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University of Beira Interior

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Education

- 2007 (September) Habilitation Title in Computer Science, University of Beira Interior, Portugal.
Lecture: Architecture and Protocols for Optical Burst Switching Networks.
- 2000 (October) Ph.D. in Electrical Engineering, University of Beira Interior, Portugal.
Thesis: Performance Studies of Communication Networks Incorporating Non-linear Applications of Semiconductor Optical Amplifiers.
- 1994 (December) 2-Year M.S. in Systems and Automatics, University of Coimbra, Portugal.
Thesis: Performance Assessment of WDM Systems with Dispersion Supported Transmission.
- 1992 (July) 5-Year B.S. in Electrical Engineering, University of Coimbra, Portugal.

Professional Experience

- 2009 – present Full Professor, Department of Computer Science, University of Beira Interior, Portugal.
- 2005 – 2009 Associate Professor, Department of Computer Science, University of Beira Interior, Portugal.
- 2000 – 2005 Assistant Professor, Department of Computer Science, University of Beira Interior, Portugal.
- 1995 – 2000 Teaching Assistant, Department of Mathematics and Computer Science, University of Beira Interior, Portugal.
- 1994 – 1995 Trainee Teaching Assistant, Department of Mathematics and Computer Science, University of Beira Interior, Portugal.
- 1993 (April) Trainee Researcher, Alcatel SEL (Alcatel-Lucent) - Research Centre, Stuttgart, Germany.
- 1993 – present Researcher, Instituto de Telecomunicações, Coimbra/Covilhã Site, Portugal.

Research Interests

Network forensics and Internet traffic classification
Security, privacy and trust in large-scale systems
Applications of multifractal theory in networking, cloud computing and 2D/3D multimedia systems
Multimedia networking and peer-to-peer systems

Honors and Awards

- Best Paper Award, 4th Portuguese Conference on Information Security (SINO 2008), Coimbra, November 19, 2008.
- Best Paper Award, The International Conference on Information Networking (ICOIN 2008), Busan, Korea, January 23-25, 2008.

Research Grants and Contracts

As Principal Investigator

1. Sistema de Apoio à Modernização Administrativa, contract SAMA-UBI, QREN – Quadro de Referência Estratégico Nacional and UBI, ~700 Keuro, 2009 - 2010 (Project Coordinator).
2. TRAMANET – Traffic and Trust Management in Peer-to-Peer Networks, contracts PTDC/EIA/73072/2006 and FCOMP-01-0124-FEDER-007253, Fundação para a Ciência e a Tecnologia (FCT), 80.4 KEuro, starting date: 2008/10/01, duration: 3&1/2 years (Principal Investigator).
3. HIPERCAMBIO - High Performance Computing Applied to Medical Data and Bioinformatics, MSFT - Microsoft Portugal, 20 KEuro, starting date: May 2007, duration: 3 years (Co-Principal Investigator jointly with Dr. Manuela Pereira (UBI) and Dr. José Fernandes (Microsoft Portugal)).
4. OBS – Optical Burst Switching, OBS contract, Nokia Siemens Networks Portugal, 14,808.00 Euro, starting date: June 2005, duration: 3 years (Co-Principal Investigator jointly with Dr. Paulo Monteiro (Nokia Siemens Portugal)).
5. Sistema de Computação e Instrumentação Científica para Investigação em Redes e Comunicações Multimedia Avançadas, contract CONC-REEQ/1201/2001, FCT, Re-equipment project of the External Lab of Instituto de Telecomunicações, 112 338.00 Euro, starting date: March 2005, finishing date: October 2009 (Project Coordinator).
6. CONDENSE – IPv4/IPv6-Compliant Optical Burst Switching Network Design with Enhanced Signaling Architectures, contract POSI/EEA-CPS/60247/2004, FCT 32 KEuro, starting date 2005/01/01, Duration: 3 years (Principal Investigator).
7. PIONEER – Performance Issues in Optical Networks with Internet Traffic, IT internal project, around 20 KEuro, starting date: 2003 (Principal Investigator).

As Project Researcher

1. Robust Video Coding for Peer-to-Peer Media Streaming, contract FCT TC-13_12, Fundação para a Ciência e a Tecnologia (FCT), Portugal, and Centre National de la Recherche Scientifique (CNRS), France, starting date: 2012, duration: 3 years (Project Researcher).
2. Robust Joint Source/Channel Coding for Multimedia Communications, contract PICS 2008, Gabinete de Relações Internacionais da Ciência e do Ensino Superior (GRICES), Portugal, and Centre National de la Recherche Scientifique (CNRS), France, starting date: 2008, duration: 3 years (Project Researcher).
3. Multiple Description Compression for Image and Video Streaming over Non Reliable Channels, GRICES, Portugal, and CNRS (France), starting date: January 2005, duration: 2 years (Project Researcher).
4. ROPE – Redes Ópticas Passivas Ethernet (Ethernet Passive Optical Networks), Nokia Siemens Networks Portugal, 15 KEuro, starting date: April 2005, duration: 3 years (Project Researcher, responsible for Task T3.1 - Security mechanisms for EPONs).
5. TRANSPARENT - Transport, Access and Distribution in Optically Multiplexed Networks”, contract POSI/34559/CPS/2000, FCT, starting date: Janeiro 2001, duration: 1 year (Project researcher, responsible for Task 3: Assessment of blocking performance in WDM networks).
6. Network of Excellence, NoE Euro-NGI – Design and Engineering of the Next Generation Internet, Sixth Framework Programme (UE FP6 IST), European Commission, starting date: December 2003, conclusion: November 2006 (Project researcher).
7. “e-UBI (Universidade da Beira Interior) Campus Virtuais”, contract 15/3.7/D/CEN-1, FEDER and UBI, starting date: September 2003 (Project Colaborator).

8. Desenvolvimento Conjunto das Capacidades Informáticas e de Comunicações entre a Universidade da Beira Interior e a Universidade de Salamanca, contrat 06/REG II/6-96, FEDER/INTERREG II, starting date: 1996 conclusion: June 2000 (Project Researcher).
9. TRAVEL – (HD)TV Transport on Very High Bitrate Optical Links, EEC RACE 2011, starting date: January 1992, conclusion date: December 1995 (Project Researcher).

Registered Patents and Published Works

International Patents

1. Mário M. Freire, João V. P. Gomes, Pedro R. M. Inácio, Paulo Monteiro, João J. Pires, and João M. Santos, "Upstream Efficiency Improvement Method for Passive Optical Networks", World Intellectual Property Organization, International Patent WO 2010/012304 A1, 2010.
2. Jorge Castro, Mário M. Freire, Marek Hajduczenia, Pedro Inácio, Rui Meleiro, Paulo M. Monteiro, José Santos, and Henrique Silva, "Automatic Topology Discovery for Passive Optical Networks", European Patent Office, European Patent EP 2141832 A1, 2010.
3. Mário M. Freire, Nuno Garcia, Przemyslaw Lenkiewicz, Paulo M. Monteiro, and José Santos, "Method and Device for Processing Data in an Optical Network and Communication System Comprising Such Device", World Intellectual Property Organization, International Patent WO 2009/156409 A1, 2009.
4. Mário Freire, Nuno M. Garcia, Marek Hajduczenia, Paulo P. Monteiro, and Henrique Silva, "Method for Aggregating a Plurality of Data Packets Into a Unified Transport Data Packet and Machine for Performing Said Method", World Intellectual Property Organization, International Patent WO 2007/118594 A1, 2007.
5. Mário Freire, Marek Hajduczenia, Pedro Inácio, Paulo P. Monteiro, and Henrique Silva, "A Method, Communication System, Central and Peripheral Communication Unit for Secure Packet Oriented Transfer of Information", World Intellectual Property Organization, International Patent WO 2007/099045 A1, 2007.
6. Mário Freire, Nuno Garcia, Marek Hajduczenia, Paulo Monteiro, and Henrique Silva, "Monitoring Method and Apparatus of Processing of a Data Stream with High Rate/Flow", European Patent Office, European Patent EP 1780955 A1, 2007.
7. Mário Freire, Nuno Garcia, Paulo Monteiro, and José M. R. R. Santos, "Method for the Transmission of Data Packets by Means of an Optical Burst Switching Network and Network Nodes for an Optical Burst Switching Network", World Intellectual Property Organization, International Patent WO 2006/072406 A1, 2006.

Articles in Refereed International Journals Listed in ISI Science Citation Index

1. Diogo A. B. Fernandes, Liliana F. B. Soares, João V. Gomes, Mário M. Freire, Pedro R. M. Inácio, "Security Issues in Cloud Environments: A Survey", *International Journal of Information Security* (Springer), accepted for publication, 2013. ISI Impact Factor (2012): 0.480.
2. Filipe Soares, Filipe Janela, Manuela Pereira, João Seabra and Mário M. Freire, "Classification of Breast Masses on Contrast-Enhanced Magnetic Resonance Images Through Log Detrended Fluctuation Cumulant-Based Multifractal Analysis", *IEEE Systems Journal*, accepted for publication, 2013. ISI Impact Factor (2012): 1.270.
3. Filipe Soares, Filipe Janela, Manuela Pereira, João Seabra and Mário M. Freire, "3D Lacunarity in Multifractal Analysis of Breast Tumor Lesions in Dynamic Contrast-Enhanced Magnetic Resonance Imaging", *IEEE Transactions on Image Processing*, 22(11): 4422-4435, 2013. ISI Impact Factor (2012): 3.199.
4. João V. Gomes, Pedro R. M. Inácio, Manuela Pereira, Mário M. Freire and Paulo P. Monteiro, "Identification of Peer-to-Peer VoIP Sessions Using Entropy and Codec Properties", *IEEE Transactions on Parallel and Distributed Systems*, 24(10): 2004-2014, 2013. ISI Impact Factor (2012): 1.796.

