

## Vasilios A. Siris

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### EDUCATION

#### **Ph.D. in Computer Science**, April 1998

*University of Crete*, Heraklion, Greece

Area: Computer Networks and Digital Telecommunications

Dissertation title: "Performance Analysis and Pricing in Broadband Networks"

Advisor: Professor Costas Courcoubetis

#### **M.S. in Computer Science**, June 1992

*Northeastern University*, Boston, U.S.A.

Area: Computer Networks and System Security

GPA: 3.945/4.0 (Ranked 1<sup>st</sup> among the 1992 graduates)

#### **B.S. in Physics**, September 1990

*National and Kapodistrian University of Athens*

Area: Telecommunication Systems and Applications

Grade: 8.09/10.0

Diploma Thesis title: "A Small Vocabulary Speech Recognition System"

### AREAS OF INTEREST

*Resource management and traffic control in wired and wireless networks:* Mechanisms for congestion control and service differentiation, development and evaluation of robust and flexible procedures for seamless and efficient resource control in wired and wireless networks, including multi-hop and multi-channel networks.

*Cross-layer interaction of network control mechanisms:* Joint analysis and optimization of control mechanisms operating at different network layers, in wireless and mobile communication systems.

*Network traffic measurement and analysis:* Statistical analysis of real network measurements in wired and wireless networks for traffic engineering, Quality of Service (QoS) monitoring, and anomaly and Denial of Service (DoS) attack detection.

*Technology and architecture of networks supporting pervasive broadband access:* Design and management of reliable infrastructures integrating wireless and wired networks, with support for self-configuration and self-organization.

A key direction of my work has been the combination of analytical methods for the investigation of wired and wireless networks, with the prototype implementation and evaluation of these methods in actual systems.

**PROFESSIONAL EXPERIENCE**

- 2/2009 – today *Assistant Professor*, Department of Informatics, Athens University of Economics and Business.
- 2/2001 – 1/2009 *Assistant Professor* (11/2002 – 1/2009, received tenure 7/2006), *Visiting Professor* (2/2001 – 10/2002), Department of Computer Science, University of Crete.
- 1/2002 – today *Research Associate*, Institute of Computer Science, FORTH. I lead the activity of broadband and wireless networks of the Telecommunications and Networks Laboratory. The research group for this activity includes 2 collaborating professors, 2 postdoc researchers, and 4 network engineers.
- 11/1996 – 1/2009 *Scientific Coordinator* (1/2006 – 1/2009), *Scientific Collaborator* (11/1996 – 12/2005), Communications and Networks Center, University of Crete.
- 7/2006 – 1/2007 *Research Fellow*, British Telecommunications, Adastral Park, Ipswich, UK. Investigated methods for improving the performance of dense wireless local area networks.
- 6/2001 – 8/2001 *Research Fellow*, British Telecommunications, Adastral Park, Ipswich, UK. Investigated the application of congestion pricing for robust and efficient resource control in 3G networks based on Wideband CDMA. This work resulted in the filing of one international patent application.
- 5/2001 *Visiting Researcher*, Statistical Laboratory, University of Cambridge, UK. Investigated packet marking algorithms for early congestion notification in IP networks supporting Explicit Congestion Notification (ECN).
- 9/1993 – 10/2002 *Researcher D' Level* (11/2000 – 10/2002), *Researcher* (1/1998 – 10/2000), *Research Assistant* (9/1993 – 12/1997), Institute of Computer Science, FORTH.
- 9/1993 – 11/1997 *Teaching Assistant*, Department of Computer Science, University of Crete.
- 9/1991 – 6/1992 *Teaching Assistant*, Graduate School of Computer Science, Northeastern University, Boston, USA.

**OTHER SCIENTIFIC AND TECHNICAL EXPERIENCE**

- 2/2010 – 5/2014 *Greece's Representative on the Management Committee* of Action IC0906 Wireless Networking for Moving Objects (WiNeMO), of COST (European Cooperation in the field of Scientific and Technical Research).
- 9/2006 – today *Member of the Working Group "Emobility"* (*Mobile and Wireless Communications Technology*) of ERCIM (European Research Consortium on Informatics and Mathematics).
- 1/2009 – 12/2009 *Member of the Expert Group* on "Priorities of Research on Current & Emerging Network Technologies (PROCENT)" of the European Network and Information Security Agency (ENISA). The work of the expert group resulted in a report (April 2010) on the dependability and security of networks.
- 3/2006 – 6/2008 *Greece's Representative on the Management Committee* of Action 290 "Wi-QoST: Traffic and QoS Management in Wireless Multimedia

- Networks”, of COST (European Cooperation in the field of Scientific and Technical Research), and *Chairman of the Working Group* on “Services, Regulation, and Economic Aspects”.
- 7/2004 – 12/2008 *Member of the Technical Advisory Group for the Region of Crete*, on optical metropolitan area networks.
- 4/2006 – 2/2007 *Member of the Advisory Board* for the European funded project CI2RCO (Critical Information Infrastructure Research Coordination).
- 3/2003 – 12/2008 *Member of the Technical Team* of GRNET (Greek Research and Technology Networks).
- 5/1999 – 1/2000 *Member of the Study Group* of the Hellenic Telecommunications and Post Commission on local loop unbundling.
- 11/1998 – 12/1998 *Member of GRNET's Working Group* on pricing of Internet services.
- 9/1992 – 9/1993 *Sergeant*, Signal Corps, Hellenic Army. Primary training in Multichannel Telecommunication Systems. Also performed database programming in the Data Processing Center of an Army Training Camp.

## AWARDS AND RECOGNITION

Keynote speaker at the 7<sup>th</sup> *Int'l Conference on Wired/Wireless Internet Communications (WWIC)*, Enschede, The Netherlands, May 2009. Presentation title: “Controlling Wireless Access Networks: Flexibility, Reliability, and Incentives”.

The project “Integrated Services for the Design, Management, and Security of Wireless Networks with Quality of Service Support”, 8/2005 – 3/2008, for which I was Principal Investigator, and which was funded by the Greek Government under the Action AKMON (05-AKMON-80), was characterized as a “Best Practices” project<sup>1</sup> of the Operational Program «Competitiveness» (EPAN) 2000-2006.

Two Research Fellowships (2001 and 2006) from British Telecommunications, UK. In addition, I have received from the same company funding in excess of 250.000 €

Invited speaker at the *Research Seminar on Mobile Networks: Quality of Service and Cross-layer Issues*, KTH Center of Wireless Systems, Kista, Stockholm, Sweden, 3 October 2003, organized by Bengt Ahlgren and Zens Zander. Presentation title: “Application of Congestion Pricing to Mobile Networks”

My paper [c19] was published in the proceedings of the 8<sup>th</sup> *ACM Int'l Conference on Mobile Computing and Networking (ACM MOBICOM'02)*, Atlanta, USA, September 2002, which until today (3/2009) has been the most competitive conference in the area of «Networking»<sup>2</sup>, with acceptance ratio 7.1% (26/364), while in 2003 it was among the five conferences in computer science with the highest impact<sup>3</sup> (top 0.40%)

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<sup>1</sup> The project was mentioned in the event «The Operational Program EPAN in the Region of Crete», Heraklion, 7 April 2008. <http://epan2.antagonistikotita.gr/greek/works1.asp?perifereia=14>

<sup>2</sup> The acceptance ratio for conferences in the area of «Networking» appear on the web page <http://www.cs.ucsb.edu/~almeroth/conf/stats/>

<sup>3</sup> <http://citeseer.ist.psu.edu/impact.html>

Ranked first among the 1992 graduates in the program M.S. in Computer Science at Northeastern University, with GPA 3.945/4.0

Teaching Assistantship from Northeastern University (1991,1992)

