Marjan Mernik

List of Publications by Year
in descending order

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129 papers	7,658 citations	201385 27 h-index	51492 86 g-index
135 all docs	135 docs citations	135 times ranked	4954 citing authors

#	Article	IF	Citations
1	Self-Adapting Control Parameters in Differential Evolution: A Comparative Study on Numerical Benchmark Problems. IEEE Transactions on Evolutionary Computation, 2006, 10, 646-657.	7.5	2,854
2	When and how to develop domain-specific languages. ACM Computing Surveys, 2005, 37, 316-344.	16.1	1,244
3	Exploration and exploitation in evolutionary algorithms. ACM Computing Surveys, 2013, 45, 1-33.	16.1	894
4	On clarifying misconceptions when comparing variants of the Artificial Bee Colony Algorithm by offering a new implementation. Information Sciences, 2015, 291, 115-127.	4.0	199
5	Domain-Specific Languages: A Systematic Mapping Study. Information and Software Technology, 2016, 71, 77-91.	3.0	151
6	Replication and comparison of computational experiments in applied evolutionary computing: Common pitfalls and guidelines to avoid them. Applied Soft Computing Journal, 2014, 19, 161-170.	4.1	131
7	A preliminary study on various implementation approaches of domain-specific language. Information and Software Technology, 2008, 50, 390-405.	3.0	113
8	A chess rating system for evolutionary algorithms: A new method for the comparison and ranking of evolutionary algorithms. Information Sciences, 2014, 277, 656-679.	4.0	103
9	Comparing general-purpose and domain-specific languages: An empirical study. Computer Science and Information Systems, 2010, 7, 247-264.	0.7	102
10	Program comprehension of domain-specific and general-purpose languages: comparison using a family of experiments. Empirical Software Engineering, 2012, 17, 276-304.	3.0	91
11	Guest Editors' Introduction: What Kinds of Nails Need a Domain-Specific Hammer?. IEEE Software, 2009, 26, 15-18.	2.1	78
12	A parameter control method of evolutionary algorithms using exploration and exploitation measures with a practical application for fitting Sovova's mass transfer model. Applied Soft Computing Journal, 2013, 13, 3792-3805.	4.1	78
13	Analysis of exploration and exploitation in evolutionary algorithms by ancestry trees. International Journal of Innovative Computing and Applications, 2011, 3, 11.	0.2	70
14	Parameter tuning with Chess Rating System (CRS-Tuning) for meta-heuristic algorithms. Information Sciences, 2016, 372, 446-469.	4.0	70
15	Challenges and directions in formalizing the semantics of modeling languages. Computer Science and Information Systems, 2011, 8, 225-253.	0.7	70
16	Is a comparison of results meaningful from the inexact replications of computational experiments?. Soft Computing, 2016, 20, 223-235.	2.1	55
17	Incremental programming language development. Computer Languages, Systems and Structures, 2005, 31, 1-16.	1.4	49
18	An educational tool for teaching compiler construction. IEEE Transactions on Education, 2003, 46, 61-68.	2.0	48

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19	Decision trees based on automatic learning and their use in cardiology. Journal of Medical Systems, 1994, 18, 201-206.	2.2	45
20	An object-oriented approach to language compositions for software language engineering. Journal of Systems and Software, 2013, 86, 2451-2464.	3.3	45
21	On the use of a domain-specific modeling language in the development of multiagent systems. Engineering Applications of Artificial Intelligence, 2014, 28, 111-141.	4.3	44
22	Ontology driven development of domain-specific languages. Computer Science and Information Systems, 2011, 8, 317-342.	0.7	44
23	MARS: A metamodel recovery system using grammar inference. Information and Software Technology, 2008, 50, 948-968.	3.0	43
24	On the influence of the number of algorithms, problems, and independent runs in the comparison of evolutionary algorithms. Applied Soft Computing Journal, 2017, 54, 23-45.	4.1	42
25	The impact of Quality Indicators on the rating of Multi-objective Evolutionary Algorithms. Applied Soft Computing Journal, 2017, 55, 265-275.	4.1	36
26	A novel direct measure of exploration and exploitation based on attraction basins. Expert Systems With Applications, 2021, 167, 114353.	4.4	31
27	A hybrid evolutionary algorithm for tuning a cloth-simulation model. Applied Soft Computing Journal, 2012, 12, 266-273.	4.1	30
28	Extracting grammar from programs. ACM SIGPLAN Notices, 2005, 40, 39-46.	0.2	29
29	Grammarâ€driven generation of domainâ€specific language debuggers. Software - Practice and Experience, 2008, 38, 1073-1103.	2.5	28
30	A memetic grammar inference algorithm for language learning. Applied Soft Computing Journal, 2012, 12, 1006-1020.	4.1	28
31	Using Ontologies in the Domain Analysis of Domain-Specific Languages. Lecture Notes in Computer Science, 2009, , 332-342.	1.0	28
32	Program comprehension for domain-specific languages. Computer Science and Information Systems, 2008, 5, 1-17.	0.7	25
33	A hybrid self-adaptive evolutionary algorithm for marker optimization in the clothing industry. Applied Soft Computing Journal, 2010, 10, 409-422.	4.1	24
34	LISA. ACM SIGPLAN Notices, 1995, 30, 71-79.	0.2	23
35	Weaving a debugging aspect into domain-specific language grammars. , 2005, , .		23
36	A Systematic Mapping Study driven by the margin of error. Journal of Systems and Software, 2018, 144, 439-449.	3.3	23

