Luis Gomes

List of Publications by Year
in descending order

131
papers	1,560
citations	759233
12
h-index	454955
30
g-index
142
all docs	142
docs citations	142
times ranked	794
citing authors

#	Article	IF	Citations
1	Current Trends in Remote Laboratories. IEEE Transactions on Industrial Electronics, 2009, 56, 4744-4756.	7.9	368
2	The Input-Output Place-Transition Petri Net Class and Associated Tools. Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on, 2007, , .	0.0	98
3	Current Trends in Industrial Electronics Education. IEEE Transactions on Industrial Electronics, 2010, 57, 3245-3252.	7.9	53
4	From Petri net models to VHDL implementation of digital controllers. , 2007, , .		45
5	IOPT-tools &#x2014; A Web based tool framework for embedded systems controller development using Petri nets. , 2013, , .		39
6	Petri net partitioning using net splitting operation. , 2009, , .		37
7	Asynchronous-Channels Within Petri Net-Based GALS Distributed Embedded Systems Modeling. IEEE Transactions on Industrial Informatics, 2014, 10, 2024-2033.	11.3	37
8	Optimizing urban traffic flow using Genetic Algorithm with Petri net analysis as fitness function. Neurocomputing, 2014, 124, 162-167.	5.9	36
9	IOPT-tools &#x2014; Towards cloud design automation of digital controllers with Petri nets. , 2014, , .		34
10	Prototyping of Concurrent Control Systems With Application of Petri Nets and Comparability Graphs. IEEE Transactions on Control Systems Technology, 2018, 26, 575-586.	5.2	34
11	From IOPT Petri nets to C: An automatic code generator tool. , 2011, , .		27
12	Dynamic Partial Reconfiguration of Concurrent Control Systems Implemented in FPGA Devices. IEEE Transactions on Industrial Informatics, 2017, 13, 1734-1741.	11.3	26
13	A Survey of Static Formal Methods for Building Dependable Industrial Automation Systems. IEEE Transactions on Industrial Informatics, 2019, 15, 3772-3783.	11.3	26
14	Automatic synthesis of VHDL hardware components from IOPT Petri net models. , 2013, , .		24
15	Model-checking framework for embedded systems controllers development using IOPT Petri nets. , 2012, , .		23
16	Extending input-output place-transition Petri nets for distributed controller systems development. , 2014, , .		21
17	Petri nets tools framework supporting FPGA-based controller implementations. , 2008, , .		19
18	Contributing to the Internet of Things. IFIP Advances in Information and Communication Technology, 2013, , 3-12.	0.7	19

#	ARTICLE	IF	CITATIONS
19	Web based IOPT Petri net Editor with an extensible plugin architecture to support generic net operations. , 2012, , .		18
20	Petri net Splitting Operation within Embedded Systems Co-design. Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on, 2007, , .	0.0	16
21	Rapid Prototyping of Graphical User Interfaces for Petri-Net-Based Controllers. IEEE Transactions on Industrial Electronics, 2010, 57, 1806-1813.	7.9	16
22	Asynchronous-Channels and Time-Domains Extending Petri Nets for GALS Systems. International Federation for Information Processing, 2012, , 143-150.	0.4	16
23	Programmable controller design based on a synchronized colored Petri net model and integrating fuzzy reasoning. Lecture Notes in Computer Science, 1995, , 218-237.	1.3	14
24	Ecore representation for extending PNML for Input-Output Place-Transition nets. , 2010, , .		14
25	State space generation algorithm for gals systems modeled by IOPT Petri nets. , 2011, , .		13
26	Industrial electronic control: FPGAs and embedded systems solutions. , 2013, , .		13
27	A graphical editor for the input-output place-transition petri net class. , 2007, , .		12
28	From Petri net models to C implementation of digital controllers. , 2010, , .		12
29	IOPT Petri net state space generation algorithm with maximal-step execution semantics. , 2011, , .		12
30	A low-voltage voltage-controlled ring-oscillator employing dynamic-threshold-MOS and body-biasing techniques. , 2015, , .		11
31	Analysis and Design Automation of Cyber-Physical System with Hippo and IOPT-Tools. , 2019, , .		11
32	Properties Preservation in Distributed Execution of Petri Nets Models. IFIP Advances in Information and Communication Technology, 2010, , 241-250.	0.7	11
33	An Ecore based Petri net type definition for PNML IOPT models. , 2011, , .		10
34	Combining Data-Flows and Petri Nets for Cyber-Physical Systems Specification. IFIP Advances in Information and Communication Technology, 2016, , 65-76.	0.7	10
35	Refining IOPT Petri Nets Class for Embedded System Controller Modeling. , 2018, , .		10
36	Structuring Mechanisms in Petri Net Models. , 2005, , 153-166.		10

