internet of Things. International Journal of Distributed Sensor Networks, 2014, 10, 896760.	1.3	6
86	Orchestration of use-case driven analytics in 5G scenarios. Journal of Ambient Intelligence and Humanized Computing, 2018, 9, 1097-1117.	3.3	6
87	Compression effects and scene details on the source camera identification of digital videos. Expert Systems With Applications, 2021, 170, 114515.	4.4	6
88	Digital Video Manipulation Detection Technique Based on Compression Algorithms. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 2596-2605.	4.7	6
89	Natural Language Processing Applied to Forensics Information Extraction With Transformers and Graph Visualization. IEEE Transactions on Computational Social Systems, 2024, , 1-17.	3.2	6
90	A family of keystream generators with large linear complexity. Applied Mathematics Letters, 2001, 14, 545-547.	1.5	5

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91	Secure extension to the optimised link state routing protocol. IET Information Security, 2011, 5, 163.	1.1	5
92	Self-Configuration and Self-Optimization Process in Heterogeneous Wireless Networks. Sensors, 2011, 11, 425-454.	2.1	5
93	Malware Detection System by Payload Analysis of Network Traffic (Poster Abstract). Lecture Notes in Computer Science, 2012, , 397-398.	1.0	5
94	An Efficient Algorithm for Searching Optimal Shortened Cyclic Single-Burst-Correcting Codes. IEEE Communications Letters, 2012, 16, 89-91.	2.5	5
95	Web from preprocessor for crawling. Multimedia Tools and Applications, 2015, 74, 8559-8570.	2.6	5
96	Estimation of Anonymous Email Network Characteristics through Statistical Disclosure Attacks. Sensors, 2016, 16, 1832.	2.1	5
97	A comparison of learning methods over raw data: forecasting cab services market share in New York City. Multimedia Tools and Applications, 2019, 78, 29783-29804.	2.6	5
98	A survey of artificial intelligence strategies for automatic detection of sexually explicit videos. Multimedia Tools and Applications, 2022, 81, 3205-3222.	2.6	5
99	Likelihood that a pseudorandom sequence generator has optimal properties. Electronics Letters, 1998, 34, 646.	0.5	4
100	On the general classification of nonlinear filters of m-sequences. Information Processing Letters, 1999, 69, 227-232.	0.4	4
101	A distributed QoS mechanism for ad hoc network. International Journal of Ad Hoc and Ubiquitous Computing, 2012, 11, 25.	0.3	4
102	Adaptive routing protocol for mobile ad hoc networks. Computing (Vienna/New York), 2014, 96, 817-827.	3.2	4
103	Disclosing user relationships in email networks. Journal of Supercomputing, 2016, 72, 3787-3800.	2.4	4
104	An algorithm to find relationships between web vulnerabilities. Journal of Supercomputing, 2018, 74, 1061-1089.	2.4	4
105	Detecting Workload-based and Instantiation-based Economic Denial of Sustainability on 5G environments. , 2018, , .		4
106	Hy-SAIL: Hyper-Scalability, Availability and Integrity Layer for Cloud Storage Systems. IEEE Access, 2019, 7, 90082-90093.	2.6	4
107	Digital Video Source Acquisition Forgery Technique Based on Pattern Sensor Noise Extraction. IEEE Access, 2019, 7, 157363-157373.	2.6	4
108	Algorithm for computing minimum distance. Electronics Letters, 1999, 35, 1534.	0.5	3

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109	Data model extension for security event notification with dynamic risk assessment purpose. Science China Information Sciences, 2013, 56, 1-9.	2.7	3
110	Extracting Association Patterns in Network Communications. Sensors, 2015, 15, 4052-4071.	2.1	3
111	BATCP: Bandwidth-Aggregation Transmission Control Protocol. Symmetry, 2017, 9, 167.	1.1	3
112	Clustering and Flow Conservation Monitoring Tool for Software Defined Networks. Sensors, 2018, 18, 1079.	2.1	3
113	A traffic analysis attack to compute social network measures. Multimedia Tools and Applications, 2019, 78, 29731-29745.	2.6	3
114	Adversarial attacks on a lexical sentiment analysis classifier. Computer Communications, 2021, 174, 154-171.	3.1	3
115	A new approach to analyze the independence of statistical tests of randomness. Applied Mathematics and Computation, 2022, 426, 127116.	1.4	3
116	Weaknesses in ENT Battery Design. Applied Sciences (Switzerland), 2022, 12, 4230.	1.3	3
117	Critical Analysis of Hypothesis Tests in Federal Information Processing Standard (140-2). Entropy, 2022, 24, 613.	1.1	3
118	GTrust: Group Extension for Trust Models in Distributed Systems. International Journal of Distributed Sensor Networks, 2014, 10, 872842.	1.3	2
119	Design and evaluation of a decentralised information service architecture for IEEE 802.21 networks. International Journal of Ad Hoc and Ubiquitous Computing, 2014, 15, 275.	0.3	2
120	A Zone-Based Media Independent Information Service for IEEE 802.21 Networks. International Journal of Distributed Sensor Networks, 2014, 10, 737218.	1.3	2
121	Quantitative Criteria for Alert Correlation of Anomalies-based NIDS. IEEE Latin America Transactions, 2015, 13, 3461-3466.	1.2	2
122	Solving technological isolation to build virtual learning communities. Multimedia Tools and Applications, 2015, 74, 8521-8539.	2.6	2
123	On multiple burst-correcting MDS codes. Journal of Computational and Applied Mathematics, 2016, 295, 170-174.	1.1	2
124	Endpoint Security in Networks: An OpenMP Approach for Increasing Malware Detection Speed. Symmetry, 2017, 9, 172.	1.1	2
125	Detection of Electronic Anklet Wearers's™ Groupings throughout Telematics Monitoring. ISPRS International Journal of Geo-Information, 2017, 6, 31.	1.4	2
126	IoT-based security service for the documentary chain of custody. Sustainable Cities and Society, 2021, 71, 102940.	5.1	2

