

KONSTANTINOS OIKONOMOU

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49100 Corfu, Greece **Email :** okon@ionio.gr
Birth Date : 1st March 1976 **Url :** <http://www.ionio.gr/~okon>

OCCUPATION

December 2017 - present **Dean of the Faculty of Information Science and Informatics**
Ionian University Elected for a three year term

April 2006 - present **Faculty member (Computer Networks)**
Ionian University Head of the Department (May 2017-October 2017), Associate Profes-
Dept. of Informatics sor (April 2017-present), Assistant Professor (June 2011-April 2017),
Lecturer (April 2007-June 2011)

EDUCATION

2000 - 2004 **Ph.D. (Dept. of Informatics & Telecommunications)**
National and Kapodis- *Ph.D. Thesis Title:* Topology-Unaware TDMA MAC Policies for Ad
trian University of Athens Hoc Networks

1998 - 1999 **M.Sc./DIC in Communications and Signal Processing (Elec-**
Imperial College **trical & Electronic Engineering Dept.)**
M.Sc. Thesis Title: Data Link Control Optimization in Multiple
Access for Mobile Communications

1993 - 1998 **MEng (Dept. of Computer Engineering & Informatics)**
University of Patras 5 years full time study at the Faculty of Engineering.
Diploma Thesis Title: Modern Video Coding Techniques

WORK EXPERIENCE

10/2004 - 6/2010 **National and Kapodistrian University of Athens**
Dept. of Informatics & Telecommunications
Post-Doctoral Research in Autonomous Networks

10/2006 - 4/2007 **Ionian University**
Dept. of Informatics
Teaching two courses in the area of computer networks

3/2006 - 8/2006 **University of Ioannina**
Dept. of Informatics
Teaching two courses in the area of computer networks

12/1999 - 1/2005 **Intracom S.A.**
Full time occupation as a research and development engineer

R&D COORDINATION

7/2017 - present **OLI-Net (ESPA 2014-2020)**
Role: Co-ordinator on behalf of the Ionian University

9/2012 - 12/2015 **Ionian Islands Virtual World (ESPA 2007-2013)**
Role: Co-ordinator on behalf of the Ionian University

9/2011 - 7/2014 **S.M.ART.BUIL.T. (Interreg Greece-Italy)**
Role: Technical co-ordinator on behalf of the Ionian University

9/2010 - 12/2015 **Ionian University Digital Planning Services (ESPA 2007-2013)**
Role: Co-ordinator on behalf of the Ionian University

1/2005 - 6/2010

ANA-Autonomic Network Architecture (FET) IST-27489
Role: Post-doc researcher on behalf of the National & Kapodistrian University of Athens

1/2002 - 1/2005

BROADWAY (6th Framework) IST-2001-32686
Role: Workpackage co-ordinator on behalf of Intracom S.A.

5/2000 - 5/2003

HARMONICS (5th Framework) IST-1999-11719
Role: Workpackage co-ordinator on behalf of Intracom S.A.

CONFERENCE CHAIR

JCKBSE 2018

27-30 August 2018
Corfu, Greece

12th Joint Conference on Knowledge-Based Software Engineering

<http://jckbse2018.unipi.gr>
Role: Program co-Chair

Algocloud 2016

22 August 2016
Aarhus, Denmark

2nd International Workshop On Algorithmic Aspects Of Cloud Computing

<http://conferences.au.dk/algo16/algocloud>
Role: Workshop co-Chair

IISA 2015

6-8 July 2015
Corfu, Greece

IEEE 6th Int. Conference on Information, Intelligence, Systems and Applications

<http://iisa2015.unipi.gr>
Role: Special Session CNEA co-Chair

ISCC 2011

28 June - 1 July 2011
Corfu, Greece

IEEE Symposium on Computers and Communications

<http://www.ieee-iscc.org/2011>
Role: Local Arrangements co-Chair

AOC 2010

14 June 2010
Montreal, Canada

IEEE WoWMoM Workshop on Autonomic and Opportunistic Communications

<http://cnd.iit.cnr.it/aoc2010/index.html>
Role: Workshop co-Chair

AOC 2009

15 June 2009
Kos, Greece

IEEE WoWMoM Workshop on Autonomic and Opportunistic Communications

<http://cnd.iit.cnr.it/aoc2009/index.html>
Role: Workshop co-Chair

MedHocNet 2007

12-15 June 2007
Corfu, Greece

Mediterranean Ad Hoc Networking Workshop

<http://di.ionio.gr/medhocnet07/>
Role: Local Arrangements co-Chair

PUBLICATIONS

Publications

Journals
Conferences
Cross-references

Total 63 Refereed Publications

20 Journal Papers
43 Conference Papers
There are 548 References (Google Scholar)

Award

Best Paper Award, January, 2005

“Power Efficiency Analysis for Topology-Unaware TDMA MAC Policies in Ad-Hoc Networks”

