Christoph Sommer

List of Publications by Year
in descending order

120 papers	4,693 citations	430874 18 h-index	395702 33 g-index
127 all docs	127 docs citations	127 times ranked	2979 citing authors

#	Article	IF	Citations
1	Bidirectionally Coupled Network and Road Traffic Simulation for Improved IVC Analysis. IEEE Transactions on Mobile Computing, 2011, 10, 3-15.	5.8	1,188
2	A computationally inexpensive empirical model of IEEE 802.11p radio shadowing in urban environments. , 2011, , .		207
3	Plexe: A platooning extension for Veins. , 2014, , .		185
4	Traffic information systems: efficient message dissemination via adaptive beaconing. , 2011, 49, 173-179.		158
5	Progressing toward realistic mobility models in VANET simulations. IEEE Communications Magazine, 2008, 46, 132-137.	6.1	141
6	On the applicability of Two-Ray path loss models for vehicular network simulation. , 2012, , .		136
7	An IEEE 802.11a/g/p OFDM receiver for GNU radio. , 2013, , .		132
8	SlotSwap: strong and affordable location privacy in intelligent transportation systems. IEEE Communications Magazine, 2011, 49, 126-133.	6.1	124
9	How Shadowing Hurts Vehicular Communications and How Dynamic Beaconing Can Help. IEEE Transactions on Mobile Computing, 2015, 14, 1411-1421.	5.8	104
10	Veins: The Open Source Vehicular Network Simulation Framework. EAI/Springer Innovations in Communication and Computing, 2019, , 215-252.	1.1	97
11	Toward Communication Strategies for Platooning: Simulative and Experimental Evaluation. IEEE Transactions on Vehicular Technology, 2015, 64, 5411-5423.	6.3	89
12	IVC in Cities: Signal Attenuation by Buildings and How Parked Cars Can Improve the Situation. IEEE Transactions on Mobile Computing, 2014, 13, 1733-1745.	5.8	78
13	Performance Assessment of IEEEÂ802.11p with an Open Source SDR-Based Prototype. IEEE Transactions on Mobile Computing, 2018, 17, 1162-1175.	5.8	74
14	A Vehicular Networking Perspective on Estimating Vehicle Collision Probability at Intersections. IEEE Transactions on Vehicular Technology, 2014, 63, 1802-1812.	6.3	72
15	Driving for Big Data? Privacy Concerns in Vehicular Networking. IEEE Security and Privacy, 2014, 12, 77-79.	1.2	62
16	The DYMO Routing Protocol in VANET Scenarios. , 2007, , .		60
17	The Role of Parked Cars in Content Downloading for Vehicular Networks. IEEE Transactions on Vehicular Technology, 2014, 63, 4606-4617.	6.3	59
18	Adaptive beaconing for delay-sensitive and congestion-aware traffic information systems. , 2010, , .		57

#	Article	IF	Citations
19	Poster: A simulator for heterogeneous vehicular networks. , 2014, , .		57
20	On the feasibility of UMTS-based Traffic Information Systems. Ad Hoc Networks, 2010, 8, 506-517.	5.5	48
21	On the Necessity of Accurate IEEE 802.11P Models for IVC Protocol Simulation. , 2012, , .		48
22	Simulating the influence of IVC on road traffic using bidirectionally coupled simulators. , 2008, , .		46
23	Towards a vehicular cloud - using parked vehicles as a temporary network and storage infrastructure. , 2014, , .		44
24	Strong and affordable location privacy in VANETs: Identity diffusion using time-slots and swapping. , 2010, , .		43
25	A cluster based architecture for intersection collision avoidance using heterogeneous networks. , 2013, , .		43
26	Virtual Cord Protocol (VCP): A flexible DHT-like routing service for sensor networks. , 2008, , .		42
27	Making cars a main ICT resource in smart cities. , 2015, , .		41
28	Cooperative Awareness at Low Vehicle Densities: How Parked Cars Can Help See through Buildings. , 2011, , .		40
29	Demo: OpenC2X â€" An open source experimental and prototyping platform supporting ETSI ITS-G5. , 2016, , .		40
30	How shadowing hurts vehicular communications and how dynamic beaconing can help. , 2013, , .		38
31	Towards inter-vehicle communication strategies for platooning support. , 2014, , .		36
32	On the need for bidirectional coupling of road traffic microsimulation and network simulation. , 2008, , .		31
33	Toward reproducibility and comparability of IVC simulation studies: a literature survey. , 2012, 50, 82-88.		31
34	Not All VANET Broadcasts Are the Same: Context-Aware Class Based Broadcast. IEEE/ACM Transactions on Networking, 2018, 26, 17-30.	3.8	31
35	Towards an Open Source IEEE 802.11p stack: A full SDR-based transceiver in GNU Radio. , 2013, , .		30
36	Vehicular Micro Clouds as Virtual Edge Servers for Efficient Data Collection. , 2017, , .		30

