

# Curriculum Vitae

*Luca Valcarenghi*

## Personal

Name: Luca Valcarenghi  
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web: www.ircphonet.it (→About  
IRCPhoNeT→Staff→Valcarenghi Luca)

## *Languages*

Italian (first language)  
English (fluent)  
French (good)

## *Certifications*

Dec. 1997 TOEFL (Test of English as Foreign Language)  
score 547/677  
Jul. 1997 Cambridge P.E.T. (Primary English Test)  
score “Pass with Merit”

## *Academic and Professional Degrees*

2003 Habilitation to the profession of Engineer  
score 103/120  
Dec. 22, 2001 Ph.D. Electrical Engineering, Major in Telecommunications, Uni-  
versity of Texas at Dallas (UTD), Richardson, TX, USA, GPA  
4.0/4.0  
Advisor: Dr. Andrea Fumagalli  
May 22, 1999 Master of Science in Electrical Engineering (M.S.E.E.), University  
of Texas at Dallas (UTD), Richardson, TX, USA, GPA 4.0/4.0  
Advisor: Dr. Andrea Fumagalli  
Oct. 15, 1997 Dottore of Engineering (Laurea), Politecnico di Torino, Italy  
Advisors: Dr. Andrea Fumagalli, Dr. Fabio Neri, Dr. Gabriella  
Balestra  
score 103/110  
Jul. 15, 1991 Classics Diploma, Liceo Classico Luigi Lagrangia, Vercelli, Italy  
score 60/60

## *Positions Held*

Sep. 1, 2008-current Consulting Assistant Professor, Scuola Superiore Sant’Anna di  
Studi Universitari e Perfezionamento, Pisa, Italy

## Personal (continued)

Sep. 1, 2002-Aug. 31, 2008	Assistant Professor (Ricercatore a Tempo Determinato), Scuola Superiore Sant'Anna di Studi Universitari e Perfezionamento, Pisa, Italy
Jan. 2002- Aug. 2002	Research Associate, OpNeAR Lab, Department EE, Erik Jonsson School of EE/CS, University of Texas at Dallas
Jan. 1998- Dec. 2001	Research Assistant, OpNeAR Lab, Department EE, Erik Jonsson School of EE/CS, University of Texas at Dallas
Aug. 2000 - Dec. 2000	Teaching Assistant, Department EE, Erik Jonsson School of EE/CS, University of Texas at Dallas
1996-1997	Laboratory Assistant for the courses of Electronic Measurement and Electronics of the Politecnico di Torino Department of Electrical Engineering

## Professional and Academic Interests

### *Research Interests*

- Optical Network design, analysis, and optimization;
- Generalized MultiProtocol Label Switching (GMPLS);
- Artificial Intelligence optimization techniques;
- Communications Network resilience;
- Multi-layer Traffic Engineering;
- QoS in network infrastructures for Grid computing;
- Broadband wireless access (IEEE 802.16);
- Wireless-wired network integration.

## Contribution to Grants, Contracts, Donations

### *Fellowships*

Apr. 15, 2009-Oct. 15, 2009	- Fulbright Research Scholar at Stanford University, E.E. Department, Advisor: Prof. Leonid Kazovsky (\$ 9.000/6 months)
A.Y. 2000-2001	- TxTEC Fellowship for conducting the project " <i>Optimized Network Resilience in the Next Generation Internet</i> " (\$ 4.000/year).
A.Y. 1999-2000	- TxTEC Fellowship for conducting the project " <i>Multi-Objective Optimization of Survivable WDM Backbone Networks Based on Simulated Annealing</i> " (\$ 4.000/year).
A.Y. 1998-1999	- Telecommunications Engineering Consortium (TxTEC) Fellowship for conducting the project " <i>Design of Self-Healing Ring Based Survivable WDM Network Using Simulated Annealing</i> " (\$ 4.000/year)
Sep. 1996-Mar. 1997	- Fellowship Centro Studi e Laboratori Telecomunicazioni Torino (CSELT) (now TILab) for conducting the "Tesi di Laurea" (EUR 2.000/6 months).

