

2013 43rd Annual IEEE/IFIP Conference on Dependable Systems and Networks Workshop

(DSN-W 2013)

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3rd International Workshop on Dependability of Clouds, Data Centers and Virtual Machine Technology (DCDV 2013)

DCDV: Introduction

Monday 8:30

The Third International Workshop on Dependability of Clouds, Data Centers and Virtual Machine Technology

Jogesh K. Muppala, Matti Hiltunen, Roy Campbell, Paulo Verissimo

DCDV 1: Cloud and Data Center Networking

Monday 9:00

Towards SDN Enabled Network Control Delegation in Clouds

Muhammad Salman Malik, Mirko Montanari, Jun Ho Huh, Rakesh B. Bobba, Roy H. Campbell

Fault-Tolerance Characteristics of Data Center Network Topologies Using Fault Regions

Yang Liu, Jogesh Muppala

DCDV 2: Dependability Evaluation

Monday 10:30

Availability Study on Cloud Computing Environments: Live Migration as a Rejuvenation Mechanism

Matheus Melo, Paulo Maciel, Jean Araujo, Rubens Matos, Carlos Araujo

Dependability Models for Designing Disaster Tolerant Cloud Computing Systems

Bruno Silva, Paulo Maciel, Eduardo Tavares, Armin Zimmermann

Analysis of Bugs in Apache Virtual Computing Lab

Flavio Frattini, Rahul Ghosh, Marcello Cinque, Andy Rindos, Kishor S. Trivedi

DCDV 3: Mobile and Cloud Computing

Monday 13:30

Model-based Performance Analysis of Local Re-execution Scheme in Offloading System

Qiushi Wang, Huaming Wu, Katinka Wolter

DataFlasks: an epidemic dependable key-value substrate

Francisco Maia, Miguel Matos, Ricardo Vilaca, Jose Pereira, Rui Oliveira, Etienne Riviere

Lilliput meets Brodingnagian: Data Center Systems Management through Mobile Devices B#5

Saurabh Bagchi, Fahad Arshad, Jan Rellermeyer, Thomas Osiecki, Michael Kistler, Ahmed Gheith

DCDV 4 - Virtualization and Cloud

Monday 15:15

Increasing the Trustworthiness of Commodity Hardware Through Software B#5

Kevin Elphinstone, Yanyan Shen

Intrusion Detection and Honeypots in Nested Virtualization Environments B#5

Michael Beham, Marius Vlad, Hans P. Reiser

Addressing Memory Exhaustion Failures in Virtual Machines in a Cloud Environment B#5

Jose Antonio Navas Molina, Shivakant Mishra

Workshop on Reliability and Security Data Analysis (RSDA 2013)

RSDA: Introduction

Monday 8:30

Workshop on Reliability and Security Data Analysis RSDA 2013 %

Catello Di Martino, Antonio Pecchia, Jon Stearley

RSDA 1: Security Data Analysis and Modeling

Monday 9:00

Keynote: The Role of Data for Safety Critical Systems Development and Validation B#5

N. Silva

Data Fusion-Based Anomaly Detection in Networked Critical Infrastructures %

Béla Genge, Christos Siaterlis, Georgios Karopoulos

Investigating DNS Traffic Anomalies for Malicious Activities %%

Fyodor Yarochkin, Vladimir Kropotov, Yennun Huang, Ing-Yi Chen

Scalable Security Analysis in Hierarchical Attack Representation Model using Centrality Measures %

Jin B. Hong, Dong Seong Kim

RSDA 2: Failures and Robustness Analysis

Monday 10:30

Automatic Collection of Failure Data from the iOS Platform

Marcello Cinque, Domenico Cotroneo, Carlos Rodriguez-Dominguez, Jose Luis Garrido

Towards Evaluating the Impact of Data Quality on Service Applications

Naghmeh Ivaki, Nuno Laranjeiro, Marco Vieira

Golden-run Alignment for Analysis of Robustness Testing Results: Dealing with Diagnostics Issues

Gizelle Sandrini Lemos, Eliane Martins

RSDA 3: Data-Driven Dependability

Monday 13:30

Reducing Service Failures by Failure and Workload aware Load Balancing in SaaS Clouds

Arpan Roy, Rajeshwari Ganesan, Dinesh Dash, Santonu Sarkar

Storage-Efficient Data Replica Number Computation for Multi-level Priority Data in Distributed Storage System

Chris X. Cai, Cristina L. Abad, Roy H. Campbell

Predicting Job Completion Times Using System Logs in Supercomputing Clusters

Xin Chen, Charng-Da Lu, Karthik Pattabiraman

Reliable Mission Deployment in Vulnerable Distributed Systems

Massimiliano Albanese, Sushil Jajodia, Ravi Jhawar, Vincenzo Piuri

RSDA 4: Data-Driven Security

Monday 15:15

Practical Experiences with Real-world Systems: Security in the World of Reliable and Safe Systems

