



The International Conference on Dependable Systems and Networks

DSN-2004

The International Conference on Dependable Systems and Networks

Palazzo dei Congressi, Florence, Italy • June 28th - July 1, 2004

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News

Registration Desk at DSN 2004 will be open on June 28 during the entire afternoon and the Welcome Reception. We strongly suggest that

Final Program

Monday, June 28 – Palazzo dei Congressi

08:00-08:30 Room: La Limonaia - Registration

08:30-12:30 Tutorials

Room: Hall 6 - Tutorial A: *Creating Strategy and Tactics in Cyberspace* - O. Sami Saydjari (Cyber Defense Agency, USA)

Room: Hall 5 - Tutorial B: *Survivability of Telecommunications Systems: Concepts, Architectures and Analysis* - Veena Mendiratta (Bell Labs, Lucent Technologies, USA); Yun Liu, Kishor Trivedi (Duke U., USA)

12:30-14:00 Lunch (Rooms: Hall 4 and 9)

14:00-18:00 Tutorials

Room: Hall 6 - Tutorial C: *Distributed Denial of Service Attacks: Background, Diagnosis and Mitigation* - Sven Dietrich (CERT Research, CMU, USA)

Room: Hall 5 - Tutorial D: *Avionics Architecture Description Language (AADL)* - David Gluch (Embry-Riddle Aeronautical U., USA); Peter Feiler, Bruce Lewis (SEI, USA)

Room: Hall Onice - Tutorial E: *Detecting Crash Failures in Asynchronous Distributed Systems: What? Why? How?* - Michel Raynal (IFSIC-IRISA &

attendees register on June 28, and only latecomers use June 29 from 7.30 to 8.00.

The Opening Session will start on June 29 at 8.00 sharp

Angelo Marino of EU will present during the Business Meeting the latest information on IST Programme and on the cooperation with NSF

Tutorial A "Creating Strategy and Tactics Cyberspace " and Tutorial C "Distributed Denial of Service Attacks Background, Diagnosis and Mitigation" have been cancelled all, other three Tutorials are confirmed

Dr. Leslie Lamport
Keynote Speaker at DSN 2004

Student Grants

Committees

Original Call for Contributions

Preliminary information about [DSN 2005](#)

U. of Rennes, France)

18:00-20:30 Room: Passi Perduti - Welcome Reception in Palazzo dei Congressi

Tuesday, June 29 – Palazzo dei Congressi

07:30-08:00 Room: La Limonaia - Registration

08:00-08:45 Room: Auditorium - Welcome to DSN 2004 (Includes Welcome from the General Chair and Conference Coordinator, Welcome from local Authorities, presentations of DCCS PC Chair and of PDS PC Co-Chairs, presentation of Carter Award, presentation of the students who have received Student Grants)

08:45-09:00 Room: Auditorium - IEEE Emanuel Piore Award ceremony presented by the President of IEEE Dr. Arthur W. Winston to Dr. Leslie Lamport

09:00-10:00 Room: Auditorium

Keynote Address

Chair: Michele Morganti (Siemens Mobile Communications, Italy)

Recent Discoveries from Paxos

Leslie Lamport (Microsoft Corp., Mountain View, USA)

10:00-10:30 Break (at bars in Palazzo dei Congressi)

10:30-12:00 Room: Auditorium

Session 1A: Overlay Networks

Chair: David Taylor (University of Waterloo, Canada)

Performance and Dependability of Structured Peer-to-Peer Overlays

Miguel Castro, Manuel Costa, Ant Rowstron (Microsoft Research, UK)

Robust Aggregation Protocols for Large-Scale Overlay Networks

Alberto Montresor, Mark Jelasity, Ozalp Babaoglu (U. of Bologna, Italy)

Impact of Path Diversity on Multi-homed and Overlay Networks

Junghee Han, Farnam Jahanian (U. of Michigan, USA)

10:30-12:00 Room: Hall Onice

Session 1B: Fault Tolerance Hardware Design

Chair: Paolo Prinetto (Turin Polytechnic, Italy)

Fault Detection and Isolation Techniques for Quasi Delay-Insensitive

Circuits

Christopher C. LaFrieda, Rajit Manohar (Cornell U., USA)

Tolerating Hard Faults in Microprocessor Array Structures

Fred Bower (Duke U. & IBM, USA), Paul Shealy, Sule Ozev (Duke U., USA); Daniel J. Sorin (Duke U., USA)

Characterizing the Effects of Transient Faults on a High-Performance Processor Pipeline

Nicholas J. Wang, Justin Quek, Todd M. Rafacz, Sanjay J. Patel (UIUC, USA)

10:30-12:00 Room: Hall Verde**Session 1C: Fault Trees & Modelling**

Chair: Chandra Kintala (Stevens Institute of Technology, USA)

Safety Optimization: A Combination of Fault Tree Analysis and Optimization Techniques

Frank Ortmeier, Wolfgang Reif (U. of Augsburg, Germany)

Repairable Fault Tree for the Automatic Evaluation of Repair Policies

Daniele Codetta Raiteri (U. of Turin, Italy); Giuliana Franceschinis ('Amedeo Avogadro' U. of Eastern Piemonte, Italy); Mauro Iacono (Second U. of Naples, Italy); Valeria Vittorini ('Federico II' U. of Naples, Italy)

Availability Measurement and Modeling for an Application Server

Dong Tang, Dileep Kumar, Sreeram Duvur, Oystein Torbjornsen (Sun Microsystems, USA)

10:30-12:00 Room: Hall 202**Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability (IA)**

Co-Chairs: Michael Harrison (University of York, UK); Lorenzo Strigini (City University, UK)

Session 1D: Psychological and Organisational Issues*Invited talk*

Peter Ayton (City U., UK)

Heterogeneous Modelling of Evolution for Socio-Technical Systems

Stuart Anderson, Massimo Felici (U. of Edinburgh, UK)

10:30-12:00 Room: Hall 203**Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (DIWANS)**

Co-Chairs: Saurabh Bagchi (Purdue University, USA); Douglas Blough

(Georgia Institute of Technology, USA); Paolo Santi (Istituto di Informatica e Telematica del CNR, Italy); Nitin Vaidya (University of Illinois at Urbana-Champaign, USA)

Session 1E: Invited Lectures

Chair: Doug Blough (Georgia Institute of Technology, USA)

Lightweight Cryptography for Sensor Networks

Virgil Gligor (U. of Maryland, USA)

Security Issues in Ad-Hoc Networks

Jean-Pierre Hubaux (EPFL, Switzerland)

12:00-13:30 Lunch (Room: Passi Perduti)

