

# Shin Yoo

## List of Publications by Year in descending order

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Version: 2024-02-01

86  
papers

4,363  
citations

394421

19  
h-index

361022

35  
g-index

88  
all docs

88  
docs citations

88  
times ranked

1844  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluating Surprise Adequacy for Deep Learning System Testing. ACM Transactions on Software Engineering and Methodology, 2023, 32, 1-29.	6.0	3
2	Predictive Mutation Analysis via the Natural Language Channel in Source Code. ACM Transactions on Software Engineering and Methodology, 2022, 31, 1-27.	6.0	4
3	FDG: a precise measurement of fault diagnosability gain of test cases. , 2022, , .		0
4	Empirical Evaluation of Fault Localisation Using Code and Change Metrics. IEEE Transactions on Software Engineering, 2021, 47, 1605-1625.	5.6	10
5	Mining Fix Patterns for FindBugs Violations. IEEE Transactions on Software Engineering, 2021, 47, 165-188.	5.6	56
6	Preliminary Evaluation of SWAY in Permutation Decision Space via a Novel Euclidean Embedding. Lecture Notes in Computer Science, 2021, , 26-40.	1.3	0
7	Leveraging Fault Localisation to Enhance Defect Prediction. , 2021, , .		2
8	Assisting Bug Report Assignment Using Automated Fault Localisation: An Industrial Case Study. , 2021, , .		4
9	Preliminary Evaluation of Path-aware Crossover Operators for Search-Based Test Data Generation for Autonomous Driving. , 2021, , .		2
10	Selecting test inputs for DNNs using differential testing with subspecialized model instances. , 2021, , .		2
11	Reducing the search space of bug inducing commits using failure coverage. , 2021, , .		4
12	Observation-based approximate dependency modeling and its use for program slicing. Journal of Systems and Software, 2021, 179, 110988.	4.5	3
13	Searching for Multi-fault Programs in Defects4J. Lecture Notes in Computer Science, 2021, , 153-158.	1.3	5
14	Ahead of Time Mutation Based Fault Localisation using Statistical Inference. , 2021, , .		2
15	Evaluating lexical approximation of program dependence. Journal of Systems and Software, 2020, 160, 110459.	4.5	3
16	Pandemic programming. Empirical Software Engineering, 2020, 25, 4927-4961.	3.9	144
17	SINVAD. , 2020, , .		17
18	Flexible Probabilistic Modeling for Search Based Test Data Generation. , 2020, , .		3

#	ARTICLE	IF	CITATIONS
19	Evaluating Surprise Adequacy for Question Answering. , 2020, , .		8
20	A new approach to distribute MOEA pareto front computation. , 2020, , .		2
21	Reducing DNN labelling cost using surprise adequacy: an industrial case study for autonomous driving. , 2020, , .		23
22	Precise Learn-to-Rank Fault Localization Using Dynamic and Static Features of Target Programs. ACM Transactions on Software Engineering and Methodology, 2019, 28, 1-34.	6.0	31
23	PyGGI 2.0: language independent genetic improvement framework. , 2019, , .		15
24	Why train-and-select when you can use them all?. , 2019, , .		5
25	Guiding Deep Learning System Testing Using Surprise Adequacy. , 2019, , .		244
26	SBST in the Age of Machine Learning Systems - Challenges Ahead. , 2019, , .		9
27	Classifying False Positive Static Checker Alarms in Continuous Integration Using Convolutional Neural Networks. , 2019, , .		13
28	A comparison of tree- and line-oriented observational slicing. Empirical Software Engineering, 2019, 24, 3077-3113.	3.9	13
29	MOAD: Modeling Observation-Based Approximate Dependency. , 2019, , .		3
30	Software review: DEAP (Distributed Evolutionary Algorithm in Python) library. Genetic Programming and Evolvable Machines, 2019, 20, 139-142.	2.2	19
31	Empirical evaluation of mutation-based test case prioritization techniques. Software Testing Verification and Reliability, 2019, 29, e1695.	2.0	27
32	A Theoretical and Empirical Study of Diversity-Aware Mutation Adequacy Criterion. IEEE Transactions on Software Engineering, 2018, 44, 914-931.	5.6	24
33	Comparing line and AST granularity level for program repair using P <sc>GGI. , 2018, , .		10
34	Learning Fault Localisation for both Humans and Machines Using Multi-objective GP. Lecture Notes in Computer Science, 2018, , 349-355.	1.3	4
35	MOBS. , 2018, , .		1
36	Generating test input with deep reinforcement learning. , 2018, , .		15

