



The International Conference on Dependable Systems and Networks

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

Sponsored by:

IEEE Computer Society Technical Committee on Fault-Tolerant Computing and IFIP WG 10.4 on Dependable Computing and Fault Tolerance

In cooperation with: AICA Italy, IBM USA, ISTI-CNR Italy, LAAS-CNRS France, U. of Coimbra Portugal, U. of Florence Italy, U. of Piemonte Orientale Italy, U. of Pisa Italy.

Advance Program and Registration Form

Panel from *Cantoria* of Luca della Robbia, 1431-38, Museo dell'Opera del Duomo



Invitation from the General Chair

On behalf of the organizing committee, it is my pleasure to invite you to attend the 2004 International Conference on Dependable Systems and Networks (DSN-2004), the leading international conference on dependability, to be held this year at Palazzo dei Congressi in Florence, Italy from June 28th to July 1st, 2004. This conference attempts to provide answers to a very important question, namely: "how can we make the computer systems and communication networks that we increasingly rely on more dependable?" Our lives have become critically dependent on the correct operation of these systems as we surf the web, fly in airplanes, drive our cars, manage our finances, and even heat our homes. The traditional concerns of the dependability community (e.g., inadvertent faults, errors, and failures) have now been enlarged by the massive connectivity provided by the Internet to include malicious exploitation of imperfect systems and networks, and intentional cyber-attacks on them. We have put together an excellent technical program for researchers, practitioners, and users to learn and exchange information on the latest research results and the state of the practice in dependable systems and networks. Multiple tracks include the Dependable Computing and Communications Symposium (DCCS), the Performance and Dependability Symposium (PDS), as well as Workshops, Tutorials, a Student Forum, and Fast Abstracts highlighting late-breaking research. There will be plenty of opportunity for informal discussions during breaks, lunches, a welcome reception, and the social event. I invite you to join us at the leading conference on dependable systems and networks. I look forward to seeing you in Italy and don't forget to enjoy art, culture, history and more... in Florence in June 2004! Detailed conference information is available at: <http://www.dsn.org>



Luca Simoncini, General Chair DSN 2004

A very special thanks to the **Main Sponsors** of DSN 2004. Without their generous support we would not be able to provide such an exciting hosting to all participants:



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Fast Abstracts

Fast Abstracts are short presentations of work in progress or opinion pieces that can cover any and all facets of dependable systems and networks. Because they have late deadlines and are not rigorously refereed, Fast Abstracts allow their authors to:

- Report on work that may or may not be complete
- Introduce new ideas to the community
- State positions on controversial issues

Participants in this track will present a short talk (5 minutes including 1 minute for questions) and publish a concise, two-page abstract in the Supplement of the 2004 International Conference on Dependable Systems and Networks. Fast Abstract sessions have been amongst the most attended in past DSN editions, with contributors as diverse as young students and distinguished members of the community.

Abstracts should be no more than two pages long (IEEE double-column format), and should be submitted in camera-ready form, ready to be printed. Contributions must be submitted electronically (.pdf or .ps format) to the Fast Abstract Chair.

Deadlines

Submission: April 26, 2004

Notification: May 11, 2004

Program Committee

Chair: Felicita Di Giandomenico (ISTI-CNR, Italy) <f.digiandomenico@isti.cnr.it>

Ricardo Jiménez-Peris (U. Politecnica de Madrid, Spain), Ann Tai (IA Tech Inc., USA)

Student Forum

The Student Forum will provide an opportunity for students working in the area of dependable computing to present and discuss their research objectives, approaches, and preliminary results. The Forum is centered around a technical session in which the selected "on-going student research papers" will be presented.

Student research papers should be singly-authored and describe preliminary results and future directions of the student's on-going research. The papers will be reviewed by a committee led by the Student Forum Chair. Accepted contributions will be published in the Supplement of the 2004 International Conference on Dependable Systems and Networks.

Papers should be no more than three pages long (IEEE double-column format), and should be submitted in camera-ready form, ready to be printed. Contributions must be submitted electronically (.pdf or .ps format) to the Student Forum Chair.

Deadlines

Submission: April 26, 2004

Notification: May 11, 2004

Program Committee

Chair: Susanna Donatelli (U. Turin, Italy) <susi@di.unito.it>

Gianfranco Ciardo (William and Mary C., USA), Geert Deconinck (Katholieke U. Leuven, Belgium), Inhwan Lee (Hanyang U., Korea)

Tutorials

All tutorials will be held on Monday, June 28, and each lasts four hours. Morning tutorials begin at 08.00 and afternoon tutorials begin at 14.00. The tutorial registration fee includes lunch on Monday.

Tutorial A: Creating Strategy and Tactics in Cyberspace

Presenter: O. Sami Saydjari, Cyber Defense Agency, USA

E-mail: ssaydjari@CyberDefenseAgency.com

Attendee type: This tutorial requires a background in the fundamentals of computer security, computer networking, and general principles of computer science. Familiarity of emerging research in the information assurance field would be beneficial, but is not strictly required.

This tutorial is expected to benefit a wide range of professionals across the gamut of sub-specialties in the dependability community. Although the tutorial offers ideas on how to pursue creating new knowledge, and is thus meant for those in the research community, those in the engineering and operational fields are expected to benefit from the new perspective that the tutorial offers.

Short description: Information assurance systems are becoming increasingly varied, complex and configurable. The arsenal of tools with which we can defend our systems against cyber attack is increasing. Yet, the knowledge of how to use these tools to mount an effective dynamic defense against serious adversaries is lacking. There appears to be substantial confusion over how one might acquire the needed knowledge without waiting to experience a long history of catastrophic attacks that can be analyzed after-the-fact.