13:30-15:30 Room: Auditorium

Session 2A: Security Attacks

Chair: Roberto De Prisco (University of Salerno, Italy)

Dynamic Quarantine of Internet Worms

Cynthia Wong, Chenxi Wang, Dawn Song, Stan Bielski, Gregory R. Ganger (CMU, USA)

HOURS: Achieving DoS Resilience in an Open Service Hierarchy

Hao Yang, Haiyun Luo, Yi Yang, Songwu Lu, Lixia Zhang (UCLA, USA)

*Robust Protection against Fault-Injection Attacks of Smart Cards
Implementing the Advanced Encryption Standard*

Mark Karpovsky, Konrad J. Kulikowski, Alexander Taubin (Boston U., USA)

A Defense-Centric Taxonomy Based on Attack Manifestations

Kevin S. Killourhy, Roy A. Maxion, Kymie M. C. Tan (CMU, USA)

13:30-15:30: Hall Onice

Session 2B: Coding Techniques

Chair: Algirdas Avizienis (Vytautas Magnus University, Lithuania)

A Practical Analysis of Low-Density Parity-Check Erasure Codes for Wide-Area Storage Applications

James S. Plank, Michael Thomason (U. of Tennessee, USA)

A Decentralized Algorithm for Erasure-Coded Virtual Disks

Svend Frølund, Arif Merchant, Yasushi Saito, Susan Spence, Alistair Veitch (Hewlett-Packard Laboratories, USA)

Efficient Byzantine-Tolerant Erasure-Coded Storage

Garth R. Goodson, Jay J. Wylie, Gregory R. Ganger, Michael K. Reiter

(CMU, USA)

Cyclic Redundancy Code (CRC) Polynomial Selection for Embedded Networks

Philip J. Koopman, Tridib Chakravarty (CMU, USA)

13:30-15:30 Room: Hall Verde

Session 2C: Fast Abstracts

Chair: Ricardo Jiménez Peris (Polytechnic University of Madrid, Spain)

Inner-circle Consistency for Wireless Networks

C. Basile, Z. Kalbarczyk, R. Iyer (UIUC, USA)

Redwood: Dependability Testbed Instrumentation Platform

V. Kotov, V. Mehrotra (CMU, USA)

A Framework for Characterizing Security Management: Methods, Practices, and Technologies using Ontology Domain Modelling Support for Security Architecture Multi-Agents Risk Assessment in E-Commerce Security Services

G. A. Santana Torrellas (Instituto Mexicano del Petroleo, Mexico)

A Dependable Information Infrastructure for Power Quality Control

G. Deconinck, J. Driesen, A. Dusa, R. Tirtea, J. Van de Vyver, K. Vanthournout (K.U. Leuven, Belgium)

Concept of Time-triggered Image Acquisition for Dependable Embedded Systems

W. Kubinger, M. Humenberger, W. Herzner (ARCS Seibersdorf research GmbH, Austria)

A General Purpose Fault Injector for CORBA Applications

M. Alsaed, N. A. Speirs (U. of Newcastle upon Tyne, UK)

STER: A Strategy for TEsting Reactive Systems

E. Martins (UNICAMP, Brazil), D. C. Guimarães (UNICAMP/INPE, Brazil), A. M. Ambrosio (INPE, Brazil)

Adaptive Incremental Checkpointing on the BlueGene/L Supercomputer

S. Agarwal, R. Garg, M.S. Gupta (IBM India Research Labs, India); J. E. Moreira (IBM T.J. Watson Research Center, USA)

Dependability-explicit Computing in Service-oriented Architectures

J. Fitzgerald, S. Parastatidis, A. Romanovsky, P. Watson (U. of Newcastle upon Tyne, UK)

Routing by Estimation in Mobile Ad Hoc Networks

R. Beraldi (U. of Rome, Italy)

Recovery Protocols for an O2PL Consistency Protocol

J. E. Armendáriz, J.R. González de Mendivil (U. Publica de Navarra, Spain); F.D. Muñoz-Escóí (U. Politecnica de Valencia, Spain)

A Comparison of Failure Detector Classes S and $\diamond P$

M. Larrea, A. Lafuente (U. of the Basque Country, Spain)

Synthetic Diversity for Intrusion Tolerance

J. E. Just, M. Cornwell (Global InfoTek, Inc.)

SAT-Based Synthesis of Fault-Tolerance

A. Ebneenasir, S. S. Kulkarni (Michigan State U., USA)

Intelligent Agents for FORCEnet: Greater Dependability in Network-Centric Warfare

M. G. Ceruti, B. J. Powers (SSC-SD, USA)

Modular Services with Byzantine Recovery

E. Anceaume (IRISA, France); C. Delporte-Gallet, H. Fauconnier (LIAFA, France), M. Hurfin (IRISA, France); G. Le Lann (INRIA, France)

Hardware Support for High-Performance, Intrusion- and Fault-Tolerant Systems

G.P. Saggese, C. Basile (UIUC, USA); L. Romano (U. of Naples, Italy); Z. Kalbarczyk, R.K. Iyer (UIUC, USA)

On the Assessment of Safety Critical Systems Essentially Built on COTS or Software of Uncertain Pedigree (SOUP)

T. Skramstad (Det Norske Veritas Research and NTNU, Norway); L. Bratthall (Det Norske Veritas Research, Norway)

E-DSR: a Mechanism Enhancing Salvaging performance for DSR

Y. Feng, C. Song (R&D Dept. Computer Network Info Center, China)

Towards Synchronization and Mutual Exclusion in Content-Based Publish/Subscribe Systems

P. Fenkam, M. Jazayeri, G. Reif (Technical U. of Vienna, Austria)

Extensions to ST-TCP

M. Marwah, S. Mishra (U. of Colorado, USA)

Applying Components to Access Control Design: Towards a Framework for OS Kernels

T. Jarboui, J-P. Fassino, M. Lacoste (France Telecom R&D, France)

13:30-15:30 Room: Hall 202

Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability (continued)

Session 2D: Methods and Applications

Improving dependability through a deviation analysis on distributed tasks in safety critical systems

A-M. Marhan (Institute for Educational Sciences, Romania); F. Paterno, C. Santoro (ISTI-CNR, Italy)

Dependability in RESCUE: A Concurrent Engineering Approach to the Specification of Requirements for Air Traffic Management

N. Maiden, S. Jones (City U., UK)

Defining electronic authenticity

J-F. Blanchette (U. of British Columbia, Canada)

Towards an inter-disciplinary dependability analysis of an e-voting System

J.W. Bryans, P.Y.A. Ryan (U. of Newcastle upon Tyne, UK)