5. João V. Gomes, Pedro R. M. Inácio, Manuela Pereira, Mário M. Freire and Paulo P. Monteiro, "Detection and Classification of Peer-to-Peer Traffic: A Survey", *ACM Computing Surveys*, 45(3): Article 30, 1-40, 2013. ISI Impact Factor (2012): 3.543.
6. João V. Gomes, Pedro R. M. Inácio, Manuela Pereira, Mário M. Freire and Paulo P. Monteiro, "Exploring Behavioral Patterns Through Entropy in Multimedia Peer-to-Peer Traffic", *The Computer Journal (Oxford University Press)*, 55: 1-16, 2012. ISI Impact Factor (2012): 0.755.
7. Pedro R. M. Inácio, Mário M. Freire, Manuela Pereira and Paulo P. Monteiro, "Fast Synthesis of Persistent Fractional Brownian Motion", *ACM Transactions on Modeling and Computer Simulation*, 22(2): Article 8, 1-24, 2012. ISI Impact Factor (2012): 0.528.
8. João V. P. Gomes, Pedro R. M. Inácio, Branka Lakic, Mário M. Freire, Henrique J. A. da Silva, and Paulo P. Monteiro, "Source Traffic Analysis", *ACM Transactions on Multimedia Computing, Communications and Applications*, 6(3): Article 21, 1-23, 2010. ISI Impact Factor (2010): 1.425.
9. Pedro R. M. Inácio, Branka Lakic, Mário M. Freire, Manuela Pereira, and Paulo P. Monteiro, "The Design and Evaluation of the Simple Self-Similar Sequences Generator", *Information Sciences (Elsevier)*, 179(23): 4029–4045, 2009. ISI Impact Factor (2009): 3.291.
10. Nuno M. Garcia, Paulo P. Monteiro, Mário M. Freire, José R. Santos, and Przemyslaw Lenkiewicz, "A New Architectural Approach for Optical Burst Switching Networks Based on a Common Control Channel", *Optical Switching and Networking (Elsevier)*, 4(3/4): 173–188, 2007. ISI Impact Factor (2010): 0.981.
11. Farid Farahmand, Vinod M. Vokkarane, Jason P. Jue, Joel J. P. C. Rodrigues, and Mário M. Freire, "Optical Burst Switching Network: A Multi-layered Approach", *Journal of High Speed Networks (IOS Press)*, 16(2): 105–122, 2007. ISI Impact Factor (2007): 0.191.
12. Marek Hajduczenia, Pedro R. M. Inácio, Henrique J. A. da Silva, Mário M. Freire, and Paulo P. Monteiro, "On EPON Security Issues", *IEEE Communications Surveys and Tutorials*, 9(1): 68–83, 2007. ISI Impact Factor (2010): 3.692.
13. Mário M. Freire and Henrique J. A. da Silva, "Assessment of Blocking Performance in WDM Chordal Ring Networks", *Journal of High Speed Networks (IOS Press)*, 15(4): 415-432, 2006. ISI Impact Factor (2006): 0.103.
14. Joel J. P. C. Rodrigues, Mário M. Freire, and Pascal Lorenz, "Performance Implications of Meshing Degree for Optical Burst Switched Networks Using One-way Resource Reservation Protocols", *Telecommunications Systems (Springer)*, 30(1/2/3): 35–47, 2005. ISI Impact Factor (2005): 0.409.
15. J. F. Rocha, A. T. Cartaxo, H. J. Silva, J. L. Pinto, A. L. Teixeira, A. S. Gameiro, P. P. Monteiro, J. O. Pires, R. S. Ribeiro, M. O. Violas, A. N. Pinto, M. N. Lima, P. S. André, M. M. Freire, A. L. Ribeiro, C. F. Fernandes, J. T. Pereira, J. M. Pousa, J. M. Santos, M. T. Almeida, A. R. Tavares, R. N. Nogueira, J. S. Machado, "Optical Communications Research at Institute of Telecommunications", *Fiber and Integrated Optics (Taylor & Francis)*, 24(3/4): 411–428, 2005. ISI Impact Factor (2005): 0.439.
16. Joel J. P. C. Rodrigues, Mário M. Freire, and Pascal Lorenz, "Performance Assessment of Optical Burst Switching Ring and Chordal Ring Networks", *Telecommunications Systems (Springer/Kluwer Academic Publishers)*, 27(2/3/4): 133–149, 2004. ISI Impact Factor (2004): 0.346.
17. Mário M. Freire, Joel J. P. C. Rodrigues, and Rui M. F. Coelho, "The Role of Network Topologies in the Optical Core of IP-over-WDM Networks with Static Wavelength Routing", *Telecommunications Systems (Springer/Kluwer Academic Publishers)*, 24(2/3/4): 111–122, 2003. ISI Impact Factor (2003): 0.413.
18. Mário M. Freire and Henrique J. A. da Silva, "Assessment of Blocking Performance in Unidirectional and Bi-directional Wavelength Routed Ring Networks", *Journal of High Speed Networks (IOS Press)*, 12(3/4): 133–140, 2002. ISI Impact Factor (2002): 0.515.
19. Mário M. Freire and Henrique J. A. da Silva, "Estimation of Multiple-Quantum-Well Laser Parameters for Simulation of Dispersion Supported Transmission Systems at 20 Gbit/s", *IEE Proceedings - Optoelectronics*, 146(2): 93–98, 1999. ISI Impact Factor (1999): 0.826.

20. Mário M. Freire, José A. R. Pacheco de Carvalho, Álvaro M. F. de Carvalho, and Henrique J. A. da Silva, "Impact of Double Cavity FP Demultiplexers on the Performance of WDM Dispersion Supported Transmission", *European Transactions on Telecommunications (John Wiley & Sons)*, 8(2): 201–204, 1997. ISI Impact Factor (1997): 0.287.
21. Mário M. Freire, Álvaro M. F. de Carvalho, and Henrique J. A. da Silva, "Performance Implications of Three-Mirror Fabry-Perot Demultiplexers for 10-Gb/s WDM Dispersion-Supported Transmission with 0.5-nm Channel Spacing", *IEEE Photonics Technology Letters*, 8(9): 1261–1263, 1996. ISI Impact Factor (1996): 1.063.
22. Mário M. Freire and Henrique J. A. da Silva, "Performance Assessment of Two-Channel Dispersion-Supported Transmission Systems Using Single- and Double-Cavity Fabry-Perot Filters as Demultiplexers", *IEEE Photonics Technology Letters*, 7(11): 1360–1362, 1995. ISI Impact Factor (1995): 0.977.

Refereed Book Chapters

1. Liliana F. B. Soares, Diogo A. B. Fernandes, João V. Gomes, Mário M. Freire and Pedro R. M. Inácio, "Cloud Security: State of the Art", in *Security, Privacy and Trust in Cloud Systems*, Surya Nepal and Mukaddim Pathan (Eds.), accepted for publication, Springer, Berlin Heidelberg, 2013.
2. Przemyslaw Lenkiewicz, Manuela Pereira, Mário Freire, and José Fernandes, Chapter 1: "Techniques for Medical Image Segmentation: Review of the Most Popular Approaches", in *Biomedical Diagnostics and Clinical Technologies – Applying High-Performance Cluster and Grid Computing*, Manuela Pereira and Mário Freire, Medical Information Science Reference, IGI Global, Hershey, New York, 2011, ISBN: 978-1-60566-280-0, 1-33.
3. Filipe Soares, Mário M. Freire, Manuela Pereira, Filipe Janela, and João Seabra, Chapter 6, "The Role of Self-Similarity for Computer Aided Detection Based on Mammogram Analysis", in *Biomedical Diagnostics and Clinical Technologies – Applying High-Performance Cluster and Grid Computing*, Manuela Pereira and Mário Freire, Medical Information Science Reference, IGI Global, Hershey, New York, 2011, ISBN: 978-1-60566-280-0, 185-203.
4. João V. P. Gomes, Pedro R. M. Inácio, Mário M. Freire, Manuela Pereira, and Paulo P. Monteiro, Part 11: Measurement and P2P Traffic Characteristics, Chapter "The Nature of Peer-to-Peer Traffic", in *Handbook of Peer-to-Peer Networking*, Xuemin Shen, Heather Yu, John Buford, and Mursalin Akon (Eds.) Springer, Berlin Heidelberg, 2010, ISBN: 978-0-387-09750-3, 1231-1252.
5. Rui G. Pereira and Mário M. Freire, "Classification of Semantic Web Technologies", *Encyclopedia of Information Science and Technology*, 2nd Edition, Mehdi Khosrow-Pour (Ed.), Information Science Reference, IGI Global, Hershey, New York, 2008, ISBN: 978-1-60566-026-4, Vol. II, 12 p.
6. Manuela Pereira and Mário M. Freire, "Proxy Caching Strategies for Internet Media Streaming" *Encyclopedia of Information Science and Technology*, 2nd Edition, Mehdi Khosrow-Pour (Ed.) Information Science Reference, IGI Global, Hershey, New York, 2008, ISBN: 978-1-60566-026-4, Vol. VI, 5 p.
7. Simão M. de Sousa, Mário M. Freire, and Rui C. Cardoso, "Security Issues in Mobile Code Paradigms", *Encyclopedia of Information Science and Technology*, 2nd Edition, Mehdi Khosrow-Pour (Ed.), Information Science Reference, IGI Global, Hershey, New York, 2008, ISBN: 978-1-60566-026-4, Vol. VII, 5 p.
8. Joel J. P. C. Rodrigues and Mário M. Freire, "Chapter III - Object-Oriented Modeling and Simulation of Optical Burst Switched Mesh Networks", in *Simulation and Modeling: Current Technologies and Applications*, Asim El Sheikh, Abid Al Ajeeli, and Evon M. O. Abu-Taieh (Eds.), IGI Publishing, IGI Global, Hershey, New York, 2008, ISBN: 978-1-59904-198-8, 99-118.
9. Mário M. Freire, "Chapter V - Interoperability Among Intrusion Detection Systems", in *Advances in Enterprise Information Technology Security*, Djamel Khadraoui and Francine Herrmann (Eds.), Information Science Reference, IGI Global, Hershey, New York, 2007, ISBN: 978-1-59904-090-5, 92-102.
10. Rui G. Pereira and Mário M. Freire, "Integration of Ontologies and Semantic Annotations with Resource Description Framework in Eclipse-based Platforms with Editing Features for Semantic Web", in *Information Networking: Advances in Data Communications and Wireless Networks*, Ilyoung Chong and Kenji Kawahara

(Eds.), Lecture Notes in Computer Science, LNCS 3961, Revised Selected Papers of ICOIN 2006, Springer, Berlin Heidelberg, September 2006, ISBN: 3-540-48563-5, 902-911.

11. Mário M. Freire, Paulo P. Monteiro, Henrique J. A. da Silva, and José Ruela, "Ethernet Passive Optical Networks", in *Encyclopedia of Multimedia Technology and Networking*, Margherita Pagani (Ed.), Idea Group Reference, Hershey, PA, 2005, ISBN: 1-59140-561-0, Vol. I, 283-289.
12. Joel J. P. C. Rodrigues, Mário M. Freire, Paulo P. Monteiro, and Pascal Lorenz, "Optical Burst Switching", in *Encyclopedia of Multimedia Technology and Networking*, Margherita Pagani (Ed.), Idea Group Reference, Hershey, PA, 2005, ISBN: 1-59140-561-0, Vol. II, 799-806.
13. Rui C. Cardoso and Mário M. Freire, "Security Vulnerabilities and Exposures in Internet Systems and Services", in *Encyclopedia of Multimedia Technology and Networking*, Margherita Pagani (Ed.), Idea Group Reference, Hershey, PA, 2005, ISBN: 1-59140-561-0, Vol. II, 910-916.
14. Rui G. Pereira and Mário M. Freire, "Semantic Web", in *Encyclopedia of Multimedia Technology and Networking*, Margherita Pagani (Ed.), Idea Group Reference, Hershey, PA, 2005, ISBN: 1-59140-561-0, Vol. II, pp. 917-924.
15. Joel J. P. C. Rodrigues and Mário M. Freire, "Performance Assessment of Signaling Protocols in Optical Burst Switching Mesh Networks", in *Information Networking: Networking Technologies for Broadband and Mobile Networks*, Hyun-Kook Kahng (Ed.), Lecture Notes in Computer Science, LNCS 3090, Revised Selected Papers of ICOIN 2004, Springer-Verlag, Berlin Heidelberg, September 2004, ISBN: 3-540-23034-3, 750-759.
16. Pascal Lorenz, Joel J. P. C. Rodrigues, and Mário M. Freire, "Fiber-Optic Networks", in *Encyclopedia of Optical Engineering*, Ronald Driggers (Ed.), CRC Press, New York, 2004, ISBN: 0-8247-0940-3, 1-8.
17. Rui M. F. Coelho, Joel J. P. C. Rodrigues, and Mário M. Freire, "Performance Analysis of Degree Four Topologies for the Optical Core of IP-over-WDM Networks", in *Information Networking: Networking Technologies for Enhanced Internet Services*, Hyun-Kook Kahng (Ed.), Lecture Notes in Computer Science, LNCS 2662, Revised Selected Papers of ICOIN 2003, Springer-Verlag, Berlin Heidelberg, August 2003, ISBN: 3-540-40827-4, 108-117.
18. Rui M. F. Coelho and Mário M. Freire, "Optical Backbones with Low Connectivity for IP-over-WDM Networks", in *Information Networking: Wired Communications and Management*, Ilyoung Chong (Ed.), Lecture Notes in Computer Science, LNCS 2343, Revised Papers of ICOIN 2002, Springer-Verlag, Berlin Heidelberg, September 2002, ISBN: 3-540-44256-1, 327-336.
19. Mário M. Freire and Henrique J. A. da Silva, "Wavelength-routed Chordal Ring Networks", in *Business Briefing: Global Optical Communications*, World Markets Series, World Markets Research Centre, London, UK, 2001, ISBN: 1-903150-48-5, 151-154.