The purpose of this tutorial is to review the current of strategy and tactics in cyberspace and to discuss methods by which the critical knowledge can be obtained in an accelerated manner.

Tutorial B: Survivability of Telecommunications Systems - Concepts, Architectures and Analysis

Presenter(s): Veena Mendiratta, Bell Labs, Lucent Technologies, USA, Yun Liu, Kishor Trivedi, Duke U., USA

E-mail: veena@lucent.com

Attendee type: The target audience includes students, academic/industrial researchers, and practitioners in the area of telecommunications, fault tolerance, and computer networks. The assumed background is basic knowledge of computer networks, probability, and stochastic modeling.

Short description: This tutorial will provide an introduction to the subject of telecommunications system survivability in terms of survivability concepts, architectures and analysis. Our focus is on the voice network for wireline, cellular and voice over packet implementations though the concepts and analysis methods are general enough to be applicable to other

architectures. Survivability definitions, both qualitative and quantitative, are presented and alternative architectures for survivability for wireline, cellular and voice over packet networks are defined. Survivability models with performance, availability and composite performance-availability measures and their traditional solution/interpretation are presented. The survivability analysis evaluates the survivability of the alternative architectures for certain failure scenarios. We conclude with a summary of what is required for architecting a survivable voice telecommunications system and what survivability analysis is needed for evaluating the effectiveness and economics of different alternative architectures.

Tutorial C: Distributed Denial of Service Attacks: Background, Diagnosis and Mitigation

Presenter(s): Sven Dietrich, CERT Research, CMU, USA

E-mail: pock@cert.org

Attendee type: A basic understanding of IP networking, network protocols, and routing as well as an understanding of computer security fundamentals is required. The tutorial is intended to be useful to system administrators, network administrators and computer security practitioners.

Short description: The tutorial will trace the development of denial of service attacks from early, machine crashing exploits to the present day distributed denial of service (DDoS) attacks. A substantial portion of the tutorial will be devoted to understanding DDoS attacks and developing appropriate responses. Among the issues to be addressed are preparing for a DDoS attack, recognizing the attack type and probable attack pattern, designing appropriate filter rules to mitigate the attack, and working with upstream providers. We will also survey current research that may lead to ways of thwarting such attacks in the future.

Tutorial D: Avionics Architecture Description Language (AADL)

Presenter(s): David Gluch, Embry-Riddle Aeronautical U., USA, Peter Feiler, Bruce Lewis SEI, CMU, USA

E-mail: gluchd@erau.edu

Attendee type: A typical attendee would have basic knowledge of real-time and dependability design issues and techniques for software intensive systems (e.g., knowledge of scheduling, communications, redundancy, partitioning) and an interest in understanding the use of architecture-driven and model-based design and analysis in the development of these systems.

Short description: The tutorial is aimed at creating awareness and understanding of the emerging SAE Avionics Architecture Description Language (AADL) standard and its application to fault-tolerant and high dependability systems design. The AADL's precisely defined semantics can describe and facilitate the analysis of important performance-critical and dependability aspects such as timing, schedulability, fault and error behaviors, time and space partitioning, and safety properties. Attendees will gain insight into the benefits of using the AADL in the engineering of highly dependable and performance-critical systems, through examples of its use in the analysis and development of actual embedded real-time systems. An avionics system design is used as the principal example application throughout the tutorial.

Tutorial E: Detecting Crash Failures in Asynchronous Distributed: What? Why? How?

Presenter: Michel Raynal, IFSIC-IRISA, U. of Rennes, France

E-mail: raynal@irisa.fr

Attendee type: This tutorial is mainly designed for people who want to understand the fundamental issues raised by crash failures and how these issues can be mastered during the design of fault-tolerant, asynchronous, distributed software. This includes PhD students working on fault-tolerant systems, researchers who are not familiar with the failure-detector approach and want to understand its basics, and engineers who have to cope with dependability problems related to failure detection.

Short description: The tutorial focuses on the problems caused by failures in asynchronous, distributed systems. Indeed, the net effect of asynchrony and process crashes makes the design of provably-correct, reliable middleware services far from trivial.

The structure of the tutorial is the following:

(i) We first review fundamental definitions and concepts related to crash-failure detection in asynchronous systems. The presentation is based on the notion of "failure detectors" (introduced by Sam Toueg and Tushar Chandra in 1991).

(ii) We then consider basic distributed computing problems (such as atomic broadcast, non-blocking atomic commit) and show what sorts of failure-detector modules an asynchronous distributed system has to be equipped with in order to be able to solve these problems in the presence of process-crash failures.

(iii) In the last part of the tutorial, we focus on the implementation of the required failure-detector modules.

The existing literature on this topic is very technical and appears mainly in theoretically-inclined journals and conferences. This tutorial offers a unique opportunity to survey the fundamentals of the failure detector approach and to quickly understand its aim, its power, its benefits and its limitations.

Workshops

Workshop 1: Interdisciplinary Approaches to Achieving and Analysing System Dependability (IA)

Many current and expected problems in system dependability push the limits of practical techniques familiar to the DSN community. Organisations using computers involve a complex interaction of technical and human components set in the context of a physical environment. Unanticipated problems arise as emergent properties of the interplay between these different system components, and may defeat the efforts of the "traditional" DSN disciplines which focus on dependable hardware and software.

The goal of this workshop is to bring together experts from different disciplines and application domains to exchange ideas, make concrete progress across disciplinary boundaries, and establish contacts and possible collaborations. The workshop will be of value to all DSN participants, providing a context that will challenge them to consider issues broader than their discipline.