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37	Content downloading in vehicular networks: Bringing parked cars into the picture. , 2012, , .		27
38	Enabling Situation Awareness at Intersections for IVC Congestion Control Mechanisms. IEEE Transactions on Mobile Computing, 2016, 15, 1674-1685.	5.8	27
39	Realistic Simulation of Network Protocols in VANET Scenarios. , 2007, , .		26
40	Emissions vs. Travel Time: Simulative Evaluation of the Environmental Impact of ITS. , 2010, , .		26
41	Toward Realistic Simulation of Intervehicle Communication. IEEE Vehicular Technology Magazine, 2011, 6, 43-51.	3.4	26
42	Bridging worlds: Integrating hardware-in-the-loop testing with large-scale VANET simulation. , 2018, , .		26
43	On the applicability of fair and adaptive data dissemination in traffic information systems. Ad Hoc Networks, 2014, 13, 428-443.	5.5	25
44	Simulation Tools and Techniques for Vehicular Communications and Applications. , 2015, , 365-392.		25
45	On the impact of antenna patterns on VANET simulation. , 2016, , .		25
46	Simulation of Ad Hoc Routing Protocols using OMNeT++. Mobile Networks and Applications, 2010, 15, 786-801.	3.3	22
47	IEEE 802.11p unicast considered harmful. , 2015, , .		21
48	To crash or not to crash: Estimating its likelihood and potentials of beacon-based IVC systems. , 2012, , .		20
49	Fair and adaptive data dissemination for Traffic Information Systems. , 2012, , .		20
50	Multi-Technology Cooperative Driving: An Analysis Based on PLEXE. IEEE Transactions on Mobile Computing, 2023, 22, 4792-4806.	5.8	19
51	Comparing apples and oranges?. , 2012, , .		18
52	Readjusting the privacy goals in Vehicular Ad-Hoc Networks: A safety-preserving solution using non-overlapping time-slotted pseudonym pools. Computer Communications, 2018, 122, 118-128.	5.1	18
53	Towards energy efficient smart phone applications: Energy models for offloading tasks into the cloud. , 2014, , .		16
54	Towards Self-Explainable Cyber-Physical Systems. , 2019, , .		16

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55	The scrambler attack: A robust physical layer attack on location privacy in vehicular networks. , 2015, , .		15
56	Parked Cars as Virtual Network Infrastructure. , 2017, , .		15
57	Dynamic Platoon Formation at Urban Intersections. , 2019, , .		15
58	A Simulation Model of DYMO for Ad Hoc Routing in OMNeT++. , 2008, , .		15
59	Duplicate suppression for efficient floating car data collection in heterogeneous LTE-DSRC vehicular networks. Computer Communications, 2018, 123, 54-64.	5.1	14
60	Vehicular micro cloud in action: On gateway selection and gateway handovers. Ad Hoc Networks, 2018, 78, 73-83.	5.5	14
61	On the Impact of Human Driver Behavior on Intelligent Transportation Systems. , 2010, , .		13
62	Short paper: Vehicle shadowing distribution depends on vehicle type: Results of an experimental study. , 2013, , .		13
63	Bloom Hopping: Bloom Filter Based 2-Hop Neighbor Management in VANETs. IEEE Transactions on Mobile Computing, 2019, 18, 534-545.	5.8	13
64	Pick the right guy: CQI-based LTE forwarder selection in VANETs. , 2016, , .		12
65	Modeling Cycling Behavior to Improve Bicyclists' Safety at Intersections - A Networking Perspective. , 2019, , .		12
66	Toward Smart Vehicle-to-Everything-Connected Powertrains: Driving Real Component Test Benches in a Fully Interactive Virtual Smart City. IEEE Vehicular Technology Magazine, 2021, 16, 75-82.	3.4	12
67	A networking perspective on self-organizing intersection management. , 2014, , .		11
68	On the impact of adjacent channel interference in multi-channel VANETs. , 2016, , .		11
69	Marrying safety with privacy: A holistic solution for location privacy in VANETs. , 2016, , .		10
70	A simulative analysis of the performance of IEEE 802.11p and ARIB STD-T109. Computer Communications, 2018, 122, 84-92.	5.1	10
71	On the need for coordinated access control for vehicular visible light communication. , 2018, , .		10
72	Demo abstract: Integrating a driving simulator with city-scale VANET simulation for the development of next generation ADAS systems. , 2018, , .		10