Papers in Refereed International Conference Proceedings

1. Miguel Neto, João V. Gomes, Mário M. Freire, and Pedro R. M. Inácio, "Real-Time Traffic Classification Based on Statistical Tests for Matching Signatures with Packet Length Distributions", *Proceedings of the 19th IEEE International Workshop on Local and Metropolitan Area Networks (LANMAN 2013)*, Brussels, Belgium, April 10–12, 2013, IEEE Press, New York, 6 pages.
2. Rui Braz, António M. G. Pinheiro, J. Moutinho, Mário M. Freire, Manuela Pereira, "Breast Ultrasound Images Gland Segmentation", *Proceedings of the 2012 IEEE International Workshop on Machine Learning for Signal Processing*, Santander, Spain, September 23–26, 2012, IEEE Press, New York, ISBN: 978-1-4673-1026-0, 6 pages.
3. Przemyslaw Lenkiewicz, Manuela Pereira, Mário M. Freire, José Fernandes, "Extended Whole Mesh Deformation Model: Full 3D Processing", *Proceedings of the 2011 18th IEEE International Conference on Image Processing (ICIP 2011)*, Brussels, Belgium, September 11–14, 2011, IEEE Press, New York, ISBN: 978-1-4577-1303-3, 1601-1604.
4. Angelo Arrifano, Marc Antonini, Manuela Pereira, Mário M. Freire, "Joint Source-Channel Decoding of Motion-Information Using Maximum-a-Posteriori", *Proceedings of the 2011 18th IEEE International*

Conference on Image Processing (ICIP 2011), Brussels, Belgium, September 11–14, 2011, IEEE Press, New York, ISBN: 978-1-4577-1303-3, 2221-2224.

5. André F. Esteves, Pedro R. M. Inácio, Manuela Pereira, and Mário M. Freire, "On-Line Detection of Encrypted Traffic Generated by Mesh-Based Peer-to-Peer Live Streaming Applications: The Case of GoalBit", *Proceedings of the 2011 10th IEEE International Symposium on Network Computing and Applications (NCA 2011)*, Cambridge, MA, USA, August 25-27 2011, IEEE Computer Society Press, Los Alamitos, CA, ISBN: 978-0-7695-4489-2, 223-228.
6. .Fábio D. Beirão, João V. Gomes, Pedro R. M. Inácio, Manuela Pereira, and Mário M. Freire, "NetOdyssey – A New Tool for Real-Time Analysis of Network Traffic", *Proceedings of the 2010 9th IEEE International Symposium on Network Computing and Applications (NCA 2010)*, Cambridge, MA, USA, July 15-17, 2010, IEEE Computer Society Press, Los Alamitos, CA, ISBN: 978-0-7695-4118-1, 239-242.
7. Filipe Soares, Filipe Janela, João Seabra, Manuela Pereira, and Mário M. Freire, "Self-similarity Classification of Breast Tumour Lesions on Dynamic Contrast-enhanced Magnetic Resonance Images", *International Journal of Computer Assisted Radiology and Surgery (Springer)*, 5(S1) S203-S205, 2010 (*Proceedings of the 24th International Congress and Exhibition on Computer Assisted Radiology and Surgery (CARS 2010)*), June 23-26, 2010, Geneva, Switzerland).
8. Angelo Arrifano, Manuela Pereira, Marc Antonini, and Mário M. Freire, "Multiple-Description Video Coding Based on JPEG 2000 MQ-Coder Registers", *Proceedings of the 2010 IEEE International Symposium on Circuits and Systems (ISCAS 2010)*, Paris, France, May 30 - June 2, 2010, IEEE Press, New York, ISBN: 978-1-4244-5309-2, 1827-1830.
9. Filipe Soares, Inês Sousa, Filipe Janela, João Seabra, Manuela Pereira, and Mário M. Freire, "Multifractal Analysis of Arterial Spin Labeling Functional Magnetic Resonance Imaging of the Brain", *Proceedings of 2010 IEEE International Workshop on Medical Measurements and Applications (MeMeA 2010)*, April 30 - May 1, 2010, Ottawa, Canada, IEEE Press, New York, ISBN: 978-1-4244-6288-9, 161-164.
10. Marisa Quaresma, Ângelo M. Arrifano, Manuela Pereira, Mário M. Freire, and Marc Antonini, "Robust Peer-to-Peer Video Streaming Based on Multiple Description Coding", *Proceedings of the 2010 IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB 2010)*, Shanghai, China, March 24-26, 2010, IEEE Press, New York, ISBN: 978-1-4244-4462-5, 6 p.
11. David A. Carvalho, Manuela Pereira and Mário M. Freire, "Towards the Detection of Encrypted BitTorrent Traffic Through Deep Packet Inspection", *Security Technology*, D. Slezak, T.-H. Kim, W.-c. Fang, K.P. Arnett (Eds.), Communications in Computer and Information Science, CCIS 58, Springer-Verlag, Berlin Heidelberg, 2009, ISBN: 978-3-642-10846-4, 265–272, 2009 (*Proceedings of the International Conference on Security Technology (SecTech 2009)*, Jeju Island, Korea, December 10-12, 2009).
12. Przemyslaw Lenkiewicz, Manuela Pereira, Mário M. Freire, and José Fernandes, "The Whole Mesh Deformation Model for 2D and 3D Image Segmentation", *Proceedings of 2009 16th IEEE International Conference on Image Processing (ICIP 2009)*, Cairo, Egypt, November 7-11, 2009, IEEE Press, New York, November 2009, ISBN: 978-1-4244-5654-3, 4045-4048.
13. Mário M. Freire, David A. Carvalho, and Manuela Pereira, "Detection of Encrypted Traffic in eDonkey Network Through Application Signatures", *Proceedings of 2009 1st International Conference on Advances in P2P Systems (AP2PS 2009)*, Sliema, Malta, October 11-16, 2009, IEEE Computer Society Press, Los Alamitos, CA, ISBN: 978-0-7695-3831-0, 174 - 179.
14. Przemyslaw Lenkiewicz, Manuela Pereira, Mário M. Freire, and José Fernandes, "The Dynamic Topology Changes Model for Unsupervised Image Segmentation", *Proceedings of 2009 11th IEEE International Workshop on Multimedia Signal Processing (MMSP 2009)*, Rio de Janeiro, Brazil, October 5-7, 2009, IEEE Press, New York, October 2009, ISBN: 978-1-4244-4464-9, 5 p.
15. Filipe Soares, Mário M. Freire, Manuela Pereira, Filipe Janela, and João Seabra, "Towards the Detection of Microcalcifications on Mammograms Through Multifractal Detrended Fluctuation Analysis", *Proceedings of 2009 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (PACRIM 2009)*, Victoria, B.C., Canada, August 23-26, 2009, IEEE Press, New York, August 2009, ISBN: 978-1-4244-4561-5, 677-681.

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81. Mário M. Freire and Henrique J. A. da Silva, "Performance Comparison of Wavelength Routing Optical Networks with Chordal Ring and Mesh-Torus Topologies", in *Networking - ICN 2001*, Pascal Lorenz (Ed.), Lecture Notes in Computer Science, LNCS 2093, Proceedings of ICN 2001, Springer-Verlag, Berlin Heidelberg, July 2001, ISBN: 3-540-42302-8, 358-367 (*Proceedings of the First International Conference on Networking (ICN'2001)*, Part 1, Colmar, France, July 9-13, 2001).
82. Mário M. Freire and Henrique J. A. da Silva, "Influence of Wavelength Interchange on the Blocking Performance of Wavelength Routed Chordal Ring Networks", *Proceedings of 3rd Conference on Telecommunications (conftele'2001)*, Figueira da Foz, Portugal, 23-24 April, 2001, Instituto de Telecomunicações, ISBN: 972-98115-2-0, 220-224.

83. Mário M. Freire and Henrique J. A. da Silva, "Performance Assessment of Dispersion Supported Transmission Followed by Wavelength Conversion Based on Cross Gain Modulation at 20 Gbit/s", *Proceedings of 3rd Conference on Telecommunications (conftele'2001)*, Figueira da Foz, Portugal, 23-24 April, 2001, Instituto de Telecomunicações, ISBN: 972-98115-2-0, 359-363.
84. Mário M. Freire and Henrique J. A. da Silva, "Assessment of Blocking Performance in Bidirectional WDM Ring Networks with Node-to-Node and Full-Mesh Connectivity", in *Core Networks and Network Management*, D. W. Faulkner and A. L. Harmer (Eds.), IOS Press, Amsterdam, 1999, ISBN: 90 5199 497 4, 82-89. (*Proceedings of the 4th European Conference on Networks and Optical Communications (NOC'99)*, Vol. II, Delft, The Netherlands, June 22-24, 1999).
85. Mário M. Freire and Henrique J. A. da Silva, "Performance Assessment of 40-Gbit/s Optical Transmission Systems at 1310 nm Using Semiconductor Optical Amplifiers", in *Core Networks and Network Management*, D. W. Faulkner and A. L. Harmer (Eds.), IOS Press, Amsterdam, 1999, ISBN: 90 5199 497 4, 147-152. (*Proceedings of the 4th European Conference on Networks and Optical Communications (NOC'99)*, Vol. II, Delft, The Netherlands, June 22-24).
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87. Mário M. Freire, Álvaro M. F. de Carvalho, and Henrique J. A. da Silva, "Assessment of Blocking Performance in Wavelength Division Multiplexed Ring Networks with Bidirectional Links", *Proceedings of the 3rd IFIP Working Conference on Optical Network Design and Modeling (ONDM'99)*, Paris, France, February 8-9, 1999, Maurice Gagnaire and Harmen R. van As (Eds.), ENST, 41-50.
88. Henrique J. A. da Silva and Mário M. Freire, "Multi-Quantum Well Laser Parameters for Simulation of Optical Transmission Systems up to 40 Gbit/s", in *"The Bridge to Global Integration", Conference Record of the IEEE Global Telecommunications Conference (GLOBECOM'98)*, Sydney, Australia, 8-12 November 1998, IEEE Press, New York, Vol. 3, ISBN: 0-7803-4984-9, 1467-1472.
89. Mário M. Freire, Luís N. Vicente, and Henrique J. A. da Silva, "Nonlinear Least Squares Estimation of MQW Laser Parameters from IM Response Measurements", in *Proceedings of the Meeting on Applied Mathematics to Telecommunications/Actas do 1º Seminário de Matemática em Telecomunicações: Que Problemas (MTQP)*, Coimbra, Portugal, September 28-29, 1998, Joaquim J. Júdice and Maria Celeste Gouveia (Eds.), Instituto de Telecomunicações, 30-35.
90. Mário M. Freire and Henrique J. A. da Silva, "Performance Assessment of Dispersion Supported Transmission at 20 Gbit/s Using a Semiconductor Optical Booster Amplifier", in *Long-Haul, ATM and Multi-Media Networks*, D. W. Faulkner and A. L. Harmer (Eds.), IOS Press, Amsterdam, 1998, ISBN: 90 5199 401 X, 228-235. (*Proceedings of the 3rd European Conference on Networks and Optical Communications (NOC'98)*, Vol. II, Manchester, UK, June 23-25, 1998).
91. Mário M. Freire and Henrique J. A. da Silva, "Performance Implications of Partial Chirp Compensation in a Semiconductor Optical Booster Amplifier for Dispersion Supported Transmission at 10 Gbit/s", in *Bridging East and West Through Telecommunications, International Conference on Telecommunications (ICT'98)*, F-N Pavlidou (Ed.), Porto Carras, Greece, June 21-25, 1998, Kings College London/IEE/Aristotle University of Thessaloniki/IEEE/URSI, Vol. I, 76-80.
92. Mário M. Freire and Henrique J. A. da Silva, "Performance Assessment of Dispersion-Supported Transmission at 10- and 20-Gb/s Using a Travelling-Wave Booster Amplifier", *Proceedings of 9th Mediterranean Electrotechnical Conference (MELECON'98)*, Tel-Aviv, Israel, 18-20 May, 1998, IEEE Press, New York, Vol. II, ISBN: 0-7803-3879-0, 779-783.
93. Mário M. Freire and Henrique J. A. da Silva, "Performance Improvement of Dispersion Supported Transmission at 10 Gbit/s by Partial Chirp Compensation in a Travelling Wave Amplifier", in *SOA-Based Components for Optical Networks*, J. Ctyroky, and J. Janta (Eds.), *Book of Abstracts of COST 240 Workshop*, Prague, The Czech Republic, October 27-28, 1997, Academy of Sciences of The Czech Republic, ISBN: 80-901658-7-7, 16-1/16-4.
94. Mário M. Freire and Henrique J. A. da Silva, "Performance Improvement of 40-Gb/s Capacity Four-Channel WDM Dispersion-Supported Transmission by Using Broadened Passband Arrayed-Waveguide Grating

Demultiplexers”, *Technical Digest of The Pacific Rim Conference on Lasers and Electro-Optics* (CLEO/Pacific Rim'97), Chiba, Japan, July 14-18, 1997, IEEE Press, ISBN: 0-7803-3889-8, 13-14.

