Sandeep K Shukla

List of Publications by Year
in descending order

176 papers	1,968 citations	567144 15 h-index	377752 34 g-index
198 all docs	198 docs citations	198 times ranked	1560 citing authors

#	Article	IF	Citations
1	DOTMUG: A Threat Model for Target Specific APT Attacks–Misusing Google Teachable Machine. , 2022, , .		4
2	Glacier change and glacier runoff variation in the Himalayan Baspa river basin. Journal of Hydrology, 2021, 593, 125918.	2.3	27
3	Hydrological modelling of a snow/glacier-fed western Himalayan basin to simulate the current and future streamflows under changing climate scenarios. Science of the Total Environment, 2021, 795, 148871.	3.9	25
4	Can miRNAs Serve as Potential Markers in Thermal Burn Injury: An In Silico Approach. Journal of Burn Care and Research, 2020, 41, 57-64.	0.2	6
5	Challenges with Wound Infection Models in Drug Development. Current Drug Targets, 2020, 21, 1301-1312.	1.0	9
6	LFSR based versatile divider architectures for BCH and RS error correction encoders. Microprocessors and Microsystems, 2019, 71, 102902.	1.8	1
7	Malware Classification using Early Stage Behavioral Analysis. , 2019, , .		17
8	Machine learning in cybersecurity: A review. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2019, 9, e1306.	4.6	63
9	A Study of Inequality in the Ethereum Smart Contract Ecosystem. , 2019, , .		2
10	Formal Hardware Verification of InfoSec Primitives. , 2019, , .		0
11	Asynchronous hardware implementations for crypto primitives. Microprocessors and Microsystems, 2019, 64, 221-236.	1.8	4
12	Efficient Hardware-Software Codesigns of AES Encryptor and RS-BCH Encoder. Communications in Computer and Information Science, 2019, , 3-15.	0.4	1
13	Low power hardware implementations for network packet processing elements. The Integration VLSI Journal, 2018, 62, 170-181.	1.3	2
14	Timing and Carrier Frequency Offset Estimation Using Selective Extended Cyclic Prefix for Correlation Sequence for OFDM Systems. Wireless Personal Communications, 2018, 101, 963-977.	1.8	2
15	Interfacing Power System and ICT Simulators: Challenges, State-of-the-Art, and Case Studies. IEEE Transactions on Smart Grid, 2018, 9, 14-24.	6.2	77
16	An automata theoretic framework for detecting schedulability attacks on cyber-physical systems. , 2018, , .		1
17	Partitioned security processor architecture on FPGA platform. IET Computers and Digital Techniques, 2018, 12, 216-226.	0.9	10
18	Performance Evaluation of Timing Estimation Technique Using Extended Cyclic Prefix for Correlation Sequence for OFDM Systems. Wireless Personal Communications, 2017, 97, 3301-3327.	1.8	1

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19	Flexible VLSI architectures for Galois field multipliers. The Integration VLSI Journal, 2017, 59, 109-124.	1.3	10
20	Snow cover area variability assessment in the upper part of the Satluj river basin in India. Geocarto International, 2017, 32, 1285-1306.	1.7	27
21	Offset Assignment to Signals for Improving Frame Packing in CAN-FD. , 2017, , .		5
22	Targeting DNA Repair through Podophyllotoxin and Rutin Formulation in Hematopoietic Radioprotection: An in Silico, in Vitro, and in Vivo Study. Frontiers in Pharmacology, 2017, 8, 750.	1.6	16
23	Flexible Composite Galois Field $$GF((2^m)^2)$$ Multiplier Designs. Communications in Computer and Information Science, 2017, , 3-14.	0.4	0
24	Design space exploration for deterministic ethernet-based architecture of automotive systems. , 2016, , .		1
25	Cyber Security of Cyber Physical Systems: Cyber Threats and Defense of Critical Infrastructures. , 2016, , .		6
26	Î³H2AX formation kinetics in PBMCs of rabbits exposed to acute and fractionated radiation and attenuation of focus frequency through preadministration of a combination of podophyllotoxin and rutin hydrate. Environmental and Molecular Mutagenesis, 2016, 57, 455-468.	0.9	7
27	Hardware optimizations for crypto implementations (Invited paper). , 2016, , .		2
28	A Survey of Automatic Protocol Reverse Engineering Tools. ACM Computing Surveys, 2016, 48, 1-26.	16.1	60
29	Optimization of Latency Insensitive Systems Through Back Pressure Minimization. IEEE Transactions on Computers, 2015, 64, 464-476.	2.4	1
30	Expansion of a glacial lake, Tsho Chubda, Chamkhar Chu Basin, Hindukush Himalaya, Bhutan. Natural Hazards, 2015, 75, 1451-1464.	1.6	14
31	Comprehensive review on Maximum Power Point Tracking techniques: Wind Energy. , 2015, , .		21
32	Implementation of solar based PWM fed two phase interleaved boost converter. , 2015, , .		10
33	A framework for analyzing and optimizing renewable energy portfolios. , 2015, , .		0
34	Distributed VSCADA: An integrated heterogeneous framework for power system utility security modeling and simulation. , 2015, , .		2
35	The challenge of interoperability. , 2015, , .		10
36	THD Analysis of Eleven Level Cascaded H-Bridge Multilevel Inverter with Different Types of Load Using in Drives Applications. , 2015, , .		6