#	ARTICLE	IF	CITATIONS
37	Learning Without Peeking: Secure Multi-party Computation Genetic Programming. Lecture Notes in Computer Science, 2018, , 246-261.	1.3	1
38	Are mutation scores correlated with real fault detection?. , 2018, , .		61
39	Observational slicing based on visual semantics. Journal of Systems and Software, 2017, 129, 60-78.	4.5	6
40	Guest editorial for special section on research in search-based software engineering. Empirical Software Engineering, 2017, 22, 849-851.	3.9	0
41	Search-Based Approaches for Software Module Clustering Based on Multiple Relationship Factors. International Journal of Software Engineering and Knowledge Engineering, 2017, 27, 1033-1062.	0.8	8
42	Embedding genetic improvement into programming languages. , 2017, , .		1
43	Hyperheuristic Observation Based Slicing of Guava. Lecture Notes in Computer Science, 2017, , 175-180.	1.3	0
44	Evaluating CAVM: A New Search-Based Test Data Generation Tool for C. Lecture Notes in Computer Science, 2017, , 143-149.	1.3	3
45	Inferring Automatic Test Oracles. , 2017, , .		12
46	FLUCCS: using code and change metrics to improve fault localization. , 2017, , .		129
47	Empirical evaluation of conditional operators in GP based fault localization. , 2017, , .		2
48	Human Competitiveness of Genetic Programming in Spectrum-Based Fault Localisation. ACM Transactions on Software Engineering and Methodology, 2017, 26, 1-30.	6.0	59
49	Tree-Oriented vs. Line-Oriented Observation-Based Slicing. , 2017, , .		10
50	Generalized observational slicing for tree-represented modelling languages. , 2017, , .		14
51	Field Report: Applying Monte Carlo Tree Search for Program Synthesis. Lecture Notes in Computer Science, 2016, , 304-310.	1.3	5
52	Diversity-Aware Mutation Adequacy Criterion for Improving Fault Detection Capability. , 2016, , .		8
53	Test Set Diameter: Quantifying the Diversity of Sets of Test Cases. , 2016, , .		63
54	Amortised Deep Parameter Optimisation of GPGPU Work Group Size for OpenCV. Lecture Notes in Computer Science, 2016, , 211-217.	1.3	4

#	ARTICLE	IF	CITATIONS
55	ORBS and the limits of static slicing. , 2015, , .		25
56	Information Transformation: An Underpinning Theory for Software Engineering. , 2015, , .		9
57	The Oracle Problem in Software Testing: A Survey. IEEE Transactions on Software Engineering, 2015, 41, 507-525.	5.6	608
58	The Programming Game. , 2015, , .		6
59	Practical Combinatorial Interaction Testing: Empirical Findings on Efficiency and Early Fault Detection. IEEE Transactions on Software Engineering, 2015, 41, 901-924.	5.6	80
60	Empirical evaluation of pareto efficient multi-objective regression test case prioritisation. , 2015, , .		61
61	Amortised Optimisation of Non-functional Properties in Production Environments. Lecture Notes in Computer Science, 2015, , 31-46.	1.3	2
62	Guest editorial: special section on regression testing. Software Quality Journal, 2014, 22, 699-699.	2.2	0
63	Genetic improvement for adaptive software engineering (keynote). , 2014, , .		35
64	Seeing Is Slicing: Observation Based Slicing of Picture Description Languages. , 2014, , .		10
65	Exact scalable sensitivity analysis for the next release problem. ACM Transactions on Software Engineering and Methodology, 2014, 23, 1-31.	6.0	29
66	ORBS: language-independent program slicing. , 2014, , .		57
67	Ask the Mutants: Mutating Faulty Programs for Fault Localization. , 2014, , .		160
68	GPGPU test suite minimisation: search based software engineering performance improvement using graphics cards. Empirical Software Engineering, 2013, 18, 550-593.	3.9	30
69	Cloud engineering is Search Based Software Engineering too. Journal of Systems and Software, 2013, 86, 2225-2241.	4.5	47
70	Efficiency and early fault detection with lower and higher strength combinatorial interaction testing. , 2013, , .		71
71	Fault localization prioritization. ACM Transactions on Software Engineering and Methodology, 2013, 22, 1-29.	6.0	83
72	Provably Optimal and Human-Competitive Results in SBSE for Spectrum Based Fault Localisation. Lecture Notes in Computer Science, 2013, , 224-238.	1.3	60

#	ARTICLE	IF	CITATIONS
73	Search Based Software Engineering: Techniques, Taxonomy, Tutorial. Lecture Notes in Computer Science, 2012, , 1-59.	1.3	128
74	Regression testing minimization, selection and prioritization: a survey. Software Testing Verification and Reliability, 2012, 22, 67-120.	2.0	941
75	Test data regeneration: generating new test data from existing test data. Software Testing Verification and Reliability, 2012, 22, 171-201.	2.0	35
76	Evolving Human Competitive Spectra-Based Fault Localisation Techniques. Lecture Notes in Computer Science, 2012, , 244-258.	1.3	83
77	Transition coverage testing for simulink/stateflow models using messy genetic algorithms. , 2011, , .		11
78	Highly Scalable Multi Objective Test Suite Minimisation Using Graphics Cards. Lecture Notes in Computer Science, 2011, , 219-236.	1.3	44
79	Using hybrid algorithm for Pareto efficient multi-objective test suite minimisation. Journal of Systems and Software, 2010, 83, 689-701.	4.5	115
80	Metamorphic Testing of Stochastic Optimisation. , 2010, , .		18
81	Optimizing for the Number of Tests Generated in Search Based Test Data Generation with an Application to the Oracle Cost Problem. , 2010, , .		62
82	A Novel Mask-Coding Representation for Set Cover Problems with Applications in Test Suite Minimisation. , 2010, , .		17
83	Search based data sensitivity analysis applied to requirement engineering. , 2009, , .		33
84	Clustering test cases to achieve effective and scalable prioritisation incorporating expert knowledge. , 2009, , .		133
85	Measuring and Improving Latency to Avoid Test Suite Wear Out. , 2009, , .		13
86	Pareto efficient multi-objective test case selection. , 2007, , .		237