

**F i n a l P r o g r a m**

# **IEEE ISCC 2002**

**The Seventh International Symposium on Computers and Communications**

1-4 July, 2002

Taormina - Giardini Naxos, Italy

Edited by:

**Antonio Corradi, Ph.D., U. Bologna, Italy**  
**Mahmoud Daneshmand, Ph.D., AT&T Labs, USA**



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## Tutorials

1 July, 2002

Morning : 9:00 –12:30

***T1. Room: Pitagora***

***QoS in Next Generation Wireless Networks***

Prof. Pascal Lorenz

University of Haute-Alsace, France

***T2. Room: Cordari***

***Internet Process Coordination with Software Agents***

Prof. Dan Marinescu

Computer Science Department, University of Central Florida,  
U.S.A.

Lunch (on your own) :12:30 -14:00

Afternoon: 14:00 –17:30

***T3. Room: Pitagora***

***Secure E-Commerce***

Dr. Mostafa Hashem Sherif

AT&T Laboratories, U.S.A

(Attendees will receive a copy of the book *Protocols for Secure Electronic Commerce*, CRC Press, 2000)

***T4. Room: Cordari***

***Ad hoc Networks***

Prof. Ivan Stojmenovic

University of Ottawa, Canada

Cocktail :18:00 -19:00

## **Keynote Speakers**

**Hossein Eslambolchi, Ph.D.**

AT&T's Chief Technology Officer and the President of AT&T Labs

*Network of the Future*

### **BIOGRAPHY**

Hossein Eslambolchi is AT&T's Chief Technology Officer and the President of AT&T Labs. As CTO, Hossein advises the AT&T Chairman and its' senior leaders on technology issues, and chairs a company-wide Technology Strategy and Development Council. As President of AT&T Labs, Hossein leads a team of the world's best scientists and engineers focused on next-generation Internet Protocol (IP)-based communications, entertainment and information services.

Hossein has a track record of developing new IP and broadband technologies to work for the benefit of AT&T customers. He holds 106 patents and is widely recognized as a technology leader. In October 1999, Hossein received AT&T's highest technical honor when he was appointed an AT&T Fellow. He has also received the 2001 NJ Inventors Hall of Fame Inventor of the Year Award, and in 1997 received the Thomas Alva Edison award, Strategically Significant Patent and the AT&T Labs Science and Technology Medal.

Hossein is on the board of advisors for Conexant as well as board of directors of the National Alliance of Business (NAB) and Wytec, and has also served as an Advisory Council member at the John Hopkins University Whiting School of Engineering. Hossein has been published in 18 technical publications and is on the IEEE editorial board of the Journal of Network and Systems Management. In September 1988, Hossein participated on The President's Committee on the Employment of People with Disabilities, supporting their efforts to make information technology accessible to people with disabilities, and currently serves as AT&T's accessibility Champion.

Hossein graduated with highest honors from the University of California - San Diego with a B.S. degree in Electrical Engineering, received his M.S. in Electrical Engineering and Ph.D. in Electrical Engineering from the University of California - San Diego.

### **ABSTRACT**

Don't plan for the next revolution in networks – it is not going to happen. Instead, plan for an evolution to the network of the future as we integrate the old and the new. There will not be a network revolution because too much has been invested in the current network infrastructure to justify a wholesale changeover. The success of the network evolution depends in part on the ability to integrate the latest and greatest with the legacies. Most of the action of the network of the future will take place on the edge of the network where a multi-service architecture will be needed to handle and rationalize multi-service access like Ethernet, TDM, cable modems, DSL, etc.,

Hossein Eslambolchi will share a vision for this network of the future– a network topology with a multi-service edge structure and a “hands-free, self operating intelligent network. This network of the future becomes a fabric that provides control, resource balancing, security policies, and management of high performance and intelligent end devices. He will address the key challenges in this journey –transparent migration from the legacy network; maintenance of high standards of reliability, security and survivability; challenges of building and managing a self-operating network; and, the need for hardware and software vendors to accelerate this multi-service fabric vision.

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**Dr. A. Cuomo**

Corporate Vice-President and General Manager, Advanced System Technology ST Microelectronics

***Present and Future of Embedded Systems***

**BIOGRAPHY**

Andrea Cuomo was born in Milano, Italy in 1954 and studied Nuclear Sciences at the Milano "Politecnico" with a special focus on analog electronics. He joined the Italian semiconductor manufacturer SGS in 1983 as a System Testing Engineer and, from 1985 to 1988, he held various positions up to Marketing Manager in the automotive, computer and industrial product segments within the Monolithic Microsystems Division of SGS-THOMSON Microelectronics. This company was created in 1997 from the merger of SGS and Thomson Semiconducteurs and changed its name to STMicroelectronics in May 1998

In 1989, the Division became the Dedicated Products Group by changing its focus and identity to better suit the needs of the market and of its customers. Andrea Cuomo was appointed Director of Strategy and Market Development, with responsibility over Strategic Marketing, Strategic Planning. One of his missions, was to develop strategic alliances with top customers. He left that position in 1994 when he was appointed Vice-President responsible for Marketing and Strategic Accounts within the Headquarters Region. In this position Andrea Cuomo had the responsibility for sales to the company's strategic accounts and for Corporate Strategic Marketing. He was also responsible for future semiconductor trends and for development of advanced systems by combining the diversified know-how and wide range technologies of the company.

In October 1998, Andrea Cuomo was appointed Vice-President responsible for Advanced System Technology (AST), a corporate organisation with the mission to be the driving force of the Company's strategy in the area of System on Chip and IP creation. To this aim, the main duties of the AST are the acquisition and development of system know how, the development of architectures and platforms for future strategic applications and the implementation of a comprehensive system level design approach.