# Contribution to Grants, Contracts, Donations (continued)

## *Contribution*

- 1998-current - Involved in writing proposals for request of funding from public foundations (e.g., US National Science Foundation, Italian Ministry of University and Research, etc.) and private companies (e.g., Alcatel, MCI-Worldcom, Marconi, Ericsson, etc.)

## *Participation*

- 08/2008-04/2009 - “Affidabilità Sistema Tecnologico AV/AC” (“Availability in High Speed/High Capacity System”), Rete Ferroviaria Italiana (RFI), (Responsible: Piero Castoldi, Technical Co-responsible: L. Valcarenghi)
- 05/01/2008-04/30/2012 - “EURO-FOS Pan-European Photonics Task Force: Integrating Europe’s Expertise on Photonic Subsystems” FP7-224402, FP7-ICT-2007-2 Network of Excellence (NoE) (Responsible: Hercules Avramopoulos, Responsible Sant’Anna Research Unit: L. Valcarenghi, EUR 60.000/anno)
- 01/01/2008-12/31/2010 - “Building the Future Optical Network in Europe (BONE) - The e-Photon-ONe Network ” FP7-21863, FP7-ICT-2007-1 Network of Excellence (NoE) (PI: P. Van Daele, Sant’Anna Unit PI P. Castoldi, EUR 30,000/year)
- 01/01/2007-12/31/2007 - Co-PI “Signal Equalization and Best Channel Selection” (“Equalizzazione Segnali e Scelta del Canale Migliore”) MI06227 S.I.T.T.I., Milan, Italy (PI: M. Secondini, EUR 40,000/year)
- 01/01/2007-12/31/2009 - Co-PI “SERvice oriented ENd-to-end optiCAI Ethernet (SERE-NAeE)”, Executive Programme of Scientific and Technological Co-operation between Italy and Quebec for the years 2007-2009, Italian Ministry of Foreign Affairs (MAE) (PI: P. Castoldi, EUR 55,000/year)
- 03/01/2006-02/28/2008 - “Optical Networks: Towards Bandwidth Manageability and Cost Efficiency (e-Photon/ONe+)”, FP6-027497, EU-IST-FP6 Network of Excellence (NoE) (PI: F. Neri, Sant’Anna Unit PI P. Castoldi EUR 50,000/year)
- Member of the WP-VD-C Administration Board
- Member of the WP-JP-G Administration Board
- 03/01/2006-02/28/2008 - ”Next generation Optical network for Broadband European Leadership phase 2 (NOBEL phase 2)” FP6-027305, EU-IST-FP6 Integrated Project (IP) (PI: G. Ferraris, Sant’Anna Unit PI E. Ciaramella, EUR 150,000/year)
- 02/01/2006-02/01/2009 - ”Telecommunications infrastructures, human-machine interfaces and applications for e-learning and collaborative environments”, Italian Fund for Investment in Basic Research (FIRB) (PI: V. Cantoni, Sant’Anna Unit PI P. Castoldi, EUR 154,000/year)

