

Appendix A.

Table A.1: Literature Mapping ACM Digital Library (Strategy I)

LID Summary	Category
L1 Software Performance Antipatterns in Cyber-Physical Systems	C2.1
L2 Identifying software performance changes across variants and versions	C2.1
L3 Towards detecting software performance anti-patterns using classification techniques	C2.1
L4 Automatically Detecting "Excessive Dynamic Memory Allocations" Software Performance Anti-Pattern	C2.1
L5 Systematic adoption of genetic programming for deriving software performance curves	C4.2
L6 Scaling size and parameter spaces in variability-aware software performance models	C4.2
L7 Efficient optimization of software performance models via parameter-space pruning	C4.3
L8 Antipattern-based model refactoring for software performance improvement	C5.1
L9 Testability and software performance: a systematic mapping study	C6.1
L10 Model Driven Software Performance Engineering: Current Challenges and Way Ahead	C6.2
L11 User-friendly approach for handling performance parameters during predictive software performance engineering	C6.4
L12 Towards software performance engineering for multicore and manycore systems	C6.4

Table A.2: Literature Mapping Google Scholar (Strategy I)

LID Summary	Category
L13 Detection and Solution of Software Performance Antipatterns in Palladio Architectural Models	C2.1
L14 Towards virtualized and automated software performance test architecture	C2.2
L15 A Declarative Approach for Performance Tests Execution in Continuous Software Development Environments	C2.2
L16 Statistical Inference of Software Performance Models for Parametric Performance Completions	C4.1
L17 An Efficient Method for Uncertainty Propagation in Robust Software Performance Estimation	C4.1
L18 Facilitating Performance Predictions Using Software Components	C4.1
L19 A Prediction Model for Software Performance in Symmetric Multiprocessing Environments	C4.1
L20 A Petri net tool for software performance estimation based on upper throughput bounds	C4.1
L21 Architecture-level software performance abstractions for online performance prediction	C4.1
L22 Software performance prediction with a time scaling scheduling profiler	C4.1
L23 Performance Prediction of Configurable Software Systems by Fourier Learning (T)	C4.1
L24 DeepPerf: Performance Prediction for Configurable Software with Deep Sparse Neural Network	C4.1
L25 Implementation of the Software Performance Engineering Development Process	C4.2
L26 Performance-Influence Model for Highly Configurable Software with Fourier Learning and Lasso Regression	C4.2
L27 Software performance simulation strategies for high-level embedded system design	C4.4
L28 Rule-based automatic software performance diagnosis and improvement	C5.1
L29 Improving software performance and reliability in a distributed and concurrent environment with an architecture-based self-adaptive framework	C5.3
L30 Software Performance Self-Adaptation through Efficient Model Predictive Control	C5.3
L31 Performance Analysis for Object-Oriented Software: A Systematic Mapping	C6.3
L32 Caliper: performance introspection for HPC software stacks	C6.4
L33 Transformation challenges: from software models to performance models	C6.4
L34 Five Layered Model for Identification of Software Performance Requirements	C6.3
L35 Completion and Extension Techniques for Enterprise Software Performance Engineering	C6.4

Table A.3: Literature Mapping DBLP (Strategy I)

LID Summary	Category
L36 Software Performance Modeling using the UML: a Case Study	C4.2
L37 Predicting the software performance during feasibility study	C4.2
L38 Automatic object deployment for software performance enhancement	C5.1
L39 Design and Modeling in the Software Performance Engineering Development Process	C6.4
L40 Cost-aware scheduling for ensuring software performance and reliability under heterogeneous workloads of hybrid cloud	C6.4

Table A.4: Literature Mapping IEEE Explore (Strategy I)