**ABSTRACT**

Semiconductors will play a key role to drive the technological evolution in the next 20 years. We already possess many of the technologies that will deeply change our scenario, among which we can mention nanotechnologies, bioelectronics, photonics, etc. The central role of Integrated Circuits in the economy will grow stronger and stronger in future, starting from the convergence between storage, security, video, audio, mobility and connectivity. Systems are converging and ICs are more and more converging with systems. The fundamental issue is how to translate knowledge and competences coming from different fields into single architectures. This consideration implies two main challenges for our industry.

The first challenge is to master a broad range of hardware and software technologies. The second, is to bring them into a single piece of silicon. To win in this scenario, we must possess a broad intellectual property (IP) portfolio and system know-how. Then, we need to have a large network of business and research partners, and to build key knowledge with them. We must also build the ability to pick up and integrate the innovative elements developed around the world. And in the end, a world-class manufacturing machine must translate all of this into world-class products, ensuring that customers receive the right device at the right time, in the right quantities, at the right price.

The key factor is to build the right culture. On one side, this implies to be open to share work, results and benefits with our research and business partners. On the other side, it means to build an organization for innovation, with the right mix of creativity, personal initiative and execution skills.

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**Roberto Saracco**

Future Centre - Telecom Italia Lab (TILAB)

*Is there a future for Telecommunications?  
Looking into today's situation and challenges lying ahead*

**BIOGRAPHY**

Roberto Saracco [M'92-SM'00] is a computer science graduate and has a university degree in mathematics. He has been working in the telecommunications field since 1971 at the Telecom Italia Group Research Center, CSELT. He was involved in designing the first electronic exchange and data network in Italy (1980s). He became responsible for network management research, contributing to the international standardization of the Telecommunications Management Network (TMN) and led the team that developed the first Italian NM center.

For many years he has been involved in the definition of the research agenda for information and communication technologies (ICT) as member or chair of various European boards, including the Visionary Group charged with definition of life scenarios for the year 2010. Roberto chaired the IEEE Committee on Network Operations and Management (CNOM) and Enterprise Networking Committee (EntNet) which focuses on "end-to end" networked solutions for enterprises. He has also served as the secretary of the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology, Inc (ABET). He is currently a member of the IEEE Communications Society (ComSoc) Board of Governors and Director-Marketing. Lately he led a World Bank project to stimulate Latin America entrepreneurship in the network economy framework.

He is the author of many papers and books, and a co-author of *The Disappearance of Telecommunications* which was published by the IEEE Press in February 2000 (ISBN: 0780353870)

**ABSTRACT**

The talk aims at providing a different viewpoint to the present situation of the telecommunications business and its foreseeable future. All development forecast is focusing on technology, market and economic and social aspects point towards a continuous growth of communications. Concerns about security and safety may also give a further boost to communications technology. Yet, why such a rosy outlook not understood, or valued, by the stock market? Why are we seeing see telecoms-related companies filing for Chapter 11 as never before? Why all these lay offs? Why after spending billions of Euros for getting 3G licenses, the same companies are now wondering what kind of service can be the golden eggs' goose? The talk is structured into four parts. The first part is an analysis of how and why we, as telecom business, got into this rough seas. The second is an outline of four major problem areas (broadband, 3G, data, service management). Next, the opportunities that innovation in technology are opening up are presented. The fourth and final part is a view on the evolution of telecommunications and Internet. Some of the questions that are left to the audience to ponder are: Where is the money? how do we link it to telecommunications? Is the Grid the next big thing? Other thought-provoking ideas will be presented as well.

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**The Honorable Jerry MacArthur Hultin**

Dean, the Howe School of Technology Management - Stevens Institute of Technology

***Law, Regulations, and Technology:  
Markets, Innovation, and the Global Economy***

**BIOGRAPHY**

Jerry Hultin is the Dean of the Wesley J. Howe School of Technology Management and Professor of Management at Stevens Institute of Technology in Hoboken, N.J. A private university with a prestigious history in American higher education, Stevens Institute trains undergraduates and professionals in engineering, science, and technology management. Stevens is uniquely located in Hoboken, New Jersey at the heart of one of the world's leading centers of finance, pharmaceuticals, and telecommunications industries.

The Howe School of Technology Management provides educational programs that address the key needs of companies, government and individuals in managing organizations with high technology content such as the telecommunications, finance, pharmaceutical, and defense industries.

Prior to joining Stevens Institute, Mr. Hultin served from 1997 to 2000 as Under Secretary of the United States Navy and Marine Corps. In this Presidential appointment as the #2 civilian leader, Mr. Hultin had a key role in developing the Navy and Marine Corp's 21<sup>st</sup> Century strategic vision, warfighting capacity, and business operations, including managing a budget in excess of \$90 billion a year. Also, Mr. Hultin commissioned a major study on national security and naval forces in the 21<sup>st</sup> Century, resulting in publication of a two-volume report titled *The Global Century: Globalization and National Security*.

Mr. Hultin is a 1964 graduate of Ohio State University and 1972 graduate of Yale Law School.

**ASBTRACT**

The 1990s were years of major change in the way the telecommunications industry was regulated at the national, multi-national and even global level. The general trend has been towards a less-regulated, market-based model, based on a widely-held but not unanimous belief that the market model is highly efficient and innovative.

At least two forces are beginning to challenge the market-model: first, the concern that the market does not fairly distribute its benefits, often referred to as anti-globalization; and second, the apparent difficulty of corporations, especially telecommunications firms, to thrive in a highly competitive market environment.