List of Publications

Journal Papers

- [1] E. Koutsoumpidis, V. Komianos, and K. Oikonomou, "Evaluation of virtual agents' effectiveness in history class", *The European Journal of Education and Applied Psychology*, Accepted for publication.
- [2] K. Skiadopoulos, K. Giannakis, and K. Oikonomou, "Random walker coverage analysis for information dissemination in wireless sensor networks", *Technologies*, vol. 5, no. 2, p. 33, 2017.
- [3] A. Demertzis and K. Oikonomou, "Braided routing technique to balance traffic load in wireless sensor networks", *International Journal of Monitoring and Surveillance Technologies Research (IJM-STR)*, vol. 4, no. 4, pp. 1–19, 2016.
- [4] V. Komianos, G. Tsoumanis, E. Kavvadia, and K. Oikonomou, "A framework for cultural heritage content organisation, dissemination and communication in large-scale virtual environments", *International Journal of Computational Intelligence Studies*, vol. 5, no. 1, pp. 71–93, 2016.
- [5] E. Kavvadia, S. Sagiadinos, K. Oikonomou, G. Tsioutsoulouklis, and S. Aïssa, "Elastic virtual machine placement in cloud computing network environments", *Computer Networks*, vol. 93, no. Part 3, pp. 435–447, 2015, Cloud Networking and Communications II.
- [6] V. Komianos, E. Kavvadia, and K. Oikonomou, "Cultural heritage recommendations and user navigation in large scale virtual environments", *International Journal of Computational Intelligence Studies*, vol. 4, no. 2, pp. 151–172, 2015.
- [7] G. Tsoumanis, E. Kavvadia, and K. Oikonomou, "A v(irtual)-city implementation for promoting cultural heritage", *International Journal of Computational Intelligence Studies*, vol. 4, no. 2, pp. 173–191, 2015.
- [8] G. Koufoudakis, N. Skiadopoulos, E. Magkos, and K. Oikonomou, "Synchronization issues in an innovative wireless sensor network architecture monitoring ambient vibrations in historical buildings", *Key Engineering Materials*, vol. 628, 2014.
- [9] K. Oikonomou, G. Koufoudakis, E. Kavvadia, and V. Chrissikopoulos, "A wireless sensor network innovative architecture for ambient vibrations structural monitoring", *Key Engineering Materials*, vol. 628, 2014.
- [10] G. Smaragdakis, N. Laoutaris, K. Oikonomou, I. Stavrakakis, and A. Bestavros, "Distributed server migration for scalable internet service deployment", *IEEE/ACM Transactions on Networking*, vol. 22, no. 3, pp. 917–930, Jun. 2014.
- [11] K. Oikonomou, D. Kogias, and I. Stavrakakis, "Probabilistic flooding for efficient information dissemination in random graph topologies", *Computer Networks*, vol. 54, no. 10, pp. 1615–1629, 2010.
- [12] K. Oikonomou and I. Stavrakakis, "Scalable service migration in autonomic network environments", *IEEE Journal on Selected Areas in Communications*, vol. 28, no. 1, pp. 84–94, Jan. 2010.
- [13] L. Tzevelekas, K. Oikonomou, and I. Stavrakakis, "Random walk with jumps in large-scale random geometric graphs", *Computer Communications*, vol. 33, no. 13, pp. 1505–1514, 2010.
- [14] K. Oikonomou and I. Stavrakakis, "An adaptive time-spread multiple-access policy for wireless sensor networks", *EURASIP J. Wirel. Commun. Netw.*, vol. 2007, no. 1, pp. 24–24, Jan. 2007.