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37	VSCADA: A reconfigurable virtual SCADA test-bed for simulating power utility control center operations. , 2015, , .		10
38	Mapping functional behavior onto architectural model in a model driven embedded system design. , 2015, , .		3
39	AN IMPROVED PREAMBLE AIDED TIMING ESTIMATION METHOD FOR OFDM SYSTEMS. ICTACT Journal on Communication Technology, 2015, 06, 1150-1154.	0.2	1
40	Representation of synchronous, asynchronous, and polychronous components by clocked guarded actions. Design Automation for Embedded Systems, 2014, 18, 63-97.	0.7	7
41	Modification of radiation-induced DNA double strand break repair pathways by chemicals extracted from <i>Podophyllum hexandrum</i>: An in vitro study in human blood leukocytes. Environmental and Molecular Mutagenesis, 2014, 55, 436-448.	0.9	23
42	APECS code synthesis: Extending ocarina for multi-threaded code synthesis from AADL models for Safety Critical applications. , 2014, , .		0
43	Construction of a microgrid communication network. , 2014, , .		12
44	Constructive polychronous systems. Science of Computer Programming, 2014, 96, 377-394.	1.5	11
45	Verification of unit and dimensional consistencies in polychronous specifications. , 2014, , .		0
46	PAPR Reduction in SC-FDMA Using NCT Technique. Procedia Technology, 2013, 10, 927-934.	1.1	8
47	Evaluating the grid impact of plug-in electric vehicles using dynamic commuting profiles. , 2013, , .		0
48	Embedding Polychrony into Synchrony. IEEE Transactions on Software Engineering, 2013, 39, 917-929.	4.3	7
49	A hierarchical networked micro-simulator to study grid-integration of renewables and electric vehicles. , 2013, , .		2
50	A New Multi-threaded Code Synthesis Methodology and Tool for Correct-by-Construction Synthesis from Polychronous Specifications. , 2013, , .		4
51	Co-simulating power systems and communication network for accurate modeling and simulation of PMU based wide area measurement systems using a global event scheduling technique. , 2013, , .		9
52	Study of a three level converter interfaced vector controlled DFIG system under fault. , 2013, , .		3
53	A hierarchically distributed non-intrusive agent aided distance relaying protection scheme to supervise Zone 3. International Journal of Electrical Power and Energy Systems, 2013, 50, 42-49.	3.3	18
54	Simplification of C-RTL equivalent checking for fused multiply add unit using intermediate models. , 2013, , .		1

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55	Guest Editors' Introduction: Special Section on System-Level Design and Validation of Heterogeneous Chip Multiprocessors. IEEE Transactions on Computers, 2013, 62, 209-210.	2.4	1
56	Abstraction of polychronous dataflow specifications into mode-automata. , 2013, , .		0
57	Constructive Polychronous Systems. Lecture Notes in Computer Science, 2013, , 335-349.	1.0	6
58	On Model-Based Software Development. , 2013, , 49-60.		4
59	A FRAMEWORK FOR ANALYZING COMBINED LOAD-CARRYING-CAPACITY OF PLUG-IN ELECTRIC VEHICLES AND SOLAR GENERATORS. Alternative Energy, 2013, 2, .	0.0	0
60	A detailed analysis of the effective-load-carrying-capacity behavior of plug-in electric vehicles in the power grid. , 2012, , .		11
61	System imbalance minimizing renewable generation portfolio selection in the presence of plug-in electric vehicles. , 2012, , .		3
62	Accelerating SystemC simulations using GPUs. , 2012, , .		5
63	Computing optimal solar penetration in the presence of plug-in electric vehicles. , 2012, , .		3
64	Communication network modeling and simulation for Wide Area Measurement applications. , 2012, , .		33
65	Cyber security impacts on all-PMU state estimator - a case study on co-simulation platform GECO. , 2012, , .		38
66	GECO: Global Event-Driven Co-Simulation Framework for Interconnected Power System and Communication Network. IEEE Transactions on Smart Grid, 2012, 3, 1444-1456.	6.2	259
67	A study of communication and power system infrastructure interdependence on PMU-based wide area monitoring and protection. , 2012, , .		15
68	Optimum location of master agents in an agent based zone 3 protection scheme designed for robustness against hidden failure induced trips. , 2012, , .		1
69	Networking technologies for wide-area measurement applications. , 2012, , 205-233.		6
70	Optimizing grid contribution and economic returns from solar generators by managing the output uncertainty risk. , 2011, , .		2
71	SMT based false causal loop detection during code synthesis from Polychronous specifications. , 2011, , .		6
72	High Level Power Estimation Models for FPGAs. , 2011, , .		21