How significantly will these forces change the legal and regulatory environment? Is there a "third way" that obtains the markets advantages but ameliorates its excesses?

Moreover, the growing concern about security and privacy of information is changing the legal and regulatory scene with significant variations between global regions.

Which venues and which leaders will have the most influence on the legal and regulatory environment of the coming decade? What should you do to respond to and succeed in this new environment?

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***PANEL: Wireless LANs and Domotics***

Prof. Claudine Guidat - *Director of ENSGSI and 1<sup>st</sup> vice-Mayor, Nancy, France*

Dr. Alessandro Nencioni - *TDC ITALIA srl, Italy*

Dr. Susanne Wetzel - *Stevens Institute of Technology, Hoboken, New Jersey, USA*

**The Time Dimension of Urban Policies**

Professor Claudine Guidat

**Abstract**

Technology innovation is at the cross-road of sciences, engineering and humanities. Changes in the work environment are encouraging innovative ways to look at urban planning with the help of new information and telecommunications technologies. In particular, a reduced work week, increased women's participation and worker's mobility have desynchronized individual and group schedules.

This talk will discuss how the "triad time-space-technology" can be used to add a human touch to urban policies. Local governments can take advantage of new information and communication technologies to better address the needs of the public through: 1) increased access to public services, 2) new urban products and services, 3) networked services and organizations and, 4) new modes for dialogues with the citizenry.

**Biography**

Professor Guidat is the Director of the École Nationale Supérieure en Génie des Systèmes Industriels (ENSGSI), Nancy France, and Professor of Innovation Sciences. The ENSGSI was created in 1993 to focus on the management of technological change and the epistemology of innovation sciences and engineering. Her main area of research is on the development of complex engineering systems. She has 5 patents, and more than 150 published papers in the field.

As an elected deputy mayor of Nancy, Professor Guidat has direct experience with the policy aspects of entrepreneurship, business incubation as well as the impact of new information technologies on the access of the citizenry to local governments.

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**Wireless LAN Security**

Dr. Susanne Wetzel

**Abstract**

Security and privacy play an important role in wireless applications. While many of the basic requirements can be met by techniques similar to those employed in wired applications, challenges and new opportunities remain. In this presentation, we cover these issues in general and address recent developments with respect to standards such as Bluetooth and 802.11.

**Biography**

Dr. Susanne Wetzel received her Diplom from the University in Karlsruhe (Germany) and her Ph.D degree in Computer Science from Saarland University (Germany) in 1998. Subsequently, she worked at DaimlerChrysler Research (Stuttgart, Germany), Lucent Technologies Bell Laboratories (Murray Hill, USA) and RSA Laboratories (Stockholm, Sweden). She recently joined the faculty at the Computer Science Department as an

Assistant Professor. Dr. Wetzel's research interests include various aspects in cryptography (wireless security, secret sharing, visual cryptography, distributed computing) and algorithmic number theory.

**MODUX - No New Wires Advanced System**

Mr. Alessandro Nencioni

**Abstract**

Although, Wireless LANs (WLAN) free users from the constraints of tethered connections, constant exposure to radio waves at the frequency of 2.4GHz or 5GHz has unknown health effects. WLAN systems have an omnidirectional antenna that radiates in all directions and then bounce against walls bombarding everything in sight, including human beings.

POWERLINE technology for data transmission over domestic electric wire can help us design WLAN system with omnidirectional antenna at 360 degree at a reduced power. We will present MODO to illustrate how such systems can combine ubiquity, ease of use without sacrificing attention to safety.

**Biography:**

Mr Alessandro Nencioni has a mechanical technician degree from the Leonardo Da Vinci Institute in Florence, with a speciality in Information Science. He has many inventions in the electronics and mechanical sector and has taught himself LINUX to develop MODO, an embedded PCI board built completely in Italy using an embedded operating system based on LINUX.



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## The Seventh International Symposium on Computers and Communications

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2 July, 2002

Registration 8:00 - 9:00 AM

Welcome: 9:00-9:05

Prof. Adel Elmaghraby, University of Louisville

Opening Remarks: 9:05 - 9:10

Prof. Gaetano Silvestri - Rector University of Messina

Room: Tindari B

Plenary 9:15-11:00

Chairs: M. Daneshmand, A. Puliafito

Keynote Speakers: H. Eslambolchi, Ph.D., AT&T's Chief Technology Officer and the President AT&T Labs  
*Network of the Future*

A. Cuomo - VP ST Microelectronics, Italy  
*Present and Future of Embedded Systems*

Coffee Break 11:00-11:30

### **Track 1 – Room: Tindari B**

11:30 - 12:30

#### **Session 1: QoS and Differentiated Services I**

**Chair: P. Lorenz**

1. Packet Delay and Packet Loss in the Internet  
*J. Bi, Q. Wu, Z. Li*
2. Session Level Rollback Recovery  
*A. Ciuffoletti*
3. Mechanism for Multi-domain Marking in DiffServ Architecture  
*I. Niang, F. Jacquet, D. Seret*
4. Resource Management in Differentiated Services: A Prototype Implementation  
*M. Jacobsson, S. Oosthoek, G. Karagiannis*

### **Track 2 – Room: Dionision**

11:30 - 12:30

#### **Session 2: Ad-hoc Networks I**

**Chair: M. H. Sherif**

1. Power and Cost Aware Localized Routing with Guaranteed Delivery in Ad Hoc Networks  
*I. Stojmenovic, S. Datta*
2. IP Address Configuration Algorithms for Routerless and Single-Router Zeroconf Networks  
*U. Shankar, S. Mukherjee, D. Braun*
3. The Performance of the TCP/RCWE Enhancement for Ad-Hoc Networks  
*M. Günes, D. Vlahovic*
4. Service Location Protocol Overhead in the Random Graph Model for Ad Hoc Networks  
*H. Koubaa, E. Fleury*