## Contribution to Grants, Contracts, Donations (continued)

- 09/03/2005-11/30/2007 - "Traffic and terminal self-configuration in integrated mesh optical and broadband wireless networks (TOWN)", National Interest Research Project (PRIN) (PI: E. Del Re, Sant'Anna Unit PI P. Castoldi, Grant EUR 25,000/year)
- 08/01/2005-07/31/2007 - "International Master program in Communication Networks Engineering", Italian Fund for the University System Internationalization (INTER LINK) (PI: P. Castoldi, EUR 100,000/year)
- Member of the Organizational Board of the "Third International Master program on Communication Networks Engineering" 2007-2008 at the Scuola Superiore Sant'Anna, Pisa, Italy
- Member of the Organizational Board of the "Second International Master program on Communication Networks Engineering" 2006-2007 at the Scuola Superiore Sant'Anna, Pisa, Italy
- Member of the Organizational Board of the "First International Master program on Communication Networks Engineering" 2005-2006 at the Scuola Superiore Sant'Anna, Pisa, Italy
- 02/01/2004-02/28/2006 - "e-Photon/ONE: Towards Bandwidth Manageability and Cost Efficiency", FP6-001933, EU-IST-FP6 Network of Excellence (NoE) (PI: F. Neri, Sant'Anna Unit PI P. Castoldi EUR 40,000/year)
- 01/01/2004-02/28/2006 - "Next generation Optical network for Broadband European Leadership (NOBEL)", FP6-506760, EU-IST-FP6 Integrated Project (IP), (PI: A. Manzalini, Sant'Anna Unit PI E. Ciaramella, EUR 150,000/year)
- 01/01/2004-12/31/2007 - Bilateral Collaboration "XVI EXECUTIVE PROGRAM OF SCIENTIFIC AND TECHNOLOGICAL CO-OPERATION BETWEEN ITALY AND HUNGARY FOR THE YEARS 2004-2007" (Sant'Anna Unit PI: P. Castoldi)
- 12/16/2002-01/25/2005 - "End-to-end traffic engineering and protection in DWDM networks" (INTREPIDO), National Interest Research Project (PRIN) (PI: G. Corazza, Sant'Anna Unit PI P. Castoldi, EUR 20,000/year)
- 01/09/2002-08/30/2005 - "Enabling platforms for high-performance computational grids oriented scalable virtual organizations (GRID.IT)", Italian Fund for Investment in Basic Research (FIRB), Italian Ministry of Research and University (PI: M. Vanneschi, Sant'Anna Unit PI G. Prati, EUR 4000,000/year)
- Member of the Technical Board
- 01/01/2002-12/31/2004 - "Design of Packet Switched Reconfigurable DWDM Network with Wavelength Conversion for Multimedia", Priority New Joint Research Projects under Indo-Italian POC 2002-2004 (PI: G. Prati)

## Contribution to Grants, Contracts, Donations (continued)

- 01/01/2002-12/31/2004 - MIUR CofinLAB Center of Excellence “Communication Networks Engineering” (CNIT/MARCONI/SANT’ANNA): various research lines in the area of “optical networking” (PI: G. Prati)
- 06/15/2002-12/31/2002 - “Meshed Protection/Restoration in WDM Optical Networks with Multiple Failures”, Alcatel, (PI: A. Fumagalli, Contract \$ 60,000)
- 08/01/2001-08/31/2004 - “Differentiated Reliability in an Optical Test-bed”, CPqD, Brazil, (PI: A. Fumagalli, Grant \$ 300,000)
- 01/01/2001-12/31/2004 - “Differentiated Reliability (DiR) in Multi-Layer Optical Networks”, National Science Foundation (NSF-CISE), USA (PI: A. Fumagalli, A. Faragó, Grant \$ 500,119)
- 12/07/2000-12/31/2005 - COST 270 action ”Reliability of Optical Components and Devices in Communications Systems and Networks”, European Cooperation in the Field of Scientific and Technical Research: ”WG1-Reliability of optical networks and systems including free space optical communications” (Sant’Anna Unit PI: P. Castoldi)
- 01/01/2000-12/31/2000 - “Network Synthesis”, Artis Software Corporation (PI: A. Fumagalli, Contract \$ 93,228)
- 01/01/2000-12/31/2002 - “Optical Pseudo Channels: Using the Optical Layer to Minimize Queuing Delays for Real-Time Traffic”, Advance Research Program of the Texas Higher Education Coordinating Board, (PI: J. Cobb, A. Fumagalli, Grant \$101,000)
- 09/01/1999-08/31/2002 - “On Demand Wavelength Routing in Support of Flexible and High Speed Internet”, National Science Foundation NSF-CISE/ANIR (PI: I. Chlamtac, A. Fumagalli, Grant \$63,746)
- 01/01/1999-12/31/1999 - “Interworking Between Network Layer (IP) and Optical Layer (WDM) in the Next Generation Internet”, Alcatel CRC, (PI: A. Fumagalli, Contract \$25,000)
- 01/01/1998-12/31/1998 - “Analysis of Optimization Algorithms or Designing Telecommunication Networks”, Alcatel CRC, (PI: A. Fumagalli, Contract \$ 25,000)
- 09/01/1996-08/31/2000 - “A Scalable Communication Integrated Optical Network (SCION) for Bandwidth Greedy Multimedia Applications, National Science Foundation (PI: I. Chlamtac, Grant \$ 378,351)

