

MARIO BALDI

Curriculum Vitae et Studiorum

HIGHLIGHTS

- **MSc degree** in Electrical Engineering **with honors** from Politecnico di Torino in 1993.
- **PhD** in Computer and Systems Engineering from Politecnico di Torino in 1998.
- **Associate Professor** of Information Processing Systems since 2002 (on tenure track since 1997).
- **Vice Dean** of the **Sino-Italian Campus** PoliTong in Shanghai since 2006.
- **Coordinator** of the BSc Programme in Information Technology Engineering at the Sino-Italian Campus, Tongji University, Shanghai, since 2006.
- **Head** of the **Computer Networks Group (NetGroup)** at Dipartimento di Automatica e Informatica (Control and Computer Engineering Department) from 2001 to 2007 growing it from two to ten members.
- **Manager** of several **research projects** involving both academic and industrial partners, funded by European Commission, local government, Italian Ministry of Education, University and Research, various companies, including Cisco Systems and Telecom Italia, and industrial research institutions including Telecom Italia Labs and Microsoft Research.
- Instructor of virtually all computer networks courses of both the BSc and MSc Computer Engineering programs at Politecnico di Torino from 2003 to 2007, Mario Baldi designed their content to ensure high integration, complementarity, and wide coverage.
- Initiation and development of **international relations** including the design of double degree and integrated programs, negotiation of academic agreements, promotional activities.
- **Applied research and entrepreneurship** resulting in **20 patents**, 16 of which already issued, besides several scientific publications:
 - **Vicepresident** for Protocol Architecture at Synchrodyne Networks, Inc. since its founding: fund raising, development of the technology owned by the Company and intellectual property protection;
 - **Founder** and **CTO** (Chief Technology Officer) at TrustesFlow Systems, Inc.: invention of the basic principle underlying the Company's technology and intellectual property protection.
- **Visiting student, professor, and researcher** at several universities and research centers including IBM T. J. Watson Research Center, Yorktown Heights, NY, Columbia University, New York, NY, International Computer Science Institute, Berkeley, CA, La Trobe University, Melbourne, Australia, Institut de Technologie du Cambodge, Phnom Penh, Cambodia, Università di Trento, Italy, Tongji University, Shanghai, China.
- **Two books** (one at its second edition) and **more than 100 papers** in scientific journals and conferences.

PRESENT EMPLOYMENT

POLITECNICO di TORINO (TECHNICAL UNIVERSITY of TORINO), Department of Control and Computer Engineering: **Associate Professor of Information Processing Systems** since 2002.

CURRENT APPOINTMENTS

SINO-ITALIAN CAMPUS, Shanghai, China. **Vice Dean** for Politecnico di Torino since September 2006; resident in Shanghai since September 2007. The Sino-Italian Campus was established in 2006 pursuant to an agreement between the Chinese Ministry of Education and the Italian Ministry for Education, University and Research (MIUR) that provided initial funding (6 M€). Academic and operation responsibilities include coordinating teaching activities, assuring course quality, designing and developing study programs, fund raising, and facilitating research cooperation of involved Universities among themselves and with Italian and Chinese Industry.

BSc PROGRAMME in Information & Communication Technology at the Sino-Italian Campus, Tongji University, Shanghai (China). **Coordinator** since September 2006.

EDUCATION

POLITECNICO DI TORINO (Italy): **Ph.D.** degree awarded in **Computer and Systems Engineering**, 1998. Dissertation topic: *Protocols for High Speed Computer Networks*; research focused on provision of real-time services over packet switched networks. **M.S.** degree awarded with honors (summa cum laude) in **Electronic Engineering** (specialization in Computer Engineering), 1993. Thesis title: *Strumenti per la modellizzazione dei processi software* (Software Process Modeling tools).

Professional Engineer Licensure, 1994.

LICEO CLASSICO S. PELLICO (Italy): High School degree in Classical Studies, 1987.

LANGUAGES

Italian and **English**: Complete spoken and written fluency. **French**: French: very good listening and fair speaking. **Spanish**: good listening. **German**: Rudimentary listening (learning). **Chinese**: learning.

EMPLOYMENTS

POLITECNICO di TORINO (TECHNICAL UNIVERSITY of TORINO), Department of Control and Computer Engineering: **Associate Professor of Information Processing Systems** – since 2002.