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37	Cloud Based IOPT Petri Net Simulator to Test and Debug Embedded System Controllers. IFIP Advances in Information and Communication Technology, 2015, , 165-175.	0.7	10
38	From models to controllers integrating graphical animation in FPGA through automatic code generation. , 2009, , .		9
39	An IOPT-net state-space generator tool. , 2011, , .		9
40	State space generation for Petri nets-based GALS systems. , 2012, , .		9
41	Configuring communication nodes for networked embedded systems specified by Petri nets. , 2013, , .		9
42	From UML state machines to Petri nets: History attribute translation strategies. , 2011, , .		8
43	Dataflow model property verification using Petri net translation techniques. , 2011, , .		8
44	Low phase-noise temperature compensated self-biased ring oscillator. , 2012, , .		8
45	The IOPT-Flow framework pairing Petri nets and data-flows for embedded controller development. , 2016, , .		8
46	Petri nets as supporting formalism within Embedded Systems Co-design. , 2006, , .		7
47	Intra- and inter-circuit network for Petri nets based components. , 2011, , .		7
48	Asynchronous wrappers configuration within GALS systems specified by Petri nets. , 2012, , .		7
49	Remote operation of embedded controllers designed using IOPT Petri-nets. , 2015, , .		7
50	The IOPT-Flow Modeling Framework Applied to Power Electronics Controllers. IEEE Transactions on Industrial Electronics, 2017, 64, 2363-2372.	7.9	7
51	Industrial Electronics Education: Past, Present, and Future Perspectives. IEEE Industrial Electronics Magazine, 2021, 15, 140-154.	2.6	7
52	Towards Statecharts to Input-Output Place Transition Nets Transformations. International Federation for Information Processing, 2011, , 227-236.	0.4	7
53	SysVeritas: A Framework for Verifying IOPT Nets and Execution Semantics within Embedded Systems Design. International Federation for Information Processing, 2011, , 256-265.	0.4	7
54	Cyber-Physical-Social Systems: Taxonomy, Challenges, and Opportunities. IEEE Access, 2022, 10, 42404-42419.	4.2	7

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55	Petri Net based Building Automation and Monitoring System. Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on, 2007, , .	0.0	6
56	Smart house monitoring and actuating system development using automatic code generation. , 2009, , .		6
57	Petri net verification techniques on Synchronous Dataflow models. , 2011, , .		6
58	3D scanning characteristics of an amorphous silicon position sensitive detector array system. Optics Express, 2012, 20, 4583.	3.4	6
59	Analysing storage resources on Synchronous Dataflows using Petri net verification techniques. , 2012, , .		6
60	Distributed embedded systems design using Petri nets. , 2013, , .		6
61	Cloud based development framework using IOPT Petri nets for embedded systems teaching. , 2014, , .		6
62	Attracting students to engineering through autonomous sailing yacht development. , 2015, , .		6
63	Petri Net Based Specification and Verification of Globally-Asynchronous-Locally-Synchronous System. International Federation for Information Processing, 2011, , 237-245.	0.4	6
64	IOPT-Tools â€" From Executable Models to Automatic Code Generation for Embedded Controllers Development. Lecture Notes in Computer Science, 2022, , 127-138.	1.3	6
65	System development using Petri net based modules. , 2011, , .		5
66	Automatic generation of graphical user interfaces for VHDL based controllers. , 2011, , .		5
67	FPGA based speed control of Brushless DC Motors using IOPT Petri Net models. , 2013, , .		5
68	Guest Editorial Special Section on Embedded and Reconfigurable Systems. IEEE Transactions on Industrial Informatics, 2013, 9, 1588-1590.	11.3	5
69	Reconfigurable Priority Ceiling Protocol - Under Rate Monotonic Based Real-time Scheduling. , 2014, , .		5
70	Model-Based Development of an Autonomous Sailing Yacht Controller. , 2015, , .		5
71	Towards automatic code generation for distributed cyber-physical systems: A first prototype for Arduino boards. , 2017, , .		5
72	Petri nets-based automatic generation GUI tools for embedded systems. , 2008, , .		4