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73	Power system and communication network co-simulation for smart grid applications. , 2011, , .		73
74	A Brief History of Multiprocessors and EDA. IEEE Design and Test of Computers, 2011, 28, 96-96.	1.4	1
75	Challenges of Rapidly Emerging Consumer Space Multiprocessors. IEEE Design and Test of Computers, 2011, 28, 52-53.	1.4	1
76	Guest Editors' Introduction: Multicore SoC Validation with Transaction-Level Models. IEEE Design and Test of Computers, 2011, 28, 6-9.	1.4	0
77	Guest Editors' Introduction: Special Section on Science of Design for Safety Critical Systems. IEEE Transactions on Computers, 2011, 60, 1057-1058.	2.4	1
78	A Framework for Analyzing Load-Carrying-Capacity of Plug-In Electric Vehicles and Impact on Solar Generators. , 2011, , .		7
79	Analysis of Scheduled Latency Insensitive Systems with Periodic Clock Calculus. Journal of Electronic Testing: Theory and Applications (JETTA), 2010, 26, 227-242.	0.9	1
80	SCGPSim: A fast SystemC simulator on GPUs. , 2010, , .		33
81	Minimizing back pressure for latency insensitive system synthesis. , 2010, , .		9
82	Translating concurrent action oriented specifications to synchronous guarded actions. ACM SIGPLAN Notices, 2010, 45, 47-56.	0.2	1
83	Translating concurrent action oriented specifications to synchronous guarded actions. , 2010, , .		4
84	An alternative polychronous model and synthesis methodology for model-driven embedded software. , 2010, , .		7
85	An algorithm for inferring master agent rules in an agent based robust Zone 3 relay architecture. , 2010, , .		2
86	A Methodology for Power Aware High-Level Synthesis of Co-processors from Software Algorithms. , 2010, , .		8
87	Agent Based Supervision of Zone 3 Relays to Prevent Hidden Failure Based Tripping. , 2010, , .		17
88	Faster Software Synthesis Using Actor Elimination Techniques for Polychronous Formalism. , 2010, , .		2
89	Coprocessor design space exploration using high level synthesis. , 2010, , .		3
90	The Model Checking View to Clock Gating and Operand Isolation. , 2010, , .		6

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91	System level simulation guided approach to improve the efficacy of clock-gating. , 2010, , .		1
92	Optimization of back pressure and throughput for latency insensitive systems. , 2010, , .		3
93	Studies on Mechanical and Antithrombogenic Behaviors of Polyvinyl Alcohol and Gelatin Based Novel Binary Polymer Blends with Grafted Polyacrylamide Chains. Journal of Macromolecular Science - Pure and Applied Chemistry, 2010, 47, 697-707.	1.2	0
94	Dynamic Power Optimizations. , 2010, , 83-101.		0
95	Verifying Peak Power Optimizations Using SPIN Model Checker. , 2010, , 115-139.		0
96	Low-Power Problem Formalization. , 2010, , 35-43.		0
97	Low Power Hardware Synthesis from Concurrent Action-Oriented Specifications. , 2010, , .		2
98	Heuristics for Power Savings. , 2010, , 45-64.		0
99	MRICDF: A Polychronous Model for Embedded Software Synthesis. , 2010, , 173-199.		3
100	Complexity Analysis of Scheduling in CAOS-Based Synthesis. , 2010, , 65-82.		0
101	Power Aware High Level Synthesis of Hardware Coprocessors. Journal of Low Power Electronics, 2010, 6, 376-389.	0.6	0
102	Analysis of scheduled Latency insensitive systems with periodic clock calculus. , 2009, , .		6
103	Accurate power estimation of hardware co-processors using system level simulation. , 2009, , .		0
104	Power estimation methodology for a high-level synthesis framework. , 2009, , .		16
105	Model-Driven Engineering and Safety-Critical Embedded Software. Computer, 2009, 42, 93-95.	1.2	6
106	Modeling and Analyzing the Implementation of Latency-Insensitive Protocols Using the Polychrony Framework. Electronic Notes in Theoretical Computer Science, 2009, 245, 3-22.	0.9	0
107	An Analysis of the Composition of Synchronous Systems. Electronic Notes in Theoretical Computer Science, 2009, 245, 69-84.	0.9	2
108	Generating Multi-Threaded code from Polychronous Specifications. Electronic Notes in Theoretical Computer Science, 2009, 238, 57-69.	0.9	15

