

TABLE V
TOP FIVE PAPERS FOR USAGE ATTRIBUTES

Attribute	ID	Paper Title	Value
#issues-open	58	Feedback-Based Debugging	54
	145	Safe Automated Refactoring for Intelligent Parallelization of Java 8 Streams	48
	68	Automated Refactoring of Legacy Java Software to Default Methods	47
	99	Accurate and Efficient Refactoring Detection in Commit History	34
	2	Building and Using Pluggable Type-Checkers	33
stars	135	Guiding Deep Learning System Testing using Surprise Adequacy	365
	99	Accurate and Efficient Refactoring Detection in Commit History	289
	83	Deep Code Search	266
	218	Interface Compliance of Inline Assembly: Automatically Check, Patch and Refine	244
	46	Termination-Checking for LLVM Peephole Optimizations	210
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	35	On Architectural Diversity of Dynamic Adaptive Systems	20
	99	Accurate and Efficient Refactoring Detection in Commit History	19
	38	DoubleTake: Fast and Precise Error Detection via Evidence-Based Dynamic Analysis	18
	46	Termination-Checking for LLVM Peephole Optimizations	16
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	35	On Architectural Diversity of Dynamic Adaptive Systems	1400
	59	How Do Developers Fix Cross-Project Correlated Bugs? A Case Study on the GitHub Scientific Python Ecosystem	214
	135	Guiding Deep Learning System Testing using Surprise Adequacy	140
	99	Accurate and Efficient Refactoring Detection in Commit History	121
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	58	Feedback-Based Debugging	180
	68	Automated Refactoring of Legacy Java Software to Default Methods	113
	2	Building and Using Pluggable Type-Checkers	108
	145	Safe Automated Refactoring for Intelligent Parallelization of Java 8 Streams	78
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	68	Automated Refactoring of Legacy Java Software to Default Methods	42
	83	Deep Code Search	21
	148	The List is the Process: Reliable Pre-Integration Tracking of Commits on Mailing Lists	20
	132	Gigahorse: Thorough, Declarative Decompilation of Smart Contracts	15
#pull-requests-open	143	Reasonably-Most-General Clients for JavaScript Library Analysis	20
	50	Code Defenders: Crowdsourcing Effective Tests and Subtle Mutants with a Mutation Testing Game	10
	58	Feedback-Based Debugging	9
	181	Near-Duplicate Detection in Web App Model Inference	7
	52	PEoPL: Projectional Editing of Product Lines	6
#pull-requests-closed	2	Building and Using Pluggable Type-Checkers	472
	202	Verifying Object Construction	455
	99	Accurate and Efficient Refactoring Detection in Commit History	87
	33	MU-MMINT: An IDE for Model Uncertainty	85
	132	Gigahorse: Thorough, Declarative Decompilation of Smart Contracts	83
longest-pull-request	148	The List is the Process: Reliable Pre-Integration Tracking of Commits on Mailing Lists	125
	202	Verifying Object Construction	99
	145	Safe Automated Refactoring for Intelligent Parallelization of Java 8 Streams	63
	209	Data-Oriented Differential Testing of Object-Relational Mapping Systems	35
	73	Search-Based Test Data Generation for SQL Queries	21
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	10	Understanding Integer Overflow in C/C++	27
	132	Gigahorse: Thorough, Declarative Decompilation of Smart Contracts	18
	35	On Architectural Diversity of Dynamic Adaptive Systems	16
	50	Code Defenders: Crowdsourcing Effective Tests and Subtle Mutants with a Mutation Testing Game	16
number-of-commits	10	Understanding Integer Overflow in C/C++	40162
	50	Code Defenders: Crowdsourcing Effective Tests and Subtle Mutants with a Mutation Testing Game	4464
	33	MU-MMINT: An IDE for Model Uncertainty	3295
	2	Building and Using Pluggable Type-Checkers	2290
	99	Accurate and Efficient Refactoring Detection in Commit History	2054
artifact-downloads	170	Heaps'n Leaks: How Heap Snapshots Improve Android Taint Analysis	8388
	233	SOAR: A Synthesis Approach for Data Science API Refactoring	3343
	228	Representation of Developer Expertise in Open Source Software	2553
	212	FlakeFlagger: Predicting Flakiness Without Rerunning Tests	1410
	18	Data clone detection and visualization in spreadsheets	849
artifact-views	122	Automated Reporting of Anti-Patterns and Decay in Continuous Integration	5463
	18	Data clone detection and visualization in spreadsheets	1998
	103	A Large-Scale Empirical Study on the Effects of Code Obfuscations on Android Apps and Anti-Malware Products	1417
	150	The Seven Sins: Security Smells in Infrastructure as Code Scripts	995
	212	FlakeFlagger: Predicting Flakiness Without Rerunning Tests	846
paper-views/downloads	121	A Novel Neural Source Code Representation based on Abstract Syntax Tree	5704
	12	Where should the bugs be fixed? More accurate information retrieval-based bug localization based on bug reports	3513
	71	Semantically Enhanced Software Traceability Using Deep Learning Techniques	3067
	230	Semi-supervised Log-based Anomaly Detection via Probabilistic Label Estimation	2343
	106	DeepTest: Automated Testing of Deep-Neural-Network-Driven Autonomous Cars	2218
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	12	Where should the bugs be fixed? More accurate information retrieval-based bug localization based on bug reports	317
	135	Guiding Deep Learning System Testing using Surprise Adequacy	166
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	83	Deep Code Search	134