## Professional Activities

### *Journal Editorship*

- 2000-2003 - SPIE/Kluwer “Optical Networks Magazine”, Feature Editor

## Professional Activities (continued)

### *Conference Organization Activities*

- 2009
- Member Technical Program Committee, “Optical Networks and Systems Symposium (ONSS)”, Globecom 2009
  - Publication Chair “17th Annual IEEE Symposium on High-Performance Interconnects (HOT Interconnects 2009)”
  - Member Technical Program Committee, “Second ITU-T Kaleidoscope Event: Innovations for Digital Inclusion”, Aug. 31- Sep. 1, 2009, Mar del Plata, Argentina
  - Member Technical Program Committee, “Second International Conference on Communication Theory, Reliability, and Quality of Service”, CTRQ 2009
  - Member Technical Program Committee, “Optical Networks and Systems” Symposium, ICC 2009
- 2008
- Publication Chair “16th Annual IEEE Symposium on High-Performance Interconnects (HOT Interconnects 2008)”
  - Member Technical Program Committee, “The First International Workshop on Wireless Sensor and Ad-hoc Networks”, WiSAN 2008
  - Member Technical Program Committee, “International Conference on Communication Theory, Reliability, and Quality of Service”, CTRQ 2008
  - Member Technical Program Committee, “13th International Telecommunications Network Strategy and Planning Symposium — Networks 2008”
  - Member of the Technical Program Committee, “Optical Networks and Systems” Symposium, Globecom 2008
- 2007
- Member of the Technical Program Committee, “Optical Networks and Systems” Symposium, ICC 2008
  - Member of the Technical Program Committee, “Optical Networks and Systems” Symposium, Globecom 2007
  - Publications Chair of the “15th Annual IEEE Symposium on High-Performance Interconnects (HOT Interconnects 2007)”
  - Tutorial chair of the “15th Annual IEEE Symposium on High-Performance Interconnects (HOT Interconnects 2007)”
- 2006
- Member of the Technical Program Committee, “Optical Networks and Systems” Symposium, ICC 2007
  - Publicity co-chair of the “14th Annual IEEE Symposium on High-Performance Interconnects (HOT Interconnects 2006)”

## Professional Activities (continued)

- Tutorial chair of the “14th Annual IEEE Symposium on High-Performance Interconnects (HOT Interconnects 2006)”
- 2004 - Member of the Technical Program Committee, “Optical Communications, Networks, and System” Symposium, Globecom 2004
- 2003 - Member of the Technical Program Committee, “Optical Networking and Systems” Symposium, Globecom 2003
- May 2001 - Session Chair, IEEE Workshop on High Performance Switching and Routing(HPSR2001), Dallas, Texas, USA
- 2000 - Member of the Organization Committee, “Opticomm 2000”, Dallas, Texas, September 2000