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109	MCBCG: Model Checking Based Sequential Clock-Gating. , 2009, , .		9
110	Distributed Simulation of AADL Specifications in a Polychronous Model of Computation. , 2009, , .		5
111	Metamodeling: What is it good for?. IEEE Design and Test of Computers, 2009, 26, 96-96.	1.4	6
112	<I>SCoPE</I>: Statistical Regression Based Power Models for Co-Processors Power Estimation. Journal of Low Power Electronics, 2009, 5, 407-415.	0.6	7
113	A Formally Verified Peak-Power Reduction Technique for Hardware Synthesis from Concurrent Action-Oriented Specifications. Journal of Low Power Electronics, 2009, 5, 135-144.	0.6	0
114	SML-Sys: a functional framework with multiple models of computation for modeling heterogeneous system. Design Automation for Embedded Systems, 2008, 12, 1-30.	0.7	6
115	Mining metadata for composability of IPs from SystemC IP library. Design Automation for Embedded Systems, 2008, 12, 63-94.	0.7	3
116	Dataflow Architectures for GALS. Electronic Notes in Theoretical Computer Science, 2008, 200, 33-50.	0.9	16
117	Guest Editors' Introduction to the Special Section on Programming Architectures for Embedded Systems. IEEE Transactions on Computers, 2008, 57, 1297-1299.	2.4	0
118	On Cosimulating Multiple Abstraction-Level System-Level Models. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2008, 27, 394-398.	1.9	1
119	MMV: A Metamodeling Based Microprocessor Validation Environment. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2008, 16, 339-352.	2.1	2
120	Applying Verification Collaterals for Accurate Power Estimation. , 2008, , .		1
121	Formal transformation of a KPN specification to a GALS implementation. , 2008, , .		0
122	Multijunction Fault-Tolerance Architecture for Nanoscale Crossbar Memories. IEEE Nanotechnology Magazine, 2008, 7, 202-208.	1.1	7
123	MCF: A Metamodeling-Based Component Composition Frameworkâ€"Composing SystemC IPs for Executable System Models. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2008, 16, 792-805.	2.1	4
124	A Trace-Based Framework for Verifiable GALS Composition of IPs. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2008, 16, 1176-1186.	2.1	2
125	On the Deterministic Multi-threaded Software Synthesis from Polychronous Specifications. , 2008, , .		8
126	Chapter 6 Probabilistic Analysis of Self-Assembled Molecular Networks. Studies in Multidisciplinarity, 2008, , 123-151.	0.0	0

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127	C-Based Design of Heterogeneous Embedded Systems. Eurasip Journal on Embedded Systems, 2008, 2008, 243890.	1.2	0
128	Model-Driven Validation of SystemC Designs. Eurasip Journal on Embedded Systems, 2008, 2008, 519474.	1.2	2
129	Verifying Compiler Based Refinement of Bluespec TM Specifications Using the SPIN Model Checker. Lecture Notes in Computer Science, 2008, , 250-269.	1.0	10
130	Algorithms for power savings. ACM Transactions on Algorithms, 2007, 3, 41.	0.9	151
131	Design Fault Directed Test Generation for Microprocessor Validation. , 2007, , .		7
132	EWD. ACM Transactions on Design Automation of Electronic Systems, 2007, 12, 1-43.	1.9	7
133	Model-driven validation of SystemC designs. Proceedings - Design Automation Conference, 2007, , .	0.0	9
134	Algorithms for low power hardware synthesis from Concurrent Action Oriented Specifications (CAOS). International Journal of Embedded Systems, 2007, 3, 83.	0.2	3
135	Reliability Analysis of Large Circuits Using Scalable Techniques and Tools. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, 54, 2447-2460.	3.5	35
136	Heterogeneous Behavioral Hierarchy Extensions for SystemC. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2007, 26, 765-780.	1.9	10
137	Model Checking Bluespec Specified Hardware Designs. , 2007, , .		3
138	VT Matrix Multiply Design for MEMOCODE '07. , 2007, , .		1
139	Local Causal Reasoning of a Safety-Critical Subway System. , 2007, , .		0
140	Assertion-Based Modal Power Estimation. , 2007, , .		5
141	Scalable techniques and tools for reliability analysis of large circuits. , 2007, , .		15
142	Type Inference for IP Composition. , 2007, , .		1
143	Model Based Test Generation for Microprocessor Architecture Validation. , 2007, , .		3
144	Model-driven test generation for system level validation. , 2007, , .		21