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37	Implementation of multiple attribute grammar inheritance in the tool LISA. ACM SIGPLAN Notices, 1999, 34, 68-75.	0.2	22
38	Design and implementation of domain-specific language easytime. Computer Languages, Systems and Structures, 2011, 37, 151-167.	1.4	22
39	Quality in model-driven engineering: a tertiary study. Software Quality Journal, 2016, 24, 601-633.	1.4	22
40	Extracting grammar from programs. ACM SIGPLAN Notices, 2005, 40, 29-38.	0.2	21
41	To explore or to exploit: An entropy-driven approach for evolutionary algorithms. International Journal of Knowledge-Based and Intelligent Engineering Systems, 2009, 13, 185-206.	0.7	21
42	On automata and language based grammar metrics. Computer Science and Information Systems, 2010, 7, 309-329.	0.7	21
43	Program comprehension of domain-specific and general-purpose languages: replication of a family of experiments using integrated development environments. Empirical Software Engineering, 2018, 23, 2734-2763.	3.0	19
44	A DSL for the development of software agents working within a semantic web environment. Computer Science and Information Systems, 2013, 10, 1525-1556.	0.7	19
45	Declarative specifications for the development of multi-agent systems. Computer Standards and Interfaces, 2016, 43, 91-115.	3.8	18
46	AN UNSUPERVISED INCREMENTAL LEARNING ALGORITHM FOR DOMAIN-SPECIFIC LANGUAGE DEVELOPMENT. Applied Artificial Intelligence, 2008, 22, 707-729.	2.0	17
47	Development of data acquisition systems by using a domain-specific modeling language. Computers in Industry, 2012, 63, 181-192.	5.7	17
48	Graph 3-coloring with a hybrid self-adaptive evolutionary algorithm. Computational Optimization and Applications, 2013, 54, 741-770.	0.9	17
49	Long Term Memory Assistance for Evolutionary Algorithms. Mathematics, 2019, 7, 1129.	1.1	16
50	Domain-specific software engineering. , 2010, , .		15
51	Converting metamodels to graph grammars: doing without advanced graph grammar features. Software and Systems Modeling, 2015, 14, 1297-1317.	2.2	14
52	Test automation of a measurement system using a domain-specific modelling language. Journal of Systems and Software, 2016, 111, 74-88.	3.3	14
53	Determination of a Hysteresis Model Parameters with the Use of Different Evolutionary Methods for an Innovative Hysteresis Model. Mathematics, 2020, 8, 201.	1.1	14
54	A technique for non-invasive application-level checkpointing. Journal of Supercomputing, 2011, 57, 227-255.	2.4	13