### **Track 3 – Room: Pitagora**

11:30 - 12:30

#### **Session 3: Traffic Management and Scheduling I**

**Chair: A. Elmaghraby**

1. Rethink the Tradeoff between Proportional Controller and PI Controller  
*M. Zhang, J. Wu, C. Lin*
2. On Synthetic Criteria for Network Traffic Control Policies  
*C. Lin, D. C. Marinescu*
3. Scheduling Real-Time Parallel Structures on Cluster Computing  
*R. Ammar, A. Alhamdan*

### **Track 4 – Room: Cordari**

11:30 - 12:30

#### **Session 4: Satellite Communications**

**Chair: H. Koraitim**

1. Capacity Provisioning and Failure Recovery in Mesh-Torus Networks with Application to Satellite Constellations  
*J. Sun, E. Modiano*
2. Service Multiplexing and Resource allocation in S-CDMA/PRMA LEO Systems  
*A. Ibrahim, S. Tohme*
3. On the Emulation of Geostationary Earth Orbit Satellite Systems  
*G. Albertengo, A. Forchino*

Lunch 12:30-14:00

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**Track 1 – Room: Tindari B**  
14:00 - 15:30

**Session 5: Video and Multimedia**  
**Chair: E. Mahmoud**

1. Rate-Based Active Queue Management with Priority Classes for Better Video Transmission  
*J. Chung, M. Claypool*
2. QoS Enhancement Methods for MPEG Video Transmission on the Internet  
*J. Takahashi, H. Tode, K. Murakami*
3. Network Constrained Smoothing: Enhanced Multiplexing of MPEG-4 Video  
*C. Bewick, R. Pereira, M. Merabti*
4. Goodput Estimation of an Access Node Buffer Carrying Correlated Video Traffic  
*A. Awad, M. W. McKimmon, R. Sivakumar*
5. How to Support Internet-based Distribution of Video on Demand to Portable Devices  
*P. Bellavista, A. Corradi*

**Track 2 – Room: Dionision**  
14:00 - 15:30

**Session 6: Wireless and Home Networks I**  
**Chair: I. Stojmenovic**

1. Performance Analysis of GSM Networks with Intelligent Underlay-Overlay  
*K. Begain, G. Rozsa, A. Pfening, M. Telek*
2. Analyzing Quality of Service of GPRS Network Systems from a User's Perspective  
*S. Porcarelli, F. Di Giandomenico, A. Bondavalli*
3. An Efficient Multiuser Detection Algorithm for CDMA Signals  
*E. Karami, M. Shiva, M. Khansari*
4. TCP Performance Evaluation during Handover among Bluetooth Network Access Points  
*F. Gallo, D. Siorpaes*
5. MAC Layer Packet-Length Adaptive CLSP/DS-CDMA Radio Networks: Performance in Flat Rayleigh Fading Channel  
*V. V. Phan, S. G. Glisic*

**Track 3 – Room: Pitagora**  
14:00 - 15:30

**Session 7: Performance Analysis**  
**Chair: H. Abdel-Wahab**

1. Predictive Methodology for High-Performance Networking  
*J. Foag, W. Brunnbauer, N. Pazos, T. Wild*
2. Dynamic Task Assignment in Server Farms: Better Performance by Task Grouping  
*L. Tan, Z. Tari*
3. Measuring End-to-End Performance of CORBA Applications using a Generic Instrumentation Approach  
*M. Debusmann, M. Schmid, R. Kroeger*
4. Analysis of Circuit-Switched Networks under Long-Range Dependent Traffic  
*G. Min, M. Ould-Khaoua*
5. Performance Evaluation of a CAC Strategy for Broadband Networks  
*N. O. Mohamed, D. Z. Deniz*

**Track 4 – Room: Cordari**  
14:00 - 15:30

**Session 8: Security I**  
**Chair: R. Montanari**

1. An Intelligent Agent-based Model for Security Management  
*K. Boudaoud, C. McCathieNevile*
2. Security as Services in Active Networks  
*Z. Liu, R. H. Campbell, M. D. Mickunas*
3. A flexible scheme for On-Line Public-Key Certificate status updating and verification.  
*E. Faldella, M. Prandini*
4. An Information Protection System for Intranets  
*G. Zhang, J. Wang, C. Cao*
5. Intruder Tracing System based on a Shadowing Mechanism  
*H. Jang, S. Kim*

**Coffee Break 15:30-16:00**

**Track 1 – Room: Tindari B**  
16:00 - 17:30

**Session 9: Modeling**  
**Chair: H. F. Abdel-Aty-Zohdy**

1. An Extendible Petri Net Model for Memex-like Applications  
*S.-U. Guan, W. Liu, K. Ong*
2. EPDA-Modeller: A Tool for Modelling a Distributed Programming Environment  
*E. Martel, F. Guerra, J. Miranda*
3. Executable Test Sequence for the Protocol Control and Data Flow Property with Overlapping  
*W.-H. Chen, J.-C. Lu*
4. Using Distributed Component Model for Active Service Deployment  
*R. Kilany A. Serhrouchni*
5. Towards a Hybrid Network Model for Wireless Packet Data Networks  
*H.-Y. Hsieh, R. Sivakumar*