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73	FPGA controller for power converters with integrated oscilloscope and graphical user interface. , 2011, , .		4
74	Exploiting dataflows and Petri nets mappings. , 2013, , .		4
75	Improving Synchronous Dataflow Analysis Supported by Petri Net Mappings. Electronics (Switzerland), 2018, 7, 448.	3.1	4
76	Soft and Transferable Skills Acquisition through Organizing a Doctoral Conference. Education Sciences, 2020, 10, 235.	2.6	4
77	Improving Instrumentation Support and Control Strategies for Autonomous Sailboats in a Regatta Contest. , 2017, , 45-56.		4
78	Minimalist Architecture to Generate Embedded System Web User Interfaces. IFIP Advances in Information and Communication Technology, 2013, , 239-249.	0.7	4
79	Animated Graphical User Interface Generator Framework for Input-Output Place-Transition Petri Net Models. Lecture Notes in Computer Science, 2008, , 409-418.	1.3	4
80	A State-Space Based Model-Checking Framework for Embedded System Controllers Specified Using IOPT Petri Nets. International Federation for Information Processing, 2012, , 123-132.	0.4	4
81	On Structuring Events for IOPT Net Models. IFIP Advances in Information and Communication Technology, 2013, , 229-238.	0.7	4
82	Partitioning of Petri net models amenable for Distributed Execution. , 2006, , .		3
83	Modeling complex Petri nets operations in the Model-Driven Architecture. , 2009, , .		3
84	Towards distributed execution of Petri net conflicts through model transformation. , 2013, , .		3
85	Color sensing ability of an amorphous silicon position sensitive detector array system. Sensors and Actuators A: Physical, 2014, 205, 26-37.	4.1	3
86	Multifunctional Controller Architecture for Solid-State Marx Modulator Based on FPGA. IEEE Transactions on Plasma Science, 2014, 42, 2991-2997.	1.3	3
87	Controller design and implementation: An approach based on problem frames and Petri Net models. , 2015, , .		3
88	Reconfigurable Priority Ceiling Protocol: A Safe Way to Real-Time Reconfiguration. Lecture Notes in Electrical Engineering, 2016, , 23-42.	0.4	3
89	Translating IOPT Petri net models into PLC ladder diagrams. , 2017, , .		3
90	Modelling Cyber Physical Social Systems Using Dynamic Time Petri Nets. IFIP Advances in Information and Communication Technology, 2018, , 81-89.	0.7	3

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91	GPGPU applied to support the construction of the state-space graphs of IOPT Petri net models. , 2019, , .		3
92	Special Issue on Recent Advances in Petri Nets, Automata, and Discrete-Event Hybrid Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 3484-3487.	9.3	3
93	MDA-Based Methodology for Verifying Distributed Execution of Embedded Systems Models. Advances in Civil and Industrial Engineering Book Series, 2013, , 112-135.	0.2	3
94	Describing Structure and Complex Interactions in Multi-Agent-Based Industrial Cyber-Physical Systems. IEEE Access, 2021, 9, 153126-153141.	4.2	3
95	Towards Digital Twin in the Context of Power Wheelchairs Provision and Support. IFIP Advances in Information and Communication Technology, 2022, , 95-102.	0.7	3
96	Requirements specification for controller design â€" From use cases to IOPT net models. , 2014, , .		2
97	Output events for human-system interaction modeling. , 2014, , .		2
98	Simulated and Real Sheet-of-Light 3D Object Scanning Using a-Si:H Thin Film PSD Arrays. Sensors, 2015, 15, 29938-29949.	3.8	2
99	Comments on â€œMinimizing Buffer Requirements Under Rate-Optimal Schedule in Regular Dataflow Networksâ€. Journal of Signal Processing Systems, 2015, 81, 129-133.	2.1	2
100	Automatic Generation of Run-Time Monitoring Capabilities to Petri Nets Based Controllers with Graphical User Interfaces. International Federation for Information Processing, 2011, , 246-255.	0.4	2
101	From SysML State Machines to Petri Nets Using ATL Transformations. IFIP Advances in Information and Communication Technology, 2014, , 227-236.	0.7	2
102	Adaptive Robust Control for Networked Strict-Feedback Nonlinear Systems with State and Input Quantization. Electronics (Switzerland), 2021, 10, 2783.	3.1	2
103	Removing ill-structured arcs in Hierarchical and Concurrent State Diagrams. , 2006, , .		1
104	Module Composition within Petri Nets Model-based Development. , 2007, , .		1
105	Extending a net splitting operation for decomposition of high-level Petri nets. , 2012, , .		1
106	Guest Editorial Special Section on Information Technologies Within Engineering Education. IEEE Transactions on Industrial Informatics, 2013, 9, 546-546.	11.3	1
107	From requirements to code (Re2Code) â€" A model-based approach for controller implementation. , 2016, , .		1
108	A JSON/HTTP communication protocol to support the development of distributed cyber-physical systems. , 2018, , .		1