Inferring Network Properties from Topological and Spectral Analysis

V. Rosato, S. Bologna (ENEA, Italy); F. Tiriticco (U. of Rome 'Tor Vergata', Italy)

13:30-15:30 Room: Hall 203

Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (continued)

Session 2E: Robust Communication

Chair: Paolo Santi (IIT- CNR, Italy)

Failure-Resilient Ad Hoc and Sensor Networks in a Shadow Fading Environment

C. Bettstetter (DoCoMo Euro-Labs, Germany)

A Robust and Light-Weight Routing Mechanism for Wireless Sensor Networks

Jing Deng, Richard Han, and Shivakant Mishra (U. of Colorado at Boulder, USA)

FLOC: A Fast Local Clustering Service for Wireless Sensor Networks

Murat Demirbas, Anish Arora, and Vineet Mittal (Ohio State U., USA)

Fault Tolerant Communication Topologies for Wireless Ad Hoc Networks

Bernd Thalner (Technical U. Wien, Austria)

15:30-16:00 Break (at bars in Palazzo dei Congressi)

16:00-17:30 Room: Auditorium

Session 3A: Emerging Technologies**Chair: Jacob Abraham (University of Texas, Austin, USA)***Fault Tolerant Computation on Ensemble Quantum Computers*

P. Oscar Boykin (UCLA, USA); Tal Mor (Technion, Israel); Vwani P. Roychowdhury (UCLA, USA); Farrokh Vatan (JPL, USA)

The Recursive NanoBox Processor Grid: A Reliable System Architecture for Unreliable Nanotechnology Devices

AJ KleinOsowski, Kevin KleinOsowski, Vijay Rangarajan, Priyadarshini Ranganath, David J. Lilja (U. of Minnesota, USA)

The Impact of Technology Scaling on Lifetime Reliability

Jayanth Srinivasan, Sarita V. Adve (UIUC, USA); Pradip Bose, Jude A. Rivers (IBM T.J. Watson Research Center, USA)

16:00-17:30 Room: Hall Onice**Session 3B: Formal Methods****Chair: Marie-Claude Gaudel (PCRI, Orsay, France)***Model Checking a Fault-Tolerant Startup Algorithm: From Design Exploration to Exhaustive Fault Simulation*

Wilfried Steiner (Vienna U. of Technology, Austria); John Rushby (SRI International, USA); Maria Sorea, Holger Pfeifer (U. of Ulm, Germany)

Verifying Web Application Using Bounded Model Checking

Yao-Wen Huang (National Taiwan U. & Academia Sinica, Taiwan); Fang Yu (Academia Sinica, Taiwan); Christian Hang (RWTH Aachen, Germany); Chung-Hung Tsai (National Taiwan U., Taiwan); Der-Tsai Lee (Academia Sinica); Sy-Yen Kuo (National Taiwan U., Taiwan)

Automated Synthesis of Multitolerance

Sandeep S. Kulkarni, Ali Ebneenasir (Michigan State U., USA)

16:00-17:30 Room: Hall Verde**Session 3C: Practical Experience on Dependability and Performance Assessment****Chair: Eliane Martins (University of Campinas, Brasil)***Benchmarking the Dependability of Windows NT4, 2000 and XP*

Ali Kalakech, Karama Kanoun, Yves Crouzet, Jean Arlat (LAAS-CNRS, France)

Checkpointing of Control Structures in Main Memory Database Systems

Long Wang, Zbigniew Kalbarczyk, Ravishankar K. Iyer (UIUC, USA); H. Vora, T. Chahande (Mascon IT Ltd., USA)

Hierarchical Computation of Interval Availability and Related Metrics

Dong Tang (Sun Microsystems, USA); Kishor S. Trivedi (Duke U., USA)

16:00-17:30 Room: Hall 202

Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability (continued)

Session 3D: Working Groups

16:00-17:30 Room: Hall 203

Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (continued)

Session 3E: Panel: Industry Perspectives on Ad Hoc and Sensor Networks

Moderator: Saurabh Bagchi (Purdue U., USA);

Christian Bettstetter (DoCoMo Euro-Labs, Germany); Salvatore Rotolo (STMicroelectronics, Italy); Fernando Genova (Telecom Italia Labs, Italy); Michele Morganti (Siemens Mobile Communications, Italy)

17:30-18:00 Break (at bars in Palazzo dei Congressi)

18:00-19:30 Room: Auditorium

Session 4A (Panel): Impact of Soft Errors in Future Computing Systems

Organizer: Ravishankar K. Iyer (University of Illinois at Urbana-Champaign, USA)

18:00-19:30 Room: Hall 202

Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability (continued)

Session 4D: Working Groups and feedback

18:00-19:30 Room: Hall 203

Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (continued)

Session 4E: Mobility

RAMBONODEs for the Metropolitan Ad Hoc Network

Jacob Beal, Seth Gilbert (MIT, USA)

Security Instantiation for Mobile Networks

Sandeep Kulkarni (Michigan State U., USA); Mohamed Gouda (U. of

Texas at Austin, USA); Anish Arora (Ohio State U., USA)

19:30-20:30 Cocktail in Palazzo dei Congressi (Room: Passi Perduti)

Wednesday, June 30 – Palazzo Affari

08:30-10:30 Room: Hall A First Floor - Palazzo Affari

Session 5A: Broadcast & Multicast

Chair: Luís Rodrigues (University of Lisbon, Portugal)

Exposing and Eliminating Vulnerabilities to Denial of Service Attacks in Secure Gossip-Based Multicast

Gal Badishi, Idit Keidar, Amir Sasson (Technion, Israel)

Data-Aware Multicast

Sébastien Baehni, Patrick Th. Eugster, Rachid Guerraoui (EPFL, Switzerland)

Timed Uniform Consensus Resilient to Crash and Timing Faults

Taisuke Izumi, Akinori Saitoh, Toshimitsu Masuzawa (Osaka U., Japan)

Caching-Enhanced Scalable Reliable Multicast

Carolos Livadas (BBN Technologies, USA); Idit Keidar (Technion, Israel)

08:30-10:30 Room: Hall B First Floor - Palazzo Affari

Session 5B: Dependability Assessment

Chair: Johan Karlsson (Chalmers University, Sweden)

The Effect of Testing on Reliability of Fault-Tolerant Software

Peter T. Popov, Bev Littlewood (CSR, City U., UK)

Quantifying the Reliability of Proven SPIDER Group Membership Service Guarantees

Elizabeth A. Latronico (CMU, USA); Paul S. Miner (NASA Langley Research Center, USA); Philip J. Koopman (CMU, USA)