Co-Chairs: Michael Harrison, University of York, UK (Michael.Harrison@cs.york.ac.uk), Lorenzo Strigini, City University, London, UK (strigini@csr.city.ac.uk)

Workshop 2: Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (DIWANSN)

Widespread proliferation of wireless RF technology has brought the possibility of infrastructureless networking to the forefront. Infrastructureless networks are often referred to as wireless ad hoc networks and they include sensor networks as an important subclass. Dependability issues such as security, reliability, availability, and quality of service are made more challenging by the wireless and infrastructureless environment. The goal of this workshop is to bring together researchers from the ad hoc networks, sensor networks, and dependable computing communities to focus exclusively on this important topic, to outline its specific and unique research challenges, and to identify some of the most promising candidate solution methods and techniques to address those challenges. The workshop is targeted at researchers and practitioners in the areas of ad hoc and sensor networks who are confronting dependability challenges, as well as those in the dependable computing community who are interested in wireless networks. The workshop will provide a stimulating and highly interactive forum for discussion of these challenges with an audience made up of individuals having diverse backgrounds and experiences in the relevant areas.

Co-Chairs: Saurabh Bagchi, Purdue University, USA (sbagchi@purdue.edu), M. Blough, Georgia Institute of Technology, USA (doug.blough@ece.gatech.edu), Paolo Santi, Istituto di Informatica e Telematica del CNR, Italy (paolo.santi@iit.cnr.it), Nitin Vaidya, University of Illinois at Urbana-Champaign, USA (nhv@uiuc.edu)

Workshop 3: Architecting Dependable Systems (ADS)

Architectural representations of systems have shown to be effective in assisting the understanding of broader system concerns by abstracting away from details of the system. The architectural level reasoning about dependability is only just emerging as an important theme in software development, considering the current complexity of emerging applications and the trend of building trustworthy systems from existing untrustworthy systems. This is a twin workshop to another being organised during ICSE 2004 (International Conference on Software Engineering) in 23-28 May 2004, Edinburgh, UK (<http://conferences.iee.org/icse2004/>). The aim of this challenging initiative is to bring together researchers from both the software architectures and the dependability communities, and to have cross-fertilization from two different communities and to build strong collaboration possibilities among the participants. The post-proceedings of these two twin workshops will be published as a single LNCS volume by Springer-Verlag.

Co-Chairs: Rogerio de Lemos, University of Kent at Canterbury, UK (r.delemos@ukc.ac.uk), Cristina Gacek, University of Newcastle upon Tyne, UK (cristina.gacek@ncl.ac.uk), Alexander Romanovsky, University of Newcastle upon Tyne, UK, (alexander.romanovsky@ncl.ac.uk)

Workshop 4: Fault Diagnosis and Tolerance in Cryptography (FDTC)

The workshop is intended to stimulate the development of methodologies and techniques for designing robust cryptographic systems and protecting them against both accidental faults and intentional intrusions and attacks, in particular those based on the malicious injection of faults into the device for the purpose of extracting the secret key. This relatively new research topic is of considerable interest to the international community of researchers in the fields of reliability and dependability on one hand, and cryptography on the other hand. It also has industrial relevance since it aims at facing an increasingly serious threat to several established and novel cryptosystems (e.g., smart-card and mobile terminals), that is, their vulnerability to malicious attacks.

Therefore, the proposed workshop aims at:

- Presenting the currently available preliminary results and challenges.
- Encouraging collaboration among the current researchers and possibly enlarging the community of researchers in this field.
- Advertising the research topic to both the cryptography and fault tolerance research communities, and stimulating the start of new research activities.

Participation of European academic and industry researchers is expected, due to the large diffusion of smart-card and mobile systems research in Europe, besides participants from the U.S. and Far East countries.

Co-Chairs: Luca Breveglieri, Politecnico di Milano, Italy (breveglieri@elet.polimi.it), Israel Koren, University of Massachusetts, Amherst, USA (koren@ecs.umass.edu)

Workshop 5: Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities (AC)

An assurance case is a documented body of evidence that provides a compelling case that a system satisfies specified critical properties. We are holding a workshop to address assurance cases, drawing on a broad range of participants from security, safety, and other certification experiences.

There is a wide range of participants who we believe can make substantial contributions to the workshop. These participants are in the safety, security, and certification communities (as researchers, practitioners, or certifiers). In addition, we intend to include speakers reflecting broader perspectives who can make a significant and perhaps novel contribution to the discussion.

We hope that the workshop will start a process of continuing discussion across disciplines on the central challenges and opportunities for assurance cases, and initiate the development of a standard set of best practices and guidelines for developing and assessing assurance cases. We would like to make this the first in a series of annual workshops on assurance cases, and begin to form a cross-discipline community of interest.