**Track 2 – Room: Dionision**  
16:00 - 17:30

**Session 10: Transmission Engineering**  
**Chair: N. Rouhana**

1. Dynamic Replier Active Reliable Multicast (DRARM)  
*M. Maimour, C. -D. Pham*
2. TCP with Sender-Based Delay Control  
*H.T. Kung, K.-S. Tan, P.-H. Hsiao*
3. The Interrelation of TCP Responsiveness and Smoothness in Heterogeneous Networks  
*C. Zhang, V. Tsaoussidis*
4. How Bad TCP Can Perform In Mobile Ad Hoc Networks  
*Z. Fu, X. Meng, S. Lu*
5. Efficiency/Friendliness Tradeoff in TCP Westwood  
*R. Wang, M. Valla, M. Y. Sanadidi, B. Ng, M. Gerla*

**Track 3 – Room: Pitagora**  
16:00 - 17:30

**Session 11: Mobile Networks and Mobile Computing**  
**Chair: P. Bellavista**

1. An Integrated Neuro Configuration Management Approach for Hybrid Mobile Communication Networks  
*M. M. El-Said, A. Kumar, A. S. Elmaghraby*
2. Executions of "Home Applications" and Service Customisations in Integrated Personal Mobility Architecture  
*B. Thai, S. Wan, A. Seneviratne*
3. Solving the Consensus Problem in a Mobile Environment  
*H. Seba, N. Badache, A. Bouabdallah*
4. ISAM, A Software Architecture for Adaptive and Distributed Mobile Applications  
*Augustin, A. Yamin, J. Barbosa, C. Geyer*
5. Code Mobility for Adaptation of Multimedia Services in a VHE Environment  
*O. Tomarchio, G. Di Modica, D. Vecchio*

**Track 4 – Room: Cordari**  
16:00 - 17:30

**Session 12: Security II**  
**Chair: M. Prandini**

1. Design and Development of a Practical Security Model for a Mobile Agent System  
*A. Puliafito, O. Tomarchio*
2. Security Aspects in Standard Certificate Revocation Mechanisms: A Case Study for OCSP  
*D. Berbecaru, A. Liroy, M. Marian*
3. Authenticating Real Time Packet Streams and Multicasts  
*Alain Pannetrat and Refik Molva*
4. An Active Security Protocol against DoS attacks  
*S. P. Romano, L. Peluso, D. Cotroneo, G. Ventre*

# I S C C 2 0 0 2 F i n a l P r o g r a m

## The Seventh International Symposium on Computers and Communications

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3 July, 2002

Plenary 9:00-10:30

Chairs: A. Corradi, M. Daneshmand

Room: Tindari B

**Keynote Speakers: R. Saracco - Future Centre - Telecom Italia Lab (TILAB)**  
*Is there a future for Telecommunications? Looking into today's situation and challenges lying ahead*

**J. MacArthur Hultin - Dean, the Howe School of Technology Management - Stevens Institute of Technology, USA**  
*Law, Regulations, and Technology: Markets, Innovation, and the Global Economy*

**Coffee Break 10:30-11:00**

<b>Track 1 – Room: Tindari B</b> 11:00 - 12:30	<b>Track 2 – Room: Dionision</b> 11:00 - 12:30	<b>Track 3 – Room: Pitagora</b> 11:00 - 12:30	<b>Track 4 – Room: Cordari</b> 11:00 - 12:30
<b>Session 13: QoS and Differentiated Services II</b> <b>Chair: O. Tomarchio</b> <ol style="list-style-type: none"> <li>1. Strategies for Dynamic Management of the QoS of Mobile Users in Wireless Networks through Software Agents <i>J. Ye, S. Papavassiliou, G. Anastasi, A. Puliafito</i></li> <li>2. Design of a Middleware for QoS-aware Distribution Transparent Content Delivery <i>G. Fábán, A. T. van Halteren, M. van de Logt, F. Stoinski</i></li> <li>3. Differentiated Services: An Experimental vs. Simulated Case Study <i>S. Andreatti</i></li> <li>4. Traffic and Interference Adaptive Scheduling for Internet Traffic in UMTS <i>M. Conti, E. Gregori</i></li> <li>5. A Study of QoS Performance for Real Time Applications over a Differentiated Services Network <i>E. Tsolakou, E. Nikolouzou, I. S. Venieris</i></li> </ol>	<b>Session 14: Wireless and Home Networks II</b> <b>Chair: R. Saracco</b> <ol style="list-style-type: none"> <li>1. HomeMAC: QoS-based MAC Protocol for the Home Network <i>W.-J. Hwang, M. Wada, H. Tode, K. Murakami</i></li> <li>2. Facilitating Adaptation to Trouble Spots in Metropolitan Area Wireless Networks <i>V. Sunderam, J. Pascoe, R. Loader</i></li> <li>3. Throughput Enhancement in Wireless Ad Hoc Networks with Spatial Channels- A MAC Layer Perspective <i>D. Lal, R. Gupta, D. P. Agrawal</i></li> <li>4. End-to-end versus Explicit Feedback Measurement in 802.11 Networks <i>M. Kazantzidis, M. Gerla</i></li> <li>5. MR<sup>2</sup>RP: The Multi-Rate and Multi-Range Routing Protocol for Ad Hoc Wireless Networks <i>S. -T. Sheu, J. Chen</i></li> </ol>	<b>Session 15: Routing</b> <b>Chair: S. Tohme</b> <ol style="list-style-type: none"> <li>1. O(log n) Dynamic Packet Routing <i>S. Sahni, K. Suk Kim</i></li> <li>2. End-to-End Quality of Service in multi-class service, high-speed networks via optimal least weight routing <i>J. Jiang, S. Papavassiliou</i></li> <li>3. Explicit Multicast Routing Algorithms for Constrained Traffic Engineering <i>Y. Seok, Y. Lee, Y. Choi, C. Kim</i></li> <li>4. An IP Address Configuration Algorithm for Multi-Router Zeroconf Networks <i>C. Akinlar, S. Mukherjee, A. Udaya Shankar, D. Braun</i></li> <li>5. A Linear Programming Based Approach for Computing Optimal Splitable Fair Routing <i>D. Nace</i></li> </ol>	<b>Session 16: Security III</b> <b>Chair: G. Schaefer</b> <ol style="list-style-type: none"> <li>1. Increasing Security and Availability of an Internet Voting System <i>G. Dini</i></li> <li>2. Automatic Implementation System of Security Protocols Based on Formal Description Techniques <i>L. Mengual, N. Barcia, E. Menasalvas, E. Jiménez, J. Setién, J. Yáñez</i></li> <li>3. Active Hardware Attacks and Proactive Countermeasures <i>A.G. Voyiatzis, D.N. Serpanos</i></li> <li>4. An Active Network approach to Virtual Private Networks <i>S. P. Romano, R. Maresca, M. D'Arienzo, M. Esposito, G. Ventre</i></li> </ol>