Generic Faultloads Based on Software Faults for Dependability Benchmarking

João Durães (Polytechnic Institute of Coimbra, Portugal); Henrique Madeira (U. of Coimbra, Portugal)

Improving System Dependability with Functional Alternatives

Charles P. Shelton (Robert Bosch Corp., USA); Philip J. Koopman (CMU, USA)

08:30-10:30 Room: Adua First Floor - Palazzo Affari

Session 5C: Model Checking**Chair: Tohru Kikuno (University of Osaka, Japan)***Model Checking Action- and State-Labelled Markov Chains*

Christel Baier (U. of Bonn, Germany); Lucia Cloth, Boudewijn Haverkort (U. of Twente, Netherlands); Matthias Kuntz (U. of Erlangen-Nürnberg, Germany); Markus Siegle (U. of the Federal Armed Forces Munich, Germany)

Model Checking Dependability Attributes of Wireless Group Communication

Mieke Massink (ISTI-CNR, Italy); Joost-Pieter Katoen (U. of Twente, Netherlands); Diego Latella (ISTI-CNR, Italy)

Min-Max Checkpoint Placement under Incomplete Failure Information

Tatsuya Ozaki, Tadashi Dohi, Hiroyuki Okamura (Hiroshima U., Japan); Naoto Kaio (Hiroshima Shudo U., Japan)

Assessing the Impact of Dynamic Power Management on the Functionality and the Performance of Battery-Powered Appliances

Andrea Acquaviva, Alessandro Aldini, Marco Bernardo, Alessandro Bogliolo, Edoardo Bontà, Emanuele Lattanzi (U. of Urbino, Italy)

08:30-10:30 Room: Hall 326 Third Floor - Palazzo Affari**Workshop on Architecting Dependable Systems****Co-Chairs: Rogério de Lemos (University of Kent at Canterbury, UK); Cristina Gacek, Alexander Romanovsky (University of Newcastle upon Tyne, UK)**

From Dependable Architectures to Dependable Systems (invited lecture)
N. Medvidovic (USC, USA)

Session 5D: Architectural Compositionality**Chair: R. de Lemos (U. of Kent, UK)***Extracting Functional and Non-functional Contracts from Java Classes and Enterprise Java Beans*

N. Milanovic, M. Malek (Humboldt U., Germany)

On Dependability of Composite Web Services with Components Upgraded Online

V. Kharchenko, (National Aerospace U., Ukraine); P. Popov (City U., UK); A. Romanovsky (U. of Newcastle upon Tyne, UK)

08:30-10:30 Room: 226 Second Floor - Palazzo Affari**Workshop on Fault Diagnosis and Tolerance in Cryptography****Co-Chairs: Luca Breveglieri (Milan Polytechnic, Italy); Israel Koren (University of Massachusetts, USA)**

Session 5E: Cryptographic Systems and Potential Attacks – Overview

Introduction

Luca Breveglieri (Polytechnic of Milan, Italy); Israel Koren (U. of Massachusetts at Amherst, USA)

The Sorcerer's Apprentice Guide to Fault Attacks (invited lecture)

David Naccache (speaker) (Gemplus Card International, France); with the co-operation of Hagai Bar-El (Discretix Technologies, Israel); Hamid Choukri (Gemplus Card International, France); Michael Tunstall (Gemplus Card International, France and Royal Holloway U.,UK); Claire Whelan, (Dublin City U., Ireland)

Basics of Fault Attacks

Christophe Giraud (Oberthur Card Systems, France); Hugues Thiebauld (Thales Microelectronics, France)

10:30-11:00 Break (Room: Basement of Palazzo Affari)

11:00-13:00 Room: Hall A First Floor - Palazzo Affari

Session 6A: Distributed Algorithms

Chair: Michel Raynal (IRISA & University of Rennes, France)

Cheap Paxos

Leslie Lamport, Mike Massa (Microsoft, USA)

The Join Problem in Dynamic Network Algorithms

Kishori Konwar (U. of Connecticut, USA); Dariusz Kowalski (Max-Planck-Institute for Informatics, Germany); Alex A. Shvartsman (U. of Connecticut & MIT, USA)

A Framework for Dynamic Byzantine Storage

Jean-Philippe Martin, Lorenzo Alvisi (U. of Texas at Austin, USA)

Dependable Initialization of Large-Scale Distributed Software

Yansong (Jennifer) Ren, Rick Buskens, Oscar Gonzalez (Lucent Technologies, USA)

11:00-13:00 Room: Hall B First Floor - Palazzo Affari

Session 6B: Fast Abstracts (continued)

Chair: Michel Cukier (University of Maryland, USA)

Recovery of Peer-to-Peer Applications in the Mobile Network Infrastructure

M. Z. Beiroumi (Technical U. of Denmark, Denmark)

Towards a Lightweight Formal Approach to Constructing Dependable

Event-Based Applications

P. Fenkam, M. Jazayeri (Technical U. of Vienna, Austria)

Using XML Schema as a Validation Mechanism to Provide Semantic Consistency for Dependable Information Exchange

J. D. Neushul (Marine Corps Tactical Systems Support Activity, USA), M. G. Ceruti (SSC-SD, USA)

Building Reliable Peer-to-Peer Systems with Formal Methods

L. Yan, K. Sere, N. Iqbal (Abo Akademi U., Finland)

Real-time Fault Injection with the Signal-Flip model by FIDYCO

B. Rahbaran, A. Steininger (Vienna U. of Technology, Austria)

Distributed Authentication and Key Generation with Multiple User Trust Levels

J. Ding, A. Mukherjee, D. Agrawal (U. of Cincinnati, USA)

A Modular Approach to Optimizing Highly-Dynamic Distributed Systems

B. Garbinato (U. of Lausanne, Switzerland), F. Pedone, R. Schmidt (EPFL, Switzerland)

On the Concept of Mobile Distributed Virtual Memory System

S. Bagchi, M. Nygaard (IDI-NTNU, Norway)

On the Effects of Graph-Structured Membership Views on the Reliability of Gossip

T. Tsuchiya, D. Igarashi, T. Kikuno (Osaka U., Japan)

Evolutionary Design Observations

M. Felici (U. of Edinburgh, UK)

Dependable Communications on Lossy Networks through Redundancy and Hop-to-Hop Recovery