## **FUNDING AND PARTICIPATION IN PROJECTS**

### **Projects where I am/was Principal Investigator**

- “Wireless Mesh Networks”, funded by Forthnet S.A., 10/2008 – 9/2010. Funding for ICS-FORTH: 17.500 €.
- “EU-MESH: Enhanced, Ubiquitous, and Dependable Broadband Access using MESH Networks”, FP7 ICT-1-1.1: The Network of the Future, project no. 215320, 2008-2010. Project Coordinator. Total budget/EC funding: 4.551.391 €/ 3.064.147 €, budget/funding for ICS-FORTH: 812.408 €/ 636.733 €.
- “Development and management services for the virtual network operation center of the Greek Research and Academic Network GRNET (VNOC-3)”, Agreement No.5 “Management of Advanced Network Services: Development of infrastructure and services for QoS, VPNs και Bandwidth-on-demand”. Funding for University of Crete: 115.220 €.
- “Technical Consultant Services for the Development of Broadband Network Access ” for the organization of municipalities (TEDK) of the prefecture of Heraklion and the municipalities of Agia Barbara and Kouloukona. Funding for the University of Crete: 31.662 €.
- “Advanced Broadband Services and E-Commerce”, action of the “Regional Pole for Innovation of Crete (i4crete)”, 11/2006-10/2008. I was Principal Investigator of the action, which had total budget 300.954 €, and funding 178.109 €. Funding for ICS-FORTH: 40.350 € and University of Crete: 53.683 €.
- “Advanced Services Over Wireless Access Networks for Visitors and Tourist Companies and Organizations in Crete”, funded under the Corporate Program of Crete 2000-2006. 7/2006-5/2008. Funding for ICS-FORTH: 125.000 €.
- “Routing Protocols in Wireless Mesh Networks based on Cross-Layer Design ”, funded by Greece’s General Secretariat for Research and Technology – GSRT (DIK00054), 3/2006 – 2/2008, and involved the cooperation of ICS-FORTH and CNR (National Research Council), Pisa, Italy. Funding for ICS-FORTH: 11.650 €.
- “Efficient Design of Wireless Access Networks based on IEEE 802.11e”, funded by Greece’s General Secretariat for Research and Technology – GSRT (05-NONEU-39), 5/2007 – 2/2008, and involved the cooperation between the Athens University of Economics and Business, ICS-FORTH and the University of California, Berkeley. Funding for ICS-FORTH: 30.000 €.
- “Design, Management, and Security of Wireless Networks with Support for Quality of Service ”, funded by Greece’s General Secretariat for Research and Technology – GSRT (05-AKMON-80), 8/2005 – 3/2008. Funding for ICS-FORTH: 247.865 €.
- “Design, support, operation, and promotion of tele-education services and digital education content in the University of Crete”, funded by Greece’s Special Secretariat for the Information Society, 11/2005 – 12/2006. Funding for University of Crete: 116.056 €.
- “Future Wireless Network Architectures: Managing e2e QoS and Resource Control”, industrial project funded by British Telecommunications (BT), UK, 10/2003 – 3/2006. Development and evaluation of robust and practical mechanisms for efficient resource

control and support for end-to-end QoS in current and future generation wireless networks. Funding for ICS-FORTH: 200.000 €.

- “Supporting Service Level Agreements (SLAs) in IPv6 networks”, funded by Forthnet S.A., 10/2004 – 3/2006, principal investigator. Funding for ICS-FORTH: 14.160 €.
- SLA Provision and Monitoring, funded by Greece’s General Secretariat for Research and Technology - GSRT, subcontract from FORTHnet S.A., 11/2003 – 10/2005, principal investigator for ICS-FORTH: Deployment and investigation of an infrastructure for supporting and monitoring SLAs. Funding for ICS-FORTH: 17.500 €.
- Investigation of Quality of Service (QoS) mechanisms in IPv6 networks, EU funded project IST-2001-32603 “6NET Large Scale International IPv6 Testbed”, subcontract from GRNET S.A., 7/2003-6/2004. Funding for University of Crete: 11.800 €.
- “Achieving Service Differentiation and High Performance in IEEE 802.11 Wireless LANs”, funded by Greece’s General Secretariat for Research and Technology – GSRT (02-PRAXE-49), 6/2003 – 12/2004. Funding for ICS-FORTH: 44.000 €.
- “Seamless Resource Control for Wireless Networks”, industrial project funded by British Telecommunications (BT), UK, 1/2002 – 12/2002. Investigated models and procedures for seamless congestion control in wired and wireless wide area and local area networks (WLANs). Funding for ICS-FORTH: 56.000 €.
- M3I, “Market Managed Multi-Service Internet”, EU funded project IST 1999-11429, subcontract from the Athens University of Economics and Business (AUEB), 1/2000 – 12/2001. Investigated the application of congestion pricing mechanisms for controlling demand and efficiently managing resources in IP-based networks. Funding for ICS-FORTH: 35.000 €.
- SLA Provisioning and Monitoring, funded by Greece’s General Secretariat for Research and Technology - GSRT, subcontract from FORTHnet S.A., 6/2002 – 12/2002. The project involved the deployment of an infrastructure for supporting QoS guarantees and for SLA monitoring. Funding for ICS-FORTH: 4.860 €.
- TrACe, “Traffic analysis, management, and charging”, funded by the Greek Universities Network (GUnet), 3/1999 – 3/2000. The project deployed a platform for collecting detailed traffic statistics on the links connecting the University of Crete and the University of Athens network with the GRnet (Greek Research & Technology network), and conducted traffic analysis and charging experiments with actual traffic measurements. Funding for Univ. of Crete: 40.350 €, total budget: 96.800 €.

#### **Projects where I have/had a major contribution**

- “Wireless Ad Hoc Networks: Security, Routing, Trust Management, and Locationing”, funded by Greece’s General Secretariat for Research and Technology - GSRT, 10/2005 – 10/2008. I participate as a Senior Researcher. Funding for ICS-FORTH: 180.000 €.
- “Multi-Gigabit Academic Network” (GN2) IST-511082, subcontract from GRNET S.A. I am leading the University of Crete’s contribution in the Joint Research Activity (JRA) on network security. Funding for University of Crete: 69.615 €.
- “Technical Advisor for the Development of Metropolitan Optical Networks in the Region of Crete”, funded by Greece’s Special Secretariat for the Information Society, 7/2004 – 12/2006. Funding for the Technical University of Crete: 349.999 €.
- “Development and Management of Advanced Services for GRNET’s Virtual Network Operations Center”, funded by GRNET, 12/2003 – 12/2005. I participated in the QoS group

and was in charge of the University of Crete's participation in the design and dimensioning of services with guaranteed QoS. Funding for University of Crete: 74.256 €.

- SCAMPI, "Scalable Measurement Platform for the Internet", EU funded project IST 2001-32404, 4/2002 – today: Investigation of architectures and interfaces for network monitoring, and development of advanced measurement-based applications. Budget for ICS-FORTH: 680.000 €.
- QoS, funded by GRNET S.A., 9/2001 – 3/2002: Investigation and evaluation of mechanisms for QoS and Service Level Agreement (SLA) provisioning. Funding for ICS-FORTH: 36.062 €.
- Traffic, "A system for efficient management of traffic and resources in Integrated Services networks", GSRT funded project PAVE 97BE128, 2/1999 – 2/2001: Investigated traffic management techniques and tools, applied to the network of a large Internet and Frame Relay services provider (Forthnett S.A.). Funding for ICS-FORTH: 52.800 €.

### Participation in other R&D projects

- "Promotion of Broadband Services in the Region of Crete", by Greece's Special Secretariat for the Information Society, 1/2004 – 12/2006, University of Crete.
- "National Education Network - EDUnet", project funded jointly by the EU and the Greek Ministry of Education, 1/2003 – 12/2004, University of Crete, member of the projects Scientific Committee.
- "Installation and operation of an ATM Lab: Development and demonstration of ATM services", funded by the Research & Development Division, OTE S.A., 10/1998 – 2/2000: Development of a system for demonstrating ATM charging schemes and Available Bit Rate (ABR) services.
- MONTAGE, "Mobile Intelligent Agents in Accounting, Charging, and Personal Mobility Support", EU funded project ACTS AC325, 10/1998 – 12/1999: Investigated charging and accounting issues in the context of mobile users and multiple service providers.
- CASHMAN, "Charging and Accounting Schemes in Multi-Service ATM Networks", EU funded project ACTS AC039, 9/1995 – 9/1998: Developed and evaluated charging models for ATM networks, and applied large deviation techniques for traffic engineering.