95. Mário M. Freire and Henrique J. A. da Silva, “Performance Assessment of High Density Wavelength Division Multiplexing Systems with Dispersion Supported Transmission at 10 Gbit/s”, *Proceedings of the Second IEEE Symposium on Computers and Communications* (ISCC'97), Alexandria, Egypt, July 1-3, 1997, IEEE Computer Society Press, ISBN: 0-8186-7852-6, 318-322.

96. Mário M. Freire and Henrique J. A. da Silva, “Performance Improvement of 10 Gbit/s Four-Channel WDM Dispersion Supported Transmission by Using Multi-Layer Thin Film Interference Filters as Demultiplexers”, in *Photonic Networks, Optical Technology and Infrastructure*, D. W. Faulkner and A. L. Harmer (Eds.), IOS Press, Amsterdam, 1997, ISBN: 90 5199 341 2, 135-140 (*Proceedings of the 2nd European Conference on Networks and Optical Communications* (NOC'97), Vol. III, Antwerp, Belgium, June 16-20, 1997).

97. Mário M. Freire, Álvaro M. F. de Carvalho, and Henrique J. A. da Silva, “Performance Implications of Three-Mirror Fabry-Perot Demultiplexers for Dispersion Supported Transmission of Two and Three 10 Gbit/s Channels Separated 0.5 nm”, *Technical Digest of the 1996 Conference on Lasers and Electro-Optics/Europe* (CLEO/Europe'96), Hamburg, Germany, 8-13 September 1996, IEEE Press, New York, ISBN: 0-7803-3169-9, 275.

98. Mário M. Freire and Henrique J. A. da Silva, “Performance Assessment of WDM Dispersion Supported Transmission Systems Using Single and Double-Cavity Fabry-Perot Demultiplexers”, *Conference Proceedings of the IEEE Lasers and Electro-Optics Society 1995 Annual Meeting* (LEOS'95), San Francisco, USA, October 30-November 2, 1995, IEEE Press, New York, Vol. 2, ISBN: 0-7803-2450-1, 57-58.

External Professional Service

Professional Memberships

Member (SM'96, M'00), IEEE (Institute of Electrical and Electronic Engineers), including IEEE Computer Society and IEEE Communications Society.

Professional Member, ACM (Association for Computing Machinery) and of ACM SIGCOMM - Special Interest Group on Data Communications.

Member of the Internet Society (ISOC).

Effective Member of the Portuguese Order of Engineers – Computer Science and Engineering College.

Elected Positions

2010 – 2013 Coordinator, Regional College of Computer Science and Engineering, Order of Engineers – Centre Region (Ordem dos Engenheiros – Região Centro), Portugal.

2007 – 2010 Coordinator, Regional College of Computer Science and Engineering, Order of Engineers – Centre Region (Ordem dos Engenheiros – Região Centro), Portugal.

2005 – 2009 Chair (by appointment) and Founder, IEEE Portugal Section – Computer Society Chapter.

2004 – 2007 Member, National Council of the Computer Science and Engineering College, Order of Engineers (Ordem dos Engenheiros), Portugal.

Journal Editorial Service

2010 – present Member of the Editorial Board, ACM Applied Computing Reviews.

2008 – present Associate Editor, International Journal of Communication Systems (John Wiley & Sons).

2007 – present Associate Editor, Journal on Security and Communication Networks (John Wiley & Sons).

2007 – 2011 Editor, IEEE Communications Surveys and Tutorials.

2007 – 2009 Associate Editor, Advances in Business Data Communications and Networking (ABDCN) Book Series, IGI Global.

2007 – 2009	Associate Editor, Journal of Computer Systems, Networks and Communications, (Hindawi Publishing).
2004 – 2008	Editorial Review Board, International Journal of Business Data Communications and Networking (Idea Group Publishing).
2001 – 2002	Reviewer Advisory Board, ACM Computing Reviews.

Edited Journal Special Issues

1. Ching-Hsien Hsu, Jong Hyuk Park, Laurence T. Yang, and Mario Freire (Guest Eds.), Special Issue on "Secure Communications and Data Management in Ubiquitous Services", *International Journal of Communication Systems (John Wiley & Sons)*, 22(9) 1065–1068, 2009.
2. Stamatios V. Kartalopoulos, Hsiao-Hwa Chen, Mário Freire, Liwen He, and Pramode Verma (Guest Editors), Guest Editorial of the Feature Topic on "Security in Mobile Ad Hoc and Sensor Networks: Part II", *IEEE Communications Magazine*, 46(4) 86–87, 2008.
3. Stamatios V. Kartalopoulos, Hsiao-Hwa Chen, Mário Freire, Liwen He, and Pramode Verma (Guest Editors), Guest Editorial of the Feature Topic on "Security in Mobile Ad Hoc and Sensor Networks: Part I", *IEEE Communications Magazine*, 46(2) 102–103, 2008.

Edited Books and Conference Proceedings

1. Manuela Pereira and Mário Freire (Eds.), "Biomedical Diagnostics and Clinical Technologies: Applying High-Performance Cluster and Grid Computing", Engineering Science Reference, IGI Global, Hershey, New York, 2011, ISBN: 978-1-60566-28-00, 350 p.
2. Teresa Vazão, Mário M. Freire, and Ilyoung Chong (Eds.), "Information Networking: Towards Ubiquitous Networking and Services", Lecture Notes in Computer Science, LNCS 5200, Springer, Berlin Heidelberg, November 2008, ISBN: 978-3-540-89523-7, 843 p. (Revised Selected Papers of the International Conference on Information Networking (ICOIN'2007), Estoril, Portugal, January 23-25, 2007).
3. Takashi Washio, Zhi-Hua Zhou, Joshua Zhexue Huang, Xiaohua Hu, Jinyan Li, Chao Xie, Jieyue He, Deqing Zou, Kuan-Ching Li, and Mário M. Freire (Eds.), "Emerging Technologies in Knowledge Discovery and Data Mining", Lecture Notes in Artificial Intelligence, LNAI 4819, Springer, Berlin Heidelberg, February 2008, ISBN: 978-3-540-77016-9, 675 p. (Revised Selected Papers of PAKDD 2007 International Workshops, Nanjing, China, May 22-25, 2007).
4. Mário Freire and Manuela Pereira (Eds.), "Encyclopedia of Internet Technologies and Applications", Information Science Reference, IGI Global, Hershey, New York, 2008, ISBN: 978-1-59140-993-9, 716 p.
5. Robert Meersman, Zahir Tari, Francisco Curbera, Frank Leymann, Mathias Weske, Pascal Felber, Aad van Moorsel, Calton Pu, Tharam Dillon, Michele Missikoff, Steffen Staab, Pilar Herrero, Daniel S. Katz, Maria S. Pérez, Domenico Talia, Mário Freire, Simão Melo de Sousa, Vitor Santos and Jong Hyuk Park (Eds.), "On the Move to Meaningful Internet Systems 2007: CoopIS, DOA, ODBASE, GADA, and IS", Lecture Notes in Computer Science, LNCS 4803 (Part I), Springer, Berlin Heidelberg, November 2007, ISBN: 3-540-76846-7, 1173 p. (Proceedings of the OTM Confederated International Conferences: CoopIS, DOA, ODBASE, GADA, and IS 2007, Part I, Vilamoura, Portugal, November 25-30, 2007).
6. Robert Meersman, Zahir Tari, Francisco Curbera, Frank Leymann, Mathias Weske, Pascal Felber, Aad van Moorsel, Calton Pu, Tharam Dillon, Michele Missikoff, Steffen Staab, Pilar Herrero, Daniel S. Katz, Maria S. Pérez, Domenico Talia, Mário Freire, Simão Melo de Sousa, Vitor Santos and Jong Hyuk Park (Eds.), "On the Move to Meaningful Internet Systems 2007: CoopIS, DOA, ODBASE, GADA, and IS", Lecture Notes in Computer Science, LNCS 4804 (Part II), Springer, Berlin Heidelberg, November 2007, ISBN: 3-540-76835-1, 683 p. (Proceedings of the OTM Confederated International Conferences: CoopIS, DOA, ODBASE, GADA, and IS 2007, Part II, Vilamoura, Portugal, November 25-30, 2007).
7. Gunter Van de Velde, Petre Dini, Mário Freire, Athanassios Liakopoulos, Ciprian Popoviciu, Dimitra Simeonidou, and Petros Th. Zerfos (Eds.), "Proceedings of the International Conference on Networking and

Services", (ICNS 2007), Athens, Greece, June 19-24, 2007, IEEE Computer Society Press, Los Alamitos, CA, June 2007, ISBN-10: 0-7695-2858-9, 714 p.