### *Refereeing Experience*

- 1999-current - Peer reviewer for International Conferences and Workshops organized by IEEE, OSA, SPIE, IFIP (i.e., Infocom, Globecom, ICC, ICCCN, HPSR, ONDM, Networking), for archival Journal and Magazines published by IEEE, ACM, OSA, SPIE, Kluwer Academics, Elsevier (IEEE/ACM Transactions on Networking, IEEE Journal on Selected Areas in Communications, Optical Networks Magazine, IEEE Communications, IEEE Networks, IEEE/OSA Journal of Lightwave Technology, Elsevier COMNET, OSA Journal of Optical Networking, Elsevier Optical Switching and Networking)

### *Invited Lectures*

- 2006 - L. Valcarenghi, “Monitoring and Resilience in the Global Grid”, Winter School of the Network of Excellence (NoE) e-Photon/ONe on “Optical Grid and Optical Network Resilience”, September 4-6, 2006, Zagreb, Croatia
- 2005 - L. Valcarenghi, ”Networks Resilience in GMPLS Based Networks”, Winter School of the Network of Excellence (NoE) e-Photon/ONe on ”Core Network Technologies”, February 23-25, 2005, Aveiro, Portugal
- B. Martini, F. Baroncelli, F. Cugini, L. Valcarenghi, and P. Castoldi, ”Optical networking Advanced architectures and protocols”, Future trends in Network Restoration/Resilience in All-Optical Networks, Pre-Seminar Tutorial Marconi, May 6, 2004, Coventry, UK, 6
- 2004 - N. Andriolli, F. Baroncelli, B. Martini, P. Castoldi, F. Cugini, M. Ghizzi, A. Giorgetti, Ramesh Kumar Manickam, P. T. Kulkarni, and L. Valcarenghi , ”New concepts, research tools and protocol extensions for optical switching”, Indo-Italian One-day Workshop on Photonic Technologies, Networking and Applications Indian Institute of Technology (IIT), March 29, 2004 Kharagpur, India
- L. Valcarenghi, ”Provisioning and restoration in grooming-capable optical networks”, Indo Italian One-day Workshop on Photonic Technologies, Networking and Applications Indian Institute of Technology (IIT), March 29, 2004, Kharagpur, India

## Professional Activities (continued)

- 2001
- L. Valcarengi, "Optical Networks: Research Directions and Proposed Solutions", February 6, 2003, Budapest University of Technology and Economics
  - L. Valcarengi, "GMPLS based intelligent optical networks and their interworking with IP clients", 3rd Hungarian WDM Workshop, April 8, 2003, Budapest, Hungary

### *Tutorials and Panels*

- 2005
- "Quality of Service in Global Grid Computing", Tutorial 2, IEEE HOT Interconnects 13, HOT13, August 17-19, 2005, Stanford University, Stanford, CA
- 2004
- "Resilient Network Infrastructures for Global Grid Computing", Tutorial 2, HOTI 12, August 27, 2004, Stanford, CA
- 2003
- Panelist at the "Performance and routing in optical networks" Workshop, part of Photonic Switching 2003 (PS 2003), September 28 - October 2, 2003, Versailles, France

### *Teaching*

- A.Y. 2007-2008
- Teacher of the "Optical Internet" course in the "Third International Master on Communication Networks Engineering"
- A.Y. 2006-2007
- Teacher of the module "Network Resource Management" (1 CFU) at the Scuola Superiore Sant'Anna, Pisa, Italia
- A.Y. 2006-2007
- Teacher of the "Optical Internet" course in "Second International Master on Communication Networks Engineering"
- A.Y. 2005-2006
- Teacher of the "Optical Internet" course in the "First International Master on Communication Networks Engineering"
  - Teacher of the module "The Migration toward the Optical Internet" (3 CFU) at the Scuola Superiore Sant'Anna, Pisa, Italia (A.A. 2002-2003, 2004-2005, 2005-2006)
- While Post-doc
- Collaborator of Prof. Andrea Fumagalli in the course EE6340-OT1 "Introduction to Telecommunications Networks", Spring 2002, "The University of Texas (UT) System".
- 2001
- Collaborator for the UTSysTem Telecampus course EE6340 "Introduction to Telecommunications Networks", University of Texas at Dallas, TX, USA
- Aug. 2000-Dec. 2000
- Teaching Assistant for the graduate course EE6340 "Introduction to Telecommunications Networks", University of Texas at Dallas, TX, USA