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55	Raising the level of abstraction for developing message passing applications. Journal of Supercomputing, 2012, 59, 1079-1100.	2.4	12
56	Debugging measurement systems using a domain-specific modeling language. Computers in Industry, 2014, 65, 622-635.	5.7	12
57	Inferring Context-Free Grammars for Domain-Specific Languages. Electronic Notes in Theoretical Computer Science, 2005, 141, 99-116.	0.9	11
58	Searching for soil modelsâ€™ parameters using metaheuristics. Applied Soft Computing Journal, 2018, 69, 131-148.	4.1	10
59	Tuning Multi-Objective Evolutionary Algorithms on Different Sized Problem Sets. Mathematics, 2019, 7, 824.	1.1	10
60	From DCOM interfaces to domain-specific modeling language: A case study on the sequencer. Computer Science and Information Systems, 2011, 8, 361-378.	0.7	10
61	Optimization of markers in clothing industry. Engineering Applications of Artificial Intelligence, 2008, 21, 669-678.	4.3	9
62	Component-based LR parsing. Computer Languages, Systems and Structures, 2010, 36, 16-33.	1.4	9
63	Improving Grammar Inference by a Memetic Algorithm. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 692-703.	3.3	9
64	A Comparison between Different Chess Rating Systems for Ranking Evolutionary Algorithms. , 0, , .		9
65	A Tool Support for Model-Driven Development: An Industrial Case Study from a Measurement Domain. Applied Sciences (Switzerland), 2019, 9, 4553.	1.3	9
66	Automatic Generation of Language-based Tools. Electronic Notes in Theoretical Computer Science, 2002, 65, 77-96.	0.9	8
67	Abstract syntax driven language development. , 2010, , .		8
68	A Case Study on the Design and Implementation of a Platform for Hand Rehabilitation. Applied Sciences (Switzerland), 2021, 11, 389.	1.3	8
69	Domain-Specific Languages: A Systematic Mapping Study. Lecture Notes in Computer Science, 2017, , 464-472.	1.0	8
70	Unit Testing for Domain-Specific Languages. Lecture Notes in Computer Science, 2009, , 125-147.	1.0	8
71	AspectCOOL. ACM SIGPLAN Notices, 2001, 36, 84-94.	0.2	8
72	Automatic implementation of programming languages using object oriented approach. Journal of Systems Architecture, 1997, 43, 203-210.	2.5	7

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73	AspectLISA: An Aspect-oriented Compiler Construction System Based on Attribute Grammars. Electronic Notes in Theoretical Computer Science, 2006, 164, 37-53.	0.9	7
74	Hybrid evolutionary algorithm for the b-chromatic number. Journal of Heuristics, 2015, 21, 501-521.	1.1	7
75	Two-level evolutionary algorithm for discovering relations between nodesâ€™ features in a complex network. Applied Soft Computing Journal, 2017, 56, 82-93.	4.1	7
76	From Grammar Inference to Semantic Inferenceâ€"An Evolutionary Approach. Mathematics, 2020, 8, 816.	1.1	7
77	CUDACL: A tool for CUDA and OpenCL programmers. , 2010, , .		6
78	Ranking Multi-Objective Evolutionary Algorithms using a chess rating system with Quality Indicator ensemble. , 2017, , .		6
79	Towards building a forensics aware language for secure logging. Computer Science and Information Systems, 2014, 11, 1291-1314.	0.7	6
80	EMBEDDING DSLS INTO GPLS: A GRAMMATICAL INFERENCE APPROACH *. Information Technology and Control, 2011, 40, .	1.1	6
81	On the Importance of the Artificial Bee Colony Control Parameter â€˜Limitâ€™. Information Technology and Control, 2017, 46, .	1.1	6
82	Developing scientific applications using Generative Programming. , 2009, , .		5
83	Metamodel Recovery from Multi-tiered Domains Using Extended MARS. , 2010, , .		5
84	Inferring Absolutely Non-Circular Attribute Grammars with a Memetic Algorithm. Applied Soft Computing Journal, 2021, 100, 106956.	4.1	5
85	Implementation of EasyTime formal semantics using a LISA compiler generator. Computer Science and Information Systems, 2012, 9, 1019-1044.	0.7	5
86	Easytime++: A Case Study Of Incremental Domain-Specific Language Development. Information Technology and Control, 2013, 42, .	1.1	5
87	Evolutionary search for optimal combinations of markers in clothing manufacturing. , 2006, , .		4
88	A clustering entropy-driven approach for exploring and exploiting noisy functions. , 2007, , .		4
89	Grammar inference algorithms and applications in software engineering. , 2009, , .		4
90	Influence of domain-specific notation to program understanding. , 2009, , .		4