8. Robert Meersman, Zahir Tari, Pilar Herrero, Daniel Grosu, Gonzalo Medez, Marta Sabou, Annika Hinze, George Buchanan, Aldo de Moor, Michael Gurstein, Mário Freire, Simão Melo de Sousa, Vitor Santos *et. al.* (Eds.), "On the Move to Meaningful Internet Systems 2006: OTM 2006 Workshops", Lecture Notes in Computer Science, LNCS 4277 (Part I), Springer, Berlin Heidelberg, October 2006, ISBN: 3-540-48269-5, 1009 p. (Proceedings of the OTM Confederated International Workshops and Posters, Part I, Montpellier, France, October 29 - November 3, 2006).
9. Robert Meersman, Zahir Tari, Pilar Herrero, Daniel Grosu, Gonzalo Medez, Marta Sabou, Annika Hinze, George Buchanan, Aldo de Moor, Michael Gurstein, Mário Freire, Simão Melo de Sousa, Vitor Santos *et. al.* (Eds.), "On the Move to Meaningful Internet Systems 2006: OTM 2006 Workshops", Lecture Notes in Computer Science, LNCS 4278 (Part II), Springer, Berlin Heidelberg, October 2006, ISBN: 3-540-48273-3, 1004 p. (Proceedings of the OTM Confederated International Workshops and Posters, Part II, Montpellier, France, October 29 - November 3, 2006).
10. Petre Dini, Pascal Lorenz, Dumitru Roman, and Mário Freire (Eds.), "Proceedings of the International Conference on Internet and Web Applications and Services" (ICIW 2006), Gosier, Guadeloupe, French Caribbean, February 22-24, 2006, IEEE Computer Society Press, Los Alamitos, CA, February 2006, ISBN-10: 0-7695-2522-9.
11. Petre Dini, Pascal Lorenz, Mário Freire, Pierre Rolin, Pawel Szulakiewicz, and Alexandra Cristea (Eds.), "Telecommunications 2005", IEEE Computer Society Press, Los Alamitos CA, July 2005, ISBN: 0-7695-2388-9, 545 p. (Proceedings of the Advanced Industrial Conference on Telecommunication/Service Assurance with Partial and Intermittent Resources Conference/E-Learning on Telecommunications Workshop (AICT/SAPIR/ELETE 2005), Lisbon, Portugal, July 17-20, 2005).
12. Mário M. Freire, Prosper Chemouil, Pascal Lorenz, and Annie Gravey (Eds.), "Universal Multiservice Networks", Lecture Notes in Computer Science, LNCS 3262, Springer, Berlin Heidelberg, October 2004, ISBN: 3-540-23551-5, 556 p. (Proceedings of the 3rd European Conference on Universal Multiservice Networks (ECUMN'2004), Porto, Portugal, October 25-27, 2004).
13. Mário M. Freire, Pascal Lorenz, and Mike M.-O. Lee (Eds.), "High-Speed Networks and Multimedia Communications", Lecture Notes in Computer Science, LNCS 2720, Springer-Verlag, Berlin Heidelberg, July 2003, ISBN: 3-540-40542-9, 582p. (Proceedings of the 6th IEEE International Conference on High-Speed Networks and Multimedia Communications, (HSNMC'2003), Estoril, Portugal, July 23-25, 2003).

Tutorials

1. Mário M. Freire, "Integration of IP with Optical Fiber Networks Through Optical Burst Switching", Half-day Tutorial presented on April 23, 14:00-17:30, at 5th International Conference on Networking (ICN 2006), Morne, Mauritius, April 23-29, 2006.
2. Mário Freire and Joel Rodrigues, "Next Generation Optical Internet Networks", Half-day Tutorial presented on June 30, 2004, 14:00-17:30, at 7th IEEE International Conference on High Speed Networks and Multimedia Communications (HSNMC 2004) Toulouse, France, June 30-July 2, 2004.

International Conference/Workshop Organization as General Chair

- General Co-chair, 5th European Conference on Universal Multiservice Networks (ECUMN'2009), Sliema, Malta, October 11-16, 2009.
- General Chair, 3rd International Conference on Internet and Web Applications and Services (ICIW 2008), Athens, Greece June 8-13, 2008.
- General Chair, 1st International Workshop on High Performance Computing Applied to Medical Data and Bioinformatics (HPCBio 2007), Cap Esterel, French Riviera, France, August 25 - 31, 2007.
- Workshop Chair, 1st International Workshop on GRID over Optical Burst Switching Networks (GOBS 2007), 3rd International Conference on Networking and Services (ICNS 2007), Athens, Greece, June 19-25, 2007.

General Co-chair, 3rd IEEE International Conference on Broadband Communications, Networks, and Systems (BROADNETS 2006), San Jose, CA, USA, October 1-5, 2006.

General Co-chair, 3rd European Conference on Universal Multiservice Networks (ECUMN'2004), Porto, Portugal, October 25-27, 2004.

General Chair, 6th IEEE International Conference on High Speed Networks and Multimedia Communications (HSNMC'2003), Estoril, Portugal, July 23-25, 2003.

Program Chair of International Conferences

Track Co-Chair, Track on Networking, The 28th Annual ACM Symposium on Applied Computing (SAC 2013), Coimbra, Portugal, March 18 - 22, 2013.

Track Co-Chair, Track on Networking, The 27th Annual ACM Symposium on Applied Computing (SAC 2012), Riva del Garda, Italy, March 26-30, 2012.

Track Co-Chair, Track on Networking, The 26th Annual ACM Symposium on Applied Computing (SAC 2011), Tunghai University, Taichung, Taiwan, March 21 – 24 2011.

Track Co-Chair, Track on Networking, The 25th Annual ACM Symposium on Applied Computing (SAC 2010), Sierre, Switzerland, 22 – 26 March 2010.

Program Co-chair, The 1st International Symposium on Cyber-Physical Intelligence (CPI 2009), Brisbane, Australia, 7-10 July, 2009 (held in conjunction with The Sixth International Conference on Ubiquitous Intelligence and Computing (UIC 2009)).

Track Co-Chair, Track on Computer Networks, The 24th Annual ACM Symposium on Applied Computing (SAC 2009), Honolulu, Hawaii, USA, March 8 - 12, 2009.

Track Co-Chair, Track on Computer Networks, The 23rd Annual ACM Symposium on Applied Computing (SAC 2008), Fortaleza, Ceará, Brazil, March 16 - 20, 2008.

Program Co-chair, Second International Symposium on Information Security (IS 2007), as part of the OnTheMove Federated Conferences (OTM 2007), Vilamoura, Algarve, Portugal, Nov 26-27, 2007.

Program Co-Chair, The 2007 International Workshop on Service, Security and its Data Management Technologies for Ubiquitous Computing (SSDU 2007) (jointly held with The 11th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2007), Nanjing, China, May 22 – 25, 2007).

Track Co-Chair, Track on Computer Networks, The 22nd Annual ACM Symposium on Applied Computing (SAC 2007), Seoul, Korea, March 11-15, 2007.

Program Chair, The International Conference on Information Networking (ICOIN 2007), Lisbon, Portugal, January 23-25, 2007.

Program Co-chair, First International Workshop on Information Security (IS 2006), as part of the OnTheMove Federated Conferences (OTM'06), Montpellier, France, October 29 – November 3, 2006.

TPC Co-Chair, International Conference on Internet and Web Applications and Services (ICIW 2006), Track on Internet and Web-based Applications and Services, Guadeloupe, French Caribbean, February 22-24, 2006.

TPC Co-Chair, Advanced Industrial Conference on Telecommunications (AICT 2005), Lisbon, Portugal, July 17-20, 2005.

Program Chair, 4th International Conference on Networking (ICN 2005), Reunion Island, April 17-21, 2005.

Member of Technical Program Committee of International Conferences

Technical Program Committee, IEEE Global Communications Conference, Exhibition and Industry Forum (GLOBECOM 2013), Atlanta, GA, USA, December 9-13, 2013.

Technical Program Committee, IEEE Communications Conference, Industry Forum and Exhibition (ICC 2013), Budapest, Hungary, June 9-13, 2013.

Technical Program Committee, 6th Joint IFIP Wireless and Mobile Networking Conference (WMNC 2013) Dubai, United Arab Emirates, April 23-25, 2013.

Technical Program Committee, The 10th Annual IEEE Consumer Communications and Networking Conference (CCNC 2013), Track on Multimedia & Entertainment Networking and Services, and Work in Progress, Las Vegas, Nevada, USA, January 11-14, 2013.

Technical Program Committee, IEEE Global Communications Conference, Exhibition and Industry Forum (GLOBECOM 2012), Anaheim, California, USA, December 3-7, 2012.

Technical Program Committee, IFIP Wireless Days 2012, Dublin, Ireland, November 21-23, 2012.

Technical Program Committee, 5th joint IFIP Wireless and Mobile Networking Conference (WMNC 2012) September, 19-20, 2012, Bratislava, Slovakia.

Technical Program Committee, IEEE Communications Conference, Industry Forum and Exhibition (ICC 2012), Ottawa, Canada, June 10-15, 2012.

Program Committee, 13th IEEE International Conference on High Performance Switching and Routing, (IEEE HPSR 2012), Belgrade, Serbia, July 24-27, 2012.

Technical Program Committee, The 9th Annual IEEE Consumer Communications and Networking Conference (CCNC 2012), Track on Multimedia & Entertainment Networking and Services, and Work in Progress, Las Vegas, Nevada, USA, January 14-17, 2012.

Technical Program Committee, IEEE Global Communications Conference, Exhibition and Industry Forum (GLOBECOM 2011), Houston, Texas, USA, December 5-9, 2011.

Technical Program Committee, IFIP Wireless Days 2011, Track 2: Wireless Multimedia and Entertainment, Venice, Italy, October 10 - 12, 2011.

Technical Program Committee, 4th Joint IFIP Wireless and Mobile Networking Conference (WMNC 2011) Toulouse, France, October 26-28, 2011.

Program Committee, 12th IEEE International Conference on High Performance Switching and Routing, (IEEE HPSR 2011), Cartagena, Spain, July 4-6, 2011.

Technical Program Committee, IEEE Communications Conference (ICC 2011), Kyoto, Japan, June 5-9, 2011.

Technical Program Committee, 7th International Conference on Networking and Services (ICNS 2011), Venice, Italy, May 22-27, 2011.

Technical Program Committee, 6th International Conference on Internet and Web Applications and Services (ICIW 2011), St. Maarten, The Netherlands Antilles, March 20-25, 2011.

Technical Program Committee, 10th International Conference on Networks (ICN 2011), St. Maarten, The Netherlands Antilles, January 23-28, 2011.

Technical Program Committee, The 8th Annual IEEE Consumer Communications and Networking Conference (CCNC 2011), Track on Multimedia & Entertainment Networking and Services, and Work in Progress, Las Vegas, Nevada, USA, January 9-12, 2011.

Technical Program Committee, IEEE Global Communications Conference (GLOBECOM 2010), Miami, Florida, USA, December 6-10, 2010, Communication & System Security Symposium (CIS).

Technical Program Committee, 2nd International Conference on Advances in P2P Systems (AP2PS 2010), Florence, Italy, October 25-30, 2010.

Technical Program Committee, IFIP Wireless Days 2010, Track 2: Wireless Multimedia and Entertainment, Venice, Italy, October 20 - 22, 2010.

Technical Program Committee, 3rd Joint IFIP Wireless and Mobile Networking Conference (WMNC 2010) Budapest, Hungary, October 13-15, 2010.

Track Technical Program Committee, 19th International Conference on Computer Communications and Networks (ICCCN 2010), Track on Optical and Backbone Networks, Zurich, Switzerland, August 2-5, 2010.

Program Committee, 4th International Conference on Information Security and Assurance (ISA 2010), Miyazaki, Japan, June 23 - 25, 2010.

Technical Program Committee, 4th International Conference on Sensor Technologies and Applications (SENSORCOMM 2010), Venice, Italy, July 18 - 25, 2010.

Committee Member, 9th European Conference on Information Warfare and Security (ECIW 2010), Thessaloniki, Greece July 1-2, 2010.

Technical Program Committee, 3rd International Workshop on Future Multimedia Networking (FMN 2010), Krakow, Poland, 2010 June 17-18

Program Committee, 11th International Conference on High Performance Switching and Routing (HPSR 2010), Richardson, Texas, USA, June 13-16, 2010.

Technical Program Committee, 2010 IEEE International Conference on Communications (ICC 2010), Cape Town, South Africa, May 23-27, 2010.

Technical Program Committee, 8th Conference on Communications Networks and Services Research (CNSR2010), Montreal, Canada, May 11- 14, 2010.

Technical Program Committee, 5th International Conference on Internet and Web Applications and Services (ICIW 2010), Barcelona, Spain, May 9 - 15, 2010.

Program Committee, International Symposium on Computational Modelling of Objects Represented in Images: Fundamentals, Methods and Applications (ComplIMAGE 2010), Buffalo-Niagara, May 5-7, 2010.

Technical Program Committee, IEEE Wireless Communications and Networking Conference (WCNC 2010), MAC Track, Sydney, Australia, April 18-21, 2010.