SYNCHRODYNE NETWORKS, Inc. (New York City): full-time commitment, 1999-2001.

POLITECNICO di TORINO (TECHNICAL UNIVERSITY of TURIN), Dipartimento di Automatica e Informatica (Department of Control and Computer Engineering): **Assistant Professor of Information Processing Systems**, 1997-1999.

RESEARCH POSITIONS and ACTIVITIES

COMPUTER NETWORKS GROUP (NetGroup), Politecnico di Torino: Head, 2001 – 2007. The group focuses on various aspects of networking, including traffic monitoring and analysis, high performance switching, quality of service on packet networks, time-driven priority scheduling, experimentation with IPv6, and some aspects of security. The group has been participating in various projects funded by the **European Union** and the **Italian Ministry for Education, University and Research (MIUR)**, cooperating with **various Companies**, and has been supported by grants of various nature.

ISTITUTO SUPERIORE MARIO BOELLA (Turin, Italy): **Consulting researcher** for working on the *Harrison* research project, 2007-2008.

INTERNATIONAL COMPUTER SCIENCE INSTITUTE (ICSI) (Berkeley, CA): **Visiting Researcher** on evaluation of the efficiency of Information Dispersal techniques for providing Quality of Service (QoS), 1998. A grant from CNR (the Italian National Research Council) financed the visit.

COLUMBIA UNIVERSITY (New York City): **Visiting Scholar** on “Synchronous Packet Switching Techniques for Real-time Services,” 1997. A grant from Centro Studi e Laboratori Telecomunicazioni S.p.A. (CSELT, now Telecom Italia Labs) covered travel and living expenses.

IBM, T. J. Watson Research Center (Yorktown Heights, NY). **Visiting Researcher** on “Delay Aspects of Videoconferencing over Packet Switching Networks,” 1996. The visit was part of his Ph.D. program and was partly funded by a scholarship from CSELT (now Telecom Italia Labs)

AC110 NICE: Politecnico di Torino Team Coordinator for bid and realization of project, 1995–1997. NICE (National Host InterConnection Experiment), funded by the European Union in the context of the ACTS programme, had the objective to install and test a support framework for teleconference events transmitted throughout Europe by means of a pilot ATM wide area network.

CSI Piemonte (Torino, Italy). **Scholarship** for research and experimentation at the Department of Control and Computer Engineering of Politecnico di Torino. July 1994 - July 1995.

Digital Equipment Corporation (DEC). **Scholarship** for research and experimentation at the Department of Control and Computer Engineering of Politecnico di Torino. March - June 1994.

RESEACH INTERESTS include internetworking, high performance switching, optical networking, quality of service, multimedia over packet networks, voice over IP, trust in distributed software execution, and computer networks in general.

Funded Research Projects

RE-TRUST: Proposal preparation and management of Politecnico's participation, 2006-2009. RE-TRUST (Remote EnTrusting by RUn-time Software authentication) is a Specific Targeted Research or Innovation Project (STREP) funded by the European Commission under IST (Information Society Technologies) Programme contract FP6-021168 up to 1.55 M€ of which 319 K€ assigned to Politecnico di Torino. The project focuses on certifying the execution of software running on a remote, unprotected environment and Politecnico's contribution includes design, prototypal implementation and evaluation of a purely software solution.

MEADOW: Proposal preparation, management of NetGroup's participation, and technical contribution, 2006 – 2009. MEADOW (MEsh ADaptive hOme Wireless networks) is funded by the Italian Ministry for Education, University and Research (MIUR) in the context of the Research Fostering Fund (FAR) Programme up to 2.41 M€ of which 117 K€ assigned to the NetGroup. The contribution of the NetGroup focuses on programmability of network devices and provision of quality of service over mesh wireless networks.

HARRISON: Technical contribution as a consultant to Istituto Superiore Mario Boella (ISMB), 2006-2007. Funded by the European Commission as the selected bid to the 3rd Galileo Joint Undertaking Call - Galileo Time and Synchronization Applications up to 1.9 M€ of which 120 K€ assigned to ISMB. The contribution to the project focuses on the deployment of Galileo time to enable services with guaranteed quality in packet networks.