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73	Improving the Accuracy of IVC Simulation Using Crowd-sourced Geodata. PIK - Praxis Der Informationsverarbeitung Und Kommunikation, 2010, 33, .	0.2	9
74	SmartRevoc: An efficient and privacy preserving revocation system using parked vehicles. , 2013, , .		9
75	Decoding IEEE 802.11a/g/p OFDM in software using GNU radio. , 2013, , .		9
76	Power matters: Automatic Gain Control for a Software Defined Radio IEEE 802.11a/g/p receiver. , 2015, , .		9
77	Interconnecting smart cities by vehicles: How feasible is it?. , 2016, , .		9
78	Timings matter. , 2014, , .		8
79	MCB â€“ A multi-channel beaconing protocol. Ad Hoc Networks, 2016, 36, 258-269.	5.5	8
80	Towards Heterogeneous Communication Strategies for Urban Platooning at Intersections. , 2019, , .		8
81	Cluster-based transmit power control in heterogeneous vehicular networks. , 2015, , .		7
82	Performance comparison of IEEE 802.11p and ARIB STD-T109. , 2016, , .		7
83	Efficient Multi-Channel Simulation of Wireless Communications. , 2018, , .		7
84	Use both lanes: Multi-channel beaconing for message dissemination in vehicular networks. , 2013, , .		6
85	Fairness kills safety: A comparative study for intersection assistance applications. , 2014, , .		6
86	A systematic study on the impact of noise and OFDM interference on IEEE 802.11p. , 2017, , .		6
87	The Impact of Head of Line Blocking in Highly Dynamic WLANs. IEEE Transactions on Vehicular Technology, 2018, 67, 7664-7676.	6.3	6
88	Guest Editorial: Introduction to the Special Issue on Advances in Smart and Green Transportation for Smart Cities. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 2152-2155.	8.0	6
89	Requirements and objectives for secure Traffic Information Systems. , 2008, , .		5
90	Faster distributed localization of large numbers of nodes using clustering. , 2013, , .		5

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91	On the impact of street width on 5.9 GHz radio signal propagation in vehicular networks. , 2014, , .		5
92	Poster: Using clusters of parked cars as virtual vehicular network infrastructure. , 2016, , .		5
93	Investigation of the impact of a wireless Fog Warning System with respect to road traffic on a highway. Personal and Ubiquitous Computing, 2019, 23, 893-899.	2.8	5
94	Using Full Duplex Relaying to Reduce Physical Layer Latency in Platooning. , 2019, , .		5
95	Modern WLAN for V2X Applications: Exploiting Beamforming for Platooning. , 2020, , .		5
96	Performance Evaluation of Network Mobility Handover over Future Aeronautical Data Link. , 2010, , .		4
97	Simulative performance evaluation of vehicular networks. , 2015, , 255-274.		4
98	Protocol options for low power sensor network MAC using wake-up receivers with duty cycling. , 2016, , .		4
99	Cars as the base for service discovery and provision in highly dynamic networks. , 2016, , .		4
100	Backwards compatible extension of CAMs/DENMs for improved bike safety on the road. , 2017, , .		4
101	Adaptive content seeding for information-centric networking under high topology dynamics. IEEE Vehicular Technology Magazine, 2021, 16, 68-75.	3.4	4
102	Information dissemination in vehicular networks. , 2015, , 75-93.		3
103	Simulating a city-scale community network: From models to first improvements for Freifunk. , 2017, , .		3
104	Fog Seeding Strategies for Information-Centric Heterogeneous Vehicular Networks. , 2019, , .		3
105	Poster Abstract: An Open Source Approach to Field Testing of WLAN up to IEEE 802.11ad at 60 GHz Using Commodity Hardware. , 2020, , .		3
106	Cooperative vehicle applications with cellular communication. ATZelektronik Worldwide, 2008, 3, 14-17.	0.1	2
107	Special Issue on Multi-radio, Multi-technology, Multi-system Vehicular Communications. Computer Communications, 2016, 93, 1-2.	5.1	2
108	Timings Matter. Mobile Computing and Communications Review, 2015, 18, 81-90.	1.7	2

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109	Opportunistic UAV Relaying for Urban Vehicular Networks. , 2022, , .		2
110	Cars as a main ICT resource of smart cities. , 2016, , 131-147.		1
111	QQDCA: Adapting IEEE 802.11 EDCA for unicast transmissions at high topology dynamics. , 2017, , .		1
112	Poster: Potentials of Mixing TSN Wired Networks and Best-Effort Wireless Networks for V2X. , 2021, , .		1
113	Poster: Simulating Hybrid LEO Satellite and V2X Networks. , 2021, , .		1
114	Beyond Sensing: Suitability of LoRa for Meshed Automatic Section Control of Agricultural Vehicles. , 2022, , .		1
115	Simulative performance evaluation of the sim^{TD} Self Organizing Traffic Information System. , 2011, , .		0
116	Towards a simulation framework for paraglider networks. , 2014, , .		0
117	Adaptive load allocation for combining Anomaly Detectors using controlled skips. , 2014, , .		0
118	User Tracking and Reidentification. , 2021, , 1-3.		0
119	Verkehrssimulation im Hardware-in-the-Loop-SteuergerÃtetest. Proceedings, 2019, , 253-269.	0.3	0
120	Poster: Enabling Comparable and Reproducible Simulations for V2X Research. , 2021, , .		0