J. E. Just (Global InfoTek, Inc.)

Reputation-based Security in Routed Networks

S. E. Coull, B. K. Szymanski (Rensselaer Polytechnic Institute, USA)

Design of Dependable VLSI Processor Using Triple Modular Redundancy

M. Arai, S. Fukumoto, K. Iwasaki (Tokyo Metropolitan U., Japan)

A Modular Middleware for Reliable Distributed Programming

M. Larrea, A. Lafuente, C. Martín (U. of the Basque Country, Spain)

CASPA: A Tool for Symbolic Performance and Dependability Evaluation

M. Kuntz, M. Siegle (U. of the Federal Armed Forces Munich, Germany), E. Werner (Georg-August-Universität Göttingen, Germany)

Checkpointing and Logging for Intrusion Analysis and Recovery

W. Zhao, L.E. Moser, P.M. Melliar-Smith (U. of California, Santa Barbara, USA)

Distributed Backup Path Bandwidth Management for Network Reliability
M. Li, C. Huang, A. Srinivasan (Carleton U., Canada)

An OBDD-based Complete Algorithm for Memory Reconfiguration Problems

H.-Y. Lin (National Taiwan U., Taiwan), F.-M. Yeh (Chung-Shan Institute of Science and Technology, Taiwan), S.-Y. Kuo (National Taiwan U., Taiwan)

Energy Efficiency and Fault Tolerance in Wireless Network Cards Through Buffering

N. Pettis, S. Bagchi (Purdue U., USA)

Reliable Schemes in Jini Middleware for Mobile Ad Hoc Networks

S.-J. Lee, J.-H. Kim, Y.-B. Ko (Ajou U., South Korea)

Timely ACID Transactions in DBMS

M. Vieira (ISEC-CISUC, Portugal), A. C. Costa (FCUL, Portugal), H. Madeira (DEI-CISUC, Portugal)

Costs/Benefits of Using Formal Methods

A. Pataricza, O. Dobán, Á. Szöke (Budapest U. of Technology and Economics, Hungary)

11:00-13:00 Room: Adua First Floor - Palazzo Affari

Session 6C: QoS and Performance Evaluation

Chair: William H. Sanders (University of Illinois at Urbana-Champaign, USA)

An SLA-Oriented Capacity Planning Tool for Streaming Media Services

Ludmila Cherkasova, Wenting Tang, Sharad Singhal (Hewlett-Packard Laboratories, USA)

QoS of Timeout-Based Self-Tuned Failure Detectors: The Effects of the Communication Delay Predictor and the Safety Margin

Raul Ceretta Nunes (Federal U. of Santa Maria, Brazil); Ingrid Jansch-Pôrto (Federal U. of Rio Grande do Sul, Brazil)

Optimal Object State Transfer-Recovery Policies for Fault-Tolerant Distributed Systems

Panagiotis Katsaros, Constantine Lazos (Aristotle U. of Thessaloniki, Greece)

Failure Data Analysis of a Large-Scale Heterogeneous Server Environment

Ramendra K. Sahoo (IBM T.J. Watson Research Center, USA); Anand Sivasubramaniam (Pennsylvania State U., USA); Mark S. Squillante,

Yanyong Zhang (IBM T.J. Watson Research Center, USA)

11:00-13:00 Room: Hall 326 Third Floor - Palazzo Affari

Workshop on Architecting Dependable Systems (continued)

Session 6D: Architectures for Dependability

Chair: C. Gacek (U. of Newcastle upon Tyne, UK)

High-level Supervision of Program Execution Based on Formal Specification

G. Pintér, I. Majzik (Budapest U. of Measurement and Economics, Hungary)

Building Dependable Peer-to-Peer Systems

K. Vanthournout, G. Deconinck, R. Belmans (Catholic University of Leuven, Belgium)

An Architecture for Versatile Dependability

T. Dumitras, P. Narasimhan (CMU, USA)

Classification of Quality Attributes for Predictability in Component-based

I. Crnkovic (Malardalen U., Sweden); M. Larsson (ABB Corp. Res., Sweden)

Applying Design Diversity to Aspects of System Architectures and Deployment Configurations to Enhance System Dependability

M. J. Hawthorne, D. E. Perry (U. of Texas at Austin, USA)

11:00-13:00 Room: 226 Second Floor - Palazzo Affari

Workshop on Fault Diagnosis and Tolerance in Cryptography (continued)

Session 6E: Fault Attacks on Cryptographic Circuits – Theory and Practical Cases

Chair: J.P. Seifert (Infineon, Germany)

Early Analysis of Fault-Attack Effects for Cryptographic Hardware

Régis Leveugle (TIMA Laboratory, France)

Fault Resistance: from Reliability to Safety

Pierre-Yvan Liardet, Yannick Tegli (ST Microelectronics, France)

Fault Attacks on Signature Schemes

Christophe Giraud (Oberthur Card Systems, France); Erik Knudsen (Logos Smart Card, Denmark)

Detecting Faults in Integer and Finite Field Arithmetic Operations for Cryptography

Luca Breveglieri (Polytechnic of Milan, Italy); Israel Koren (U. of Massachusetts at Amherst, USA); Paolo Maistri (Polytechnic of Milan, Italy)

13:00-14:30 Lunch (Room: Basement of Palazzo Affari)

14:30-16:30 Room: Hall A First Floor - Palazzo Affari

Session 7A: Embedded & Real-Time Systems

Chair: András Pataricza (Budapest University of Technology and Economics, Hungary)

A Bi-criteria Scheduling Heuristic for Distributed Embedded Systems under Reliability and Real-Time Constraints

Ismail Assayad (Verimag & ST Microelectronics, France); Alain Girault (INRIA Rhône-Alpes, France); Hamoudi Kalla (INRIA Rhône-Alpes, France)

Proactive Recovery in Distributed CORBA Applications

Soila M. Pertet, Priya Narasimhan (CMU, USA)

Assured Reconfiguration of Embedded Real-Time Software

Elisabeth A. Strunk, John C. Knight (U. of Virginia, USA)

Fault Tolerance Tradeoffs in Moving from Decentralized to Centralized Embedded Systems

Jennifer A. Morris, Daniel Kroening, Philip J. Koopman (CMU, USA)

14:30-16:30 Room: Hall B First Floor - Palazzo Affari

Session 7B: Practical Experience of Evaluation Tools & Methods

Chair: João Gabriel Silva (University of Coimbra, Portugal)

Fault Diversity Among Off-the-Shelf SQL Database Servers

Ilir I. Gashi, Peter T. Popov, Lorenzo Strigini (CSR, City U., UK)

Does Your Result Checker Really Check?