OSATE: Technical contribution, 2006-2007. OSATE (Optics in Switching Architectures: Theory and Experimentation) was funded by the Italian Ministry for Education, University and Research (MIUR) in the context of the Relevant National Interest Projects (PRIN) Programme up to 149 K€ of which 35 K€ assigned to Politecnico di Torino. NetGroup's contribution focuses on experimentation of ultra-scalable switching architectures.

QUASAR: Proposal preparation, management of Politecnico's participation, and technical contribution, 2005-2006. QUASAR (Quality and Controllability of Communication Services over Heterogeneous Networks) was funded by the Italian Ministry for Education, University and Research (MIUR) in the context of the Relevant National Interest Projects (PRIN) Programme up to 144 K€ of which 28 K€ assigned to Politecnico di Torino. NetGroup's contribution focused on efficient solutions for implementing programmability in network devices.

E-NEXT: Proposal preparation, management of Politecnico's participation, technical contribution, 2003 – 2006. E-NEXT (Emerging Networking Experiments and Technologies) is a Network of Excellence (NOE) funded by the European Union in the context of the IST (Information Society Technologies) Programme of Framework Programme 6 and focuses on computer networking.

NICE: Proposal preparation, management of Politecnico's participation, and technical contribution, 1995 – 1997. NICE (National Host InterConnection Experiment) was funded by the European Commission under ACTS Programme contract AC110. Politecnico's contribution focused on the setup and experimentation of a videoconferencing and distributed collaboration system.

Research Contracts

Cisco Systems (CA, USA), 2009: Service Access on Highway VANETs, 93 k\$

Cisco Systems (CA, USA), 2007: Advancing High-performance Packet Processing, 120 k\$

Telecom Italia Lab (Italy), 2006: IP networking evolution, 10 K€

CSI Piemonte (Italy), 2005: Experimentation with e-presence services over IPv6 networks, 41 K€

Microsoft Research (United Kingdom), 2003: Prototypal implementation of a remote software authentication system, 9 K€

Telecom Italia Lab (Italy), 2003: IP traffic classification and processing, 30 K€

Telecom Italia Lab (Italy), 2002: Advanced Networking Services, 50 K€

TEACHING POSITIONS

TONGJI UNIVERSITY (Shanghai, China): *Guest Professor*, since 2008.

UNIVERSITY OF TRENTO (Trento, Italy): *Visiting Professor*, May 2006.

INSTITUT DE TECHNOLOGIE DU CAMBODGE (Phnom Penh, Cambodia): *Visiting Professor*, Spring 2005.

LA TROBE UNIVERSITY at Bundoora (Melbourne, Victoria, Australia): *Honorary Visiting Professor* at the Department of Computer Science and Computer Engineering, Fall 2004.

UNIVERSITY OF ILLINOIS AT CHICAGO: *Adjunct Professor of Computer Engineering*, 1999.

TEACHING EXPERIENCE

Have **taught** the following graduate and undergraduate courses, 1995-present (in chronological order):

- Communication networks
- Computer Architecture
- Internet: architecture and protocols
- Network technologies and services
- Computer Networks, curriculum in Computer Engineering and Electrical Engineering
- Computer Networks, curriculum in Business Engineering
- Computer Networks II
- Design of local and metropolitan area networks
- Infrastructures and services for wide area networks
- Technologies and Services for computer networks
- Computer network technologies
- Internet and Communication Protocols
- Introduction to Computer Networks
- Telecommunications Networks I
- Protocols
- Computer Communication Networks
- Fundamentals of Computer Engineering
- Object Oriented Programming
- Operating Systems
- Parallel Computing and Complex Architectures
- Algorithms and Advanced Programming
- Fundamentals of Computer Science
- Fundamentals of Computer Science III
- Digital Circuits

Have **taught** part of the video course on “Computer Networks II” produced and distributed by Consorzio Nettuno, Rome, Italy and being used in undergraduate distance learning curricula throughout Italy. Filmed in 2003.

Have given the following **tutorials**:

- “Time for a Greener Internet” at
 - Southeast University, School of Computer Science and Engineering, Nanjing (China), Nov. 2009.
 - Cisco Systems, Research and Development Co., Shanghai (China), May 2009.
- “A Routing Solution for Service Access in Highway VANET,” City University of New York, New York (NY, USA), Nov. 2008
- “Pipeline forwarding” at
 - Computer Science Department, Rensselaer Polytechnic Institute, Troy (NY, USA), March 2008.
 - School of Computer and Information Technology, Beijing Jiaotong University, Beijing (China), Dec. 2007.

