Christian KÃ¤stner

List of Publications by Year
in descending order

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131

papers

7,168

citations

218677

26

h-index

197818

49

g-index

131

all docs

131

docs citations

131

times ranked

1729

citing authors

#	Article	IF	Citations
1	Collaboration challenges in building ML-enabled systems. , 2022, , .		27
2	On debugging the performance of configurable software systems. , 2022, , .		8
3	White-Box Analysis over Machine Learning: Modeling Performance of Configurable Systems. , 2021, , .		21
4	When and How to Make Breaking Changes. ACM Transactions on Software Engineering and Methodology, 2021, 30, 1-56.	6.0	26
5	A Look into Programmersâ€™ Heads. IEEE Transactions on Software Engineering, 2020, 46, 442-462.	5.6	31
6	ConfigCrusher: towards white-box performance analysis for configurable systems. Automated Software Engineering, 2020, 27, 265-300.	2.9	19
7	Exploring differences and commonalities between feature flags and configuration options. , 2020, , .		19
8	On the relation of control-flow and performance feature interactions: a case study. Empirical Software Engineering, 2019, 24, 2410-2437.	3.9	4
9	Model-Based Adaptation for Robotics Software. IEEE Software, 2019, 36, 83-90.	1.8	17
10	An investigation of misunderstanding code patterns in C open-source software projects. Empirical Software Engineering, 2019, 24, 1693-1726.	3.9	20
11	Exploring output-based coverage for testing PHP web applications. Automated Software Engineering, 2019, 26, 59-85.	2.9	3
12	Tradeoffs in modeling performance of highly configurable software systems. Software and Systems Modeling, 2019, 18, 2265-2283.	2.7	33
13	Indicators for merge conflicts in the wild: survey and empirical study. Automated Software Engineering, 2018, 25, 279-313.	2.9	30
14	Discipline Matters: Refactoring of Preprocessor Directives in the #ifdef Hell. IEEE Transactions on Software Engineering, 2018, 44, 453-469.	5.6	43
15	Exploring feature interactions without specifications: a controlled experiment. , 2018, , .		3
16	Learning to sample: exploiting similarities across environments to learn performance models for configurable systems. , 2018, , .		40
17	Variability-Aware Static Analysis at Scale. ACM Transactions on Software Engineering and Methodology, 2018, 27, 1-33.	6.0	30
18	Tracking Load-Time Configuration Options. IEEE Transactions on Software Engineering, 2018, 44, 1269-1291.	5.6	23

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19	Measuring neural efficiency of program comprehension. , 2017, , .		71
20	Transfer Learning for Improving Model Predictions in Highly Configurable Software. , 2017, , .		53
21	Transfer learning for performance modeling of configurable systems: An exploratory analysis. , 2017, , .		55
22	How to break an API: cost negotiation and community values in three software ecosystems. , 2016, , .		147
23	On essential configuration complexity: measuring interactions in highly-configurable systems. , 2016, , .		60
24	Inter-app communication in Android. , 2016, , .		13
25	A comparison of 10 sampling algorithms for configurable systems. , 2016, , .		115
26	Intelligently Transparent Software Ecosystems. IEEE Software, 2016, 33, 89-96.	1.8	4
27	Preprocessor-based variability in open-source and industrial software systems: An empirical study. Empirical Software Engineering, 2016, 21, 449-482.	3.9	64
28	Characterizing complexity of highly-configurable systems with variational call graphs. , 2015, , .		5
29	When It Breaks, It Breaks: How Ecosystem Developers Reason about the Stability of Dependencies. , 2015, , .		37
30	Cross-language program slicing for dynamic web applications. , 2015, , .		23
31	Detecting semantic merge conflicts with variability-aware execution. , 2015, , .		17
32	Extracting Configuration Knowledge from Build Files with Symbolic Analysis. , 2015, , .		8
33	Performance-influence models for highly configurable systems. , 2015, , .		165
34	Varis: IDE Support for Embedded Client Code in PHP Web Applications. , 2015, , .		3
35	Where Do Configuration Constraints Stem From? An Extraction Approach and an Empirical Study. IEEE Transactions on Software Engineering, 2015, 41, 820-841.	5.6	70
36	Tracking load-time configuration options. , 2014, , .		29