LID Summary	Category
L41 Discovering, reporting, and fixing performance bugs.	C1.1
L42 Understanding and detecting real-world performance bugs	C1.1
L43 A qualitative study on performance bugs.	C1.1
L44 Reproducing performance bug reports in server applications: The researchers' experiences.	C1.1
L45 An empirical study on performance bugs for highly configurable software systems.	C1.2
L46 Performance modeling: understanding the past and predicting the future	C1.3
L47 Performance analysis of idle programs.	C2.1
L48 Syncprof: Detecting, localizing, and optimizing synchronization bottlenecks.	C2.1
L49 Catch me if you can: Performance bug detection in the wild.	C2.1
L50 Uncovering performance problems in java applications with reference propagation profiling.	C2.1
L51 Static detection of asymptotic performance bugs in collection traversals.	C2.1
L52 Supporting swift reaction: Automatically uncovering performance problems by systematic experiments	C2.1
L53 Context-sensitive delta inference for identifying workload-dependent performance bottlenecks.	C2.1
L54 Eventbreak: Analyzing the responsiveness of user interfaces through performance-guided test generation.	C2.2
L55 Automatically finding performance problems with feedback-directed learning software testing.	C2.2
L56 Automatic generation of load tests.	C2.2
L57 Wise: Automated test generation for worst-case complexity.	C2.2
L58 Automatic generation of load tests.	C2.2
L59 Toddler: Detecting performance problems via similar memory-access patterns.	C2.3
L60 Performance regression testing target prioritization via performance risk analysis.	C2.4
L61 Performance regression testing of concurrent classes.	C2.4
L62 X-ray: Automating root-cause diagnosis of performance anomalies in production software.	C3.1
L63 Performance debugging in the large via mining millions of stack traces	C3.3
L64 On performance debugging of unnecessary lock contentions on multicore processors	C3.3
L65 Critical lock analysis: Diagnosing critical section bottlenecks in multithreaded applications	C3.3
L66 Analyzing lock contention in multithreaded applications.	C3.3
L67 Variability-aware performance prediction: A statistical learning approach.	C4.1
L68 Mantis: Automatic performance prediction for smartphone applications.	C4.2
L69 Performance-influence models for highly configurable systems.	C4.2
L70 Automated analysis of multithreaded programs for performance modeling.	C4.2
L71 Finding reusable data structures.	C5.1
L72 A survey on load testing of large-scale software systems	C6.1

Table A.5: Research Literature Venues (Strategy I)

Venue	# Paper
International Conference on Software Engineering (ICSE)	10
International Conference on Automated Software Engineering (ASE)	6
Programming Language Design and Implementation (PLDI)	2
Object oriented programming systems languages and applications (OOPSLA)	4
Operating Systems Design and Implementation (OSDI)	1
International Symposium on Software Testing and Analysis (ISSTA)	2
Empirical Software Engineering and Measurement (ESEM)	1
Mining Software Repositories (MSR)	2
International Conference on Performance engineering (ICPE)	3
ICSE SEIP	1
International conference on autonomic computing (ICAC)	1
International Conference on Software Maintenance (ICSM)	2
European Conference on Object-Oriented Programming (ECOOP)	1
Asia-Pacific Web Conference	1
ACM Symposium on Cloud Computing	1
Principles and Practice of Parallel Programming (PPoPP)	1
High Performance Computing, Networking, Storage and Analysis	2
International Symposium on Code Generation and Optimization	1
USENIX ATC	1
Quality of Software Architectures (QoSA)	1
International Conference on Computing, Communication and Security (ICCCS)	1
International Conference on the Quantitative Evaluation of Systems (QEST)	1
Software Engineering Research, Management and Applications (SERA)	1
Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS)	1
International Conference on Computer and Information Science (ACIS)	1
Automated Software Engineering (ASE)	2
IEEE Transactions on Software Engineering	1
Journal of Systems and Software	3
Software: Practice and Experience	1
Performance Evaluation	2
Software and Systems Modeling	2
Multimedia Tools and Applications	1
Journal of Software Engineering and Knowledge Engineering	1
IEEE Software	1
Design Automation for Embedded Systems volume	1
Science of Computer Programming	1
Future Business Software	1
International Journal of Software Engineering & Applications (IJSEA)	1
Journal of Software	1