### ACADEMIC WORK

- 10/2008 – today     **Department of Informatics, Athens University of Economics and Business**  
                           "Wireless Networks and Mobile Communications", Winter '08/09/10  
                           "Computer Programming with Java", Spring '09/10/11  
                           "Computer Networks", Spring '11  
                           "Communication Networks" (co-instructor with Theodoros Apostolopoulos), Winter '09  
                           "Wireless and Mobile Communications", Graduate M.S. program on Computer Science, Winter '08 (graduate course)
- 2/2001 – 9/2008     **Department of Computer Science, University of Crete**  
                           "Computer Networks", χειμερινό εξάμηνο '01/02/03/04/05/06/07  
                           "Network Technology and Programming Laboratory", Spring '01/02, Winter '03/04/05/06/07

- “Resource Control and Performance of Broadband Wired and Wireless Networks”, Spring ’05/06/07 (graduate course)  
 “Theory of High Performance Networks”, Spring ’03/04 (graduate course)  
 “Network Technology and Programming Lab II”, Spring ’01 (graduate course)
- 9/1993 – 11/1997 **Department of Computer Science, University of Crete:** Teaching Assistant in the courses “High Performance Networks”, “Architecture and Management of High Performance Networks”, “Introduction to Network Economics and Pricing”
- 1997 **Preparation of the multimedia course** (Computer Based Training, CBT): “ISDN και B-ISDN”
- 9/1991 – 6/1992 **Graduate School of Computer Science, Northeastern University, Boston, USA:** Instructor of the course “Introduction to Programming using Fortran”

## THESIS SUPERVISION

### Supervision of undergraduate projects, University of Crete (partial list)

- G. Georgiou. “Simulation of resource control procedures in wireless networks based on Wideband CDMA”, Department of Computer Science, June 2002.
- D. Triantafyllidou. “Improvements of TCP congestion control in wireless networks with the ECN (Explicit Congestion Notification) mechanism”, Department of Computer Science, September 2002.
- G. Fotiadis, “Investigation of improvements of the TCP protocol for wireless networks”, Department of Computer Science, September 2003.
- E. Loukas, “Study of Performance Issues in Wireless Networks based on IEEE 802.11e”, Department of Computer Science, July 2005.
- A. Karapantelakis, “Study of Voice and Video over IEEE 802.11e Wireless Networks”, Department of Computer Science, July 2005.
- P. Alafouzou, “Investigation of Analytical Models for Performance Evaluation in Wireless Networks”, Department of Mathematics, July 2005.
- P. Palias, “Routing Protocols in Wireless Networks”, Department of Computer Science, November 2005.
- S. Karagiorgou, “Service Differentiation in IEEE 802.11e Wireless LANs”, Department of Computer Science, September 2006.
- The Dionisiou, “IEEE 802.11 Standardization”, Department of Computer Science, September 2007.

### Supervision of M.S. thesis, Department of Computer Science, University of Crete

- G. Margetis, “Service Differentiation using End-to-End Congestion Control”, November 2001.
- M. Kavouridou, “Service Differentiation in Wireless LANs based on 802.11”, February 2003.
- H. Marinakis, “Adaptive Marking for Achieving Fairness in Differentiated Services Networks”, February 2004.

- F. Papagalou, “Evaluation of Algorithms for Detecting Denial of Service Attacks”, February 2004.
- D. Triantafyllidou, “Application of Explicit Congestion Notification (ECN) to Heterogeneous Wired and Wireless Networks”, March 2005.
- H. Athanasopoulou, “Providing Incentives in Ad Hoc Networks”, March 2005.
- G. Stamatakis, “Provision of Differentiated Services and Fairness in Wireless LANs based on IEEE 802.11”, July 2005.
- I. Stavrakis, “Provider-Based Packet Marking for Defense Against Distributed Denial of Service (DDoS) Attacks”, July 2005.
- D. Evaggelatos, “Access Point Selection for Improving Throughput Fairness in Wireless LANs”, October 2006.
- M. Delakis, “Channel Assignment in Multi-radio Mesh Networks”, February 2008.
- K. Mathioudakis, “Performance Measurements in a Metropolitan Mesh Network”, February 2008.
- M. Genetzakis, “Contention-Aware Routing Metric in Multi-Rate Multi-Radio Mesh Networks”, February 2008.
- Th. Dionysioy, “Utility-based Channel Assignment and Topology Control in Wireless Mesh Networks”, March 2010.
- X. Fafoutis, “Cooperation Incentives for Wireless Network Operators”, March 2010.
- N. Gkazoni, “A Framework for Opportunistic Routing in Wireless Multi-hop Networks”, March 2010.

**Supervision of M.S. thesis, Department of Informatics, Athens University of Economics and Business**

- H. Flouri, “Channel selection in opportunistic access networks”, June 2010.
- P. Stampernas, “Load balancing in WLANs”, June 2010.

**PATENTS AND PATENT APPLICATION**

- [p1] **V.A. Siris**, “Method of Resource Control in a Wireless Network”, International Patent Application, publication date: 12/6/2003, publication no.: WO/2003/049319. European Patent: EP1449312. US Patent: 2005/3824.
- [p2] **V. A. Siris** and G. Stamatakis, “Access Router for Supporting Differentiated Services in 802.11 Wireless Networks”, Greek Patent, Number 1006334, 14/4/2009, Application Number 20050100119, Application Date: 9/3/2005.
- [p3] **V.A. Siris**, T. Dionysioy, G. Stamatakis, “Channel assignment and topology control in wireless mesh network based on utility functions”. Greek Patent, Number 1007150, 17/1/2011, Application Number 20100100053, Application Date: 26/1/2010.

**CITATIONS TO SCIENTIFIC WORK**

**Scopus (without self-citations):** 211 (12/2010)

**Google Scholar (using Publish or Perish, with self-citations):** 955 (12/2010)

The references are from top and well-known journals such as IEEE/ACM Trans. on Networking, IEEE Journal on Select. Areas in Commun., IEEE Trans. on Parallel and Distributed Systems, IEEE Trans. on Computers, IEEE Trans. on Commun., IEEE Network,



IEEE Commun. Letters, Computer Networks, Performance Evaluation, Telecommunication Systems, Computer Commun., European Transactions on Telecommunications

## PUBLICATIONS

### International journals

- [j1] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, "Application of the many sources asymptotic and effective bandwidths to traffic engineering". *Telecommunication Systems*, 12(2-3), 167-191, 1999.
- [j2] D. Prevedourou, K. Zygourakis, S. Efremidis, G. Stamoulis, D. Kalopsikakis, A. Kyrikoglou, **V.A. Siris**, et al, "Use of agent technology in service and retailer selection in a personal mobility context". *Computer Networks*, 31(19), 2079-2098, August 1999.
- [j3] C. Courcoubetis, F.P. Kelly, **V.A. Siris**, and R. Weber, "A study of simple usage-based charging schemes for broadband networks". *Telecommunication Systems*, 15(3-4), 323-343, 2000.
- [j4] J. Jormakka, I. Grgic, and **V.A. Siris**, "Methods for monitoring, controlling and charging QoS in IP networks". *Telektronikk*, 97 (2-3), 269-286, 2001 (Special issue on Internet Traffic Engineering).
- [j5] C. Courcoubetis and **V.A. Siris**, "Procedures and tools for analysis of network traffic measurements". *Performance Evaluation*, 48(1-2), 5-23, 2002.
- [j6] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, "Simple tariffs based on price multipliers for ATM VBR Services". *European Transactions on Telecommunications*, 14(2), 97-106, March/April 2003.
- [j7] **V.A. Siris**, C. Courcoubetis, and G. Margetis, "Service differentiation in ECN networks using weighted congestion control for various packet marking algorithms". *Computer Communications*, 26(4), 314-326, March 2003.
- [j8] B. Briscoe, V. Darlagiannis, O. Heckman, H. Oliver, **V.A. Siris**, D. Songhurst, and B. Stiller, "A Market Managed Multi-service Internet (M3I)". *Computer Communications*, 26(4), 404-414, March 2003.
- [j9] **V.A. Siris** and H. Marinakis, "Adaptive Packet Marking for Achieving Fairness in DiffServ Networks". *Computer Communications*, 29(1), 52-58, December 2005, Elsevier.
- [j10] **V.A. Siris** and I. Stavarakis, "Provider-Based Deterministic Packet Marking Against Distributed DoS Attacks". *Journal of Network and Computer Applications*, accepted for publication, March 2005, Elsevier Science.
- [j11] **V.A. Siris** and F. Papagalou, "Application of Anomaly Detection Algorithms for Detecting SYN Flooding Attacks". *Computer Communications*, 29(9), 1433-1442, 2006, Elsevier Science.
- [j12] **V.A. Siris**, "Cell Dimensioning in the CDMA Uplink based on Economic Modeling". *European Transactions on Telecommunications*, 18(4), 427-433, June 2007, Wiley.
- [j13] **V.A. Siris**, "Resource Control for Hybrid Code and Time Division Scheduling Wireless Systems". *Wireless Personal Communications*, 40(2), 171-184, January 2007, Springer.
- [j14] I. Askoxylakis, B. Bencsath, L. Buttyan, L. Dora, **V.A. Siris**, D. Szili, I. Vajda, "Securing Multi-operator Based QoS-aware Mesh Networks: Requirements and Design Options", *Wireless Communications and Mobile Computing* (Special Issue on QoS and Security in Wireless Networks), 10(5), 622-646, 2010, Wiley.