Lan Guo (West Virginia U., USA); Supratik Mukhopadhyay (NASA & West Virginia U., USA); Bojan Cukic (West Virginia U., USA)

Experience with Evaluating Human-Assisted Recovery Processes

Aaron B. Brown, Leonard Chung, William Kakes, Calvin Ling, David A. Patterson (UC Berkeley, USA)

Automated System Design for Availability

G. (John) Janakiraman, Jose Renato Santos, Yoshio Turner (Hewlett-Packard Laboratories, USA)

14:30-16:00 Room: Adua First Floor - Palazzo Affari

Session 7C: Sensor Networks**Chair: Mirosław Malek (Humboldt University of Berlin, Germany)***Evaluating the Impact of Limited Resource on the Performance of Flooding in Wireless Sensor Networks*

Patrick Downey, Rachel Cardell-Oliver (U. of Western Australia, Australia)

Fault Tolerant Energy Aware Data Dissemination Protocol in Sensor Network

Gunjan Khanna, Saurabh Bagchi, Yu-Sung Wu (Purdue U., USA)

Cluster-Based Failure Detection Service for Large-Scale Ad Hoc Wireless Network Applications

Ann T. Tai, Kam S. Tso (IA Tech, USA); William H. Sanders (UIUC, USA)

14:30-16:30 Room: Hall 326 Third Floor - Palazzo Affari**Workshop on Architecting Dependable Systems (continued)****Session 7D: Architectural Dependability Evaluation****Chair: A. Romanovsky (U. of Newcastle upon Tyne, UK)***Architecture-based Dependability Prediction for Service-oriented Computing*

V. Grassi (U. of Rome 'Tor Vergata', Italy)

Architecture-based Strategy for Interface Fault Injection

R. L. de O. Moraes, E. Martins (UNICAMP, Brazil)

Toward Architecture-Based Reliability Estimation

R. Roshandel, N. Medvidovic (USC, USA)

Panel: How to Guarantee at the Architectural Level the Dependability Requirements of a System?**14:30-16:30 Room: 226 Second Floor - Palazzo Affari****Workshop on Fault Diagnosis and Tolerance in Cryptography (continued)****Session 7E: Fault Detection for Protection against Attacks****Chair: David Naccache (Gemplus Card International, France)***Fault Detection Mechanisms for Smart-Cards performing Modular Exponentiation (RSA)*

Shay Gueron (Discretix Technologies, Israel and University of Haifa, Israel)

Can Scan Chains be Used to Attack the Data Encryption Standard

Bo Yang, Kaijie Wu, Ramesh Karri (Polytechnic U. of Brooklyn, USA)

Error Detection by Parity Modification for the 128-bit Serpent Encryption Algorithm

Grigori Kusnezov (U. of Potsdam, Germany); Ramesh Karri, (Polytechnic U. of Brooklyn, USA); Michael Goessel (U. of Potsdam, Germany)

Cryptanalysis of two Protocols for RSA with CRT based on Fault Infection

Sung-Ming Yen (National Central U., Taiwan); Dongryeol Kim (Korea Information Security Agency, Korea)

17:00-20:00 Reception in Salone dei Cinquecento, Palazzo Vecchio (entrance from Porta della Dogana, via dei Gondi) and visit of Corridoio Vasariano

20:00-21:30 Buffet Dinner in Cortile dell'Ammannati in Palazzo Pitti

21:30-23:30 Final Rehearsal of 'Il Viaggio a Reims' of Gioacchino Rossini in Cortile della Meridiana in Palazzo Pitti

Thursday, July 1

08:30-10:30 Room: Hall A First Floor - Palazzo Affari

Session 8A: Intrusion Detection & Intrusion Tolerance

Chair: Carl E. Landwehr (National Science Foundation, USA)

Secure Distributed DNS

Christian Cachin (IBM Research Zurich, Switzerland); Asad Samar (CMU, USA)

SCIDIVE: A Stateful and Cross Protocol Intrusion Detection Architecture for Voice-over-IP Environments

Yu-Sung Wu, Saurabh Bagchi (Purdue U., USA); Sachin Garg, Navjot Singh, Tim Tsai (Avaya Labs, USA)

A Portable Implementation Framework for Intrusion-Resilient Database Management Systems

Alexey I. Smirnov, Tzi-cker Chiueh (SUNY at Stony Brook, USA)

A Qualitative Analysis of the Intrusion-Tolerance Capabilities of the MAFTIA Architecture

Robert J. Stroud (U. of Newcastle upon Tyne, UK); Ian Welch (Victoria U., New Zealand); John Warne, Peter Ryan (U. of Newcastle upon Tyne, UK)

08:30-10:30 Room: Hall B First Floor - Palazzo Affari

Session 8B: Fault-Tolerant Routing

Chair: Arun Somani (Iowa State University, USA)

FRTR: A Scalable Mechanism for Global Routing Table Consistency
Lan Wang (UCLA, USA); Daniel Massey (USC/ISI, USA); Keyur Patel (Cisco, USA); Lixia Zhang (UCLA, USA)

On Failure Dependent Protection in Optical Grooming Networks
Srinivasan Ramasubramanian (U. of Arizona, USA)

Analyses of the Reverse Path Forwarding Routing Algorithm
Christie M. Bolton, Gavin Lowe (Oxford U., UK)

Delivering Packets during the Routing Convergence Latency Interval through Highly Connected Detours
Elias P. Duarte Jr. (Federal U. of Paraná, Brazil); Rogério Santini (Federal U. of Paraná, Brazil); Jaime Cohen (State U. of Paraná at Ponta Grossa, Brazil)

08:30-10:30 Room: Adua First Floor - Palazzo Affari

Session 8C: Evaluation Theory

Chair: Boudewijn Haverkort (University of Twente, Netherlands)

A Markov Reward Model for Reliable Synchronous Dataflow System Design

Vinu Vijay Kumar, Rashi Verma, John Lach, Joanne Bechta Dugan (U. of Virginia, USA)

A Method for Performance Analysis of Earliest-Deadline-First Scheduling Policy

Mehdi Kargahi, Ali Movaghar (Sharif U. of Technology & IPM, Iran)

An Efficient Algorithm for the Transient Analysis of a Class of Deterministic Stochastic Petri Nets

Marco Gribaudo, Matteo Sereno (U. of Turin, Italy)

Analysis of Second-Order Markov Reward Models

Gabor Horváth, Sandor Rácz, Miklos Telek (Technical U. of Budapest, Hungary)

08:30-10:30 Room: Hall 326 Third Floor - Palazzo Affari

Workshop on Assurance Cases: Best Practices, Possible Obstacles and Future Opportunities (AC)