Technical Program Committee, 9th International Conference on Networks (ICN 2010), Menuires, The Three Valleys, French Alps, France, April 11-16, 2010.

Technical Program Committee, 6th International Conference on Networking and Services (ICNS 2010), Cancun, Mexico, March 7-13, 2010.

Technical Program Committee, 2nd International Conference on Advances in Biotechnologies (BIOTECHNO 2010), Cancun, Mexico, March 7-13, 2010.

Technical Program Committee, 1st International Conference on Advances in Bioinformatics and Applications (BIOINFO 2010), Cancun, Mexico, March 7-13, 2010

Technical Program Committee, 7th IEEE Consumer Communications and Networking Conference (CCNC 2010), Track on Multimedia Communication and Services, CCNC 2010 Short Papers: CCNC 2010 Work-in-Progress and Positioning Papers, Las Vegas, Nevada, USA, January 9-12, 2010.

Technical Committee Member, 3rd International Conference on New Technologies, Mobility and Security (NTMS 2009), Cairo, Egypt, December 20-23, 2009.

Technical Program Committee, IFIP Wireless Days 2009, Paris, France, December 15-17, 2009.

Technical Program Committee, International Conference on Security Technology (SecTech 2009), Jeju Island, Korea, December 10-12, 2009.

Technical Program Committee, 52nd IEEE Global Communications Conference (IEEE GLOBECOM 2009), Honolulu, Hawaii, USA, November 30 - December 4, 2009.

Program Committee, 3rd International Conference on Network and System Security (NSS 2009), Gold Coast, Australia, October 19-21, 2009.

Technical Program Committee, 5th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob 2009), Marrakech, Morocco, October 12-14, 2009.

Technical Program Committee, 3rd International Conference on Next Generation Mobile Applications, Services and Technologies (NGMAST 2009), Cardiff, UK, September 15-18, 2009.

Technical Program Committee, 2nd Joint IFIP Wireless and Mobile Networking Conference (WMNC'2009), Personal Wireless Communications (PWC), Gdańsk, Poland, September 9-11, 2009.

Technical Program Committee, 18th International Conference on Computer Communications and Networks (ICCCN 2009), Track on Optical Networking, San Francisco, CA, USA, August 2-6, 2009.

Conference Executive, 8th European Conference on Information Warfare and Security, Military Academy, Lisbon & the University of Minho, Braga, Portugal, July 6-7, 2009.

Technical Program Committee, First International Conference on Network and Service Security (N2S 2009), Paris, France, June, 24-26, 2009.

Technical Program Committee, 2009 IEEE Workshop on High Performance Switching and Routing (HPSR 2009), Paris, France, June 22-24, 2009.

Technical Program Committee, 2nd International Workshop on Future Multimedia Networking (FMN 2009), Coimbra, Portugal, June 22-23, 2009.

Program Committee, Pervasive/Ubiquitous Computing Workshop (held in conjunction with International Wireless Communications and Mobile Computing Conference 2009 (IWCMC 2009)), Leipzig, Germany, June, 21-24, 2009.

Technical Program Committee, IEEE Communications Conference (ICC 2009), Dresden, Germany, June 14-18, 2009.

Technical Program Committee, 4th International Conference on Internet and Web Applications and Services (ICIW 2009), Venice/Mestre, Italy, May 24-28, 2009.

Technical Program Committee, 7th Annual Conference on Communication Networks and Services Research (CNSR 2009), Moncton, New Brunswick, Canada, May 11 - 13, 2009.

Technical Program Committee, The 7th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-2009), Rabat, Morocco, May 10-13, 2009.

Technical Program Committee, 5th International Conference on Networking and Services (ICNS 2009), April 20-25, 2009 - Valencia, Spain.

Program Committee, 3rd International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2009), Track on Pervasive Computing and Ad Hoc Networking, Fukuoka, Japan, March 16-19, 2009.

Technical Program Committee, 2nd International Workshop on Intelligent Pervasive Devices (PerDev 2009) (in conjunction with the 7th IEEE International Conference on Pervasive Computing and Communication (IEEE PerCom 2009), Galveston, Texas, USA, March 9-13, 2009).

Technical Program Committee, 8th International Conference on Networks (ICN 2009), Gosier, Guadeloupe/France, March 1-6, 2009.

Technical Program Committee, 6th Annual IEEE Consumer Communications & Networking Conference (CCNC 2009), CCNC 2009 Short Papers: CCNC 2009 Work-in-Progress and Positioning Papers, Las Vegas, Nevada, January 10-13, 2009.

Technical Program Committee, The 2008 IEEE International Workshop on Cyberspace Safety and Security (CSS 2008), December 12, 2008, Sydney, Australia (held in conjunction with The 2008 IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA-08)).

Technical Program Committee, 11th International Conference on Information Security and Cryptology (ICISC 2008), Seoul, Korea, December 3-5, 2008.

Technical Program Committee, 51st IEEE Global Communications Conference (IEEE GLOBECOM 2008), New Orleans, LA, USA, November 30-December 4, 2008.

Technical Program Committee, 2nd IFIP International Conference on New Technologies, Mobility and Security (NTMS 2008), Tangier, Morocco, November 5-7, 2008.

Technical Program Committee, 3rd International Conference on Systems and Networks Communications (ICSNC 2008), Track on High speed networks (HSNET), Track on Sensor networks (SENET), Track on Multimedia communications systems (MCSYS), Sliema, Malta October 26-31, 2008.

Technical Program Committee, 2nd International Conference and Exhibition on Next Generation Mobile Applications, Services and Technologies (NGMAST 2008), Cardiff, Wales, UK 16-19 September 2008.

Technical Program Committee da 10th IFIP International Conference on Mobile and Wireless Communications Networks (MWCN 2008), Toulouse, France, September 15-16, 2008.

Technical Program Committee, The International Conference on Mobile Technology, Applications and Systems (Mobility Conference 2008), National Ilan University, Taiwan, September 10-12, 2008.

Technical Program Committee, 9th International Conference on Electronic Commerce and Web Technologies (EC-Web 2008), to be held in conjunction with DEXA 2008, Turin, Italy, September 1-5, 2008.

Technical Program Committee, 17th International Conference on Computer Communications and Networks (ICCCN 2008), Optical Networking Track, St. Thomas, U.S. Virgin Islands, August 4-7, 2008.

Technical Program Committee, International Conference on Biocomputation, Bioinformatics, and Biomedical Technologies (BIOTECHNO 2008), Bucharest, Romania, June 29 - July 5, 2008.

Technical Program Committee, 3rd International Conference on Internet and Web Applications and Services (ICIW 2008), Athens, Greece June 8-13, 2008.

Technical Program Committee, 4th Advanced International Conference on Telecommunications (AICT 2008), Athens, Greece, June 8-13, 2008.

Technical Program Committee, 2008 IEEE International Conference on Communications (IEEE ICC 2008), Beijing, China, May, 19-23, 2008.

Technical Program Committee, 2008 International Conference on High Performance Switching and Routing (HPSR 2008), Shanghai, China, May 15-17, 2008.

Technical Program Committee da 7th IFIP Networking 2008 Conference (IFIP Networking 2008), Singapore, May 5-9, 2008.

Technical Program Committee, 7th International Conference on Networking (ICN 2008), Cancun, Mexico, April 13-18, 2008.

Technical Program Committee, IEEE Wireless Communications and Networking Conference (WCNC 2008), Las Vegas, Nevada, March 31 - April 3, 2008.

Technical Program Committee, 4th International Conference on Networking and Services (ICNS 2008), Gosier, Guadeloupe, March 16-21, 2008.

Technical Program Committee, Fifth IEEE Consumer Communications and Networking Conference (CCNC 2008), Track on Multimedia Networking, Las Vegas, Nevada, 10 - 12 January 2008.

Technical Program Committee, 10th International Conference Information Security and Cryptology (ICISC 2007), Seoul, Korea, November 29-30, 2007.

Technical Program Committee, 50th IEEE Global Telecommunications Conference (IEEE GLOBECOM 2007), Washington D.C., USA, November 26-30, 2007.

Technical Program Committee, Wireless Broadband World Forum 2007 (WBWF 2007), Tokyo, Japan, October 29-30, 2007.

Technical Program Committee, International Conference and Exhibition on Next Generation Mobile Applications, Services, and Technologies (NGMAST 2007), Cardiff, Wales, UK, September 12-14, 2007.

Program Committee, 8th International Conference on Electronic Commerce and Web Technologies (EC-Web 2007), in parallel with DEXA 2007 (18th Int. Conference on Database and Expert Systems Applications), Regensburg, Germany, September 3-7, 2007.

Technical Program Committee, 2nd International Conference on Systems and Networks Communications (ICSNC 2007), Track on Sensor Networks (SENET 2007), Track on High Speed Networks (HSNET 2007), and Track on Multimedia Communications Systems (MCSYS 2007), Cap Esterel, French Riviera, France, August 25-31, 2007.

Program Committee, International Conference on Security and Cryptography (SECRYPT'2007), Barcelona, Spain, July 28-31, 2007.

Technical Program Committee, 2007 IEEE International Conference on Communications (ICC 2007), Glasgow, Scotland, June 24-28, 2007.

Technical Program Committee, 3rd International Conference on Networking and Services (ICNS 2007), Athens, Greece June 19-25, 2007.

Technical Program Committee, 2007 IEEE Workshop on High Performance Switching and Routing (HPSR 2007), Polytechnic University, Brooklyn, NY, USA, May 31-June 1, 2007.

International Program Committee, 2007 Information Resources Management Association International Conference (IRMA 2007), Vancouver, Canada, May 19-23, 2007.

Technical Program Committee, 6th IFIP Networking 2007 Conference (IFIP Networking 2007), Atlanta, Georgia USA, May 14-18, 2007.

Technical Program Committee, International Conference on Internet and Web Applications and Services (ICIW 2007), Track on Internet and Web-based Applications and Services, Mauritius, May 13-19, 2007.

Technical Program Committee, 4th International Workshop on Partial and Intermittent Resources (SAPIR 2007), Mauritius, May 13-19, 2007.

Technical Program Committee, 3rd Advanced International Conference on Telecommunications (AICT 2007), Mauritius, May 13-19, 2007.

Technical Program Committee, 5th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2007), Amman, Jordan, May 13-16, 2007.

Technical Committee, 6th Conference on Telecommunications (Conftele 2007), Peniche, Portugal, May 9-11, 2007.

Technical Program Committee, 6th International Conference on Networking (ICN 2007), Martinique, French Caribbean, April 22 - 28, 2007.

Technical Program Committee, 2007 IEEE Wireless Communications & Networking Conference (WCNC 2007), Networks Program, Hong Kong, 11-15 March 2007.

Technical Program Committee, 4th European Conference on Universal Multiservice Networks (ECUMN 2007), Toulouse, France, February 14-16, 2007.

Technical Program Committee, 3rd IEEE International Workshop on Networking Issues in Multimedia Entertainment (NIME 2007), CCNC 2007 - Satellite Workshop, Las Vegas, Nevada, USA, January 11 2007.

Technical Program Committee, IEEE Consumer Communications and Networking Conference (CCNC'2007), Track on Novel Applications, Las Vegas, Nevada, USA, January 11-13, 2007.

Technical Program Committee, 2nd IEEE International Symposium on Multimedia (ISM 2006), San Diego, USA, December 11-13, 2006.

Program Committee, IADIS International Conference on e-Commerce 2006, Barcelona, Spain December 9-11, 2006.

Technical Program Committee, 49th IEEE Global Telecommunications Conference (IEEE GLOBECOM 2006), San Francisco, USA, November 27 – December 1, 2006.

Technical Program Committee, 8th International Symposium on System and Information Security (SSI 2006), São José dos Campos, São Paulo, Brazil, November 8-10, 2006.