- [j15] I. Askoxylakis, T. Tryfonas, J. May, **V.A. Siris**, and A. Traganitis, “A family of key agreement mechanisms for mission critical communications for secure mobile ad hoc and wireless mesh internetworking”. Accepted for publication in EURASIP Journal on Wireless Communications and Networking.
- [j16] V. Angelakis, S. Papadakis, **V.A. Siris**, A. Traganitis, “Channel Interference in 802.11a Is Harmful. Testbed validation of a simple quantification model”, IEEE Communications Magazine, Network Testing Series, Volume 49, Issue 3, pp 160-166, March 2011.
- [j17] **V.A. Siris**, M. Delakis, “Interference-Aware Channel Assignment in a Metropolitan Multi-Radio Wireless Mesh Network with Directional Antennas”, accepted for publication in Computer Communications, Elsevier.
- [j18] **V.A. Siris**, G. Stamatakis, E. Tragos, “A Simple End-to-End Throughput Model for 802.11 Multi-Radio Multi-Rate Wireless Mesh Networks”, accepted for publication in IEEE Communications Letters.

### Book editing

- [e1] Jarmo Harju, Geert J. Heijenk, Peter Langendörfer, **Vasilios A. Siris** (eds). *Wired/Wireless Internet Communications, 6th International Conference, WWIC 2008*, Tampere, Finland, May 28-30, 2008. Lecture Notes in Computer Science 5031, Springer Verlag, Berlin / Heidelberg. ISBN 978-3-540-68805-1, 2008.
- [e2] **V.A. Siris**, K. Anagnostakis, S. Ioannidis, P. Trimintzios (eds). *Proceedings of the 3<sup>rd</sup> European Conference on Computer Network Defense*. Lecture Notes in Electrical Engineering Volume 30, Springer Verlag, USA. ISBN: 978-0-387-85554-7, 2009.
- [e3] F. Barcelo, T. Braun, G. Giambene, Y. Kourchyavy, **V.A. Siris**, D. Staele (eds). *Traffic and QoS Management in Wireless Multimedia Networks*, COST 290 Final Report. Lecture Notes in Electrical Engineering Volume 31, Springer Verlag, USA. ISBN: 978-0-387-85572-1, 2009.

### Invited book chapters

- [b1] **V.A. Siris**, D. Songhurst, G.D. Stamoulis, M. Schreinemachers και C. Courcoubetis, “Charging in communication networks”. In *Charging Communication Networks: From Theory to Practice*, D.J. Songhurst (editor), Elsevier Science B.V., Amsterdam, ISBN 0-444-50275-0, 1999.
- [b2] F.P. Kelly, R. Weber, **V.A. Siris**, G.D. Stamoulis και C. Courcoubetis, “Pricing guaranteed services”. In *Charging Communication Networks: From Theory to Practice*, D.J. Songhurst (editor), Elsevier Science B.V., Amsterdam, ISBN 0-444-50275-0, 1999.
- [b3] F.P. Kelly, G.D. Stamoulis, and **V.A. Siris**, “Pricing elastic services”. In *Charging Communication Networks: From Theory to Practice*, D.J. Songhurst (editor), Elsevier Science B.V., Amsterdam, ISBN 0-444-50275-0, 1999.
- [b4] **V.A. Siris**, “The OSI model and switching”. In *Enterprise Networking: Multilayer Switching and Applications*, D. Serpanos and V. Theoharakis (editors), Idea Group Publishing, ISBN 1-930-70817-3, 2001.
- [b5] T. Braun, A. Kessler, M. Kihl, V. Rakocevic, **V. Siris**, and G. Heijenk, “Multihop Wireless Networks”, Κεφάλαιο 5 στο βιβλίο *Traffic and QoS Management in Wireless Multimedia Networks*, COST 290 Final Report. Lecture Notes in Electrical Engineering Volume 31, Springer Verlag, USA. ISBN: 978-0-387-85572-1, 2009.
- [b6] **V. Siris**, I. Ganchev, M. O’Droma, and B. Stiller, “Services, Optimization, and Economic Aspects”, Κεφάλαιο 6 στο βιβλίο *Traffic and QoS Management in Wireless Multimedia*

*Networks*, COST 290 Final Report. Lecture Notes in Electrical Engineering Volume 31, Springer Verlag, USA. ISBN: 978-0-387-85572-1, 2009.

- [b7] I. Askoxylakis, B. Bencsath, L. Buttyan, L. Dora, **V. Siris**, A. Traganitis, in N. Zorba, C. Skianis, and C. Verikoukis (eds), "Cross-layer security and re-silience in wireless mesh networks". Cross Layer Designs in WLAN Systems, Troubador Publishing Ltd, Emerging Communication and Service Technologies Series, 2010. ISBN: 9781848762275.

#### **Conference and workshop proceedings with full paper review**

- [c1] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, "Integration of pricing and flow control for Available Bit Rate services in ATM networks". In *Proc. of IEEE Global Communications Conference (GLOBECOM'96)*, London, UK, November 1996.
- [c2] F.C. Charmantzis, C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, "A comparative study of usage-based charging schemes". In *Proc. of IEE Colloquium on "Charging for ATM"*, London, UK, November 1996.
- [c3] C. Courcoubetis, **V.A. Siris**, and R. Weber, "Investigation of cell scale and burst scale effects on the cell loss probability using large deviations". In *Proc. of 15<sup>th</sup> U.K. Workshop on Performance Engineering of Computer and Telecomm. Syst. (UKPEW'97)*, Ilkley, UK, July 1997.
- [c4] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, "Comparing usage-based pricing schemes for broadband networks". In *Proc. of IEE Colloquium on "Charging for ATM - the reality arrives"*, London, UK, November 1997.
- [c5] C. Courcoubetis and **V.A. Siris**, "An evaluation of pricing schemes based on effective usage". In *Proc. of IEEE International Conference on Communications (ICC'98)*, Atlanta, USA, June 1998.
- [c6] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, "Network control and usage-based charging: Is charging for volume adequate?". In *Proc. of First In'l Conference on Information and Computational Economics (ICE'98)*, Charleston, USA, October 1998.
- [c7] C. Courcoubetis and **V.A. Siris**, "An approach to pricing and resource sharing for Available Bit Rate (ABR) services". In *Proc. of IEEE Global Communications Conference (GLOBECOM'98)*, Sydney, Australia, November 1998.
- [c8] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, "Application and evaluation of large deviation techniques for traffic engineering in broadband networks". In *Proc. of ACM SIGMETRICS '98/ PERFORMANCE '98*, Madison, USA, June 1998. **Acceptance Ratio<sup>4</sup> 18.4% (25/136)**
- [c9] C. Courcoubetis, F.P. Kelly, **V.A. Siris**, and R. Weber, "A study of simple usage-based charging schemes for broadband networks". In *Proc. of IFIP International Conference on Broadband Communications'98*. Stuttgart, Germany, April 1998.
- [c10] G.D. Stamoulis, D. Kalopsikakis, A. Kirikoglou, **V.A. Siris**, et al, "Agent-based service and retailer selection in a personal mobility context". In *Proc. of 6<sup>th</sup> International Conference on Intelligence in Services and Networks (IS&N'99)*, April 1999.
- [c11] **V.A. Siris**, D.J. Songhurst, G.D. Stamoulis, and M. Stoer, "Usage-based charging using effective bandwidths: studies and reality". In *Proc. of 16<sup>th</sup> International Teletraffic Congress (ITC-16)*, Edinburgh, UK, June 1999.

