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Name : **Sarigiannidis Panagiotis**  
Position : Lecturer (appointment pending), University of Western Macedonia,  
Department of Informatics and Telecommunications Engineering  
Address : University of Western Macedonia,  
50100 Kozani, Greece  
Phone : +30 23920 62158, +30 6937741147  
E-mail : psarigiannidis@uowm.gr

### **Research Interests**

- Optical networks
- Wireless networks
- Medium access control (MAC) protocols
- Dynamic Bandwidth Allocation Algorithms
- Traffic Prediction

### **Education**

- BS in Computer Science, Department of Informatics,  
Aristotle University of Thessaloniki 2001
- PhD in Computer Science, Department of Informatics,  
Aristotle University of Thessaloniki 2007

### **Teaching Activities**

- Adjunct Lecturer, Department of Computer Science, University of Ioannina,  
Greece 2007-2008
  - Courses:
    1. Optical Networks
    2. Security of Computer Systems and Networks
    3. Computer Networks (Co-Teaching Labs)
- Adjunct Lecturer, Department of Engineering Informatics and  
Telecommunications 2007-present
  - Courses:
    1. Computer Networks II
    2. Security of Computers and Networks
    3. Broadband Communication Networks
- Teaching Assistant, Department of Informatics, Aristotle University of  
Thessaloniki:
  - Courses:
    1. Communication Systems
    2. New Communication Technologies

### **Research activities**

- Associate Editor of the International Journal of Communication Systems.
- Technical Program Committee Member:
  1. IEEE International Conference on Communications (ICC 2010)
  2. 7th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA'09)
  3. International Conference on Communication Theory, Reliability, and Quality of Service (CTRQ 2008)
  4. International Conference on Communication Theory, Reliability, and Quality of Service (CTRQ 2009)

5. Mobile Lightweight Wireless Systems (Mobilight 2009)
- Reviewer:
    1. IEEE Transactions on Broadcasting
    2. IEEE Sensors Journal
    3. IEEE Transactions on Systems, Man and Cybernetics
    4. IEEE Systems Journal
    5. International Journal of Communication Systems
    6. Elsevier Information Sciences.

## **Publications**

### **Journals**

J1. P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "CS-POSA A high performance scheduling algorithm for WDM star networks", Photonic Network Communication, vol. 11, no. 2, pp. 209-225, Mar. 2006.

J2. P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "A High Throughput Scheduling Technique, with Idle Timeslot Elimination Mechanism", IEEE/OSA Journal of Lightwave Technology, vol. 24, no. 12, pp. 4811-4827, Dec. 2006.

J3. P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "A high performance scheduling priority scheme for WDM star networks", IEEE Communications Letters, vol. 11, no. 1, pp. 76-78, Jan. 2007.

J4. P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "A novel medium access control protocol for optical local networks based on data request ordering", Optics and Laser Technology, Elsevier, vol. 40, no. 1, pp. 175-193, Feb. 2008.

J5. P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "LENA: An efficient channel eclectic algorithm for WDM optical networks", Optics and Laser Technology, Elsevier, vol. 40, no. 1, pp. 39-51, Feb. 2008.

J6. S. G. Petridou, P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "Clustering Based Scheduling: A New Class of Scheduling Algorithms for Single-Hop Lightwave Networks", International Journal of Communications Systems, Wiley InterScience, vol. 21, no. 8, pp. 863-887, Aug. 2008.

J7. S. G. Petridou, P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "A Clustering-Driven Medium Access Control Protocol for WDM Star Networks", Optics and Laser Technology, Elsevier, vol. 41, no. 1, pp. 42-52, Feb. 2009.

J8. S. G. Petridou, P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "On the use of Clustering Algorithms for Message Scheduling in WDM Star Networks", IEEE/OSA Journal of Lightwave Technology, vol. 26, no. 17, pp. 2999-3010, Sep. 2008.

J9. P. G. Sarigiannidis, S. G. Petridou, G. I. Papadimitriou, and A. S. Pomportsis, "Supporting Quality-of-Service Scheduling in a TT-FR WDM System", IEEE Systems Journal, vol. 2, no. 4, pp. 525-535, Dec. 2008.