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127	A Comparison Study between AntOR-Disjoint Node Routing and AntOR-Disjoint Link Routing for Mobile Ad Hoc Networks. Communications in Computer and Information Science, 2011, , 300-304.	0.4	2
128	Comparing AntOR-Disjoint Node Routing Protocol with Its Parallel Extension. Communications in Computer and Information Science, 2011, , 305-309.	0.4	2
129	Application of Mobile Technology in Virtual Communities with Information of Conflict-Affected Areas. Studies in Informatics and Control, 2013, 22, .	0.6	2
130	Performance of WLAN and MANET networks for new auto-configured mobile IP agents. , 2006, , .		1
131	Efficient Shortened Cyclic Codes Correcting Either Random Errors or Bursts. IEEE Communications Letters, 2011, 15, 749-751.	2.5	1
132	Use of Gray codes for optimizing the search of (shortened) cyclic single burst-correcting codes. , 2011, , .		1
133	Multiple Interface Parallel Approach of Bioinspired Routing Protocol for Mobile Ad Hoc Networks. International Journal of Distributed Sensor Networks, 2012, 8, 532572.	1.3	1
134	Restrictive Disjoint-Link-Based Bioinspired Routing Protocol for Mobile Ad Hoc Networks. International Journal of Distributed Sensor Networks, 2012, 8, 956146.	1.3	1
135	Parallel approach of a bioinspired routing protocol for MANETs. International Journal of Ad Hoc and Ubiquitous Computing, 2013, 12, 141.	0.3	1
136	Some new bounds for binary multiple burst-correcting codes. Electronics Letters, 2014, 50, 756-758.	0.5	1
137	Advances on Software Defined Sensor, Mobile, and Fixed Networks. International Journal of Distributed Sensor Networks, 2016, 12, 5153718.	1.3	1
138	An optimisation framework for monitoring of SDN/OpenFlow networks. International Journal of Ad Hoc and Ubiquitous Computing, 2017, 26, 263.	0.3	1
139	Distributed One Time Password Infrastructure for Linux Environments. Entropy, 2018, 20, 319.	1.1	1
140	A proposal of a Wireless Sensor Network Routing Protocol. , 2007, , 410-422.		1
141	Virtualization with Automated Services Catalog for Providing Integrated Information Technology Infrastructure. Lecture Notes in Computer Science, 2011, , 75-91.	1.0	1
142	An Optimization Framework for Monitoring of SDN/OpenFlow Networks. International Journal of Ad Hoc and Ubiquitous Computing, 2015, 1, 1.	0.3	1
143	Load Balancing and Survivability for Network Services Based on Intelligent Agents. Lecture Notes in Computer Science, 2004, , 868-881.	1.0	1
144	Concurrency Optimization for NIDS (Poster Abstract). Lecture Notes in Computer Science, 2012, , 395-396.	1.0	1

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145	Application of Mobile Technology in Virtual Communities with Information of Conflict-Affected Areas. Studies in Informatics and Control, 2013, 22, 33-42.	0.6	1
146	Analysis of MP4 Videos in 5G Using SDN. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 2668-2677.	4.7	1
147	FASSVid: Fast and Accurate Semantic Segmentation for Video Sequences. Entropy, 2022, 24, 942.	1.1	1
148	IMIS 2008 - Message from the Workshop Organizers. , 2008, , .		0
149	DASC 2013: Message from the Program Chairs. , 2013, , .		0
150	Theia: a tool for the forensic analysis of mobile devices pictures. Computing (Vienna/New York), 2016, 98, 1251-1286.	3.2	0
151	Dynamic IEEE 802.21 information server mesh architecture for heterogeneous networks. International Journal of Ad Hoc and Ubiquitous Computing, 2016, 21, 207.	0.3	0
152	Locating similar names through locality sensitive hashing and graph theory. Multimedia Tools and Applications, 2019, 78, 29853-29866.	2.6	0
153	On MARS's s-boxes Strength against Linear Cryptanalysis. Lecture Notes in Computer Science, 2003, , 79-83.	1.0	0
154	Use of Spectral Techniques in the Design of Symmetrical Cryptosystems. Lecture Notes in Computer Science, 2004, , 859-867.	1.0	0
155	Proposal of a System for Searching and Indexing Heterogeneous Vulnerabilities Databases. Lecture Notes in Computer Science, 2006, , 819-828.	1.0	0
156	Enhancing an Integer Challenge-Response Protocol. Lecture Notes in Computer Science, 2008, , 526-540.	1.0	0
157	Grid of Learning Resources in E-learning Communities. Communications in Computer and Information Science, 2011, , 295-299.	0.4	0
158	Improving the Wi-Fi Channel Scanning Using a Decentralized IEEE 802.21 Information Service. Communications in Computer and Information Science, 2011, , 290-294.	0.4	0
159	Trie Data Structure to Compare Traffic Payload in a Supervised Anomaly Detection System (Poster) Tj ETQq1 1 0.784314 rgBT ₀ /Overlock	1.0	0
160	Technique to Neutralize Link Failures for an ACO-Based Routing Algorithm. Lecture Notes in Computer Science, 2012, , 251-260.	1.0	0
161	Routing Techniques Based on Swarm Intelligence. Advances in Intelligent Systems and Computing, 2014, , 515-519.	0.5	0
162	A Model for the Definition, Prioritization and Optimization of Indicators. Electronics (Switzerland), 2022, 11, 967.	1.8	0