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<sup>4</sup> The acceptance ratios are published on the page <http://www.cs.ucsb.edu/~almeroth/conf/stats/>

- [c12] C. Courcoubetis and **V.A. Siris**, “Managing and pricing service level agreements for differentiated services”. In *Proc. of 7<sup>th</sup> IEEE/IFIP International Workshop on Quality of Service (IWQoS '99)*, London, UK, May - June 1999. **Acceptance Ratio 17.5% (21/120)**
- [c13] C. Courcoubetis and **V.A. Siris**, “Measurement and analysis of real network traffic”. In *Proc. of 7<sup>th</sup> Hellenic Conference on Informatics (HCI'99)*, Ioannina, Greece, August 1999.
- [c14] C. Courcoubetis and **V.A. Siris**, “A web-based tool for advanced statistical analysis of network traffic measurements”. In *Proc. of 8<sup>th</sup> IFIP Workshop on Performance Modelling and Evaluation of ATM & IP Networks*, Ilkley, West Yorkshire, UK, July 2000.
- [c15] **V.A. Siris**, C. Courcoubetis, and G. Margetis, “Service differentiation in ECN networks using weighted congestion control for various packet marking algorithms”. In *Proc. of 2<sup>nd</sup> Int. Workshop on Quality of Future Internet Services (QofIS'01)*, Coimbra, Portugal, September 2001. Published in *Lecture Notes in Computer Science 2156*, Springer. **Acceptance Ratio 24.2% (23/95)**
- [c16] **V.A. Siris**, “Cell Coverage based on Social Welfare Maximization”. In *Proc. of IST Mobile and Wireless Telecomm. Summit'02*, Thessaloniki, Greece, June 2002.
- [c17] **V.A. Siris**, B. Briscoe, and D. Songhurst, “Economic Models for Resource Control in Wireless Networks”. In *Proc. of IEEE Int. Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC'02)*, September 2002.
- [c18] **V.A. Siris**, “Congestion Sensitive Downlink Power Control in Wideband CDMA Systems”. In *Proc. of 4<sup>th</sup> IEEE Conference on Mobile and Wireless Communications Networks, (MWCN'02)*, Stockholm, Sweden, September 2002.
- [c19] **V.A. Siris**, “Resource Control for Elastic Traffic in CDMA Networks”. In *Proc. of 8<sup>th</sup> ACM Int'l Conference on Mobile Computing and Networking (MOBICOM'02)*, Atlanta, USA, September 2002. **Acceptance Ratio 7.1% (26/364) Up to 2009, this conference was the most competitive in the area of Networking.**
- [c20] **V.A. Siris**, B. Briscoe, and D. Songhurst, “Service Differentiation in Third Generation Mobile Networks”. In *Proc. of 3<sup>rd</sup> Int'l Workshop on Quality of future Internet Services (QofIS'02)*. **Acceptance Ratio 37.7% (20/53)**
- [c21] **V.A. Siris** and M. Kavouridou, “Achieving Service Differentiation and High Utilization in IEEE 802.11”. In *Proc. of IFIP Personal Wireless Communications (PWC'03)*, Venice, Italy, September 2003. Published in *Lecture Notes in Computer Science 2775/2003*, Springer.
- [c22] **V.A. Siris** and C. Courcoubetis, “Resource Control for Loss-sensitive Traffic in CDMA Networks”. In *Proc. of 23<sup>rd</sup> Conference of the IEEE Communications Society (IEEE INFOCOM'04)*, Hong Kong, March 2004. **Acceptance Ratio 18.4% (261/1420)**
- [c23] **V.A. Siris** and D. Triantafyllidou, “Seamless Congestion Control over Wired and Wireless IEEE 802.11 Networks”. In *Proc. of 3<sup>rd</sup> IFIP TC6 Networking Conference (Networking'04)*, Athens, Greece, May 2004. Published in *Lecture Notes in Computer Science 3042/2004*, Springer. **Acceptance Ratio 26.5% (143/539)**
- [c24] **V.A. Siris**, “Resource Control for Hybrid Code and Time Division Scheduling”. In *Proc. of IEEE Int'l Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC'04)*, Barcelona, Spain, September 2004.
- [c25] **V.A. Siris** and F. Papagalou, “Application of Anomaly Detection Algorithms for Detecting SYN Flooding Attacks”. In *Proc. of IEEE Global Communications Conference*

- (GLOBECOM'04) - *Security and Network Management Symposium*, Dallas, USA, November 2004. **Ποσοστό αποδοχής 37.7% (792/2086)**
- [c26] **V.A. Siris** and I. Stavrakis, "Provider-based Deterministic Packet Marking against Distributed DoS Attacks". To appear in *Proc. of 1<sup>st</sup> Int'l Workshop on Security in Systems and Networks (SSN'05)*, held in conjunction with the *Int'l Parallel and Distributed Processing Symposium (IPDPS'05)*, Denver, USA, April 2005. **Acceptance Ratio 32% (16/50)**
- [c27] **V.A. Siris** and D. Triantafyllidou, "ECN Marking for Congestion Control in Multihop Wireless Networks". In *Proc. of 3<sup>rd</sup> Int'l Conference on Wired/Wireless Internet Communications (WWIC'05)*, Xanthi, Greece, May 2005. Published in *Lecture Notes in Computer Science 3510/2005*, Springer. **Acceptance Ratio 29.1% (34/117)**
- [c28] **V.A. Siris** and C. Athanasopoulou, "Creating Motives for Cooperation to Achieve High Throughput in Wireless Ad Hoc Networks". In *Proc. of 1<sup>st</sup> IEEE Int'l Conference on Wireless Networks, Communications and Mobile Computing (WirelessCom'05)*, Maui, Hawaii, June 2005.
- [c29] **V.A. Siris** and G. Stamatakis, "A Dynamic CBWFQ Scheme for Service Differentiation in WLANs". In *Proc. of 16<sup>th</sup> IEEE Int'l Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC'05)*, Berlin, Germany, September 2005.
- [c30] G.I. Fotiadis and **V.A. Siris**, "Improving TCP Throughput in 802.11 WLANs with High Delay Variability". In *Proc. of 2<sup>nd</sup> IEEE Int'l Symposium on Wireless Communication Systems (ISWCS)*, Siena, Italy, September 2005. **Acceptance Ratio 35.7% (90/252)**
- [c31] A. Varvitsiotis, **V.A. Siris**, D.N. Pimpas, G.I. Fotiadis, et al, "Techniques for DiffServ-based QoS in Hierarchically Federated MAN Networks - the GRNET Case". In *Proc. of 14<sup>th</sup> IEEE Workshop on Local and Metropolitan Area Networks (LANMAN'05)*, Chania, Crete, Greece, September 2005. **Acceptance Ratio 36.6% (41/112)**
- [c32] **V.A. Siris** and P. Alafouzou, "Throughput Differentiation for TCP Uplink Traffic in IEEE 802.11e Wireless LANs". In *Proc. 14<sup>th</sup> IEEE Workshop on Local and Metropolitan Area Networks (LANMAN'05)*, Chania, Crete, Greece, September 2005. **Acceptance Ratio 36.6% (41/112)**
- [c33] **V.A. Siris** and C. Courcoubetis, "Resource Control for the EDCA and HCCA Mechanisms in IEEE 802.11e Networks". In *Proc. of 4<sup>th</sup> Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt'06)*, Boston, USA, April 2006. **Acceptance Ratio 30% (42/140)**
- [c34] **V.A. Siris** and G. Stamatakis, "Application of Network Layer Mechanisms for Service Differentiation in 802.11 WLANs: Implementation and Experience". In *Proc. of IEEE Wireless Communications and Networking Conference (WCNC'06)*, Las Vegas, USA, April 2006. **Acceptance Ratio 38.9% (117/301 – networking track)**
- [c35] **V.A. Siris** and G.I. Fotiadis, "Network Dimensioning Based on Percentage of Access Link Capacity used for Premium IP Traffic", In *Proc. of IEEE Int'l Conference on Commun. (ICC'06)*, Istanbul, June 2006. **Acceptance Ratio 39% (982/2517)**
- [c36] **V.A. Siris** and C. Courcoubetis, "Resource Control for the EDCA Mechanism in Multi-rate IEEE 802.11e Networks". Accepted as "regular paper" in *IEEE Int'l Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'06)*, Niagara Falls, NY, USA, June 2006. **Acceptance Ratio 27.5% (39/142 – acceptance for regular papers)**
- [c37] **V.A. Siris** and G. Stamatakis, "Optimal CWmin Selection for Achieving Proportional Fairness in Multi-rate 802.11e WLANs: Test-bed Implementation and Evaluation". In *Proc. of 1<sup>st</sup> ACM Int'l Workshop on Wireless Network Testbeds, Experimental evaluation*