J10. Ch. Papazoglou, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "Efficient void management for improved scheduling in optical burst switched networks", International Journal of Communication Systems, accepted.

J11. V. L. Kakali, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "A Novel Adaptive Framework for Wireless Push Systems based on Distributed Learning Automata", *Wireless Personal Communications*, Springer, 0929-6212 (Print) 1572-834X (Online), 2010.

J12. P. G. Sarigiannidis, S. Petridou, G. I. Papadimitriou, and M. S. Obaidat, "A New Approach to the Design of MAC protocols for WDM-EPON Systems", *IEEE Systems Journal*, vol. 4, no. 1, pp. 49-56, 2010.

J13. P. Nicopolitidis, G. I. Papadimitriou, P. G. Sarigiannidis, M. S. Obaidat, A. S. Pomportsis, "Adaptive Wireless Networks Using Learning Automata", *IEEE Wireless Communications Magazine*, accepted.

J14. V. L. Kakali, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "A Novel HMM-Based Learning Framework for Improving Dynamic Wireless Push Systems Performance", *Computers and Mathematics and Applications*, Springer, accepted.

### **Conferences**

C1. P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "A New Prediction and Channel Sorting Based Scheduling Algorithm for WDM Star Networks", *Proceedings of IEEE/SCVT (Symposium on Communications and Vehicular Technology)*, Enschede, the Netherlands, Nov. 2005.

C2. P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "WFF: A High Performance Scheduling Algorithm for WDM Star Networks that Minimizes Idle Timeslots", *Proceedings of IEEE/SCVT (Symposium on Communications and Vehicular Technology)*, Enschede, the Netherlands, Nov. 2005.

C3. P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "SASA: A Synthesis Scheduling Algorithm with Prediction and Sorting Features", *Proceedings of IEEE ISCC (International Symposium on Computers and Communications) 06*, Sardinia, Italy, Jun. 2006.

C4. P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "A new channel priority scheduling technique for WDM star networks", *Proceedings of CSNDSP 2006 (Communication Systems, Networks and Digital Signal Processing)*, Patras, Greece, Jul. 2006.

C5. P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "A high performance channel sorting scheduling algorithm based on largest packet", *Proceedings of CSNDSP (Communication Systems, Networks and Digital Signal Processing) 2006*, Patras, Greece, Jul. 2006.

C6. S. G. Petridou, P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "An Efficient Clustering Oriented Algorithm for Message Scheduling on WDM Star Networks", *Proceedings of IEEE/SCVT (Symposium on Communications and Vehicular Technology)*, Delft, The Netherlands, Nov. 2007.

C7. S. G. Petridou, P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "Clustering Based Scheduling: A New Approach to the Design of Scheduling Algorithms for WDM Star Networks", *Proceedings of IEEE/SCVT (Symposium on Communications and Vehicular Technology)*, Delft, The Netherlands, Nov. 2007.

C8. C. Papazoglou, P. G. Sarigiannidis, G. I. Papadimitriou, A. S. Pomportsis, "A New Priority Scheme for WDM Star Networks", Proceedings of IEEE/SCVT (Symposium on Communications and Vehicular Technology), Delft, The Netherlands, Nov. 2007.

C9. S. G. Petridou, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "Node Clustering in WDM Star Networks with Real-Time Traffic", 14th IEEE MELECON (Mediterranean Electrotechnical Conference) 2008, Ajaccio, France, May 5-7, 2008.

C10. S. G. Petridou, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "A High Performance Clustering-Driven MAC Protocol for Single-Hop Lightwave Networks", 14th IEEE MELECON (Mediterranean Electrotechnical Conference) 2008, Ajaccio, France, May 5-7, 2008.

C11. V. Kakali, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "DIAS: An adaptive Push System, based on Distributed Learning Automata", IEEE/SCVT (Symposium on Communications and Vehicular Technology), 2008 (accepted).

C12. V. Kakali, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "A prediction-based scheme for wireless push systems, using a statistical Hidden Markov Model", IEEE/SCVT (Symposium on Communications and Vehicular Technology), 2008 (accepted).