- “MPLS - Timeliness, benefits, and deployment from the origins, to ATM, to Optical Networks” at
 - IEEE Tutorials Now™, available on-line since Jan. 2008.
 - 2006 IEEE GLOBECOM, San Francisco (CA, USA), Nov. 2006.
 - IEEE Networks 2006, New Delhi (India), Nov. 2006.
 - 2005 IEEE International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2005), Split (Croatia), Sep. 2005.
- “Interactive Multimedia Networking” at
 - IEEE Symposium on Computers and Communications (ISCC 07), Aveiro (Portugal), July 2007.
 - 5th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT 2005), Athens (Greece), Dec. 2005.
 - IEEE International Conference on Telecommunications (ConTEL 2005), Zagreb (Croatia), June 2005;
 - IEEE International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2003), Split, Dubrovnik (Croatia), Ancona, Venezia (Italy), Oct. 2003;
 - IASTED International Conference on Communication Systems and Networks (CSN 2003), Benalmadena, Spain, Sep. 2003.
- “MPLS Traffic Engineering” at 2002 IEEE Workshop on IP Operations and Management (IPOM 2002), Dallas, Texas, Oct. 2002.
- “Time-Driven Priority Scheduling: operating principles, benefits, and implementation,” at
 - La Trobe University, Department of Computer Science and Computer Engineering, Melbourne, Australia, Oct. 2004.
 - Melbourne University, Department of Electrical and Electronic Engineering, Melbourne, Australia, Oct. 2004.
- “The TrustedFlow Protocol: Idiosyncratic Signatures for Authenticated Remote Execution” at Microsoft Research, Cambridge, UK, Mar. 2004.
- “End-to-end Delay of Videoconferencing over Packet Switched Networks” at
 - International Computer Science Institute (ICSI), Berkeley, California, Aug. 1998;
 - IBM T. J. Watson Research Center, Yorktown Heights, New York, Sep. 1996.

Have delivered the following **keynote addresses**:

- “Trusted Remote Execution - Relevance, Possible Solutions, and the RE-TRUST Project,” 3rd Workshop of the International Society for Scientific Innovation (ISSI 2009), Beijing (China), Oct. 2009.
- “End-to-end Quality of Service - Putting Together Wired Backbones, Wireless Links and Mobile Terminals,” International Symposium on Future Mobile Communication Technology (FMCT), Chongqing (China), Oct. 2009.

Have served as **Instructor** for various training seminars offered by the following training companies, 1995-present:

- Telecom Italia Learning Services (formerly Scuola Superiore Guglielmo Reiss Romoli — SSGRR)
- Teach s.r.l.
- FasterNet s.r.l.
- Studio Reti s.a.s.
- Fiore s.r.l.
- Elea S.p.A.

Have served as **Instructor** for various in-house training seminars of the following companies, 1995-present:

- Telecom Italia
- Ansaldo
- Eni
- COLT
- A.N.A.S. (Italian National Road Maintenance Company)
- Telefonica Argentina
- Omnitel
- FIAT

Topics taught in training seminars include (in chronological order):

- Technologies for Local Area Networks
- Design of Local Area Networks
- Internetworking and routing protocols
- Routing in the Internet: Advanced Topics
- Voice Over IP
- Multi-protocol Label Switching (MPLS)
- Virtual Private Network (VPN) principles, technologies, and configuration
- Configuration of Multiprotocol Routers
- Advances in the Internet and its Protocol Suite
- ATM Networks
- Quality of Service in the Internet
- Object Oriented Analysis and Design
- Software Quality and Software Processes
- Software Testing
- Software Review and Audit
- Software Quality and ISO 9000.

OTHER ACADEMIC OFFICES

International Relations Office, Politecnico di Torino (Technical University of Turin). Support for initiation and development of relations with **Chinese Institutions**, since 2006. Contributions include designing double degree and integrated programs, negotiating academic agreements, promotional activities.

Master Innovation at Politecnico di Torino (Technical University of Turin). Scientific Committee member since 2003.