- and *CHARACTERIZATION (WiNTECH'06)*, διοργανώθηκε στα πλαίσια του *ACM MOBICOM'06*, Los Angeles, USA, September 2006. **Acceptance Ratio 35.5% (11/31)**
- [c38] **V.A. Siris** and D. Evaggelatou, "Access Point Selection for Improving Throughput Fairness in Wireless LANs". In Proc. of *10<sup>th</sup> IFIP/IEEE Symposium on Integrated Management*, Munich, Germany, May 2007. **Acceptance Ratio 28%**
- [c39] Y. Koukoutsidis and **V.A. Siris**, "802.11e EDCA Protocol Parameterization: A Modeling and Optimization Study", In Proc. of *IEEE Int'l Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, Helsinki, Finland, June 2007. **Acceptance Ratio 31.8% (47/148)**
- [c40] I. Koukoutsidis and **V.A. Siris**, "Modeling Approximations for an IEEE 802.11 WLAN under Poisson MAC-Level Arrivals". In Proc. of *IFIP Networking 2007*, Atlanta, USA, May 2007. **Acceptance Ratio 22.5% (99/440)**
- [c41] V. Angelakis, S. Papadakis, **V.A. Siris**, and A. Traganitis, "Adjacent Channel Interference in 802.11a: Modeling and Testbed Validation". In Proc. of *IEEE Radio and Wireless Symposium 2008*, Orlando, USA, January 2008.
- [c42] M. Delakis, K. Mathioudakis, N. Petroulakis, **V. A. Siris**, "Experiences and Investigations with Heraklion MESH: An Experimental Metropolitan Multi-Radio Mesh Network". In Proc. of *4th Int'l Conference on Testbeds and Research Infrastructures for the Development of Networks & Communities (TRIDENTCOM)*, Innsbruck, March 2008.
- [c43] I. Koukoutsidis and **V. A. Siris**, "Access Point Assignment Algorithms in WLANs based on Throughput Objectives". In Proc. of *6<sup>th</sup> Int'l Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt'08)*, April 2008.
- [c44] V. Angelakis, S. Papadakis, N. Kossifidis, **V. A. Siris**, A. Traganitis, "The Effect of Using Directional Antennas on Adjacent Channel Interference in 802.11a: Modeling and Experience With an Outdoors Testbed". In Proc. of *4<sup>th</sup> International workshop on Wireless Network Measurements (WiNMe 2008)*, Berlin, March 2008.
- [c45] M. Genetzakis and **V. A. Siris**, "A Contention-Aware Routing Metric for Multi-Rate Multi-Radio Mesh Networks". In Proc. of *5<sup>th</sup> Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (IEEE SECON)*, San Francisco, USA, June 2008. **Acceptance Ratio 21.1% (64/304)**
- [c46] M. Delakis and **V. A. Siris**, "Channel Assignment in a Metropolitan Wireless Multi-Radio Mesh Network". In Proc. of *5<sup>th</sup> International Conference on Broadband Communications, Networks and Systems (Broadnets)*, London, September 2008.
- [c47] N. Petroulakis and **V. A. Siris**, "Real-Time Collection of Electromagnetic Field Measurements using a Metropolitan Wireless Mesh Network". In Proc. of *12th Pan-Hellenic Conference in Informatics (PCI 2008)*, Samos, August 2008.
- [c48] D. Triantafyllidou, **V. A. Siris**, K. A. Agha, "Adaptive Setting of TCP's Maximum Window in Ad Hoc Networks". In Proc. of *IEEE Wireless Communications and Networking Conference (IEEE WCNC)*, 2009.
- [c49] V. Angelakis, K. Mathioudakis, E. Delakis, A. Traganitis, **V. A. Siris**, "Investigation of Timescales for Channel, Rate, and Power Control in a Metropolitan Wireless Mesh Testbed". In Proc. of *ICT Mobile Summit 2009*, Santander, Spain, June 2009.
- [c50] X. Fafoutis and **V. A. Siris**, "Handover Incentives for WLANs with Overlapping Coverage". In Proc. of *7<sup>th</sup> Int'l Conf. on Wired/Wireless Internet Communications (WWIC'09)*, Enschede, The Netherlands, March 2009. Published in Lecture Notes in Computer Science 5546/2009, Springer. **Acceptance Ratio 33.3% (13/39)**
- [c51] X. Fafoutis and **V. A. Siris**, "Performance Incentives for Cooperation between Wireless Mesh Network Operators". In Proc. of *2nd Int'l Workshop on*

*CARrier-grade wireless MESH Networks (CARMEN)*, held in conjunction with *IEEE INFOCOM 2010*, San Diego, HPIA, March 2010.

- [c52] A. Fragkiadakis, **V. A. Siris**, N. Petroulakis, “Anomaly-based intrusion detection algorithms for wireless networks”. In *Proc. of 8<sup>th</sup> Int’l Conference on Wired/Wireless Internet Communications (WWIC’10)*, Lulea, Sweden, June 2010. Published in Lecture Notes in Computer Science 6074/2010, Springer.
- [c53] A. Fragkiadakis, **V. A. Siris**, A. Traganitis, “Effective and Robust Detection of Jamming Attacks”. In *Proc. of ICT Mobile Summit 2010*, Florence, Italy, June 2010.
- [c54] T. Dionysiou, **V.A. Siris**, G. Stamatakis, “Utility-based Channel Assignment and Topology Control in Wireless Mesh Networks”. In *Proc. of IEEE Int’l Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, Montreal, Canada, June 2010. **Acceptance Ratio 20.2% (35/173)**
- [c55] N. Pappas, **V.A. Siris**, and A. Traganitis, “Path Diversity Gain with Network Coding and Multipath Transmission in Wireless Mesh Networks”. In *Proc. of 2<sup>nd</sup> IEEE International Workshop on Hot Topics in Mesh Networking (HOTMESH)*, 2010.
- [c56] X. Fafoutis and **V. A. Siris**. “Handover Incentives: Revised Model with extensions for Uplink Traffic”. In *Proc. of 1<sup>st</sup> Int’l Workshop Mobility in Future Internet (MiFI)*, Chania, Greece, June 2010.
- [c57] E. Tragos, **V.A. Siris**, R. Bruno, K. Grochla, E. Ancilloti, “Automatically configured, optimised and QoS aware wireless mesh networks”. In *Proc. of IEEE PIMRC 2010*, September 2010.
- [c58] N. Gazoni, V. Angelakis, **V. Siris**, and B. Raffaele. “A Framework for Opportunistic Routing in Multi-hop Wireless Networks”. In *Proc. of 7th ACM Int’l Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks (PE-WASUN)*, held in conjunction with MSWiM 2010, Bodrum, Turkey, October 2010.
- [c59] N. Pappas, V.A. Siris, A. Traganitis, “Delay and Throughput of Network Coding with Path Redundancy for Wireless Mesh Networks”. In *Proc. of 3rd Joint IFIP Wireless and Mobile Networking Conference*, Budapest, Hungary, October 2010.
- [c60] E. Tragos, A. Fragkiadakis, I. Askoxylakis, and **V. A. Siris**. “The Impact of Interference on the Performance of a Multi-path Metropolitan Wireless Mesh Network”. In *Proc. of 16th IEEE symposium on Computers and Communications*, Kerkyra (Corfu), Greece, June-July 2011.

#### **Other workshops with review of abstract**

- [w1] C. Courcoubetis, **V.A. Siris**, and G. D. Stamoulis, “Application of large deviation techniques for performance evaluation and dimensioning of ATM networks”. In *Proc. of ATM Traffic Symposium*, Mykonos, Greece, September 1997.
- [w2] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, “Many sources asymptotic and effective bandwidths: Investigation with MPEG traffic”. In *Proc. of 2<sup>nd</sup> IFIP Workshop on Traffic Management and Synthesis of ATM Networks*, Montreal, Canada, Sep. 1997.
- [w3] C. Courcoubetis, F.P. Kelly, **V.A. Siris**, G.D. Stamoulis, and R. Weber, “ABR pricing experiments in a real network”. In *Proc. of International Conference on Telecommunications (ICT’97)*, Melbourne, Australia, April 1997.
- [w4] P. Antoniadis, C. Courcoubetis, G. Margetis, **V.A. Siris**, and G.D. Stamoulis, “Efficient adaptation to dynamic pricing communicated by ECN marks: Scenarios for experimental assessment”. In *Proc. of SPIE Int. Symposium on Information Technologies*, Boston, USA, November 2000.