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91	The screening phase in systematic reviews: Can we speed up the process?. Advances in Computers, 2021, 123, 115-191.	1.2	4
92	A Domain-Specific Language for Application-Level Checkpointing. Lecture Notes in Computer Science, 2008, , 26-38.	1.0	4
93	Design and implementation of simple object description language. , 2001, , .		3
94	Fitting Sovova's mass transfer model using an evolutionary algorithm and differential evolution. International Journal of Innovative Computing and Applications, 2010, 2, 237.	0.2	3
95	Graph Grammar Induction as a Parser-Controlled Heuristic Search Process. Lecture Notes in Computer Science, 2012, , 121-136.	1.0	3
96	Attraction Basins in Metaheuristics: A Systematic Mapping Study. Mathematics, 2021, 9, 3036.	1.1	3
97	Controlling industrial processes with a dataflow industrial controller: A way to achieve better performances. Microprocessing and Microprogramming, 1990, 28, 95-99.	0.3	2
98	Domain-specific languages as key tools for ulssis engineering. , 2008, , .		2
99	MARS: Metamodel Recovery from Multi-tiered Models Using Grammar Inference. , 2009, , .		2
100	A SOA Approach for Domain-Specific Language Implementation. , 2010, , .		2
101	Report from the first international workshop on realizing artificial intelligence synergies in software engineering (RAISE 2012). Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2012, 37, 34-35.	0.5	2
102	PPModel: a modeling tool for source code maintenance and optimization of parallel programs. Journal of Supercomputing, 2012, 62, 1560-1582.	2.4	2
103	Tools and techniques for non-invasive explicit parallelization. Journal of Supercomputing, 2012, 62, 1583-1608.	2.4	2
104	A high-level framework for parallelizing legacy applications for multiple platforms. , 2013, , .		2
105	A JSSP solution for production planning optimization combining industrial engineering and evolutionary algorithms. Computer Science and Information Systems, 2021, 18, 349-378.	0.7	2
106	RNGSGLR: Generalization of the Context-Aware Scanning Architecture for All Character-Level Context-Free Languages. Mathematics, 2022, 10, 2436.	1.1	2
107	Applying program comprehension techniques to karel robot programs. , 2009, , .		1
108	Can domain-specific languages be implemented by service-oriented architecture?. , 2010, , .		1

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109	Automatic generation of model traversals from metamodel definitions. , 2010, , .		1
110	Introducing domain-specific language implementation using web service-oriented technologies. Multiagent and Grid Systems, 2012, 8, 19-44.	0.5	1
111	Special issue on quality in model-driven engineering. Software Quality Journal, 2016, 24, 597-599.	1.4	1
112	Foreword to the Thematic Track: Quality Aspects in Model-Driven Engineering. , 2016, , .		1
113	Graph grammar induction. Advances in Computers, 2020, , 133-181.	1.2	1
114	Specifying Languages Using Aspect-oriented Approach: AspectLISA. Journal of Computing and Information Technology, 2006, 14, 343.	0.2	1
115	Implementation of Programming Languages Syntax and Semantics. , 2009, , 1863-1869.		1
116	Globalized Domain Specific Language Engineering. Lecture Notes in Computer Science, 2015, , 43-69.	1.0	1
117	A Domain-Specific Language for High-Level Parallelization. , 0, , 533-552.		1
118	Experiences on DSL Tools for Visual Studio. Information Technology Interfaces (ITI), Proceedings of the International Conference on, 2007, , .	0.0	0
119	A tool for compiler construction based on aspect-oriented specifications. Proceedings - IEEE Computer Society's International Computer Software and Applications Conference, 2007, , .	0.0	0
120	On defining quality based grammar metrics. , 2009, , .		0
121	Robot Learning of Domain Specific Knowledge from Natural Language Sources. , 0, , .		0
122	Special section on the Programming Languages track at the 26th ACM Symposium on Applied Computing. Science of Computer Programming, 2013, 78, 613-614.	1.5	0
123	Special issue on realizing artificial intelligence synergies in software engineering. Software Quality Journal, 2014, 22, 49-50.	1.4	0
124	Information System Software Development with Support for Application Traceability. Lecture Notes in Computer Science, 2015, , 513-527.	1.0	0
125	Quality of information and communication technology introduction. Software Quality Journal, 2021, 29, 195-196.	1.4	0
126	Grammar Inference Technology Applications in Software Engineering. Lecture Notes in Computer Science, 2010, , 276-279.	1.0	0

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127	Ontop: A Component for Acquiring Information from OWL Ontologies. Acta Electrotechnica Et Informatica, 2012, 12, .	0.3	0
128	SimpleConcepts: A lightweight extension to C++ to support constraints on generic types. Computer Science and Information Systems, 2014, 11, 1361-1379.	0.7	0
129	A Domain-Specific Language for High-Level Parallelization. , 0, , 276-295.		0