Technical Program Committee, International Conference on Systems and Networks Communications (ICSNC 2006), Track on Sensor Networks (SENET 2006), Track on High Speed Networks (HSNET 2006), Track on Multimedia Communications Systems (MCSYS 2006), Tahiti, French Polynesia, October 29 - November 3, 2006.

Technical Program Committee, 3rd IEE International Conference on Mobile Technology, Applications and Systems (Mobility Conference), Bangkok, Thailand, October 25-27, 2006.

Program Committee, International Conference on Security and Cryptography (SECRYPT'2006), Setúbal, Portugal, August 7-10, 2006.

Technical Program Committee, International Conference on Networking and Services (ICNS'2006), Santa Clara, CA, USA, July 16-19, 2006.

Technical Program Committee, International Conference on Telecommunications and Multimedia (TEMU 2006), Heraklion, Crete, Greece, July 5-7, 2006.

Technical Program Committee, Wireless Broadband World Forum 2006, Seoul, Korea, May 22-25, 2006.

Technical Program Committee, 2006 IFIP Networking Conference (NETWORKING'2006), Coimbra, Portugal, May 15-19, 2006.

Technical Program Committee, IEEE Wireless Communications & Networking Conference (WCNC'2006), Track on Services and Applications, Las Vegas, USA, April 3-6, 2006.

Technical Program Committee, International Conference on Internet and Web Applications and Services (ICIW 2006), Track on Online Communications, Collaborative Systems and Social Networks, Guadeloupe, French Caribbean, February 22-24, 2006.

Technical Program Committee, Advanced International Conference on Telecommunications (AICT 2006), Main Track on Telecommunications (AICT 2006), Track on Service Assurance with Partial and Intermittent Resources (SAPIR 2006), Guadeloupe, French Caribbean, February 19-22, 2006.

Technical Program Committee, The International Conference on Information Networking (ICOIN'2006), Sendai, Japan, January 16 - January 19, 2006.

Technical Program Committee, 2nd IEEE International Workshop on Networking Issues in Multimedia Entertainment (NIME 2006), CCNC 2006 - Satellite Workshop, Las Vegas, Nevada, USA, January 7-10, 2006.

Technical Program Committee, Track on Enabling Technologies, IEEE Consumer Communications and Networking Conference (CCNC 2006), Las Vegas, Nevada, USA, January 7-10, 2006.

Technical Program Committee, First IEEE International Symposium on Multimedia (ISM 2005), Irvine, California, USA, December 12-14, 2005.

Technical Program Committee, 2nd IEEE International Workshop on Adaptive Wireless Networks, IEEE GLOBECOM 2005 Workshop, St. Louis, Missouri, USA, November 28, 2005.

Technical Program Committee, Wireless Communications Symposium da IEEE Global Telecommunications Conference (GLOBECOM 2005), St. Louis, Missouri, USA, Missouri, November 28 – December 2, 2005.

Technical Program Committee, International Conference on Networking and Services (ICNS 2005), Papeete, Tahiti, French Polynesia, October 23-28, 2005.

Program Committee, International Conference on E-business and Telecommunication Networks (ICETE'2005), Microsoft Convention Centre at Reading, UK, October 3-7, 2005.

Technical Program Committee, 2005 International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2005), Split, Croatia, September 15-17, 2005.

Technical Program Committee, International Conference on Systems Communications (ICSC 2005), Track on High Speed Networks (ICHSN 2005), Track on Multimedia Communications Systems (ICMCS 2005), Track on Sensor Networks (SENET 2005), Montreal, Canada, August 14-17, 2005.

Technical Program Committee, Advanced Industrial Conference on Telecommunications (AICT'2005), Service Assurance with Partial and Intermittent Resources Conference (SAPIR'2005), Lisbon, Portugal, July 17-20, 2005.

Technical Program Committee, IEEE 2005 International Conference on Communications (ICC'2005), Multimedia Communications and Home Networking Symposium, Seoul, Korea, May 16-20, 2005.

Technical Program Committee, Conference on Telecommunications (Conftele'2005), Tomar, Portugal, April 6-8, 2005.

Technical Program Committee, IEEE Wireless Communications & Networking Conference (WCNC'2005), Track on Services and Applications, New Orleans, LA, USA, March 13-17, 2005.

Technical Program Committee, The International Conference on Information Networking (ICOIN'2005), Jeju, Korea, January 31 - February 2, 2005.

Technical Program Committee, 2005 IEEE Consumer Communications and Networking Conference (CCNC'2005), Track on Enabling Technologies, Las Vegas, Nevada, USA, January 3-6, 2005.

Technical Committee, 10th IEEE Workshop on Computer-Aided Modeling, Analysis and Design of Communication Links and Networks (CAMAD'2004), GLOBECOM'2004 - Satellite Workshop, Dallas, TX, USA, December 3, 2004.

Technical Committee, 1st IEEE International Workshop on Networking Issues in Multimedia Entertainment (NIME'2004), GLOBECOM'2004 - Satellite Workshop, Dallas, TX, USA, November 29, 2004.

Technical Program Committee, 7th IEEE International Conference on High Speed Networks and Multimedia Communications (HSNMC'04), Toulouse, France, June 30-July 2, 2004.

Technical Program Committee, 2004 IEEE Consumer Communications and Networking Conference (CCNC'2004), Las Vegas, Nevada, USA, January 5-8, 2004.

Technical Program Committee, Optical Networking and Systems Symposium da IEEE 2003 Global Telecommunications Conference (IEEE GLOBECOM'2003), San Francisco, USA, December 1-5, 2003.

Technical Program Committee, 6th IEEE International Conference on High Speed Networks and Multimedia Communications (HSNMC'03), Estoril, Portugal, July 23-25, 2003.

Other International Conference Activities

International Publicity Committee, 7th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-2009), Rabat, Morocco, May 10-13, 2009.

Keynote & Panel Chairs, 2006 IFIP Networking Conference (NETWORKING'2006), Coimbra, Portugal, May 15-19, 2006.

Plenary/Panel Chairs, 3rd International Conference on Information Technology: Research and Education (ITRE 2005), Hsinchu, Taiwan, June 27-30, 2005.

Publicity Co-chair, The International Conference on Information Networking (ICOIN'2005), January 31 - February 2, 2005, Jeju, Korea.

Teaching and Advising Experience

Undergraduate Courses

Telemedicine (Springer 2008)
Multimedia Networks (Spring 2005, Spring 2006, Spring 2007)
Security and Systems Management (Spring 2005, Spring 2006)
Network Planning (Spring 2004)
Networks and Distributed Systems (Fall 2003, Fall 2004, Fall 2005)
Communication Services (Fall 2003)
Computer Networks (Fall 2003, Fall 2004, Fall 2005)
Programming Languages (Spring 2002, Spring 2003)
Internet Services and Technologies (Fall 2001, Fall 2002)
Logical Systems (Fall 2000, Fall 2001, Fall 2002)
Computer Architecture (Fall 2000, Fall 2001, Fall 2002)

Graduate Courses

Advanced Topics in Peer-to-Peer Networks (Spring 2011, Spring 2012)
Computer Aided Diagnosis Systems (Fall 2010, Fall 2011, Fall 2012)
PhD Thesis Project and Seminar (Spring 2008, Spring 2009)
Advanced Topics in Computer Science and Engineering (Fall 2007, Fall 2008, Fall 2009)
Multimedia Networks (Fall 2005, Spring 2008, Spring 2009, Spring 2010, Spring 2011, Springer 2012, Springer 2013)
Communication Architectures and Protocols (Fall 2007, Fall 2008, Fall 2009, Fall 2010)
Communication Architecture and Protocols (Fall 2011, Fall 2012)
Communication Protocols (Spring 2004)
Internet Services (Spring 2003)

Supervision of Doctoral Students

1. Carlos D. M. Queiroz, Ph. D. in Computer Science and Engineering, University of Beira Interior, 2010-present.
Thesis Title: Towards Autonomic Detection of Encrypted Peer-to-Peer Traffic.
2. Ângela C. M. Oliveira, Ph. D. in Computer Science and Engineering, University of Beira Interior, 2010-present.
Thesis Title: Automatic Quantification and Classification of Breast Tissue Density in 2D Ultrasound Images.
3. Filipe C. G. Soares, Ph. D. in Computer Science and Engineering, University of Beira Interior, 2007-present.
Thesis Title: Generalization of the Embedded Branch Process for Automatic Detection of Breast Cancer.
Co-advised with João Seabra, General Manager of Siemens – Healthcare Sector.
4. João V. P. Gomes, Ph. D. in Computer Science and Engineering, University of Beira Interior, July 16, 2012.
Thesis Title: Classification of Peer-to-Peer Traffic by Exploring the Heterogeneity of Traffic Features Through Entropy.
Co-advised with Dr. Paulo Pereira Monteiro, Nokia Siemens Networks Portugal.
5. Pedro R. M. Inácio, Ph. D. in Computer Science and Engineering, University of Beira Interior, December 17, 2009.
Thesis Title: Study of the Impact of Intensive Attacks on the Self-Similarity Degree of the Network Traffic in Intra-Domain Aggregation Points.
Co-supervised with Dr. Paulo Pereira Monteiro, Nokia Siemens Networks Portugal.
6. Nuno M. Garcia, Ph. D. in Computer Science and Engineering, University of Beira Interior, November 7, 2008.
Thesis Title: Architectures and Algorithms for IPv4/IPv6-Compliant Optical Burst Switching Networks.
Co-advised with Dr. Paulo Pereira Monteiro, Nokia Siemens Networks Portugal.

7. Joel J. P. C. Rodrigues, Ph. D. in Computer Science and Engineering, University of Beira Interior, July 25, 2006.
Thesis Title: Performance Assessment of One-way Resource Reservation Protocols in IP Over Optical Burst Switched Networks.

Supervision of Master Students

1. Pedro Manuel Madureira Correia, MS in Computer Science and Engineering, University of Beira Interior, September 2012-present.
Dissertation Title: Early Diagnosis of Anomaly Performance in Virtualized Cloud Environments.
2. André Filipe Prata Ferreira, MS in Computer Science and Engineering, University of Beira Interior, September 2012-present.
Dissertation Title: Secure and Efficient Transmission and Storage of Multimedia Content in Public Cloud Environments Using Joint Compression and Encryption.
3. Nuno Ricardo da Conceição Rosa Marques, M.S. in Computer Science and Engineering, University of Beira Interior, November 7, 2012
Dissertation Title: Convergence Study of the Open Shortest Path First Protocol in an Institutional Network Using the Cisco Packet Tracer (Convergence Study of the Open Shortest Path First Protocol in an Institutional Network Using the Cisco Packet Tracer).
4. André Esteves, M.S. in Computer Science and Engineering, University of Beira Interior, December 12, 2011.
Dissertation Title: Detection of Encrypted Traffic Generated by Peer-to-Peer Live Streaming Applications Using Deep Packet Inspection.
5. Rui P. Q. Braz, M.S. in Computer Science and Engineering, University of Beira Interior, July 28, 2010.
Dissertation Title: An Object-Oriented Architecture for Transmission Simulation of Image and Video with Multiple Description Coding Over High-Speed Optical Fibre Channels.
Co-supervised by Dr Manuela Pereira, Department of Computer Science, University of Beira Interior.
6. Fábio D. Beirão, M.S. in Computer Science and Engineering, University of Beira Interior, July 22, 2010.
Dissertation Title: NetOdyssey: A Framework for Real-Time Windowed Analysis of Network Traffic.
7. Marisa R. Quaresma, M.S. in Computer Science and Engineering, University of Beira Interior, December 9, 2009.
Dissertation Title: Multiple Description Image and Video Coding for P2P Transmissions.
Supervised by Dr Manuela Pereira, Department of Computer Science, University of Beira Interior.
8. David A. Carvalho, M.S. in Information Systems and Technologies, University of Beira Interior, October 22, 2009.
Dissertation Title: Towards the Detection of Encrypted Peer-to-Peer File Sharing Traffic and Peer-to-Peer TV Traffic Using Deep Packet Inspection Methods.
9. Rui A. R. G. Pereira, M.S. in Computer Science and Engineering, University of Beira Interior, July 26, 2006.
Dissertation Title: Editor para a Web Semântica Integrando Anotações Semânticas, Ontologias e RDF (Editor for Semantic Web Integrating Semantic Annotations, Ontologies and RDF).