Master in Networking and Security at Telecom Italia Learning Services (TILS). Scientific Committee member since 2003.

IEEE Network Magazine. Guest Editor of the Special Issue “Advances in Network Systems Architecture,” to be published in July 2007.

Journal of Communications Software and Systems (JCOMSS), IEEE Publisher. Editorial Board Member since 2005.

SPIE Optical Networks Magazine, Kluwer Academic Publisher. Guest Editor and Editorial Board Member since 2002.

Technical Program Committee Member for various conferences, including:

- IEEE Infocom,
- International Conference on Network Protocols (ICNP),
- Workshop on High Performance Switching and Routing (HPSR)
- Symposium on Optical Networking in association with the IEEE Conference on Communications,
- IEEE Workshop on IP Operations and Management (IPOM),
- International Workshop on QoS in Multiservice IP Networks,
- International Workshop on Quality of Future Internet Services (QoFIS).

External Member of PhD Thesis Review Committee for the International Doctorate School in Information and Communication Technology of the University of Trento (Italy), since 2004.

PROFESSIONAL ACTIVITIES

TRUSTEDFLOW SYSTEMS, INC.: *founder and CTO*. The Company has developed intellectual property related to a solution for the trusted execution of software on remote untrusted systems.

UNIVERSITY OF VERONA: reviewer for finding proposals submitted to the program "Bando Joint Projects - JP07", 2007.

UNIVERSITY OF TRENTO (Trento, Italy): *Consulting Professor*, since 2006

CROATIAN MINISTRY FOR SCIENCE EDUCATION AND SPORT: reviewer for funding proposals, since 2006.

ToPIX (Torino Piemonte Internet Exchange): member of the **Program Development Committee**, 2006

AGENZIA DELLE ENTRATE DEL MINISTERO DEL TESORO (REVENUE AGENCY, ITALIAN MINISTRY OF TREASURY): consultant for the optimization of nationwide computer network, 2004.

ATLANET S.p.A.: consultant on a survey of Voice over IP infrastructure to assess the extendibility of assets' lifetime, 2004.

NETWORK FOR THE ITALIAN PUBLIC ADMINISTRATION: consultant to CONSIP for the preparation of a European call, 2003.

ITALIAN MINISTRY FOR EDUCATION, UNIVERSITY AND RESEARCH (MIUR): reviewer for funding proposals, 2003 – present.

POLITECNICO DI TORINO, CAMPUS NETWORK: member of the technical committee for the design, deployment, and evolution of the institution's campus network.

POLITECNICO DI TORINO and ISTITUTO SUPERIORE MARIO BOELLA, INTERNET PROTOCOLS and NETWORK ARCHITECTURE LABORATORY (LIPAR): scientific committee member, 2003 – present.

INTERNATIONAL MARKETING CO. (Cuneo, Italy): **Contracting Programmer and Consultant**. 1990–1991.

PATENTS

Sixteen patents issued by the United States Patent Office in the field of networking and security.

Three applications to the United States Patent Office in the fields of high performance networking and security.

One patent issued by the European Patent Office in the field of high performance networking.

MAIN PUBLICATIONS*

BOOKS

M. Baldi, P. Nicoletti, “**Internetworking**,” Second Edition, The McGraw-Hill Companies, 2004, ISBN 88 386 6154-5.

M. Baldi, P. Nicoletti, “**Switched LAN**,” The McGraw-Hill Companies, 2002, ISBN 88 386 3426-2.

M. Baldi, P. Nicoletti, “**Internetworking**,” The McGraw-Hill Companies, 1999, ISBN 88 386 0780-X.

JOURNAL ARTICLES

M. Baldi, G. Marchetto, “**Pipeline Forwarding of Packets based on a Low Accuracy Network-distributed Common Time Reference**,” *IEEE/ACM Transactions on Networking*, 2009.

M. Baldi, R. Giacomelli, G. Marchetto, “**Time driven Access and Forwarding for industrial wireless multi-hop networks**,” *IEEE Transactions on Industrial Informatics*, special section on Wireless Technologies in Factory and Industrial Automation, 2009.

E. Masala, A. Vesco, M. Baldi, J-C. De Martin, “**Optimized H.264 Video Encoding and Packetization for Video Transmission over Pipeline Forwarding Networks**,” *IEEE Transactions on Multimedia*, 2009.