**Lunch 12:30-14:00**

**I S C C 2 0 0 2 F i n a l P r o g r a m**  
**The Seventh International Symposium on Computers and Communications**  
**1-4 July, 2002 Taormina - Giardini Naxos, Italy**

**Track 1 – Room: Tindari B**  
14:00 - 15:30

**Session 17: Voice and Audio**

**Chair: A. Puliafito**

1. On the suitability of the E-Model to VoIP networks  
*R. Estepa, A. Estepa, J. M. Vozmediano*
2. Novel Multiple Access Protocol for Voice over IP in Wireless LAN  
*T. Hiraguri, T. Ichikawa, M. Iizuka, M. Morikura*
3. An Algorithm for Playout Delay Adjustment for Interactive Audio Applications in Mobile Ad Hoc Networks.  
*M. Benaissa, V. Lecuire, F. Lepage*
4. Comparison of Voice Activity Detection Algorithms for VoIP  
*R. V. Prasad, A. Sangwan, H. S. Jamadagni, M. C. C. hiranth, R. Sah, VishalGaura*

**Track 2 – Room: Dionision**  
14:00 - 15:30

**Session 18: Ad Hoc Networks II**

**Chair: T. Saadawi**

1. A Distributed Mutual Exclusion Algorithm for Mobile Ad-Hoc Networks  
*R. Baldoni, A. Virgillito, R. Petrassi*
2. Performance of Group Communications over Ad-Hoc Networks  
*M. Mosko, J. J. Garcia-Luna-Aceves*
3. Partitioning Avoidance in Mobile Ad Hoc Networks Using Network Survivability Concepts  
*D. Goyal, J. Caffery, Jr.*
4. An Adaptive, Integrated Approach to Reliable Group Communications in Multi Hop Ad Hoc Networks  
*K. Viswanath, K. Obrazcka*
5. Self-securing Ad Hoc Wireless Networks  
*H. Luo, P. Zerfos, J. Kong, S. Lu, L. Zhang*

**Track 3 – Room: Pitagora**  
14:00 - 15:30

**Session 19: Traffic Management II**

**Chair: H. Hassanein**

1. Scheduling Constant Bit Rate Flows in Data over Cable Networks  
*N. Naaman, R. Rom*
2. Fair-Rate GPS: A New Class for Decoupling Delay and Bandwidth Properties  
*H. M. Mokhtar, R. Pereira, M. Merabti*
3. Bandwidth Allocation in a Dynamic Environment Using a Variable Pricing Policy  
*A. S. Elmaghraby, A. Kumar, M. M. Kantardzic, M. G. Mostafa*
4. Transport Layer Proxy for Stateful UDP Packet Filtering  
*R. K. C. Chang, K. P. Fung*
5. High-layer Protocol and Service Management Based on Passive Network Traffic Monitoring: the Trace Management Platform  
*L. Gaspary, E. Meneghetti, F. Wendi, L. Braga, L. F. Balbinot, R. Storch, L. Tarouco*

**Track 4 – Room: Cordari**  
14:00 - 15:30

**Session 20: Distributed Applications**

**Chair: C. Stefanelli**

1. A Parallel Hill Climbing Algorithm for Pushing Dependent Data in Clients-Providers-Servers Systems  
*F. Ovalle, J. Solano, I. Stojmenovic*
2. Software Supports for Preemptive Rollback in Optimistic Parallel Simulation on Myrinet Clusters  
*F. Quaglia, A. Santoro*
3. Mining Negative Association Rules  
*X. Yuan, B. P. Buckles, Z. Yuan, J. Zhang*
4. Introducing Distribution into Applications: a Reflective Approach for Transparency and Dynamic Fine-Grained Object Allocation  
*A. Di Stefano, G. Pappalardo, E. Tramontana*
5. Autonomous Consistency Coordination Technique among Distributed Database Systems for Achieving High Reliability  
*C. Perez Leguizamo, S. Kato, K. Mori*

**Coffee Break 15:30-16:00**

**I S C C 2 0 0 2 F i n a l P r o g r a m**  
**The Seventh International Symposium on Computers and Communications**  
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**Track 1 – Room: Tindari B**  
16:00 - 17:30