## Professional Activities (continued)

### *University Service*

- 12/11/2007 - Expert Member of the Committee for the Public Recruitment of a Technician of Category D in the data elaboration technical area under limited time position
- 12/06/2007 - Expert Member of the Committee for the assignment of two one-year Research Scholarships (Assegni di Ricerca) on "Photonic network and technologies for very high-speed optical systems" (ING-INF/03 Telecommunications)
- 2006-2008 - Member of the ePhoton/ONe+ "Core Networks" Virtual Department workpackage (WP-VD-C) Administration Board
- Member of the ePhoton/ONe+ "Optical networking for grids and e-science" Joint Project workpackage (WP-JP-G) Administration Board
- Co-responsible (together with Prof. Branko Mikac) for the course "Optical Network Resilience" of the ePhoton/ONe+ Teaching workpackage (WP-T)
- 2007-2008 - Member of the Organization Board of the "Third International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 08/27/2007-08/28/2007 - Member of the Recruiting Committee for the "Third International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 2006-2007 - Member of the Organization Board of the "Second International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 12/14/2006 - Member of the Graduation (Ph.D.) Committee of Dr. Nicola Andriolli
- 12/13/2006 - Member of the Graduation Committee of the Second Graduation Session of the "First International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 10/26/2006 - Member of the Graduation Committee of the First Graduation Session of the "First International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 09/25/2006-09/26/2006 - Member of the Recruiting Committee for the "Second International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 06/09/2006 - Member of the Graduation (Ph.D.) Committee of Dr. Alessio Giorgetti
- 05/2006 - Expert Member of the Committee for the Public Recruitment of a Technician of Category C under tenured position

## Professional Activities (continued)

- 2005-2006 - Member of the Organization Board of the "First International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 10/11/2005-10/12/2005 - Member of the Recruiting Committee for the "First International Master program on Communication Networks Engineering" of the Scuola Superiore Sant'Anna, Pisa, Italy
- 2005 - Expert Member of the Committee for the Public Recruitment of a Technician of Category C under 1 year contract
- 2005 - Member of the Organization Committee of the e-Photon/ONe "II Summer School: Optical switching technologies", Aug. 20-Sep. 2, 2005, Cesenatico-Pisa, Italy
- 2005 - Member of the Technical Programme Committee of the e-Photon/ONe "Winter School on Core Network Technologies", February 23-25, 2005, Aveiro, Portugal
- 06/07/2005 - Member of the Diploma Committee at the Scuola Superiore Sant'Anna
- 2002-2005 - Member of the Ph.D. Committee of Alessio Giorgetti, Scuola Superiore Sant'Anna, Pisa, Italy
- 2002-2005 - Member of the Ph.D. Committee of Nicola Andriolli, Scuola Superiore Sant'Anna, Pisa, Italy
- Awards, Professional Societies, and Other Services*
- 2004-current - Active participant to the Grid High Performance Network Research Group (GHPN-RG) of the Global Grid Forum (GGF) (now Open Grid Forum - OGF)
- 1999-current - IEEE Member

## Supervised Students

### *Doctoral Students*

- graduation date: 12/14/2006 - Nicola Andriolli, Ph.D., "Advanced Architectures and Protocols for Optical Networks"
- graduation date: 06/09/2006 - Alessio Giorgetti, Ph.D., "Reliability in Multi-Layer Networks"

### *Master Students*

- Individual Instruction - Ramkumar Ganapathysubramanian
- Venkat Peddigari
- Sandeep Darisala
- Parthasarathy Kothandaraman