M. Baldi, J-C. De Martin, E. Masala, A. Vesco, “**Quality-oriented Video Transmission with Pipeline Forwarding**,” *IEEE Transactions on Broadcasting, Special issue on Quality Issues in Multimedia Broadcasting*, 2008.

M. Baldi, G. Marchetto, Y. Ofek, “**A Scalable Solution for Engineering Streaming Traffic in the Future Internet**,” published in *Computer Networks (COMNET)*, 2007.

F. Risso, M. Baldi, “**NetPDL: An Extensible XML-based Language for Packet Header Description**,” published in: *Computer Networks (COMNET)*, Vol. 50, No. 5, Elsevier, 2006.

M. Baldi, Y. Ofek, “**Fractional Lambda Switching - Principles of Operation and Performance Issues**,” published in: *SIMULATION: Transactions of The Society for Modeling and Simulation International*, Vol. 80, No. 10, 2004.

M. Baldi, Y. Ofek, “**Comparison of Ring and Tree Embedding for Real-time Group Multicast**,” published in: *IEEE/ACM Transactions on Networking*, Vol. 11, No. 3, 2003.

M. Ajmone Marsan, M. Baldi, A. Bianco, R. Lo Cigno, M. Munafò, “**Performance of Transport Protocols over ATM Networks**,” published in: *SIMULATION: Transactions of The Society for Modeling and Simulation International*, Vol. 78, No. 4, 2002.

* A complete list of publications can be found at: <http://staff.polito.it/mario.baldi/publications>

M. Baldi, A. Macii, E. Macii, M. Poncino, “**VHDL Simulation: A Flexible Approach to Verification and Performance Evaluation of Communication Protocols,**” published in: *Systems Analysis Modeling Simulation*, Gordon and Breach Science Publishers, Reading, UK, 2002.

M. Baldi, Y. Ofek, “**End-to-end Delay Analysis of Videoconferencing over Packet Switched Networks,**” published in: *IEEE/ACM Transactions on Networking*, Vol. 8, No. 4, 2000.

M. Baldi, Y. Ofek, B. Yener, “**Adaptive Group Multicast with Time-Driven Priority,**” published in: *IEEE/ACM Transactions on Networking*, Vol. 8, No.1, 2000.

M. Baldi, A. Macii, E. Macii, M. Poncino, “**Application of symbolic FSM Markovian analysis to protocol verification,**” published in: *IEE Proceedings on Computers and Digital Techniques*, 1999.

M. Baldi, D. Bergamasco, S. Gai, D. Malagrino, “**CLIMAX: Cell-Interleaved Merged ATM Connexions,**” published in: *Telecommunication Systems*, 1999.

M. Baldi, G. P. Picco, F. Risso, “**Designing a Videoconference System for Active Networks,**” published in: *Springer Journal on Personal Technologies*, 12/98.

M. Baldi, D. Bergamasco, E. Guarene, “**Scelte architetturali per reti telefoniche a commutazione di pacchetto**” (“Architectural Choices for Packet Switched Telephone Networks”), published in: *CSELT Technical Reports*, Vol. 25, No. 5, 1997.

BOOK CHAPTERS

M. Baldi, “Multi-Protocol Label Switching,” in *Wireless Edge and Optical Core – Next Generation Networks*, Krzysztof Iniewski (Editor), Wiley, 2009.

M. Baldi, F. Risso, L. Torrero, “**NAT Traversal,**” Chapter 13 in *SIP Handbook: Services, Technologies, and Security of Session Initiation Protocol*, Mohammad Ilyas (Editor), CRC Press, 2008.

M. Baldi, Y. Ofek, “**Lambda and Sub-lambda Switching,**” published in: *The Handbook of Computer Networks*, Hossein Bidgoli (Editor), John Wiley & Sons, 2006.

M. Baldi, F. Corno, M. Rebaudengo, M. Sonza Reorda, G. Squillero, “**GA-Based Verification of Network Protocols Performance**”; published in: *Telecommunications Optimization: Heuristic and Adaptive Computation Techniques*, David Corne (ed.); Smith, Oates & Wiley, 2000.