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145	Tackling an Abstraction Gap: Co-simulating SystemC DE with Bluespec ESL. , 2007, , .		2
146	Comparing Reliability-Redundancy Tradeoffs for Two von Neumann Multiplexing Architectures. IEEE Nanotechnology Magazine, 2007, 6, 265-279.	1.1	26
147	Guest Editors' Introduction: GALS Design and Validation. IEEE Design and Test of Computers, 2007, 24, 414-416.	1.4	3
148	MCF: A Metamodeling-based Visual Component Composition Framework. , 2007, , 319-337.		3
149	On the Polychronous Approach to Embedded Software Design. , 2007, , 261-273.		0
150	Techniques for Power-Aware Hardware Synthesis from Concurrent Action Oriented Specifications. Journal of Low Power Electronics, 2007, 3, 156-166.	0.6	3
151	Mining Metadata from SystemC IP Library. , 2007, , 111-129.		0
152	A Trace Based Framework for Validation of SoC Designs with GALS Systems. , 2006, , .		0
153	A Functional Programming Framework for Latency Insensitive Protocol Validation. Electronic Notes in Theoretical Computer Science, 2006, 146, 169-188.	0.9	3
154	Special issue on formal methods for globally asynchronous and locally synchronous (GALS) systems. Formal Methods in System Design, 2006, 28, 91-92.	0.9	2
155	MMV: Metamodeling Based Microprocessor Valiation Environment. , 2006, , .		4
156	SoC Design Space Exploration through Automated IP Selection from SystemC IP Library. , 2006, , .		6
157	Polychronous Methodology For System Design: A True Concurrency Approach. , 2006, , .		1
158	UMoC++: A C++-Based Multi-MoC Modeling Environment. , 2006, , 115-130.		4
159	Parallelizing High-Level Synthesis. Industrial Information Technology Series, 2006, , 11-1-11-20.	0.2	1
160	Using probabilistic model checking for dynamic power management. Formal Aspects of Computing, 2005, 17, 160-176.	1.4	50
161	XFM. ACM Transactions on Design Automation of Electronic Systems, 2005, 10, 589-609.	1.9	18
162	Automated Extraction of Structural Information from SystemC-based IP for Validation. International Workshop on Microprocessor Test and Verification, 2005, , .	0.0	2

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163	Design Issues for Networked Embedded Systems. Industrial Information Technology Series, 2005, , 29-1-29-18.	0.2	0
164	Design Issues for Networked Embedded Systems. Industrial Information Technology Series, 2005, , .	0.2	0
165	NANOPRISM. , 2004, , .		49
166	Effects of property ordering in an incremental formal modeling methodology. , 2004, , .		0
167	Structural Component Composition for System-Level Models. , 2004, , 57-81.		0
168	Truly Heterogeneous Modeling with Systemc. , 2004, , 83-101.		1
169	Online strategies for dynamic power management in systems with multiple power-saving states. Transactions on Embedded Computing Systems, 2003, 2, 325-346.	2.1	143
170	Typing abstractions and management in a component framework. , 2003, , .		8
171	Structured Component Composition Frameworks for Embedded System Design. Lecture Notes in Computer Science, 2002, , 663-678.	1.0	5
172	Interoperability as a design issue in C++ based modeling environments. , 2001, , .		6
173	Model Checking Using Automata Theory. , 2000, , 55-79.		0
174	Unification and matching in process algebras. Lecture Notes in Computer Science, 1998, , 91-105.	1.0	0
175	A Cross-Layer Approach for Power-Performance Optimization in Distributed Mobile Systems. , 0, , .		33
176	Expressing the Behavior of Three Very Different Concurrent Systems by Using Natural Extensions of Separation Logic. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 8, 26-40.	0.8	0