Co-Chairs: Charles C. Howell, MITRE, USA (howell@mitre.org), Shari Lawrence Pfleeger, RAND, USA (shari_pfleeger@rand.org), Victoria Stavridou-Coleman, SRI, USA (victoria@sdl.sri.com), Sofia Guerra, Adelard, UK (aslg@adelard.com)

Conference at a glance

Monday, June 28

08:00 – 08:30	Registration		
08:30 – 12:30	Tutorial A - Creating Strategy and Tactics in Cyberspace	Tutorial B - Survivability of Telecommunications Systems – Concepts, Architectures and Analysis	
12:30 – 14:00	Lunch		
14:00 – 18:00	Tutorial C - Distributed Denial of Service Attacks: Background, Diagnosis and Mitigation	Tutorial D - Avionics Architecture Description Language (AADL)	Tutorial E - Detecting Crash Failures in Asynchronous Distributed Systems: What? Why? How?
18:00 – 20:30	Welcome Reception in Palazzo dei Congressi		

Tuesday, June 29

08:00 – 08:30	Registration				
08:30 – 10:00	Opening Remarks and Keynote Address				
10:00 – 10:30	Break				
10:30 – 12:00	Session 1A (DCCS) Overlay Networks	Session 1B (DCCS) Fault Tolerance Hardware Design	Session 1C (PDS) Fault Trees & Modelling	Session 1D (IA) Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability	Session 1E (DIWANSN) Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks
12:00 – 13:30	Lunch				
13:30 – 15:30	Session 2A (DCCS) Security Attacks	Session 2B (DCCS) Coding Techniques	Session 2C (FA) Fast Abstracts	Session 2D (IA) Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability	Session 2E (DIWANSN) Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks
15:30 – 16:00	Break				
16:00 – 17:30	Session 3A (DCCS) Emerging Technologies	Session 3B (DCCS) Formal Methods	Session 3C (PDS) Practical Experience on Dependability and Performance Assessment	Session 3D (IA) Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability	Session 3E (DIWANSN) Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks
17:30 – 17:45	Break				
17:45 – 19:00	Session 4A (Panel) – Will Soft Errors Precipitate the End of Moore's Law?			Session 4D (IA) Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability	Session 4E (DIWANSN) Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks
19:00 – 20:00	Cocktail in Palazzo dei Congressi				

Wednesday, June 30

08:30 – 10:30	Session 5A (DCCS) Broadcast & Multicast	Session 5B (DCCS) Dependability Assessment	Session 5C (PDS) Model Checking	Session 5D (ADS) Workshop on Architecting Dependable Systems	Session 5E (FTDC) Workshop on Fault Diagnosis and Tolerance in Cryptography
10:30 – 11:00	Break				
11:00 – 13:00	Session 6A (DCCS) Distributed Algorithms	Session 6B (FA) Fast Abstracts	Session 6C (PDS) QoS and Performance Evaluation	Session 6D (ADS) Workshop on Architecting Dependable Systems	Session 6E (FTDC) Workshop on Fault Diagnosis and Tolerance in Cryptography
13:00 – 14:30	Lunch				
14:30 – 16:30	Session 7A (DCCS) Embedded & Real-Time Systems	Session 7B (DCCS) Practical Experience of Evaluation Tools & Methods	Session 7C (PDS) Sensor Networks	Session 7D (ADS) Workshop on Architecting Dependable Systems	Session 7E (FTDC) Workshop on Fault Diagnosis and Tolerance in Cryptography
17:00 – 20:00	Reception in Palazzo Vecchio and Visit to 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	Session 8A (DCCS) Intrusion Detection & Intrusion Tolerance	Session 8B (DCCS) Fault-Tolerant Routing	Session 8C (PDS) Evaluation Theory	Session 8D (AC) Workshop on Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities	Session 8E (SF) Student Forum
10:30 – 11:00	Break				
11:00 – 13:00	Session 9A (DCCS) Dissemination & Diffusion	Session 9B (DCCS) Practical Experience in Fault-Tolerance & Real-Time	Session 9C (PDS) Dependability Benchmarking	Session 9D (AC) Workshop on Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities	Session 9E (SF) Student Forum
13:00 – 14:30	Lunch				
14:30 – 16:30	Session 10A (DCCS) Support for Security & Dependability	Session 10B (DCCS) Mobility & Wireless Systems	Session 10C (FA) Fast Abstracts	Session 10D (AC) Workshop on Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities	Session 10E (SF) Student Forum
16:30 – 16:45	Break				
16:45 – 18:00	Business Meeting: IEEE Technical Committee on Fault-Tolerant Computing				

Combined Program

The information contained in this Advance Program is provisional. Session order and content are subject to change, both for logistic reasons and depending on final committee decisions on conditionally-accepted papers.

Monday, June 28

08:00-08:30 Registration

08:30-12:30 Tutorials

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

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

14:00-18:00 Tutorials

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

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

Tutorial E: *Detecting Crash Failures in Asynchronous Distributed Systems: What? Why? How?* - Michel Raynal (IFSIC-IRISA & U. of Rennes, France)

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

Tuesday, June 29

08:00-08:30 Registration

08:30-10:00 Opening Remarks and Keynote Address

10:00-10:30 Break

10:30-12:00 Session 1A (DCCS) - Overlay Networks

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 Session 1B (DCCS) - Fault Tolerance Hardware Design

Reliability Through Fault Isolation in Quasi Delay-Insensitive Circuits - Christopher C. LaFrieda, Rajit Manohar (Cornell U., USA)

Tolerating Hard Faults in Microprocessor Array Structures - Daniel J. Sorin (Duke U., USA); Fred Bower (Duke U. & IBM, USA); Paul Shealy, Sule Ozev (Duke U., USA)

Characterizing the Effects of Transient Faults on a Dynamically Scheduled Pipeline - Nicholas J. Wang, Justin Quek, Todd M. Rafacz, Sanjay J. Patel (UIUC, USA)

10:30-12:00 Session 1C (PDS) - Fault Trees & Modelling

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 - Mauro Iacono (Second U. of Naples, Italy); Daniele Codetta Raiteri (U. of Turin, Italy); Giuliana Franceschinis ("Amedeo Avogadro" U. of Eastern Piemonte, Italy); Nicola Mazzocca (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 Session 1D (IA) - Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability

10:30-12:00 Session 1E (DIWANS) - Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks

12:00-13:30 Lunch

13:30-15:30 Session DCCS 2A - Security Attacks

Dynamic Quarantine of Internet Worms - Cynthia Wong, Chenxi Wang, Dawn Song, Gregory R. Ganger, Stan Bielski (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 - Konrad J. Kulikowski, Mark Karpovsky, Alexander Taubin (Boston U., USA)

A Defense-Centric Taxonomy Based on Attack Manifestations – Roy A. Maxion, Kevin S. Killourhy (CMU, USA)

13:30-15:30 Session 2B (DCCS) - Coding Techniques

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

Byzantine-Tolerant Erasure-Coded Storage - Jay J. Wylie, Garth R. Goodson, 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 Session 2C (FA) - Fast Abstracts

13:30-15:30 Session 2D (IA) - Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability (continued)

13:30-15:30 Session 2E (DIWANS) - Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (continued)

15:30-16:00 Break

16:00-17:30 Session 3A (DCCS) - Emerging Technologies

Fault Tolerant Computation on Ensemble Quantum Computers - Oscar P. Boykin (UCLA, USA); Tal Mor (Technion, Israel); Vwani P. Roychowdhury (UCLA, USA); Farrokh Vatan (JPL, USA)

The Recursive NanoBox Processor Grid: A Reliable Microarchitecture for Unreliable Nanotechnology Devices - AJ KleinOsowski, Kevin KleinOsowski, David J. Lilja (U. of Minnesota, USA)

The Impact of Scaling on Processor 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 Session 3B (DCCS) - Formal Methods

Automated Formal Verification of a Fault-Tolerant Contention Resolving Algorithm - Wilfried Steiner (Vienna U. of Technology, Austria); John Rushby (SRI International, USA); Maria Sorea, Holger Pfeifer (U. of Ulm, Germany)

Detecting Web Application Vulnerabilities by Model Checking - Sy-Yen Kuo (National Taiwan U., Taiwan); Yao-Wen Huang (National Taiwan U. & Academia Sinica, Taiwan); Fang Yu (Academia Sinica, Taiwan); Christian Hang (RWTH Aachen, Germany); Der-Tsai Lee (Academia Sinica)

Automated Synthesis of Multitolerance - Sandeep S. Kulkarni, Ali Ebneenasir (Michigan State U., USA)

16:00-17:30 Session 3C (PDS) - Practical Experience on Dependability and Performance Assessment

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 - Zbigniew Kalbarczyk, Long Wang, Ravishankar K. Iyer (UIUC, USA)

Hierarchical Evaluation of Interval Availability Metrics in RAScad - Dong Tang (Sun Microsystems, USA); Kishor S. Trivedi (Duke U., USA)

16:00-17:30 Session 3D (IA) - Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability (continued)

16:00-17:30 Session 3E (DIWANS) - Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (continued)

17:30-17:45 Break

17:45-19:00 Session 4A (Panel) – Will Soft Errors Precipitate the End of Moore's Law? - Moderator: Ravishankar K. Iyer (UIUC, USA)

17:45-19:00 Session 4D (IA) - Workshop on Interdisciplinary Approaches to Achieving and Analysing System Dependability (continued)

17:45-19:00 Session 4E (DIWANS) - Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (continued)

19:00-20:00 Cocktail in Palazzo dei Congressi

Wednesday, June 30

08:30-10:30 Session 5A (DCCS) - Broadcast & Multicast

Exposing and Eliminating Vulnerabilities to Denial of Service Attacks in Secure Gossip-Based Multicast - Idit Keidar, Gal Badishi, Amir Sasson (Technion, Israel)

Data-Aware Multicast - Sébastien Baehni, Patrick Th. Eugster, Rachid Guerraoui (EPFL, Switzerland)

Timed Atomic Broadcast 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 Session 5B (DCCS) - Dependability Assessment

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

08:30-10:30 Session 5C (PDS) - Model Checking

Model Checking Action- and State-Labelled Markov Chains – Lucia Cloth (U. of Twente, Netherlands); Christel Baier (U. of Bonn, Germany); 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 - Tadashi Dohi, Tatsuya Ozaki, 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 Multimedia Appliances - Marco Bernardo, Andrea Acquaviva, Alessandro Aldini, Alessandro Bogliolo, Edoardo Bontà, Emanuele Lattanzi (U. of Urbino, Italy)

08:30-10:30 Session 5D (ADS) - Workshop on Architecting Dependable Systems

08:30-10:30 Session 5E (FTDC) - Workshop on Fault Diagnosis and Tolerance in Cryptography

10:30-11:00 Break

11:00-13:00 Session 6A (DCCS) - Distributed Algorithms

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)

Dynamic Quorums for Adaptable Byzantine Fault Tolerance - Jean-Philippe Martin, Lorenzo Alvisi (U. of Texas at Austin, USA)

Dependable Initialization of Large-Scale Distributed Software - Ren Yansong, Rick Buskens (Lucent Technologies, USA)

11:00-13:00 Session 6B (FA) - Fast Abstracts (continued)

11:00-13:00 Session 6C (PDS) - QoS and Performance Evaluation

An SLA-Oriented Capacity Planning Tool for Streaming Media Services - Ludmila Cherkasova, Wenting Tang, Sharad Singhal (Hewlett-Packard Laboratories, USA)

QoS of Time-Out based Self-Tuned Failure Detector: the Effects of its Communication Delay Predictor and its 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)

Performance Implications of Failures in Large-Scale Cluster Scheduling - 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 Session 6D (ADS) - Workshop on Architecting Dependable Systems (continued)