M. Baldi, S. Gai, M. L. Jaccheri, P. Lago, “**Object Oriented Software Process Model Design in E3,**” published in: *Software Process Modeling and Technology*, A. Finkelstein, J. Kramer and B.A. Nuseibeh (eds.); Advanced Software Development Series, Research Studies Press/John Wiley & Sons, 1994.

MAGAZINE ARTICLES

D. Serpanos, M. Baldi, R. Giladi, “**Network Systems Architecture,**” Guest Editorial, *IEEE Networks*, Vol. 21, Issue 4, 2007.

Y. Ofek, M. Baldi, “**Global Time from GALILEO for Overcoming Internet Challenges: Switching Scalability and Streaming Media,**” published in: *Parliament Magazine*, Issue 220, 2006.

M. Baldi, Y. Ofek, “**Realizing Dynamic Optical Networking,**” published in: *Optical Networks Magazine*, Special Issue: “*Dynamic Optical Networking: around the Corner or Light Years Away?*”, Vol. 4, No. 5, 2003.

M. Baldi, F. Risso, “**Efficiency of Packet Voice with Deterministic Delay**,” published in: *IEEE Communications Magazine*, Vol. 38, No. 5, 2000.

M. Baldi, D. Bergamasco, “**Internetworking ad alte prestazioni: lo scatto di IP switching**” (**High performance internetworking: IP switching sprint**), published in: *Networking Italia*, Vol. VI, No. 9, 1997.

M. Baldi, D. Bergamasco, “**Quando la voce viaggia in pacchetti**” (**When voice travels into packets**); published in: *Networking Italia*, Vol. VI, No. 5, 1997.

M. Baldi, S. Gai, “**Un TCP/IP carrozzato ATM**” (**TCP/IP fitted on ATM**); published in: *Networking Italia*, Vol. V, No. 1, 1996.

M. Baldi, S. Gai, “**LAN ATM: la nuova generazione**” (**ATM LAN: the new generation**); published in: *Networking Italia*, Vol. IV, No. 11, 1995.

CONFERENCE PAPERS

M. Baldi, Y. Ofek, “**Time for a ‘Greener’ Internet**,” *1st International Workshop on Green Communications (GreenComm’09)*, in conjunction with the IEEE International Conference on Communications (IEEE ICC 2009), Dresden (Germany), 2009.

M. Baldi, R. Giacomelli, “**Time-driven Access and Forwarding in IEEE 802.11 Mesh Networks**,” *The Second International Conference on Advances in Mesh Networks (MESH 2009)*, Athens (Greece), 2009.

M. Baldi, R. Giacomelli, “**End-to-end Quality of Service Framework for Heterogeneous Networks**,” *4th IEEE International Workshop on Broadband Convergence Networks (IEEE BcN 2009)*, Long Island (NY, USA), 2009.

M. Baldi, Y. Ofek, “**Dynamic Optical Switching for a Greener Internet**,” *Wireless and Optical Communication Conference (WOCC 2009), Optical Symposium*, Newark (NJ, USA), May 2009.

M. Baldi, F. Risso, N. Cascarano, A. Baldini, “**Service-Based Traffic Classification: Principles and Validation**,” *2009 IEEE Sarnoff Symposium*, Princeton (NJ, USA), Mar. 2009.

M. Baldi, M. Papa Manzillo, “**Deterministic Service on IEEE 802.11-like Networks**,” *13th IEEE Symposium on Computers and Communications (ISCC 2008)*, Marrakech (Morocco), 2008. Recipient of the **Best Paper Award**.

T. H. Truong, M. Baldi, Y. Ofek, “**Scheduling High-Rate Sessions in Fractional Lambda Switching Networks: Algorithm and Analysis**,” *13th IEEE Symposium on Computers and Communications (ISCC 2008)*, Marrakech (Morocco), 2008.

M. Baldi, L. De Marco, F. Risso, L. Torrero, “**Providing End-to-End Connectivity to SIP User Agents Behind NATs**,” *IEEE International Conference on Communications (ICC 2008)*, Advances in Networks & Internet Symposium, Beijing (China), 2008.

F. Risso, A. Baldini, M. Baldi, P. Monclus, O. Morandi, “**Lightweight, Session-Based Traffic Classification**,” *IEEE International Conference on Communications (ICC 2008)*, Advances in Networks & Internet Symposium, Beijing (China), 2008.