**Session 21: ATM**

**Chair: D. N. Serpanos**

1. An Adaptive Survivability Admission Control Mechanism Using Backup VPs for Self-Healing ATM Networks  
*C.-C. Lo, B.-W. Chuang*
2. Queueing Analysis of Dynamic Bandwidth Allocation Scheme for IP traffic on ATM networks  
*D. H. Han*
3. Moderating traffic flow over Conventional ATM Service  
*T. Nagase, T. Araki, T. Nakamura*
4. Congestion Control Strategy for Transient Video Source in ATM Network  
*T. Sanguankotchakorn, J. Aung, A. A. Aung*
5. Signalling performance evaluation of large ATM networks based on performance measurements of isolated switches  
*S. Szekely*

**Track 2 – Room: Dionision**  
16:00 - 17:30

**Session 22: Wireless and Home Networks III**

**Chair: M. H. Sherif**

1. BIG: Bluetooth Internet Gateway  
*N. Rouhana, E. Horlait*
2. Spatial FTDMA and Aloha with Preamble Sampling for Low Power Ad Hoc Wireless Sensor Networks  
*A. El-Hoiydi*
3. Carrier frequency offset estimation and correction for hiperlan2 wlans  
*A. Miaoudakis, A. Koukourgiannis, G. Kalivas*
4. Link Performance of an Ultra Wide Bandwidth Wireless In-Home Network  
*D. Gerakoulis, P. Salmi*
5. Resource and Performance Management in Wireless Communications Networks  
*C.-H. Lin, F. Yeong-Sung Lin*

**Track 3 – Room: Pitagora**  
16:00 - 17:30

**Session 23: Optical Networks**

**Chair: H. Moftah**

1. Tunable Fiber Bragg Grating-based a pair of M-sequence coding for Optical CDMA  
*D.-Zu Hsu*
2. Partial Path Protection for WDM Networks: End-to-End Recovery Using Local Failure Information  
*H. Wang, E. Modiano, M. Medard*
3. Survivable Routing in WDM Networks  
*A. Sen, B. Hao, B. Hong Shen*
4. Spare Capacity Planning Using Survivable Alternate Routing for Long-Haul WDM Networks  
*B. Zhou, H. T. Mouftah*

**Track 4 – Room: Cordari**  
16:00 - 17:30

**Session 24: Agents and Mobile Agents**

**Chair: A. Corradi**

1. A Secure Approach for Mobile Agent Migration Control  
*S.-U. Guan, T. Wang, S.-H. Ong*
2. Mechanisms to Support Situated Agent Systems  
*S. Bandini, F. DePaoli, S. Manzoni, C. Simone*
3. Mobile Agent Solutions for Accounting Management in Mobile Computing  
*P. Bellavista, A. Corradi, S. Vecchi*
4. View Generator (VG): A Mobile Agent Based System for the Creation and Maintenance of Web Views  
*G. Samaras, C. Spyrou, E. Pitoura*
5. From Client/Server to Mobile Agents: An in-depth Analysis of the Related Performance Aspects  
*M. Scarpa, M. Villari, A. Zaia, A. Puliafito*

**Organizational Meeting for ISCC 2003 and 2004, 17:40-18:30**

**C. Savolaine**

**Room: Tindari B**

**Conference Banquet 20:00**

# I S C C 2 0 0 2 F i n a l P r o g r a m

## The Seventh International Symposium on Computers and Communications

1-4 July, 2002 Taormina - Giardini Naxos, Italy

4 July, 2002

**Plenary 9:00-9:10**  
**Chairs: C. Savolaine**  
**Room: Tindari B**

**Welcome remarks**  
**Ing. Arturo Alonci**  
**Presidente Ordine degli Ingegneri di Messina**

**PANEL: 9:15 - 10:30**  
**Moderators: M.H. Sherif, A. Elmaghraby**

**Wireless LANs and Domotics**

Prof. Claudine Guidat - *Director of ENSGSI and 1<sup>st</sup> vice-Mayor, Nancy, France*

Mr. Alessandro Nencioni - *TDC ITALIA srl, Italy*

Dr. Susanne Wetzel - *Stevens Institute of Technology, Hoboken, New Jersey, USA*

**Coffee Break 10:30-11:00**

**Track 1 – Room: Tindari B**

11:00 - 12:30

**Session 25: QoS and Differentiated Services III**

**Chair: A. Puliafito**

1. EDS: A New Scalable Service Differentiation Architecture for Internet  
*B. Gaidioz, P. Primet*
2. End-to-End Relative Differentiated Services for IP Networks  
*Cs. Simon, A. Vidács, I. Moldován, A. Török, K. Ishibashi, A. Koike, K. Ichikawa*
3. Call Admission Control Algorithms for Tandem Generalized Processor Sharing Networks  
*P. Barta, F. Nemeth, R. Szabo, J. Biro*
4. An Architecture for Automated Replacement of QoS Policies  
*L. Zambenedetti Granville, G. A. Faraco de Sá Coelho Maria, J. B. Almeida Liane, M. Rockenbach Tarouco*
5. A New FLC Based Model for Differentiated Services  
*M. H. Yaghmae, S. M. Safavi*

**Track 2 – Room: Dionision**

11:00 - 12:30

**Session 26: Wireless and Home Networks IV**

**Chair: S. Wetzel**

1. Code Division Multiple Access with Adaptable Reservation: A New Paradigm for CDMA-based Multimedia Wireless Networks  
*C.-H. Yeh, R. Iltis, H. Lee*
2. Wireless Access Server for Quality of Service and Location based Access Control in 802.11 Networks  
*S. Garg, M. Kappes*
3. UMTS-TDD: A Solution for Internetworking Bluetooth Piconets in Indoor Environments  
*M. Gerla, Y. Lee, R. Kapoor, T. Kwon, A. Zanella*
4. Very Efficient Wireless Frequency Usage by Coherent Addition of Multipath Signals Using ZCCZ Sequence Set  
*N. Suehiro, T. Imoto, N. Kuroyanagi*
5. SIP Call Setup Delay in 3G Networks  
*I. D. D. Curcio, M. Lundan*