- [w5] G. Margetis and **V.A. Siris**, “Weighted window-based congestion control: Testbed implementation and experiments”. In *Proc. of 8<sup>th</sup> Int. Conference on Advances in Communications and Control (COMCON’01)*, June 2001, Rethymnon, Crete, Greece.
- [w6] **V.A. Siris** and G.I. Fotiadis, “A Testbed Investigation of QoS Mechanisms for Supporting SLAs in IPv6”. In *Proc. of TERENA Networking Conference (TNC’04)*, June 2004, Rhodes, Greece.
- [w7] V. Angelakis, M. Genetzakis, N. Kossifidis, K. Mathioudakis, M. Ntelakis, S. Papadakis, N. Petroulakis, **V.A. Siris**, “Heraklion MESH: An Experimental Metropolitan Multi-Radio Mesh Network”. In *Proc. of 2<sup>nd</sup> ACM Int’l Workshop on Wireless Network Testbeds, Experimental evaluation and CHaracterization (WiNTECH’07)*, held in conjunction with *ACM MOBICOM’07*, Montreal, Canada, September 2007.
- [w8] **V.A. Siris**, Th. Dionysioy, G. Stamatakis, “A Utility-based Framework for Joint Channel, Topology, and Routing Control in Wireless Mesh Networks”. Workshop on “Future Internet Architectures: New Trends in Service Architectures”, held in conjunction with *ICT Mobile Summit 2009*, Santander, Spain, June 2009.
- [w9] X. Fafoutis and **V. A. Siris**, “Cooperation Incentives between Wireless Mesh Network Operators”. In 3rd ERCIM Workshop on eMobility, held in conjunction with WWIC 2009, Enschede, Netherlands, May 2009.
- [w10] N. Gazoni, V. Angelakis, R. Bruno, M. Conti, **V.A. Siris**, “A framework for adaptive opportunistic forwarding in wireless networks”. IEEE WoWMoM’09 Work-in-Progress Session, Kos, Greece, June 2009.

#### Invited papers

- [i1] C. Courcoubetis, **V.A. Siris**, G.D. Stamoulis, and Y. Markopoulos, “Charging issues for services in broadband networks”. In *Proc. of Organization for Economic Coordination and Development (OECD) Conference on The Economics of the Information Society*, Istanbul, December 1995.
- [i2] C. Courcoubetis, **V.A. Siris**, and G.D. Stamoulis, “Comparing usage-based pricing schemes for broadband networks”. *1997 joint International meeting between EURO and INFORMS*, Barcelona, Spain, July 1997.
- [i3] **V. A. Siris**, “Efficient Resource Control for IEEE 802.11e’s EDCA Mechanism”, *14<sup>th</sup> Applied Probability Society Conference INFORMS*, Eindhoven, The Netherlands, July 2007.
- [i4] **V.A. Siris**, “EU-MESH: Enhanced, Ubiquitous, and Dependable Broadband Access using MESH Networks”. In *Proc. of ERCIM eMobility 2010 workshop*, Lulea, Sweden, June 2010.
- [i5] **V.A. Siris**, G. Stamatakis, and E. Tragos, “Channel Assignment based on the End-to-end Throughput in Multi-hop Wireless Networks”. In 9th Int’l Conference on Wired/Wireless Internet Communications (WWIC’11), Barcelona, Spain, June 2011. Published in *Lecture Notes in Computer Science 6649/2011*, Springer.

#### Participation in reports

- [r1] “Priorities for Research on Current and Emerging Network Technologies”, prepared by the Exert Group of ENISA (European Network and Information Security Agency), which I was a member of.

#### Other publications

- [o1] **V. Siris** and A. Traganitis, “A Metropolitan Mesh Testbed in Heraklion”, *Economist* (Greek edition), supplement to the newspaper Kathimerini, Edition 43, September 2007.



- [o2] I. Askoxylakis, **V. Siris** and A. Traganitis, “Radiation from Mobile and Wireless Networks & Public Health”, Economist (Greek edition), supplement to the newspaper Kathimerini, Edition 43, September 2007.
- [o3] **V. Siris**, A. Traganitis, and I. Askoxylakis, “The medium for a new generation of telecommunication services”, Economist (Greek edition), supplement to the newspaper Kathimerini, December 2007.
- [o4] **V. Siris**, I. G. Askoxylakis, M. Conti, and R. Bruno, "Enhanced, Ubiquitous and Dependable Broadband Access using MESH Networks". ERCIM Newsletter, Issue 73, pp 50-51, April 2008.
- [o5] V. Angelakis, **V. A. Siris**, and A. Traganitis, “Management of Future Mesh-based Radio Access Networks”, ERCIM Newsletter, Issue 77, Special theme: Future Internet Technology, pp 55-56, April 2009.
- [o6] I. Askoxylakis, **V. Siris**, A. Traganitis and C. Stephanidis, “Internet of the Future and Smart Cities: An advanced smart network infrastructure in Crete”, Economist (Greek edition), supplement to the newspaper Kathimerini, December 2010.

#### **Demonstrations / Posters (demonstrations [d4] were accepted after review)**

- [d1] **V.A. Siris** and G. Stamatakis, “Service Differentiation and Improved Performance in Wireless LANs using Network Layer Mechanisms”. Demonstration at British Telecommunications, UK, 28 January 2005, during the evaluation of the Institute of Computer Science, FORTH, 8 July 2005, and the International Exhibition in Thessaloniki, 16-20 September 2005.
- [d2] **V.A. Siris** and G. Stamatakis, “Resource Control for the EDCA Mechanism in Multi-Rate IEEE 802.11e Networks”. Demonstration at British Telecommunications, UK, 1 March 2006 and 18 September 2006.
- [d3] **V.A. Siris** and G. Stamatakis, “Support and Monitoring of Quality of Service in Wireless Networks”. Poster at «Science and Technology Week», Zapeion Hall, Athens, 28 June – 6 July 2006.
- [d4] N. Petroulakis, M. Delakis, M. Genetzakis, T. Dionysiou, S. Papadakis, **V.A. Siris** “Demonstration of Channel Assignment in a Wireless Metropolitan MESH Network”. Demo at IEEE WoWMoM’09, Kos, Greece, June 2009.
- [d5] X. Fafoutis, K. Mathioudakis and **V.A. Siris**, “Performance-Oriented Handover Incentives: A Proof-of-Concept Demonstration”. Demo at the 5th ACM Int’l Workshop on Wireless Network Testbeds, Experimental evaluation and Characterization (WiNTECH), held in conjunction with ACM MOBICOM 2010, Chicago IL, USA, September 2010.
- [d6] K. Grochla, K. Stasiak, **V.A. Siris**, E. Tragos, “Automatic channel assignment and topology optimization in multi-radio wireless mesh networks”. Demo at the 16th Annual ACM Int’l Conference on Mobile Computing and Networking (ACM MOBICOM), Chicago IL, USA, September 2010.

#### **Technical reports that have not been published in journals or conferences**

- [t1] **V.A. Siris**, “Congestion Pricing for Resource Control in WCDMA: Models and Design Issues”. BT Technical Report, August 2001. Shorter version appears as ICS-FORTH Technical Report 299, December 2001.
- [t2] **V.A. Siris** and George Stamatakis, “Experimental Evaluation of QoS Features in WiFi Multimedia (WMM)”. ICS-FORTH Technical Report 375, March 2006.

### **INVITED TALKS (after 2005)**

- “Wireless Multi-Channel Multi-Hop Mesh Network with QoS Support”. OTEnet, Athens, Greece, 14 January 2005.
- “Broadband Services: A New Reality ”. Seminar for the Promotion of Broadband Services, Heraklion, Greece, 11 July 2005.
- “Improving TCP Throughput in WLANs with High Delay Variability”. *4<sup>th</sup> COST 290 Management Committee Meeting*, University of Wuerzburg, Germany, 13 October 2005.
- “Resource Control in Multi-rate 802.11e Networks”. BT, Ipswich, UK, 17 July 2006.
- “Access Point Selection for Improving Throughput Fairness in Wireless LANs”. BT, Ipswich, UK, 18 July 2006.
- “Some Issues in Dense Wireless LANs: Towards Joint Cell Breathing and Channel Assignment”. Wireless Cities Workshop, BT, Ipswich, UK, 15 September 2006.
- “Resource Control for the EDCA Mechanism in Multi-rate IEEE 802.11e Networks”. *8<sup>th</sup> COST 290 Management Committee Meeting*, University of Malaga, Spain, 15 Feb 2007.
- “Efficient Resource Management in Wireless Mesh Network”, invited talk at 1<sup>st</sup> Workshop on Carrier Grade Wireless Mesh Networks, held in conjunction with ICT Mobile Summit 2009, Santander, Spain, June 2009.
- “Controlling Wireless Access Networks: Flexibility, Reliability, and Incentives”, invited talk at Seminar Series on Advances in Telecommunications, Networking and Computing, BME, Budapest, October 2009.