11:00-13:00 Session 6E (FTDC) - Workshop on Fault Diagnosis and Tolerance in Cryptography (continued)

13:00-14:30 Lunch

14:30-16:30 Session 7A (DCCS) - Embedded & Real-Time Systems

A Bicriteria Scheduling Heuristic for Distributed Embedded Systems under Reliability and Real-Time Constraints - Alain Girault (INRIA Rhône-Alpes, France); Ismail Assayad (Verimag & ST Microelectronics, 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 System Architectures - Jennifer A. Morris, Daniel Kroening, Philip J. Koopman (CMU, USA)

14:30-16:30 Session 7B (DCCS) - Practical Experience of Evaluation Tools & Methods

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)

Dependability Benchmarking of Human-Assisted Recovery Processes - Aaron B. Brown, Leonard Chung, William Kakes, Calvin Ling, David A. Patterson (UC Berkeley, USA)

Automated System Design for Service Availability - Renato Jose Santos, G. (John) Janakiraman, Yoshio Turner (Hewlett-Packard Laboratories, USA)

14:30-16:00 Session 7C (PDS) - Sensor Networks

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, 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 Session 7D (ADS) - Workshop on Architecting Dependable Systems (continued)

14:30-16:30 Session 7E (FTDC) - Workshop on Fault Diagnosis and Tolerance in Cryptography (continued)

17:00-20:00 Reception in Palazzo Vecchio 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 Session 8A (DCCS) - Intrusion Detection & Intrusion Tolerance

Secure Distributed DNS - Asad Samar (CMU, USA); Christian Cachin (IBM Research Zurich, Switzerland)

SCIDIVE: A Stateful and Cross Protocol Intrusion Detection Architecture for Voice-over-IP Environments - Saurabh Bagchi, Yu-Sung Wu (Purdue U., USA); Sachin Garg, Navjot Singh, Tim Tsai (Avaya Labs, USA)

A Portable Intrusion Resilience Implementation Framework for Database Management Systems - Alexey I. Smirnov, Tzi-cker Chiueh (SUNY at Stony Brook, USA)

An Architectural Analysis of MAFTIA's Intrusion Tolerance Capabilities - 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 Session 8B (DCCS) - Fault-Tolerant Routing

FRTR: A Scalable Mechanism to Restore Routing Table Consistency - Lan Wang (UCLA, USA); Daniel Massey (USC/ISI, 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)

Avoiding the Damage of the Routing Convergence Latency by Using Highly Connected Detours - Elias P. Duarte Jr. (Federal U. of Paraná, Brazil); Jaime Cohen (State U. of Paraná at Ponta Grossa, Brazil); Rogério Santini (Federal U. of Paraná, Brazil)

08:30-10:30 Session 8C (PDS) - Evaluation Theory

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 Horvath, Sandor Racz, Miklos Telek (Technical U. of Budapest, Hungary)

08:30-10:30 Session 8D (AC) - Workshop on Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities

08:30-10:30 Session 8E (SF) - Student Forum

10:30-11:00 Break

11:00-13:00 Session 9A (DCCS) - Dissemination & Diffusion

An Adaptive Algorithm for Efficient Message Diffusion in Unreliable Environments - Benoît Garbinato (U. of Lausanne, Switzerland); Fernando Pedone, Rodrigo Schmidt (EPFL, Switzerland)

Symmetrically Addressed Decoupled Event Dissemination - John C. Knight, Jonathan Rowanhill, 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)

MykilDDS - A Scalable, Secure and Efficient Data Disseminating System - Shivakant Mishra, Jyh-How Huang (U. of Colorado at Boulder, USA)

11:00-13:00 Session 9B (DCCS) - Practical Experience in Fault-Tolerance & Real-Time

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 Taiani (LAAS-CNRS, France)

In Advance Activation of Backup Channels for Real-Time Video Transmission - Enrique Hernandez-Orallo, Joan Vila-Carbo (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 TCB based Systems - Pedro R. Martins, Paulo Sousa, António Casimiro, Paulo Veríssimo (U. of Lisbon, Portugal)

11:00-13:00 Session 9C (PDS) - Dependability Benchmarking

On Benchmarking the Dependability of Automotive Engine Control Applications - Juan Carlos Ruiz Garcia, Pedro Yuste, Lenin Lemus, Pedro Gil (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 Comparison of the PowerPC G4 and Pentium 4 Executing under Linux - Weining Gu, Zbigniew Kalbarczyk, Ravishankar K. Iyer (UIUC, USA)

11:00-13:00 Session 9D (AC) - Workshop on Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities (continued)**11:00-13:00 Session 9E (SF) - Student Forum (continued)****13:00-14:30 Lunch****14:30-16:30 Session 10A (DCCS) - Support for Security & Dependability**

High Throughput Byzantine Fault Tolerant Services - Ramakrishna Kotla, Mike Dahlin (U. of Texas at Austin, USA)

An Architectural Framework for Providing Reliability and Security Support - Nithin M. Nakka (UIUC, USA); Jun Xu (North Carolina State U., USA); Zbigniew Kalbarczyk, Ravishankar K. Iyer (UIUC, USA)

Firewall Correctness by Design Diversity - Xiang-Yang A. 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 Session 10B (DCCS) - Mobility & Wireless Systems

Customizing Dependability Attributes for Mobile Service Platforms - Matti A. Hiltunen (AT&T Labs - Research, USA); Jun He (U. of Arizona, USA); Richard Schlichting (AT&T Labs - Research, USA)