## Supervised Students (continued)

- graduation date: 09/23/2005 - Lorenzo Rossi, Master, "Affidabilità su Reti Ottiche per Grid Computing" ("Reliability in Optical Networks for Grid Computing")
- graduation date: 11/16/2006 - Domenico Ficara, Scuola Superiore Sant'Anna Diploma, "Integration of Computational and Network Resource Information Services"
- Undergraduate Students*
- graduation date: 12/19/2008 - Michele Chincoli, Bachelor, Telecommunications Engineering, University of Pisa, "Realizzazione e valutazione sperimentale di un servizio di esplorazione di rete a livello di router" ("Implementation and Experimental Evaluation of Router Level Topology Discovery Service")
- graduation date: 11/16/2006 - Claudio Nani, Scuola Superiore Sant'Anna Diploma, "Ottimizzazione dell'Instradamento di Connessioni con Qualità del Servizio in Reti Integrate Wired e Wireless" ("Optimal Routing of QoS-guaranteed Connections in integrated Wired-Wireless Networks")
- graduation date: 06/07/2005 - Luca Foschini, Scuola Superiore Sant'Anna Diploma, "Studio di servizi di Rete per Grid Computing" ("Study of Network Services for Grid Computing")
- graduation date: 10/25/2005 - Pier Giorgio Raponi, Scuola Superiore Sant'Anna Diploma, "Assessment of GridFTP performance in connection-less and connection-oriented Metropolitan Area Networks"

## List of Patents

- 2009 - Annikki Welin, Luca Valcarenghi, Francesco Paolucci, Piero Castoldi, Filippo Cugini, "Technique for Global Load Balancing of Zero-bandwidth TE LSPs in MPLS Networks", US patent filed, March 12, 2009, provisional application no. 61/159537
- 2004 - S. Darisala, A. Fumagalli, P. Kothandaraman, M. Tacca, L. Valcarenghi, M. Ali, D. Elie-Dit-Cosaque, "Method and Apparatus for Dynamic Provisioning of Reliable Connections in the Presence of Multiple Failures", Full Application filed with the U.S. Patent Office, Fall 2003, Full Application filed with the European Patent Office, Spring 2004.

## List of Publications

### *Theses*

- 2001 - L. Valcarenghi, "IP-over-WDM Survivable Networks", *Ph. D. dissertation*, University of Texas Dallas, Dec. 2001
- 1999 - L. Valcarenghi, "Optical Network Design Optimization Based on Simulated Annealing", *M.S.E.E. thesis*, University of Texas at Dallas, May 1999

## List of Publications (continued)

- 1997 - L. Valcarenghi, "Optical Amplifier Placement in WDM Networks"), *Laurea thesis*, Politecnico di Torino, Oct. 1997

### *Book Chapters*

- I. Cerutti, L. Valcarenghi, P. Castoldi, D. Marabissi, F. Meucci, L. Pierucci, E. Del Re, L. S. Ronga, R. Tka, F. Kamoun, "IEEE 802.16: Enhanced Modes of Operation and Integration with Wired MANs", chapter in "Current Technology Developments of WiMax Systems", Ma Maode (Ed.), pp. 265-300, Springer, Jan. 2009, Springer-Verlag GmbH, D-69121 Heidelberg, Germany, ISBN: 9781402092992
- A. Fumagalli, J. Aracil, and L. Valcarenghi, "The Future Optical Internet: Integration of Optical and IP Technologies", chapter in "Managing IP Networks: Challenges and Opportunities", Salah Aidarous and Tom Plevyak (Eds.), pp. 287-334, Wiley-IEEE Press, Sep. 2003, Hoboken, NJ, USA, ISBN: 0471392995
- I. Chlamtac, A. Fumagalli, and L. Valcarenghi, "Use of Computational Intelligence Techniques for Designing Optical Networks", chapter in "Computational Intelligence in Telecommunications Networks", W. Pedrycz and A. Vasilakos (Eds.), pp. 407-432, CRC Press LLC, Sep. 2000, Boca Raton, FL, USA, ISBN: 084931075X