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109	NOVA Mobility Assistive System: Developed and Remotely Controlled with IOPT-Tools. Electronics (Switzerland), 2020, 9, 1328.	3.1	1
110	Elementary Events for Modeling of Human-System Interactions with Petri Net Models. IFIP Advances in Information and Communication Technology, 2014, , 219-226.	0.7	1
111	Strategies to Improve Synchronous Dataflows Analysis Using Mappings between Petri Nets and Dataflows. IFIP Advances in Information and Communication Technology, 2014, , 237-248.	0.7	1
112	Semantic Equations for Formal Models in the Model-Driven Architecture. IFIP Advances in Information and Communication Technology, 2010, , 251-260.	0.7	1
113	Augmenting High-Level Petri Nets to Support GALS Distributed Embedded Systems Specification. IFIP Advances in Information and Communication Technology, 2013, , 221-228.	0.7	1
114	Merging and Splitting Petri Net Models within Distributed Embedded Controller Design. , 0, , 160-183.		1
115	INTERNAL EVENT REMOVAL IN HIERARCHICAL AND CONCURRENT STATE DIAGRAMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 105-110.	0.4	0
116	A MDA-based contribution for integrating web services within embedded system's design. , 2010, , .		0
117	Model composition by reusing Petri net based modules. , 2012, , .		0
118	A platform independent communication support for distributed controller systems modelled by Petri nets. , 2014, , .		0
119	Event life time in detection of sequences of events. , 2015, , .		0
120	Distributed controllers modeling through Petri nets with multi-asynchronous-channels. , 2015, , .		0
121	Analysis and Generation of Logical Signals for Discrete Events Behavioral Modeling. IFIP Advances in Information and Communication Technology, 2015, , 147-156.	0.7	0
122	A current-mode VCO-based amplifier-less 2nd-order $\Delta\Sigma$ modulator with over 85dB SNDR. , 2015, , .		0
123	High-level Petri nets modules for embedded controllers design. , 2015, , .		0
124	Semi-formal method design using synchronous dataflows and Petri nets. , 2016, , .		0
125	Model-based development of distributed embedded controllers - rapid prototyping using IOPT-tools and FPGAs -. , 2016, , .		0
126	Extending IOPT Nets with a Module Construct. IFIP Advances in Information and Communication Technology, 2016, , 86-95.	0.7	0

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127	Towards Cloud-Based Engineering Systems. IFIP Advances in Information and Communication Technology, 2015, , 3-10.	0.7	0
128	Application Example. Springer Briefs in Electrical and Computer Engineering, 2016, , 43-67.	0.5	0
129	Development of Distributed Embedded Controllers. Springer Briefs in Electrical and Computer Engineering, 2016, , 19-41.	0.5	0
130	Reachability Graph of IOPT Petri Net Models Using CUDA C++â€‰Parallel Application. IFIP Advances in Information and Communication Technology, 2020, , 93-100.	0.7	0
131	Robot Grasping Based on Stacked Object Classification Network and Grasping Order Planning. Electronics (Switzerland), 2022, 11, 706.	3.1	0