Co-Chairs: Charles C. Howell (MITRE, USA); Sofia Guerra (Adelard, UK); Shari Lawrence Pfleeger (RAND, USA); Victoria Stavridou-Coleman (SRI, USA)

Session 8D: Current Best Practices, Experiences and Recurring Challenges

Session Introduction: The Future of Goal-based Assurance Cases

Sofia Guerra (Adelard, UK)

Formalism and Judgment in Assurance Cases

Lorenzo Strigini (CSR, City U., UK)

Regulatory Assessment of Software Based Safety Systems: Experiences and Conclusions

Bo Liwång (Swedish Nuclear Power Inspectorate, Sweden)

Assurance in Security Evaluation

Charles P. Pfleeger (Pfleeger Consulting Group)

08:30-10:30 Room: Hall 226 Second Floor - Palazzo Affari

Session 8E: Student Forum

Chair: Gianfranco Ciardo (University of California at Riverside, USA)

Causal Ordering of Asynchronous Request Services

Christian Delbé (INRIA - CNRS - U. Nice-Sophia Antipolis, France)

Parametric Dynamic Fault Tree and its Solution through Modularization

Daniele Codetta Raiteri (U. of Turin, Italy)

On Queuing Networks of VBR Video

Wenze Hu (Tsinghua U., P.R.China)

Dependable Self-organizing Overlay Networks for Resource Discovery

Koen Vanthournout (Catholic University of Leuven, Belgium)

Experimental Validation of Linux Journaling Filesystems

Leonardo Garcia de Mello (Federal U. of Rio Grande do Sul, Brazil)

A Self-Healing Network for Content-Based Publish/Subscribe Systems

Leonardo Querzoni (U. of Rome "La Sapienza", Italy)

Performance Evaluation in Overlay Communication Networks

Daniele Manini (University of Turin, Italy)

Achieving Dependability in Nomadic Environments

Marcello Cinque ('Federico II' U. of Naples, Italy)

Performance Analysis of MAC Layer in IEEE 802.11 Networks

Muhammad Umar Ilyas (National U. of Sciences & Technology, Pakistan)

10:30-11:00 Break (Room: Basement of Palazzo Affari)

11:00-13:00 Room: Hall A First Floor - Palazzo Affari

Session 9A: Dissemination & Diffusion

Chair: Raimundo A. Macêdo (Federal University of Bahia, Brazil)

An Adaptive Algorithm for Efficient Message Diffusion in Unreliable Environments

Benoît Garbinato (U. of Lausanne, Switzerland); Fernando Pedone, Rodrigo Schmidt (EPFL, Switzerland)

Efficient Hierarchic Management for Reconfiguration of Networked Information System

Jonathan Rowanhill, John C. Knight, Philip Varner (U. of Virginia, USA)

Collective Endorsement and the Dissemination Problem in Malicious Environments

Subramanian Lakshmanan, Deepak J. Manohar, Mustaque Ahamad, H. Venkateswaran (Georgia Institute of Technology, USA)

Support for Mobility and Fault Tolerance in Mykil

Jyh-How Huang, Shivakant Mishra (U. of Colorado at Boulder, USA)

11:00-13:00 Room: Hall B First Floor - Palazzo Affari

**Session 9B: Practical Experience in Fault-Tolerance & Real-Time
Chair: David Powell (LAAS-CNRS, France)**

Implementing Simple Replication Protocols Using CORBA Portable Interceptors and Java Serialization

Taha Bennani, Laurent Blain, Ludovic Courtes, Jean-Charles Fabre, Marc-Olivier Killijian, Eric Marsden, François Taïani (LAAS-CNRS, France)

In Advance Activation of Backup Channels for Real-Time Transmission

Enrique Hernández Orallo, Joan Vila Carbó (Polytechnic U. of Valencia, Spain)

Why PCs are Fragile and What We Can Do about It: A Study of Windows Registry Problems

Archana S. Ganapathi (UC Berkeley, USA); Yi-Min Wang (Microsoft Research, USA); Ni Lao, Ji-Rong Wen (Microsoft Research, China)

Dependable Adaptive Real-Time Applications in Wormhole-Based Systems

Pedro R. Martins, Paulo Sousa, António Casimiro, Paulo Veríssimo (U. of Lisbon, Portugal)

11:00-13:00 Room: Adua First Floor - Palazzo Affari

**Session 9C: Dependability Benchmarking
Chair: Cristian Constantinescu (Intel, USA)**

On Benchmarking the Dependability of Automotive Engine Control Applications

Juan-Carlos Ruiz, Pedro Yuste, Pedro Gil, Lenin Lemus (Technical U. of Valencia, Spain)

Characterization of the Impact of Faulty Drivers on the Robustness of the Linux Kernel

Arnaud Albinet, Jean Arlat, Jean-Charles Fabre (LAAS-CNRS, France)

A Framework for Evaluating Storage System Dependability

Kimberly Keeton, Arif Merchant (Hewlett-Packard Laboratories, USA)

Error Sensitivity of the Linux Kernel Executing on PowerPC G4 and Pentium 4 Processors

Weining Gu, Zbigniew Kalbarczyk, Ravishankar K. Iyer (UIUC, USA)

11:00-13:00 Room: Hall 326 Third Floor - Palazzo Affari

Workshop on Assurance Cases: Best Practices, Possible Obstacles and Future Opportunities (continued)

Session 9D: Promising Research and New Opportunities

Session Introduction: Information Assurance Cases: Problems and Approaches

Victoria Stavridou-Coleman (SRI, USA)

Dependability Cases

Chuck Weinstock, John Goodenough, (SEI, USA)

The Goal Structuring Notation - A Safety Argument Notation

Tim Kelly, Rob Weaver (U. of York, UK)

Assurance Cases: how assured are you?