Nuno Silva, Rui Lopes

Interoperability in Fingerprint Recognition - A Large Scale Empirical Study

Luca Lugini, Emanuela Marasco, Bojan Cukic, Ilir Gashi

SAFE: Shoulder-Surfing Attack Filibustered With Ease

Narayan Gowraj, Srinivas Avireddy, Sruthi Prabhu

Authors' Panel

Concluding remarks

Catello Di Martino, Antonio Pecchia, Jon Stearley

2nd Workshop on Open Resilient Human-aware Cyber-Physical Systems (WORCS 2013)

WORCS: Introduction

Monday 8:30

2nd Workshop on Open Resilient human-aware Cyber-physical systems

Mohamed Kaâniche, Michael Harrison, Hermann Kopetz , Daniel Siewiorek

Keynote: Toward Vehicle Automation - ADAS The New Challenges

Serge Boverie

Autonomous Emergency Braking : A System-of-Systems Perspective

Hermann Kopetz, Stephan Poledna

WORCS 2: Security

Monday 10:30

Keynote: Detecting Cognitive State for Operators of Cyber-Physical Systems: Design of Experiments

Roy Maxion

A Survey of Security Threats and Protection Mechanisms in Embedded Automotive Networks

Ivan Studnia, Vincent Nicomette, Eric Alata, Yves Deswarte, Mohamed Kaâniche, Youssef Laarouchi

WORCS 3: Smart Cooperative Driving

Monday 13:30

On Reliability Analysis of Leader Election Protocols for Virtual Traffic Lights

Negin Fathollahnejad, Emilia Villani, Risat Pathan, Raul Barbosa, Johan Karlsson

The KARYON project : Predictable and Safe Coordination in Cooperative Vehicular Systems

Antonio Casimiro, Jörg Kaiser, Elad M. Schiller, Pedro Costa, Jose Parizi, Rolf Johansson, Renato Librino

Driver Performance in the Presence of Adaptive Cruise Control Related-Failures

Josef Nilsson, Niklas Strand, Paolo Falcone, Jonny Vinter

WORCS 4: Panel and Workshop Wrap

Monday 15:15

Panel: Human Interactive Autonomous Driving: Future Trends, Resilience Challenges and Research perspectives

Serge Boverie, Johan Karlsson, Hermann Kopetz, Jonny Vinter

Workshop Wrap-up and Conclusions

Workshop on Systems Resilience (WSR 2013)

WSR: Introduction

Monday 10:15

Chair's Welcome Remarks

Hiroshi Maruyama

WSR 1: Resilience Definitions and Research Opportunities

Monday 10:30

Towards Systems Resilience

Hiroshi Maruyama

FORISK: Formalizing Information Security Risk and Compliance Management

Stefan Fenz, Thomas Neubauer, Rafael Accorsi, Thomas Koslowski

Key Issues in Service Systems Resilience

Kazuo Furuta, Taro Kanno

SCoRe: An Across-the-Board Metric for Computer Systems Resilience Benchmarking

Raquel Almeida, Afonso Araújo Neto, Marco Vieira

WSR 2: Modeling Resilience

Monday 13:30

Model-Based Evaluation of System Resilience

John F. Meyer

Resilience Modeling by Means of a Set of Recursive Functions

Maria Teresa Signes Pont, Juan Manuel García Chamizo, Higinio Mora Mora, Jerónimo Mora Pascual

Behavioral aspects for agent-based models of resilient urban systems

Thomas Brudermann, Yoshiki Yamagata

WSR 3: Building Resilient Systems

Monday 15:15

An Intrusion-Tolerant Firewall Design for Protecting SIEM Systems

Miguel Garcia, Nuno Neves, Alysso Bessani

Community-based Resilient Electricity Sharing: Optimal Spatial Clustering

Yoshiki Yamagata, Hajime Seya

Cyber Security Problem based on Multi-Objective Distributed Constraint Optimization Technique

Tenda Okimoto, Naoto Ikegai, Tony Ribeiro, Katsumi Inoue, Hitoshi Okada, Hiroshi Maruyama

Additional Papers:

A Framework for Runtime V&V in Business-Critical Service Oriented Architectures
Cristiana Areias

BARLEY: Modelling Program Behavior with Resource Usage
Kevin Leach

Fault-Tolerant Broadcast Algorithms for the Virtual Hypercube Topology
Luiz A. Rodriguez

Improving the Dependability of FPGA-Based Real-Time Embedded Systems with Partial Dynamic Reconfiguration
Jose Luis Nunes

Detecting and Tolerating Data Corruptions Due to Device Driver Defects
Francesco Fucci

IOCheck: A Framework to Enhance the Security of I/O Devices at Runtime
Fengwei Zhang

Resilience: The Case of International Treaties
Ola Dahlman, Nicholas Kyriakopoulos