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37	Mining configuration constraints: static analyses and empirical results. , 2014, , .		93
38	Exploring variability-aware execution for testing plugin-based web applications. , 2014, , .		72
39	Building call graphs for embedded client-side code in dynamic web applications. , 2014, , .		24
40	Variational Data Structures. , 2014, , .		32
41	Feature maintenance with emergent interfaces. , 2014, , .		32
42	Measuring and modeling programming experience. Empirical Software Engineering, 2014, 19, 1299-1334.	3.9	89
43	Limiting recertification in highly configurable systems. , 2014, , .		1
44	A Classification and Survey of Analysis Strategies for Software Product Lines. ACM Computing Surveys, 2014, 47, 1-45.	23.0	360
45	Variability Mining: Consistent Semi-automatic Detection of Product-Line Features. IEEE Transactions on Software Engineering, 2014, 40, 67-82.	5.6	67
46	FeatureIDE: An extensible framework for feature-oriented software development. Science of Computer Programming, 2014, 79, 70-85.	1.9	336
47	<scp>JavAdaptor</scp>â€”Flexible runtime updates of Java applications. Software - Practice and Experience, 2013, 43, 153-185.	3.6	26
48	Predicting quality attributes of software product lines using software and network measures and sampling. , 2013, , .		7
49	Do background colors improve program comprehension in the #ifdef hell?. Empirical Software Engineering, 2013, 18, 699-745.	3.9	67
50	Feature-interaction detection based on feature-based specifications. Computer Networks, 2013, 57, 2399-2409.	5.1	50
51	Feature-Oriented Software Product Lines. , 2013, , .		505
52	Feature-oriented software evolution. , 2013, , .		46
53	Scalable prediction of non-functional properties in software product lines: Footprint and memory consumption. Information and Software Technology, 2013, 55, 491-507.	4.4	67
54	Language-Independent and Automated Software Composition: The FeatureHouse Experience. IEEE Transactions on Software Engineering, 2013, 39, 63-79.	5.6	74

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55	Feature-Oriented Software Development. Lecture Notes in Computer Science, 2013, , 346-382.	1.3	5
56	Scalable analysis of variable software. , 2013, , .		128
57	Reify your collection queries for modularity and speed!. , 2013, , .		13
58	Exploring feature interactions in the wild. , 2013, , .		63
59	The PLA model. , 2013, , .		29
60	Layout-Sensitive Generalized Parsing. Lecture Notes in Computer Science, 2013, , 244-263.	1.3	14
61	Reifying and optimizing collection queries for modularity. , 2012, , .		0
62	A variability-aware module system. , 2012, , .		63
63	Toward measuring program comprehension with functional magnetic resonance imaging. , 2012, , .		20
64	Toward variability-aware testing. , 2012, , .		45
65	Type checking annotation-based product lines. ACM Transactions on Software Engineering and Methodology, 2012, 21, 1-39.	6.0	132
66	Comparing program comprehension of physically and virtually separated concerns. , 2012, , .		17
67	Predicting performance via automated feature-interaction detection. , 2012, , .		103
68	Growing a language environment with editor libraries. ACM SIGPLAN Notices, 2012, 47, 167-176.	0.2	2
69	SPL Conqueror: Toward optimization of non-functional properties in software product lines. Software Quality Journal, 2012, 20, 487-517.	2.2	134
70	Measuring programming experience. , 2012, , .		69
71	Access control in feature-oriented programming. Science of Computer Programming, 2012, 77, 174-187.	1.9	29
72	A variability-aware module system. ACM SIGPLAN Notices, 2012, 47, 773-792.	0.2	13

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73	Exploring Software Measures to Assess Program Comprehension. , 2011, , .		21
74	The Pervasive Nature of Variability in SOC. , 2011, , .		5
75	Scalable Prediction of Non-functional Properties in Software Product Lines. , 2011, , .		47
76	Semistructured merge. , 2011, , .		80
77	Partial preprocessing C code for variability analysis. , 2011, , .		15
78	Code clones in feature-oriented software product lines. ACM SIGPLAN Notices, 2011, 46, 103-112.	0.2	9
79	Variability-aware parsing in the presence of lexical macros and conditional compilation. ACM SIGPLAN Notices, 2011, 46, 805-824.	0.2	37
80	Library-based model-driven software development with SugarJ. , 2011, , .		4
81	SugarJ. , 2011, , .		97
82	View infinity. , 2011, , .		14
83	Abstract Features in Feature Modeling. , 2011, , .		80
84	SugarJ. ACM SIGPLAN Notices, 2011, 46, 391-406.	0.2	20
85	JavAdaptor. , 2011, , .		15
86	Third International Workshop on Feature-Oriented Software Development (FOSD 2011). , 2011, , .		0
87	Analyzing the discipline of preprocessor annotations in 30 million lines of C code. , 2011, , .		84
88	Growing a language environment with editor libraries. , 2011, , .		21
89	SugarJ. , 2011, , .		6
90	Variability-aware parsing in the presence of lexical macros and conditional compilation. , 2011, , .		166