Examination of Habilitation Thesis

1. Luís Filipe Barbosa de Almeida Alexandre, Habilitation in Computer Science and Engineering, University of Beira Interior, May, 7-8, 2013.
Lecture Title: Reconhecimento de Objetos 3D.
2. José Benjamim Ribeiro da Fonseca, Habilitation in Computer Science, University of Trás-os-Montes and Alto Douro, March 7-8, 2013.
Lecture Title: Suporte Computacional a Trabalho Cooperativo.
3. Maria Manuela Cruz Cunha, Habilitation in Computer Science, University of Trás-os-Montes and Alto Douro, March 7-8, 2013.
Lecture Title: Sistemas Ágeis, Virtuais e Ubíquos.

4. Luís Gonzaga Mendes Magalhães, Habilitation in Computer Science, University of Trás-os-Montes and Alto Douro, October 29-30, 2012.
Lecture Title: A Reconstrução Virtual de Sítios Arqueológicos.
5. Leonel Caseiro Morgado, Habilitation in Computer Science, University of Trás-os-Montes and Alto Douro, April 23-24, 2012.
Lecture Title: Características e Desafios Tecnológicos dos Mundos Virtuais no Ensino.
6. Eva Hladká, Habilitation, Faculty of Informatics, Masaryk University, Brno, Czech Republic, Thesis Reviewer, September 30, 2009.
Thesis Title: Multimedia Data Distribution and Processing in IP Networks.
7. Damien Magoni, Diplôme d'Habilitation à Diriger des Recherches, Université Louis Pasteur, Spécialité Informatique, Strasbourg, France, Examineur, December 19, 2007.
Memoire: Topologies de l'Internet: Des Routeurs aux Réseaux Recouvrants".
8. Abdelhamid Mellouk, Diplôme d'Habilitation à Diriger des Recherches, l'Université de Paris XII, Spécialité Informatique et Réseaux, Val de Marne, France, Rapporteur, November 2, 2006.
Memoire: Contribution aux Techniques d'Apprentissage par Renforcement pour le Routage Adaptatif dans les Réseaux de Communication à Trafic Irrégulier.

Examination of Doctoral Thesis

1. Tiago José dos Santos Martins da Cruz, Ph. D. in Computer Science and Engineering, University of Coimbra, June 22, 2012.
Thesis Title: A Management Framework for Residential Broadband Environments.
2. Claunir Pavan, Ph. D. in Electrical Engineering, University of Aveiro, Portugal, March 17, 2011.
Thesis Title: Dimensioning of Multilayer Optical Networks.
3. João M. F. Pedro, Ph. D. in Electrical and Computer Engineering, IST/Technical University of Lisbon, Portugal, January 16, 2011.
Thesis Title: Contention Minimization Strategies for Optical Burst-Switched Networks.
4. Manuela Popescu, Ph. D. in Computer Science, University of Franche-Comté, France, December 17, 2010.
Thesis Title: Semantic Mechanisms for Cross-Domain System Diagnosis.
5. João Paulo Pereira de Sousa, Ph. D. in Computer Science, University of Trás-os-Montes e Alto Douro, Portugal, December 13, 2010
Thesis Title: Um Modelo para a Composição Dinâmica de Serviços Dependentes do Contexto.
6. Fernando J. R. Correia, Ph. D. in Computer Science and Engineering, IST/Technical University of Lisbon, Portugal, October 8, 2010.
Thesis Title: Simple Ant Routing Algorithm - SARA.
7. Nuno A. R. Costa, PhD in Computer Science, University of Trás-os-Montes e Alto Douro, Portugal, July 6, 2010.
Dissertation Title: Pervasive Wireless Sensor Networks Beyond Dumb Sensor Nodes.
8. Álvaro M. L. Barradas, Ph. D. in Electronics and Computing, University of Algarve, Portugal, November 20, 2009.
Thesis Title: Quality of Service in Optical Burst Switching Networks.
9. Paulo J.G. Loureiro, Ph. D. in Computer Science and Engineering, University of Coimbra, Portugal, October 21, 2009.
Thesis Title: Controlo de Congestão com Suporte nos Sistemas Intermédios da Rede.
10. Sílvia S. Farraposo, Ph. D. in Computer Science and Engineering in Co-Guardianship between University of Coimbra, Portugal, and Université Paul Sabatier, Toulouse, France, June 16, 2009.
Thesis Title: Contributions on Detection and Classification of Internet Traffic Anomalies.
11. Carlos M. C. S. Barrico, Ph. D. in Electrical and Computer Engineering, University of Coimbra, Portugal, January 12, 2009.

Thesis Title: Optimização Evolucionária Multi-Objectivo em Ambientes Incertos – Pesquisa de Soluções Robustas.

12. Paulo Sérgio, Ph. D. in Information Systems and Technologies, University of Minho, Portugal, January, 6 2009.
Thesis Title: Estudo de Viabilidade da Utilização de Tecnologias Biométricas Comportamentais na Autenticação do Cidadão Perante os Serviços Electrónicos do Estado.
13. Carlos M. S. Rabadão, Ph. D. in Computer Science and Engineering, University of Coimbra, Portugal, September 20, 2007.
Thesis Title: Segurança em Redes com Diferenciação de Serviços.
14. António M. R. C. Santos, Ph. D. in Information Systems and Technologies, University of Minho, Portugal, July 19, 2007.
Thesis Title: Segurança nos Sistemas de Informação Hospitalares: Políticas, Práticas e Avaliação.
15. Abel J. P. Gomes, Equivalence for the PhD in Computer Science and Engineering, University of Beira Interior, Reporter, June 6, 2007.
Thesis Title: “Shape Theory and Mathematical Design of a General Geometric Kernel Through Regular Stratified Objects”.
16. Hugo P. M. C. Proença, PhD in Computer Science and Engineering, University of Beira Interior, January 3, 2007.
Thesis Title: Towards Non-Cooperative Biometric Iris Recognition.
17. Mohamed Brahma, Doctorat en Informatique, Université de Haute Alsace, France, Rapporteur, December 13, 2006.
Thesis Title: Etude de la QoS dans les Réseaux Ad hoc: Intégration du Concept de l'Ingénierie du Trafic.
18. António M. J. Pereira, Ph.D. in Computer Science and Engineering, University of Coimbra, Portugal, July 5, 2006.
Thesis Title: Mapeamento entre Arquitecturas de Serviços Integrados e de Serviços Diferenciados para Suporte de Qualidade de Serviço na Internet.
19. Frutuoso G. M. Silva, PhD in Computer Science and Engineering, University of Beira Interior, February 10, 2006.
Thesis Title: Estruturas Poligonais Deformáveis com Resolução Variável.
20. José Francisco M. Morgado, PhD in Computer Science and Engineering, University of Beira Interior, November 9, 2005.
Thesis Title: Poligonização de Curvas e Superfícies Implícitas Não-Homogéneas com Preservação Topológica.
21. Jorge B.C. Mamede, PhD in Electrical and Computer Engineering, University of Porto, Portugal, October 11, 2005.
Thesis Title: A Methodology for the Progressive Testing of Telecommunications Protocols.
22. Noélia Correia, Ph. D. in Electronics and Computing, University of Algarve, Portugal, March 21, 2005.
Thesis Title: “Survivable WDM Optical Networks.
23. Mohamed El Hachimi, Doctorat en Automatique Informatique, Université de Franche-Comté, France, Rapporteur, December 23, 2004.
Thesis Title: Gestion des Communications Multicast dans L'Architecture DiffServ.
24. Paula C. R. Coutinho de Oliveira, PhD in Electrical Engineering, University of Trás-os-Montes e Alto Douro, Portugal, December 4, 2003.
Thesis Title: Um Modelo Baseado em Agentes Móveis para Procura de Informação em Sistemas de Informação Distribuídos.

Examination of Master Dissertations

1. Nuno F. P. Salvador, M.S. in Computer Science, University of Trás-os-Montes e Alto Douro, Portugal, January, 30, 2009.
Dissertation Title: Modelo de Gestão para Redes Wireless de Banda Larga.
2. Rodrigo S. C. Selada, M.S. in Computer Science, University of Trás-os-Montes e Alto Douro, Portugal, January, 30, 2009.
Dissertation Title: Redes Wireless de Banda Larga.

3. José C. Lourenço Martins, M. S. In Information Systems, University of Minho, Portugal, October 17, 2008.
Dissertation Title: Framework de Segurança de um Sistema de Informação.
4. Hélder B. Silva, Integrated M.S. in Electrical and Computer Engineering, University of Porto, July 15, 2008.
Dissertation Title: Qualidade de Serviço de Chamadas VoIP.
5. Jorge F. G. Silva, Integrated M.S. in Electrical and Computer Engineering, University of Porto, July 15, 2008.
Dissertation Title: Medidas de Tráfego IP entre Fornecedores de Serviços IP (ISP).
6. José Miguel Rodrigues Fernandes, Equivalence for the M. S. in Electronics and Telecommunications, University of Aveiro, Portugal, July 23, 2007.
Dissertation Title: Real-time Charging in IP Networks.
7. Gil Coutinho C. S. Lopes, M. S. in Networks and Communication Services, University of Porto, Portugal, January 5, 2007.
Dissertation Title: Estudo para uma Rede Metropolitana Comunitária.
8. José Armando Dinis Pimenta, M. S. in Information Systems, University of Minho, Portugal, April 28, 2006.
Dissertation Title: Estudos de Modelos de Avaliação da Segurança de Informação.
9. Bruno M. A. C. Castro, M. S. in Computer Science and Engineering, University of Coimbra, Portugal, December 12, 2005.
Dissertation Title: Spotlight - Sistema de Detecção, Monitorização e Isolamento a Intrusão.
10. António M. F. A. Simão, M. S. in Management, University of Beira Interior, July 12, 2005.
Dissertation Title: O Papel do Software de Código Aberto/Software Livre nas Organizações.
11. João M. F. Pedro, M. S. in Electrical and Computer Engineering, Instituto Superior Técnico, Technical University of Lisbon, July 29, 2004.
Dissertation Title: Encaminhamento e Atribuição de Canais em Redes WDM

University Service

Elected Positions

2009 – present	President, Disciplinary Section of University Senate, University of Beira Interior.
2009 – present	President, School of Engineering, University of Beira Interior.
2007 – 2008	Elected Member, Bye-Laws (Statute) Assembly, University of Beira Interior.
2006 – 2008	Elected Member, University Assembly, University of Beira Interior.
2006 – 2009	Chair, Department of Computer Science, University of Beira Interior.
2004 – 2006	Chair, Department of Computer Science, University of Beira Interior.
2002 – 2006	Elected Member, University Assembly, University of Beira Interior.

Main Positions by Appointment

2009 – present	Director, Centre for Computer Science, University of Beira Interior.
2007 – 2009	Director, Ph.D. Programme in Computer Science and Engineering, Department of Computer Science, University of Beira Interior.
2003 – 2007	Director, M.S Programme in Computer Science and Engineering, Department of Computer Science, University of Beira Interior.
2001 – 2003	Director, B.S Programme in Computer Science and Engineering, Department of Computer Science, University of Beira Interior.