- [15] —, “Energy considerations for topology-unaware tdma mac protocols”, *Ad Hoc Networks*, vol. 4, no. 3, pp. 359–379, 2006.
- [16] A. Vaios, K. Oikonomou, and I. Stavrakakis, “Analysis of a topology control paradigm in wlan/wpan environments”, *Computer Communications*, vol. 29, no. 11, pp. 2096–2108, 2006.
- [17] K. Oikonomou, N. Pronios, and I. Stavrakakis, “Performance analysis of topology-unaware tdma mac schemes for ad hoc networks with topology control”, *Computer Communications*, vol. 28, no. 3, pp. 313–324, 2005.
- [18] K. Oikonomou and I. Stavrakakis, “Analysis of topology-unaware tdma mac policies for ad-hoc networks under diverse traffic loads”, *SIGMOBILE Mob. Comput. Commun. Rev.*, vol. 9, no. 4, pp. 25–38, Oct. 2005.
- [19] A. Vaios, K. Oikonomou, N. Zinelis, and I. Stavrakakis, “Increasing capacity in dual-band wlans through ad-hoc networking”, *International Journal of Wireless and Mobile Computing (IJWMC), Special Issue on Wireless Ad Hoc Networking*, 2005.
- [20] K. Oikonomou and I. Stavrakakis, “Analysis of a probabilistic topology-unaware tdma mac policy for ad hoc networks”, *IEEE Journal on Selected Areas in Communications*, vol. 22, no. 7, pp. 1286–1300, Sep. 2004.

Conference Papers

- [1] V. Dragonas, K. Oikonomou, and I. Stavrakakis, “A topology-independent tdma mac policy for safety applications in vehicular networks”, in *BalkanCom 2017, First International Balkan Conference on Communications and Networking, Tirana, Albania*, 2017.
- [2] G. Tsoumanis, K. Oikonomou, S. Aïssa, and I. Stavrakakis, “Recharging vehicle distance minimization in wireless sensor networks”, in *BalkanCom 2017, First International Balkan Conference on Communications and Networking, Tirana, Albania*, 2017.
- [3] A. Demertzis and K. Oikonomou, “A braided routing mechanism to reduce traffic load’s local variance in wireless sensor networks”, in *2015 6th International Conference on Information, Intelligence, Systems and Applications (IISA)*, Jul. 2015, pp. 1–6.
- [4] V. Komianos and K. Oikonomou, “Constrained interest-based tour recommendations in large scale cultural heritage virtual environments”, in *2015 6th International Conference on Information, Intelligence, Systems and Applications (IISA)*, Jul. 2015, pp. 1–6.
- [5] A. Demertzis and K. Oikonomou, “Avoiding energy holes in wireless sensor networks with non-uniform energy distribution”, in *IISA 2014, The 5th International Conference on Information, Intelligence, Systems and Applications*, Jul. 2014, pp. 138–143.
- [6] E. Kavvadia, G. Koufoudakis, and K. Oikonomou, “Robust probabilistic information dissemination in energy harvesting wireless sensor networks”, in *2014 13th Annual Mediterranean Ad Hoc Networking Workshop (MED-HOC-NET)*, Jun. 2014, pp. 63–70.
- [7] V. Komianos, E. Kavvadia, and K. Oikonomou, “Efficient and realistic cultural heritage representation in large scale virtual environments”, in *IISA 2014, The 5th International Conference on Information, Intelligence, Systems and Applications*, Jul. 2014, pp. 1–6.