## ADMINISTRATIVE WORK

### Athens University of Economics and Business

Substitute Member of the Curriculum Committee, Department of Informatics, Athens University of Economics and Business (academic years 2009-2010, 2010-2011)

Substitute Representative of the Department of Informatics in the Student Club Committee (Foititiki Lesxi), Athens University of Economics and Business (academic years 2009-2010)

### University of Crete

President of the University of Crete's Committee on Systems and Networks, Representative of the School of Sciences and Engineering (January 2006 – January 2009)

Member of the Senate of the University of Crete (Regular Member: October 2006 – September 2007, Substitute Member: October 2003 – September 2004)

Representative of the University of Crete in the Greek University Network (GUnet) (July 2005 – January 2009)

Member of the Systems and Networks Committee of the University of Crete, Representative of the School of Sciences and Engineering (October 2003 – June 2004)

## PARTICIPATION IN INTERNATIONAL ORGANIZATIONS

Member of the Institute of Electrical and Electronics Engineers (IEEE), and the IEEE Communications Society

Member of the Association for Computing Machinery (ACM) Special Interest Group on Mobility of Systems, Users, Data and Computing (SIGMOBILE)

## OTHER PROFESSIONAL ACTIVITIES

### Conference organization

- **Co-organizer** of the 1<sup>st</sup> *Workshop on advanced EXPERIMENTAL activities ON WIRELESS networks and systems (EXPONWIRELESS 2006)*, held in conjunction with the *IEEE WoWMoM 2006 (Int'l Symposium on a World of Wireless, Mobile and Multimedia Networks)*, Niagara Falls, NY, USA, June 2006, and the 2<sup>nd</sup> *Workshop on advanced EXPERIMENTAL activities ON WIRELESS networks and systems (EXPONWIRELESS 2007)*, held in conjunction with IEEE WoWMoM 2007.
- **General Co-Chair**, 3<sup>rd</sup> *European Conference on Computer Network Defense (EC2ND)*, Heraklion, Crete, 4-5 October 2007.
- **Technical Program Committee (TPC) Co-Chair** of 6<sup>th</sup> *Int'l Conference on Wired/Wireless Internet Communications (WWIC)*, Helsinki, Finland, 2008.
- **General Co-Chair**, 10<sup>th</sup> *IEEE Int'l Symposium on a World of Wireless, Mobile and Multimedia Networks (IEEE WoWMoM)*, Kos, Greece, June 2009.
- **Scientific Committee** of the 1<sup>st</sup> *IEEE WoWMoM Workshop on Hot Topics in Mesh Networking (HotMESH)*, Kos, Greece, June 2009, and **Co-organizer** of HotMESH 2011.
- **Co-organizer of the invited session** "Mesh Networks", European Wireless 2010, Lucca, Italy, April 2010.
- **Workshop Co-Chair**, 11<sup>th</sup> *IEEE Int'l Symposium on a World of Wireless, Mobile and Multimedia Networks (IEEE WoWMoM)*, Montreal, Canada, 2010.

**Panels in conferences/workshops**

- Panel “Research on Wireless Mesh Networks: What's Next?”, 1st IEEE WoWMoM Workshop on Hot Topics in Mesh Networking (HotMESH), Kos, Greece, June 2009
- Panel “Carrier Grade Mesh Networks”, 1<sup>st</sup> Workshop on Carrier Grade Wireless Mesh Networks, in conjunction with ICT Mobile Summit 2009, Santander, Spain, June 2009.
- Panel Organizer, “Experiments and Measurements in a Changing Wireless World”, EXPONWIRELESS’06, held in conjunction with IEEE WoWMoM’06, Niagara Falls, NY, USA, June 2006.

**Member of the Program Committee** in more than 55 International conferences and workshops:

- *IEEE Int’l Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, 2007, 2008, 2011
- *Int’l Conference on Wired/Wireless Internet Communications (WWIC)*, 2005, 2006, 2007, 2009, 2010, 2011
- *Wireless Networking Symposium, IEEE ICC*, 2008, 2009, 2010
- *Wireless Networking Symposium, IEEE GLOBECOM*, 2009, 2010, 2011
- *IEEE International Workshop on Quality of Service (IWQoS)*, 2008, 2009, 2010, 2011
- *IEEE PIMRC 2008*
- *IEEE Workshop on Local and Metropolitan Area Networks (LANMAN)*, 2005, 2007, 2008, 2010, 2011
- *ERCIM Workshop on Emobility*, 2007, 2008, 2009, 2010, 2011
- *ICT Mobile Summit 2008, 2009, 2010*
- *WiMesh 2010*
- *Int’l Workshop for Internet Charging and QoS Technologies (ICQT)*, 2002, 2003, 2004, 2006, 2009
- *2nd International Workshop on the Evaluation of Quality of Service through Simulation in the Future Internet (QoSim) 2009*
- *IEEE Broadband Wireless Access Workshop*, 2<sup>nd</sup> (within IEEE CCNC 2008), 3<sup>rd</sup> (within IEEE ICC 2008), 4<sup>th</sup> (within IEEE Globecom 2008)
- *IEEE MeshTech 2008, 2009*
- *1<sup>st</sup> Workshop on Wireless Broadband Access for Communities and Rural Regions - WIRELESS4D*, 2008
- *Int’l Workshop On Wireless Network Measurement / Int’l Workshop on Wireless Traffic Measurements and Modeling (WiNmee/WiTMeMo)*, 2007, 2008
- *16<sup>th</sup> IEEE Vehicular Technology Conference (VTC’07) Spring*, 2007
- *5<sup>th</sup> Int’l Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt’07)*, 2007
- *16th International Conference on Computer Communications and Networks (ICCCN 2007)*, Cross-Layer Design and Optimization track, 2007
- *2<sup>nd</sup> ACM/SIGMOBILE Workshop on Multi-hop Ad hoc Networks: from theory to reality (REALMAN)*, held in conjunction with *ACM MobiHoc*, 2006
- *International Wireless Communications and Mobile Computing Conference (IWCMC)*, 2006
- *2<sup>nd</sup> Int’l workshop on Wireless Traffic Measurements and Modeling (WiTMeMo)*, 2006
- *Symposium on QoS in Wireless Multimedia Networks, IEEE SoftCOM 2006*
- *2<sup>nd</sup> IFIP Workshop on Autonomic Communication (WAC)*, 2005

- *IEEE ICPS Workshop on Multi-hop Ad hoc Networks: from theory to reality (REALMAN)*, 2005
- *Int'l Workshop on Quality of Future Internet Services (QofIS)*, 2003, 2004
- *5<sup>th</sup> Int'l Conference on Enterprise Information Systems*, 2003

#### **Member of the Review Committee for Proposals**

- IWT, the Institute for the Promotion of Innovation by Science and Technology in Flanders, Belgium (2002, 2003)
- General Secretariat for Research and Technology – GSRT

#### **Editorial Board**

- *Journal of Internet Engineering* ([www.jie-online.org](http://www.jie-online.org)), Klidarithmos (since 1/2006)
- *Computer Communications*, Elsevier (since 12/2008)

**Reviewer for international journals** (more than 18): European Transactions on Telecommunications, IEEE Communications Letters, IEEE Communications Magazine, IEEE Wireless Communications Magazine, IEEE Network, Journal of Network and System Management, Journal of Performance Evaluation, IEEE/ACM Transactions on Networking, IEEE Journal on Select. Areas in Commun., Computer Communications, Computer Networks, IEEE Transactions on Wireless Communications, IEEE Transactions on Mobile Computing, ACM Mobile Computing and Communications Review, Journal of Systems and Software, Journal of Network and Computer Applications, Wireless Networks, Computational Statistics and Data Analysis, The Computer Journal

**Reviewer for international conferences** (total 27, in addition to those where I was a member of the Program Committee): 16<sup>th</sup> International Teletraffic Congress (ITC-16), IFIP Networking'04, IEEE Int'l Conference on Services Computing (SCC) 2004, IEEE SoftCom'05, QoSIP'04, IEEE IWQoS'04, IEEE WCNC'04, IEEE VTC'03/04/05, IEEE GLOBECOM'02/04/07, IEEE ICC'04/07, IEEE PIMRC'06, 1<sup>st</sup> Int'l Workshop on Security in Systems and Networks (SSN'05), European Wireless 2006, Europar 2006, IEEE WoWMoM'05, IEEE INFOCOM'99/00/01/02/03/04/05/11