**Track 3 – Room: Pitagora**

11:00 - 12:30

**Session 27: Congestion Control**

**Chair: D. Nace**

1. Analysis and Application of Congestion Measures  
*D. D. Luong, J. Bíró*
2. Additive Increase Adaptive Decrease Congestion Control: Mathematical Modeling, Simulations and Experiments  
*A. Grieco, S. Mascolo*
3. Adaptive Explicit Congestion Notification  
*Z. Zheng, R. Kinicki*
4. Robustness Issues of Fluid Approximations for Congestion Detection in Best Effort Networks  
*F. Châté, B. Ducourthial, S.-I. Niculescu*
5. On Averaging and Randomization for Active Queue Management Congestion Avoidance  
*T. Ziegler*

**Track 4 – Room: Cordari**

11:00 - 12:30

**Session 28: World Wide Web**

**Chair: A. Tantawy**

1. An Integrated Architecture for the Scalable delivery of Semi-Dynamic Web Content  
*D. Dolev, O. Mokry, Y. Shavitt, I. Sukhov*
2. Exploitation of Different Types of Locality for Web Caches  
*D. N. Serpanos, G. Karakostas*
3. Performance Comparison of Alternative Web Caching Techniques  
*H. Hassanein, Z. Liang, P. Martin*
4. Adaptive Resource-based Web Server Admission Control  
*T. Voigt, P. Gunningberg*
5. Test++: Ad Adaptive Training System on the Internet  
*M. Barra, A. Iannaccone, G. Palmieri, V. Scarano*
6. Intermediaries for the World-Wide Web: Overview and Classification  
*Marios Dikaiakos*

**Lunch 12:30-14:00**

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**Track 1 – Room: Tindari B**  
14:00 - 15:30

**Session 29: MPLS**

**Chair: R. K. C. Chang**

1. A New Approach to Construct Multicast Trees in MPLS Networks  
*A. Boudani, B. Cousin*
2. A Hierarchical Distributed Protocol for MPLS Path Creation  
*M. El-Dariby, D. Petriu, J. Rolia*
3. Capacity-balanced Alternate Routing for MPLS Traffic Engineering  
*P.-H. Ho, H. T. Mouftah*
4. Robust Path Design Algorithms for Traffic Engineering with Restoration in MPLS Networks  
*E. Yetginer, E. Karasan*

**Track 2 – Room: Dionision**  
14:00 - 15:30

**Session 30: Broadcast and Multicast**

**Chair: S. Papavasiliou**

1. The Cost of Application-level Broadcast in a fully Decentralized Peer-to-peer Network  
*M. Portmann, A. Seneviratne*
2. Latent Multicast Monitoring  
*R. State*
3. Design of a Multicast File Transfer Tool on Top of ALC  
*V. Roca, B. Mordelet*
4. Fast Topological Design with Simulated Annealing for Multicast Networks  
*T. Miyoshi, S. Shimizu, Y. Tanaka*
5. Congestion Controlled Adaptive Lightweight Multicast in Wireless Mobile Ad Hoc Networks  
*K. Tang, K. Obraczka, S.-Ju Lee, M. Gerla*

**Track 3 – Room: Pitagora**  
14:00 - 15:30

**Session 31: Traffic Management III**

**Chair: E. Mahmoud**

1. OC-48c Traffic Tester for Generating and Analyzing Long-range Dependence Traffic  
*A. Tagami, T. Hasegawa, T. Hasegawa, K. Nakao*
2. A Multi-Agent Approach to Support Dynamic Scheduling Decisions  
*A. Gozzi, M. Paolucci, A. Boccalatte*
3. Object Scheduling in Broadcast Systems for Energy-limited Clients  
*D. N. Serpanos, A. P. Traganitis*
4. Alternative admission rules based on the many sources asymptotic  
*G. Seres, A. Szlavik, J. Zatoryi, J. Biro*
5. Fair Queuing with Round Robin: A New Packet Scheduling Algorithm for Routers  
*A. Sen, R. Samprathi, I. Mohammed, S. Bandopadhyay*

**Track 4 – Room: Cordari**  
14:00 - 15:30

**Session 32: Modeling, Properties and Algorithms**

**Chair: G. Anastasi**

1. Exploiting the Structure of Space-Time Codes  
*N. Al-Dhahir*
2. Reliability assessment of network elements using black box testing  
*M. H. Sherif, D. Hoeflin, M. Recchia*
3. Internet Topology Modeler Based on Map Sampling  
*D. Magoni, J.-J. Pansiot*
4. Decoding Codes with the Identifiable Parent Property  
*M. Fernandez, M. Soriano*
5. Combining Homogeneous Classifiers for Centroid-Based Text Classification  
*V. Lertmattee, T. Theeramunkong*
6. A New Method for Finding Generalized Frequent Itemsets in Generalized Association Rule Mining  
*K. Sriphaew, T. Theeramunkong*

**Coffee Break 15:30-16:00**

**Closing Session and Conference Feedback 16:00-16:30**

**A. Corradi, M. Daneshmand**

**Room: Tindari B**

**P l e a s e   j o i n   u s   a t   t h e   n e x t**

**IEEE Symposium on Computers and Communications**

**ISCC 2003**

**30 June – 3 July 2003**

**Antalya, Turkey**

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