- [8] F. P. Tso, K. Oikonomou, E. Kavvadia, and D. P. Pezaros, "Scalable traffic-aware virtual machine management for cloud data centers", in *2014 IEEE 34th International Conference on Distributed Computing Systems (ICDCS)*, Jun. 2014, pp. 238–247.
- [9] G. Tsoumanis, E. Kavvadia, and K. Oikonomou, "Changing the look of a city: The v-corfu case", in *IISA 2014, The 5th International Conference on Information, Intelligence, Systems and Applications*, Jul. 2014, pp. 419–424.
- [10] F. P. Tso, G. Hamilton, K. Oikonomou, and D. P. Pezaros, "Implementing scalable, network-aware virtual machine migration for cloud data centers", in *2013 IEEE Sixth International Conference on Cloud Computing*, Jun. 2013, pp. 557–564.
- [11] K. Oikonomou and S. Aïssa, "Dynamic sink assignment for efficient energy consumption in wireless sensor networks", in *2012 IEEE Wireless Communications and Networking Conference (WCNC)*, Apr. 2012, pp. 1876–1881.
- [12] K. Oikonomou, G. Koufoudakis, and S. Aïssa, "Probabilistic flooding coverage analysis in large scale wireless networks", in *2012 19th International Conference on Telecommunications (ICT)*, Apr. 2012, pp. 1–6.
- [13] K. Oikonomou, G. Tsioutsoulouklis, and S. Aïssa, "Scalable facility placement for communication cost reduction in wireless networks", in *2012 IEEE International Conference on Communications (ICC)*, Jun. 2012, pp. 5118–5123.
- [14] K. Oikonomou, A. Loukidou, and S. Sioutas, "A study of a time-graph friendship model", in *2011 IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks*, Jun. 2011, pp. 1–6.
- [15] D. Tsolis, S. Sioutas, A. Panaretos, I. Karydis, and K. Oikonomou, "Decentralized digital content exchange and copyright protection via p2p networks", in *2011 IEEE Symposium on Computers and Communications (ISCC)*, Jun. 2011, pp. 1056–1061.
- [16] E. Magkos, P. Kotzanikolaou, S. Sioutas, and K. Oikonomou, "A distributed privacy-preserving scheme for location-based queries", in *2010 IEEE International Symposium on "A World of Wireless, Mobile and Multimedia Networks" (WoWMoM)*, Jun. 2010, pp. 1–6.
- [17] K. Oikonomou, D. Kogias, and I. Stavrakakis, "A study of information dissemination under multiple random walkers and replication mechanisms", in *Proceedings of the Second International Workshop on Mobile Opportunistic Networking*, ser. MobiOpp '10, Pisa, Italy: ACM, 2010, pp. 118–125.
- [18] D. Kogias, K. Oikonomou, and I. Stavrakakis, "Study of randomly replicated random walks for information dissemination over various network topologies", in *2009 Sixth International Conference on Wireless On-Demand Network Systems and Services*, Feb. 2009, pp. 53–60.
- [19] K. Oikonomou, D. Kogias, L. Tzevelekas, and I. Stavrakakis, "Investigation of information dissemination design criteria in large-scale network environments", in *2009 13th Panhellenic Conference on Informatics*, Sep. 2009, pp. 163–167.
- [20] K. Oikonomou, S. Sioutas, and I. Stavrakakis, "Scalable communication cost reduction: The chord case", in *2009 8th IFIP Annual Mediterranean Ad Hoc Networking Workshop*, Jun. 2009, pp. 42–47.
- [21] S. Sioutas, K. Oikonomou, G. Papaloukopoulos, M. Xenos, and Y. Manolopoulos, "Building an efficient p2p overlay for energy-level queries in sensor networks", in *Proceedings of the International Conference on Management of Emergent Digital EcoSystems*, ser. MEDES '09, France: ACM, 2009, 54:361–54:368.
- [22] D. Kogias, K. Oikonomou, and I. Stavrakakis, "Replicated random walks for service advertising in unstructured environments", in *Advances in Ad Hoc Networking, Ad Hoc Networking Workshop (MED-HOC-NET), 2008 7th Annual Mediterranean*, Springer, 2008, pp. 25–36.