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91	Revisiting Information Hiding: Reflections on Classical and Nonclassical Modularity. Lecture Notes in Computer Science, 2011, , 155-178.	1.3	5
92	Service Variability Patterns. Lecture Notes in Computer Science, 2011, , 130-140.	1.3	7
93	The road to feature modularity?. , 2011, , .		38
94	FeatureCommander. , 2011, , .		5
95	Type safety for feature-oriented product lines. Automated Software Engineering, 2010, 17, 251-300.	2.9	91
96	An algebraic foundation for automatic feature-based program synthesis. Science of Computer Programming, 2010, 75, 1022-1047.	1.9	41
97	Visual Support for Understanding Product Lines. , 2010, , .		9
98	Code clones in feature-oriented software product lines. , 2010, , .		23
99	Types and modularity for implicit invocation with implicit announcement. ACM Transactions on Software Engineering and Methodology, 2010, 20, 1-43.	6.0	50
100	An analysis of the variability in forty preprocessor-based software product lines. , 2010, , .		237
101	TypeChef. , 2010, , .		57
102	Language-independent reference checking in software product lines. , 2010, , .		15
103	Detecting Dependences and Interactions in Feature-Oriented Design. , 2010, , .		43
104	A model of refactoring physically and virtually separated features. ACM SIGPLAN Notices, 2010, 45, 157-166.	0.2	7
105	Safe composition of non-monotonic features. ACM SIGPLAN Notices, 2010, 45, 177-186.	0.2	4
106	How to compare program comprehension in FOSD empirically. , 2009, , .		13
107	An orthogonal access modifier model for feature-oriented programming. , 2009, , .		1
108	FeatureIDE: A tool framework for feature-oriented software development. , 2009, , .		146

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109	FEATUREHOUSE: Language-independent, automated software composition. , 2009, , .		137
110	Reasoning about edits to feature models. , 2009, , .		206
111	Model Superimposition in Software Product Lines. Lecture Notes in Computer Science, 2009, , 4-19.	1.3	73
112	Guaranteeing Syntactic Correctness for All Product Line Variants: A Language-Independent Approach. Lecture Notes in Business Information Processing, 2009, , 175-194.	1.0	46
113	Feature (De)composition in Functional Programming. Lecture Notes in Computer Science, 2009, , 9-26.	1.3	8
114	A model of refactoring physically and virtually separated features. , 2009, , .		46
115	Safe composition of non-monotonic features. , 2009, , .		11
116	An Overview of Feature-Oriented Software Development.. Journal of Object Technology, 2009, 8, 49.	0.9	291
117	Language-Independent Quantification and Weaving for Feature Composition. Lecture Notes in Computer Science, 2009, , 45-54.	1.3	4
118	Towards Unanticipated Runtime Adaptation of Java Applications. , 2008, , .		15
119	Measuring Non-Functional Properties in Software Product Line for Product Derivation. , 2008, , .		22
120	Type-Checking Software Product Lines - A Formal Approach. , 2008, , .		79
121	Research challenges in the tension between features and services. , 2008, , .		23
122	Granularity in software product lines. , 2008, , .		302
123	On the modularity of feature interactions. , 2008, , .		32
124	Feature featherweight java. , 2008, , .		39
125	Program refactoring using functional aspects. , 2008, , .		19
126	An Algebra for Features and Feature Composition. Lecture Notes in Computer Science, 2008, , 36-50.	1.3	33

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127	A Case Study Implementing Features Using AspectJ. , 2007, , .		76
128	On the Necessity of Empirical Studies in the Assessment of Modularization Mechanisms for Crosscutting Concerns. , 2007, , .		8
129	A Case Study Implementing Features Using AspectJ. , 2007, , .		7
130	Pointcuts, advice, refinements, and collaborations: similarities, differences, and synergies. Innovations in Systems and Software Engineering, 2007, 3, 281-289.	2.1	1
131	Aspect Refinement â€" Unifying AOP and Stepwise Refinement.. Journal of Object Technology, 2007, 6, 13.	0.9	14