Discovering 1-FT Routes in Mobile Ad Hoc Networks - Rajesh Venkatasubramanian, John P. Hayes (U. of Michigan, USA)

Intrusion Tolerance Strategies against Base Station Attacks in Wireless Sensor Networks - Jing Deng, Richard Han, Shivakant Mishra (U. of Colorado at Boulder, USA)

14:30-16:30 Session 10C (FA) - Fast Abstracts (continued)**14:30-16:30 Session 10D (AC) - Workshop on Assurance Cases: Best Practices, Possible Obstacles, and Future Opportunities (continued)****14:30-16:30 Session 10E (SF) - Student Forum (continued)****16:30-16:45 Break****16:45-18:00 Business Meeting: IEEE Technical Committee on Fault-Tolerant Computing**

Local Information

Venue

The conference will be held at the **Palazzo dei Congressi, Piazza Adua, 1, 50123 Florence, Italy.**

Hotel Reservations

Late June is a very high season in Florence. Please plan your trip as soon as possible and make early hotel reservations if you want to be sure to have what you asked for. Reservations should be made through the web page clicking on the **Hotel Reservations** button in the left column (secure transaction). Please be sure to make your reservations **before May 25, 2004** (the earlier the better). We have blocks of rooms in several hotels of different categories. Each request will be served on a first-come-first-served basis. If a chosen category has been sold out, the immediately lower category will be assigned. Reservations received after May 25, 2004 will be accepted on a space available basis and are not guaranteed.

Social Events

Welcome Reception

There will be a welcome reception on Monday, June 28, 2004 in Palazzo dei Congressi from 18:00 to 20:30

Cocktail

There will be a cocktail on Tuesday, June 29, 2004 in Palazzo dei Congressi from 19:00 to 20:00

Conference Cultural Event

On Wednesday, June 30, 2004 we will be received by the Mayor of Florence in Salone dei Cinquecento, Palazzo Vecchio, starting at 17:00. We then will visit the Corridoio Vasariano painting gallery, which connects Palazzo Vecchio to Palazzo Pitti in groups of 30 persons (do not forget to bring your camera since you will see some of the most beautiful and unusual views of Florence).

When we reach Palazzo Pitti we will have a Buffet Dinner in Cortile dell'Ammannati from 20:00 to 21:30. At 21:30 we will attend the Final Rehearsal of "Il Viaggio a Reims" of Gioacchino Rossini in Cortile della Meridiana in Palazzo Pitti.

This event is sponsored by SIEMENS Mobile of Italy.

Conference Registration Desk

The Registration Desk for DSN will be located in the Palazzo dei Congressi and will be open on Monday, June 28, 2004 through Thursday, July 1, 2004.

Accompanying Persons

The welcome reception (Monday, June 28, 2004) and the cocktail (Tuesday, June 29, 2004) are free of charge for accompanying persons. Please indicate your participation on the registration form for planning purposes. Additional tickets for the Conference Cultural Event must be booked in advance on the registration form for € 80. It will not be possible to buy additional tickets on-site. For planning purposes, please mark on the registration form how many persons in your party will attend the Conference Cultural Event (Wednesday, June 30, 2004).

Tourist Booth

A tourist booth will be open during the Conference days at Palazzo dei Congressi. The tourist operator has arranged for half day and full day tours for accompanying persons. Details are provided on the web site **www.dsn.org**. You are kindly invited to make early reservations.

Transportation

Florence (code FLR - Amerigo Vespucci Airport) can be reached by air from many European cities. From Amerigo Vespucci Airport there is a bus that links the Airport with the Main Train Station (Stazione S. Maria Novella). Taxis and rental booths are available at the airport.

Alternatively, you may reach Florence from Pisa (code PSA – Galileo Galilei Airport) by taking the train connecting Pisa Airport to the Main Train Station (Stazione S. Maria Novella) in Florence. Tickets for the train can be bought in the main hall of Pisa Airport.

Climate & Dress

Late June may be very hot in Florence (90 F/32 C) and humid. Rainfall is negligible. Comfortable light dress is recommended. All events are informal so there is no need for jacket and tie.

Information

For latest information regarding the conference arrangements, please refer to **www.dsn.org** or send an e-mail to Ettore Ricciardi <ettore.ricciardi@isti.cnr.it>

Registration Information

Payment

If payment is not received by June 13 you may be required to register again, provide credit card information, and to pay the late registration/on-site fees before attending the conference

Please make checks payable to: **Ettore Ricciardi, Treasurer DSN2004**. All checks must be in Euros (€). Cancellations must be in writing and received before June 13, 2004. Cancellations are subject to a € 50 processing fee. Substitutions are allowed at any time.

Wire transfers are an acceptable form of payment but are subject to an additional € 25 bank fee, and are not considered paid until received by our bank. These payments must be received by May 23, 2004. For wiring instructions please contact Vittore Casarosa, Registration Chair DSN 2004 <vittore.casarosa@isti.cnr.it>.

To qualify for the advance registration discount, form and payment must be received by the deadline. Registrations received after the deadline will be charged at the late/on-site rate. Those received after the late deadline (June 13, 2004) may not be acknowledged or accepted, and may require processing and payment on-site.

Registration Confirmation

Written confirmation of registration will be mailed by DSN 2004 Treasurer Ettore Ricciardi within two days of receiving your registration. If you do not receive confirmation please send an e-mail to <ettore.ricciardi@isti.cnr.it>.

Member, Emeritus and Student Discounts

To qualify for the discounted Member rates, you must be a member of the IEEE or the IEEE Computer Society and include your membership number. Retired scientists are eligible for Emeritus discount rate. To qualify for the Student discount rate you must be a full time student and you must show your student ID at registration.