- [23] K. Oikonomou, I. Stavrakakis, and A. Xydias, “Scalable service migration in general topologies”, in *2008 International Symposium on a World of Wireless, Mobile and Multimedia Networks*, Jun. 2008, pp. 1–6.
- [24] A. Pateli, A. Floros, K. Oikonomou, and E. Magkos, “Corfunet: A mesh network providing wireless services at metropolitan level”, in *Proceedings of the IADIS International Conference on Wireless Applications and Computing 2008*, 2008, pp. 22–24.
- [25] M. Avlonitis, P. Vlamos, and K. Oikonomou, “A space-time analytical model for energy consumption in wireless sensor networks”, in *The Sixth Annual Mediterranean Ad Hoc Networking Workshop (Med-Hoc-Net 2007)*, Corfu, Greece, 2007.
- [26] N. Laoutaris, G. Smaragdakis, K. Oikonomou, I. Stavrakakis, and A. Bestavros, “Distributed placement of service facilities in large-scale networks”, in *IEEE INFOCOM 2007 - 26th IEEE International Conference on Computer Communications*, May 2007, pp. 2144–2152.
- [27] K. Oikonomou and I. Stavrakakis, “Performance analysis of probabilistic flooding using random graphs”, in *2007 IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks*, Jun. 2007, pp. 1–6.
- [28] —, “Scalable service migration: The tree topology case”, in *5th Annual Mediterranean Ad Hoc Networking Workshop, Lipari, Italy*, 2006.
- [29] —, “Throughput analysis of an aloha-based mac policy for ad hoc networks”, in *Challenges in Ad Hoc Networking: Fourth Annual Mediterranean Ad Hoc Networking Workshop, June 21–24, 2005, Île de Porquerolles, France*, Springer, 2006, pp. 219–223.
- [30] —, “Power efficiency analysis for topology-unaware tdma mac policies in ad-hoc networks”, in *Proceedings of the 38th Annual Hawaii International Conference on System Sciences*, Jan. 2005, 287b–287b.
- [31] K. Oikonomou, K. Ntagkounakis, A. Vaios, N. Zinelis, and I. Stavrakakis, “Layered architecture and modules of cana supporting dual mode hiperlan/2”, in *International Workshop on Wireless Ad-Hoc Networks, 2004.*, May 2004, pp. 172–176.
- [32] K. Oikonomou and N. Pronios, “Transient behavior of an ad-hoc network architecture supporting an enhanced dual mode hiperlan/2 system”, in *International Workshop on Wireless Ad-Hoc Networks, 2004.*, May 2004, pp. 11–15.
- [33] K. Oikonomou, N. Pronios, and I. Stavrakakis, “Performance analysis of tdma mac schemes for ad-hoc networks with topology control”, in *The Third Annual Mediterranean Ad Hoc Networking Workshop (Med-Hoc-Net 2004)*, Bodrum, Turkey, 2004.
- [34] K. Oikonomou and I. Stavrakakis, “Load analysis of topology-unaware tdma mac policies for ad hoc networks”, in *Quality of Service in the Emerging Networking Panorama*, Springer, 2004, pp. 84–93.
- [35] A. Vaios, K. Oikonomou, N. Zinelis, K. Ntagkounakis, and I. Stavrakakis, “On supporting dual-mode hiperlan/2: Architecture and overhead”, in *13th IST Mobile & Wireless Communications Summit*, 2004, pp. 27–30.
- [36] A. Vaios, K. Oikonornou, P. Pellati, S. Simoens, and I. Stavrakakis, “A dual-band hiperlan/2-based architecture for indoor hotspot applications”, in *International Workshop on Wireless Ad-Hoc Networks, 2004.*, May 2004, pp. 6–10.
- [37] K. Oikonomou and N. B. Pronios, “Ad-hoc networking: A unified evaluation framework”, in *IST Mobile & Communications Summit*, 2003.
- [38] K. Oikonomou and I. Stavrakakis, “A probabilistic topology unaware tdma medium access control policy for ad hoc environments”, in *Personal Wireless Communications*, Springer, 2003, pp. 291–305.

- [39] —, “Throughput analysis of a probabilistic topology-unaware tdma mac policy for ad-hoc networks”, in *Quality for All*, Springer, 2003, pp. 172–181.
- [40] K. Oikonomou, A. Vaios, S. Simoens, P. Pellati, and I. Stavrakakis, “A centralized ad-hoc network architecture (cana) based on enhanced hiperlan/2”, in *14th IEEE Proceedings on Personal, Indoor and Mobile Radio Communications, 2003. PIMRC 2003.*, vol. 2, Sep. 2003, pp. 1336–1340.
- [41] A. Vaios, K. Oikonomou, and I. Stavrakakis, “A centralized routing scheme supporting ad hoc networking in dual mode hiperlan/2”, in *IST Mobile & Communications Summit*, 2003, pp. 15–18.
- [42] K. Oikonomou, C. Mas, and I. Tenidis, “On qos management of h/2 bearer service for 3g telecommunication systems”, in *3G Technologies and Applications, EURESCOM Summit, Heidelberg, Germany*, 2001, pp. 12–15.
- [43] K. Oikonomou, I. Tenidis, and I. Stavrakakis, “A mechanism to enable differentiated services qos in hiperlan/2”, in *8th IEEE International Conference on Telecommunications, Bucharest, Romania*, 2001.