C13. P. G. Sarigiannidis, S. Petridou, G. I. Papadimitriou, M. Obaidat and A. S. Pomportsis, "A Quality of Service Scheduling Technique for Optical LANs", ACS/IEEE AICCSA (International Conference on Computer Systems and Applications), 2009 (accepted).

C14. C. Papazoglou, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "Techniques for improved scheduling in optical burst switched networks", ISADS (International Symposium on Autonomous Decentralized Systems), 2009 (accepted).

C15. P. G. Sarigiannidis, "Applying Quality of Service Prediction in WDM Optical Networks", the 15th IEEE Mediterranean Electrotechnical Conference (MELECON) 2010, accepted.

C16. V. L. Kakali, P. G. Sarigiannidis, G. I. Papadimitriou, and A. S. Pomportsis, "Speeding-up the Adaption Process in Adaptive Wireless Push Systems by Applying Spline Interpolation Technique", the 15th IEEE Mediterranean Electrotechnical Conference (MELECON) 2010, accepted.

C17. P. G. Sarigiannidis, S. Petridou, G. I. Papadimitriou, and M. S. Obaidat, "A New Approach to the Design of Mac Protocols for WDM-EPONs ", the 15th IEEE Mediterranean Electrotechnical Conference (MELECON) 2010, accepted.

C18. P. G. Sarigiannidis, G. I. Papadimitriou, P. Nikopolitidis, M. S. Obaidat, and A. Pomportsis, "A Novel Adaptive Mapping Scheme for IEEE 802.16 Mobile Downlink Framing", Globecom 2010, accepted.

C19. P. G. Sarigiannidis, M. Louta, P. Chatzimisios, "A Novel Fair Mapping Scheme for IEEE 802.16 Downlink Sub-Frame", 2nd International Workshop on Mobile Computing and Networking Technologies to be held in conjunction with 2010

International Congress on Ultra Modern Telecommunications and Control Systems, accepted.

C20. P. G. Sarigiannidis, M. Louta, D. Stratogiannis, G. Tsiropoulos, "Towards a QoS-Aware IEEE 802.16 Downlink Sub-Frame Mapping Scheme", Workshop on Mobile Computing and Emerging Communication Networks to be held in conjunction with 2010 IEEE Global Communications Conference Exhibition & Industry Forum (GLOBECOM 2010).

C21. K. Christidis, P. Nicopolitidis, G. I. Papadimitriou, P. G. Sarigiannidis and A. S. Pomportsis, "Utilizing Locality of Demand for Lower Response Times in Underwater Data Broadcasting", IEEE VTC Spring 2011, May 15-18, Budapest, Hungary.

C22. T. Lagkas, D. G. Stratogiannis, G. I. Tsiropoulos, P. Sarigiannidis, and M. Louta, "Load Dependent Resource Allocation in Cooperative Multiservice Wireless Networks: Throughput and Delay Analysis", IEEE Symposium on Computers and Communications (ISCC'11), June 28 – July 1, 2011, Kerkyra, Greece, accepted.

C23. P. Sarigiannidis, V. Pechlivanidou, M. Louta, and P. Angelidis, "Towards an Effective Energy Efficient Passive Optical Network", IEEE Symposium on Computers and Communications (ISCC'11), June 28 – July 1, 2011, Kerkyra, Greece, accepted.

C24. M. Louta, P. Zournatzis, S. Kraounakis, P. Sarigiannidis, and "Towards realization of the ABC vision: a comparative survey of access network selection", IEEE Symposium on Computers and Communications (ISCC'11), June 28 – July 1, 2011, Kerkyra, Greece, accepted.

C25. A. Sarigiannidis, P. Nicopolitidis, G. Papadimitriou, P. Sarigiannidis, and M. Louta, "Using Learning Automata for Adaptively Adjusting the Downlink-Uplink Ratio in IEEE 802.16e Wireless Networks", IEEE Symposium on Computers and Communications (ISCC'11), June 28 – July 1, 2011, Kerkyra, Greece, accepted.

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