O. Morandi, F. Risso, M. Baldi, A. Baldini, “**Enabling Flexible Packet Filtering Through Dynamic Code Generation**,” *IEEE International Conference on Communications (ICC 2008)*, Advances in Networks & Internet Symposium, Beijing (China), 2008.

- R. Scandariato, P. Falcarin, M. Baldi, Y. Ofek, “**Application-oriented trust in distributed computing,**” *International Conference on Availability, Reliability and Security (ARES 2008)*, Barcelona (Spain), Mar. 2008.
- T. H. Truong, M. Baldi, Y. Ofek, “**Efficient Scheduling for Heterogeneous Fractional Lambda Switching (FLS) Networks,**” *IEEE Globecom 2007, Optical Networks and Systems Symposium*, Washington D.C., Nov. 2007.
- M. Baldi, F. Risso, L. Torrero, “**Adding Multi-Homing and Dual-Stack Support to the Session Initiation Protocol,**” *IEEE Globecom 2007, Internet Protocol Symposium*, Washington D.C., Nov. 2007.
- M. Baldi, R. Giacomelli, G. Marchetto, A. Vesco, “**On the Deployment of Pipeline Forwarding in a Nation-wide Internet Service Provider Network,**” *2007 International Conference on Broadband Network & Multimedia Technology (IC-BNMT2007)*, Beijing (China), Sep. 2008.
- T. H. Truong, M. Baldi, Y. Ofek, “**An Efficient Scheduling Algorithm for Time-Driven Switching Networks,**” *15th IEEE Workshop on Local and Metropolitan Area Networks (LANMAN 2007)*, Princeton (NJ), June 2007.
- D. Agrawal, M. Baldi, M. Corrà, G. Fontana, T. H. Truong, G. Marchetto, V. T. Nguyen, Y. Ofek, D. Severina, O. Zadedyurina, “**A Scalable Approach for Supporting Streaming Media: Design, Implementation and Experiments,**” *IEEE Symposium on Computers and Communications (ISCC 07)*, Aveiro (Portugal), July 2007.
- D. Agrawal, M. Baldi, M. Corrà, G. Fontana, T. H. Truong, G. Marchetto, V. T. Nguyen, Y. Ofek, D. Severina, O. Zadedyurina, “**Scalable Switching Testbed not 'Stopping' the Serial Bit Stream,**” *IEEE International Conference on Communications (ICC 2007), Optical Networks and Systems Symposium*, Glasgow (Scotland, UK), June 2007. Recipient of the **Best Paper Award**.
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Prof. Yoram Ofek, Marie Curie Chair at the Università degli Studi di Trento (University of Trento), Dipartimento di Informatica e Telecomunicazioni (Department of Computer Science and Telecommunications), Trento (Italy); e-mail ofek@dit.unitn.it; tel. +39 0461 88 2093.

Dr. Moti Yung, Google, Inc., New York, NY; e-mail moti@google.com. Also with Columbia University, Computer Science Department, New York, NY; e-mail moti@cs.columbia.edu; tel. +1 (212) 939-7022.

Prof. Bulent Yener, Rensselaer Polytechnic Institute, Computer Science Department, Lally 310, 110 Eighth Street, Troy, NY; e-mail yener@cs.rpi.edu; tel. +1 518 276 6907.

CONTACTS

Work (China): TONGJI UNIVERSITY
PoliTong Sino-Italian Campus
No.1239 Siping Rd — 200092 Shanghai — P.R. China
Tel. +86 21 65988637 Cell. +86 135 24706768 Fax +86 21 65983561
e-mail: baldi@politong.org Web page: <http://people.politong.org/mario.baldi>

Work (Italy): POLITECNICO DI TORINO
Dipartimento di Automatica e Informatica
Corso Duca degli Abruzzi, 24 — 10129 Torino — Italy
Tel. +39 011 564 7067 Cell. +39 335 126 7290 Fax +39 011 564 7198
e-mail: mario.baldi@polito.it Web page: <http://staff.polito.it/mario.baldi>

Permanent address: Viale Angeli, 43 — 12100 Cuneo — Italy
Tel. +39 0171 681 888
e-mail: mail@mariobaldi.net Web page: <http://www.mariobaldi.net>