On-site Registration

On-site registrants will pay the late registration fees. Credit cards are the preferred form of payment. All checks must be in Euros (€). Wire transfer will not be accepted.

Cancellations and Substitutions

Cancellations and substitutions are allowed. However, full registration fees will be charged unless cancellation notice is sent in writing (mail or fax is acceptable), and received before the deadline of June 13. A € 50 handling fee will be applied to all cancellations. Fees will not be refunded after the cancellation deadline. Substitutions are allowed at any time upon receipt of a letter from the original registrant on company letterhead stating the conditions of the substitutions and the name of the replacement. Please send cancellations to: Vittore Casarosa, Registration Chair DSN 2004, ISTI-CNR, Area della Ricerca CNR, Via G. Moruzzi, 1, 56100 Pisa, Italy. Fax: +39 050 315 2811.

Attendee List

Following Computer Society policy, the attendee list will not be distributed to registrants on-site. Once on-site registrations have been added to the database, we will send the attendance list via postal mail to those who request it. When on-site, please check your information for accuracy.

Questions

Please direct all registration related questions to Vittore Casarosa, Registration Chair DSN 2004 <vittore.casarosa@isti.cnr.it>

Registration Form

Preferred registration is through the web: <http://www.dsn.org>

To register by mail, fax or mail this form to the following address:

Vittore Casarosa
Registration Chair DSN 2004
ISTI-CNR
Area della Ricerca CNR
Via G. Moruzzi, 1
56100 Pisa, Italy
fax: +39 050 315 2811

Register on the Web!
(secure transaction)

www.dsn.org

Payments must be received before June 13, 2004. Registration forms without payment will not be processed, and you must re-register on-site with payment. For questions please call: +39 050 315 3115 or send an e-mail to <ettore.ricciardi@isti.cnr.it>

Name: _____

Mr./Ms./Dr./Prof. Last/Family Name First Name MI

Organization/Affiliation: _____

Address: _____

City/State/Province/Zip/Country: _____

Daytime Phone: _____ Fax: _____ E-Mail: _____

Do not include me on: the attendance list _____ the mailing list _____

Membership: IEEE: _____ IEEE Computer Society: _____ Full-Time Student ____ (Verification will be required at registration desk)

Special Needs: _____

Methods of Payment : Master Card _____ Visa _____ Check _____

Credit Card/Check Number: _____ Expiration Date: _____ Total Fee: _____

Cardholder Name: _____ Signature: _____

DSN Conference Registration (Members, Non-Members, Emeritus) (includes attendance to all DCCS and PDS sessions and Workshops (Tuesday-Thursday), Monday Welcome Reception, Breaks, Luncheons, Cocktail, Conference Cultural Event, Proceedings, CD and the Supplemental Volume). **Student Registration** includes attendance to all DCCS and PDS sessions and Workshops (Tuesday-Thursday), Monday Welcome Reception, Breaks, Proceedings, CD and the Supplemental Volume.

Advance (on or before May 23)

Late/On-site (after May 23)

I am eligible for discount rate: Member IEEE/IEEECS # _____ Emeritus _____ Student _____

____ Member € 550
____ Non-Member € 700
____ Emeritus € 300
____ Student € 300

____ Member € 660
____ Non-Member € 825
____ Emeritus € 360
____ Student € 360

For planning purposes, it is mandatory to indicate how many persons in your party (including you) will participate in the Welcome Reception (Monday, June 28, 2004 starting at 18.30 at Palazzo dei Congressi, free of charge for accompanying persons): _____

Students may attend the Conference Cultural Event (Wednesday, June 30, 2004) buying tickets at € 80.00: Number required: _____

Additional Tickets for the Conference Cultural Event (Wednesday, June 30, 2004) are available at € 80.00 each (children under 12 are free) (it will not be possible to buy on-site additional tickets): Number required: _____

For planning purposes, it is mandatory to indicate how many persons in your party (including you) will participate to the Conference Cultural Event (Wednesday, June 30, 2004 starting at 17,00 at Salone dei Cinquecento, Palazzo Vecchio): _____

Single Day Workshop Only Registration (includes the single day workshop of your choice, Monday Welcome Reception, Breaks, Luncheon on the day of the workshop, and the Supplemental Volume).

Choose the workshop you plan to attend:

____ Workshop1 (IA) ____ Workshop2 (DIWANSN) ____ Workshop3 (ADS) ____ Workshop4 (FDTC) ____ Workshop5 (AC)

Advance (on or before May 23)

Late/On-site (after May 23)

____ Member € 240 IEEE/IEEECS # _____
____ Non-Member € 300

____ Member € 290 IEEE/IEEECS # _____
____ Non-Member € 360

Tutorial Registration (includes the chosen tutorial(s), Monday Welcome Reception, Monday Breaks, Luncheon and handouts.)

Choose one morning and/or one afternoon tutorial: ____ Tutorial A ____ Tutorial B ____ Tutorial C ____ Tutorial D ____ Tutorial E

Advance (on or before May 23)

Late/On-site (after May 23)

Member: ____ 1 tutorial € 110 ____ 2 tutorials € 200
IEEE/IEEECS # _____
Non-Member: ____ 1 tutorial € 140 ____ 2 tutorials € 250

Member: ____ 1 tutorial € 130 ____ 2 tutorials € 240
IEEE/IEEECS # _____
Non-Member: ____ 1 tutorial € 165 ____ 2 tutorials € 300



The International Conference on
Dependable Systems and Networks
c/o Ettore Ricciardi
ISTI-CNR
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