

Message from the DCCS Workshop Chairs

DSN-W 2024

On behalf of the DCCS 2024 Organizing Committee, it is our pleasure to welcome you to the 3rd International Workshop on Dependable Computing for Complex Systems, which is co-located with DSN 2024 held in Brisbane, Australia, on June 24-27, 2024.

The DCCS seeks to provide an international venue to discuss the advanced discoveries and emerging trends related to the dependability of complex systems in both the academic society and the industry. It explores how we can apply not only emerging dependability theories and techniques to describe and evaluate complex systems, but also the methods or tools for localizing and fixing system defects/vulnerabilities to improve system dependability.

This year we selected four research papers for presentation, which discuss highly relevant topics in the field of dependable computing for complex systems. The topics include software reliability, software testing, and data security. The workshop is organized into two sessions. The first session features an invited talk and two research papers. The keynote talk in this session, entitled: “*Advanced Techniques for Deep Neural Network Repair*”, is made by Prof. Paolo Arcaini, Associate Professor at the National Institute of Informatics, Japan, and gives an overview of some search-based deep neural network repair approaches. The following two research papers are; (1) *DDOSHIELD-IoT: A Testbed for Simulating and Lightweight Detection of IoT Botnet DDoS Attacks* by Simona De Vivo, Islam Obaidat, Dong Dai, and Pietro Liguori, and (2) *Caching and Prefetching for Improving ORAM Performance* by Naohiro Hayashibara and Kazuaki Kawabata. The second session also consists of an invited talk and two research papers. The keynote talk by Prof. Hiroyuki Okamura, Professor at the Graduate School of Advanced Science and Engineering, Hiroshima University, Japan, presents “*On Perfect Sampling for Stochastic Petri Nets*”, explains how to draw samples in a steady state, and discusses methods to perform perfect sampling on stochastic Petri net models. The following two research papers are; (3) *On Predicting Software Intensity Using Wavelets and Nonlinear Regression* by Kaoru Matsui and Xiao Xiao, and (4) *Performance Comparison of Bayesian Estimations on the Residual Number of Software Bugs* by Yuki Hagiwara, Tadashi Dohi, and Hiroyuki Okamura.

We extend our gratitude to the organizing committee for their support in orchestrating this workshop. Our heartfelt appreciation also goes to the program committee members for their diligent paper reviews, valuable advice, and constructive feedback to the authors. Lastly, we extend our thanks to our invited speakers, all authors, participants, and everyone who contributed to the success of DCCS 2024. We wish them a fruitful continuation of their work in this field.

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