### *International and National Peer-Reviewed Journal Papers*

- F. Cugini, N. Sambo, N. Andriolli, A. Giorgetti, L. Valcarenghi, P. Castoldi, E. Le Rouzic, J. Poirrier, "Enhancing GMPLS Signaling Protocol for Encompassing Quality of Transmission (QoT) in All-Optical Networks", in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 26, no. 19, Oct. 1, 2008, pp.3318-3328, IEEE, 445 Hoes Lane, Piscataway, NJ, 08855, USA, ISSN: 0733-8724, (ISI Impact Factor [2007] 2,196)
- P. Castoldi, N. Andriolli, L. Valcarenghi, "Multi-class Lightpath Provisioning based on Separate Wavelength Pools", in *Fiber and Integrated Optics*, vol. 27, no. 4, Jul. 2008, pp. 293-300, ISSN: 1096-4681 (Online) 0146-8030 (Print), (ISI Impact Factor [2007] 0,952)
- N. Sambo, N. Andriolli, A. Giorgetti, F. Cugini, L. Valcarenghi, and P. Castoldi, "Distributing Shared Regenerator Information in GMPLS-Controlled Translucent Networks", in *IEEE Communications Letters*, vol. 12, no. 6, Jun. 2008, pp. 462-464, IEEE, 445 Hoes Lane, Piscataway, NJ, 08855, USA, ISSN: 1089-7798, (ISI Impact Factor [2007] 0,869)
- L. Valcarenghi, F. Cugini, F. Paolucci, P. Castoldi, "Quality-of-Service-Aware Fault Tolerance for Grid-Enabled Applications", in *Optical Switching and Networking (OSN)*, Special Issue on "Advances in IP-Optical Networking for IP Quad-play Traffic and Services", vol. 5, no. 2-3, Jun. 2008, pp. 150-158, Elsevier, Amsterdam, The Netherlands, ISSN: 1573-4277
- N. Andriolli, A. Giorgetti, L. Valcarenghi, P. Castoldi, "Idle Protection Capacity Reuse in Multiclass Optical Networks", in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 25, no. 5, May 2007, pp. 1152-1162, IEEE, 445 Hoes Lane, Piscataway, NJ, 08855, USA, ISSN: 0733-8724, (ISI Impact Factor [2007] 2,196)

## List of Publications (continued)

- R. Martinez, C. Pinart, F. Cugini, N. Andriolli, L. Valcarengi, P. Castoldi, L. Wosinska, J. Comellas, G. Junyent, "Challenges and requirements for introducing impairment-awareness into the management and control planes of ASON/GMPLS WDM networks", in IEEE Communications Magazine, Feature Topic on "Advances in Control and Management of Connection-Oriented Networks", vol. 44, no. 12, Dec. 2006, pp. 76-85, IEEE, 445 Hoes Lane, Piscataway, NJ, 08855, USA, ISSN: 0163-6804, (ISI Impact Factor [2007] 1,704), (cited by 15, source Google Scholar, Jul. 23, 2008; cited by 5, source ISI, Jul. 23, 2008)
- N. Andriolli, J. Buron, S. Ruepp, F. Cugini, L. Valcarengi, P. Castoldi, "Label preference schemes in GMPLS controlled networks", in IEEE Communications Letters, vol. 10, no. 12, Dec. 2006, pp. 849-851, IEEE, 445 Hoes Lane, Piscataway, NJ, 08855, USA, ISSN: 1089-7798, (ISI Impact Factor [2007] 0,869), (citato da 4, source Google Scholar, Jul. 23, 2008)
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## Hobbies

- Sport, Tourism, and Movies
- Mythology, History, Philosophy, Opera, Classical and Popular Music
- Alpinism, Cycling, Hiking, Tennis, Ski, Soccer, Volleyball
- Visited countries Belgium, Canada, France, Hungary, Germany, Greece, India, Italy, Spain, Switzerland, Tunisia, UK, USA

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