Samantha Lautieri, David Cooper, David Jackson, Trevor Cockram, (Praxis Critical Systems, UK)

11:00-13:00 Room: Hall 226 Second Floor - Palazzo Affari

Session 9E: Student Forum (continued)

Chair: Susanna Donatelli (University of Turin, Italy)

Middleware Services for Trusted Coordination

Paul Robinson (U. of Newcastle, UK)

Integration of adaptable fault management techniques into a dependable middleware architecture

Rodica Tirtea (Catholic University of Leuven, Belgium)

Edge Services: Generating Dynamic Web Content for E-commerce

Sameh Elnikety (EPFL, Switzerland)

Asynchronous Duplex Communication Based on Wire-Shared Current-Mode Signal Multiplexing

Tomohiro Takahashi (Tohoku U., Japan)

Application Specific Small-Scale Reconfigurability

Vinu Vijay Kumar (U. of Virginia, USA)

Denial of Service – A Study of Latest Trends

Muhammad Abu Baker Ilyas (National U. of Sciences & Technology, Pakistan)

Client Based Stateful Session Bean Replication Algorithm

Jaksa Vuckovic (U. of Bologna, Italy)

Dependable Application Hosting

Giorgia Lodi (U. of Bologna, Italy)

An Efficient Multicasting Protocol for ad hoc Networks

P.Athi Sivasankari (Anna U., India)

13:00-14:30 Lunch (Room: Basement of Palazzo Affari)

14:30-16:30 Room: Hall A First Floor - Palazzo Affari

Session 10A: Support for Security & Dependability

Chair: Hermann Kopetz (Technical University of Vienna, Austria)

High Throughput Byzantine Fault Tolerance

Ramakrishna Kotla, Mike Dahlin (U. of Texas at Austin, USA)

An Architectural Framework for Providing Reliability and Security Support

Nithin M. Nakka (UIUC, USA); Zbigniew Kalbarczyk, Ravishankar K. Iyer (UIUC, USA); Jun Xu (North Carolina State U., USA)

Diverse Firewall Design

Alex X. Liu, Mohamed G. Gouda (U. of Texas at Austin, USA)

Component Middleware to Support Non-repudiable Service Interactions

Nick O. Cook, Paul Robinson, Santosh Shrivastava (U. of Newcastle upon Tyne, UK)

14:30-16:00 Room: Hall B First Floor - Palazzo Affari

Session 10B: Mobility & Wireless Systems

Chair: Roberto Baldoni (University of Rome "La Sapienza", Italy)

Customizing Dependability Attributes for Mobile Service Platforms

Jun He (U. of Arizona, USA); Matti A. Hiltunen (AT&T Labs - Research, USA); Richard Schlichting (AT&T Labs - Research, USA)

Discovering I-FT Routes in Mobile Ad Hoc Networks

Rajesh Venkatasubramanian, John P. Hayes (U. of Michigan, USA)

Intrusion Tolerance and Anti-traffic Analysis Strategies for Wireless Sensor Networks

Jing Deng, Richard Han, Shivakant Mishra (U. of Colorado at Boulder, USA)

14:30-16:30 Room: Adua First Floor Palazzo Affari

Session 10C: Fast Abstracts (continued)

Chair: Ann Tai (IA Tech, Inc., USA)

Incompetence Faults: Let's Record that They Exist

A. Avizienis (Vytautas Magnus U., Lithuania)

A Component-based Methodology to Adapt the Fault Tolerance of Distributed Protocols

R. Baldoni (U. of Rome, Italy), J-M. H elary (IRISA, France)

The Heisenbug Problem

P. M. Melliar-Smith and L. E. Moser (U. of California, Santa Barbara, USA)

Predictive Routing for Vide Streaming over MANETs

S. H. Srinivasan (Satyam Computer Services Ltd, India)

Survivable Design in Light Trail Optical Networks: A Heuristic Approach

W. He, A. K. Somani (Iowa State U., USA)

Recovery Oriented Device Driver Architecture

V. Sethi (SCO Software India Pvt. Ltd, India), P. Verma (U. of Michigan, USA)

Design Trade-offs for Systematic Tests of Embedded Communication Systems

E. Armengaud, A. Steininger (Vienna U. of Technology, Austria), M. Horauer (Technikum Wien, Austria), R. Pallierer (Dependable Computer Systems GmbH)

MAC Layer Multicast Protocol to Increase Reliability in WLANs

P. Ding, J. Holliday, A. Celik (Santa Clara U., USA)

A Hybrid Service Discovery for Improving Robustness in Mobile Ad Hoc Networks

C-S Oh, Y-B Ko, J-H Kim (Ajou U., Republic of Korea)

Towards Anti-Model-based Testing

A. Bertolino, A. Polini (ISTI-CNR, Italy), P. Inverardi, H. Muccini (U. of L'Aquila, Italy)

Scalable, Signature-Free Characterizations of Propagating Internet

Phenomena

A. Valdes, M. Fong (SRI International)

Design Motivations of a Composable Group Service

F. Gonçalves Pereira Greve (Federal U. of Bahia, Brazil)

A Reliable Gradient Approach for Efficient Data Dissemination in Wireless Sensor Networks

K.-H. Han, Y.-B. Ko (Ajou U., Republic of Korea)

Towards a Framework for Distributed, Survivable Enterprises

A. Kim, J. Luo, J. Froscher (Naval Research Lab, USA)

Web-server Availability from the End-user Viewpoint: a Comparative Study

J. Durães (DEIS-ISEC/CISUC, Portugal), H. Madeira (DEI/CISUC, Portugal)

Dynamically Adaptive Replicated Databases

J. Milan-Franco, R. Jiménez-Peris, M. Patiño-Martínez (Universidad Politecnica de Madrid, Spain), B. Kemme (McGill U., Canada)

An API for Varying Criticality Requirements in Parallel Programs

A. Rabeler, Z. Chishti, S. Bagchi (Purdue U., USA)

A Fault Tolerance Strategy for Real-Time Distributed Multimedia Applications

D. Cotroneo, C. di Flora, G. Paolillo, S. Russo (U. of Naples "Federico II", Italy)

Reconfiguring Wireless Security and Fault Tolerance

M. T. Frederick, N. VanderHorn, A. K. Somani (Iowa State U., USA)

Overview of the Methodology and Tools Developed for the Validation of CNES Fault-Tolerant Architectures

M. Pignol (CNES, France)

Towards Uniform Interchange Formats for Performance Validation Tools

A. Di Marco, V. Cortellessa (U. of L'Aquila, Italy)

A Trust Index Based Protocol to Tolerate Byzantine Failures in Sensor Networks

M. Krasniewski, P. Varadharajan, S. Bagchi (Purdue U., USA)

14:30-16:30 Room: Hall 326 Third Floor - Palazzo Affari

Workshop on Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities (continued)

Session 10D: Moderated Discussion – Conclusions, Consensus, Next Steps

Session Introduction: The Need for Careful Evidential Analysis in Assurance Cases

Shari Lawrence Pfleeger (RAND, USA)

14:30-16:30 Room: Hall 226 Second Floor - Palazzo Affari

Session 10E: Student Forum (continued)

Chair: Geert Deconinck (Catholic University of Leuven, Belgium)

Students meet Industry

16:30-16:45 Break (Room: Basement of Palazzo Affari)

16:45-18:00 Room: Hall A First Floor - Palazzo Affari

Business Meeting: IEEE Technical Committee on Fault-Tolerant Computing