Europass Curriculum Vitae

Personal information

Surname(s) / First name(s)	**Liaskos, Christos**
Address(es)	FORTH.ICS - Office G106 N. Plastira 100 Vasilika Vouton, 70013 Heraklion, Crete
Email(s)	cliaskos@ics.forth.gr
Nationality(-ies)	Greek
Gender	Male (Military obligations completed in 2004-2005)

Education

2008–2013	**PhD** in ***Communication Networks*** / *Analysis of the Periodic Scheduling Problem Under Multiple Optimization Criteria*, [ISCED 6] Dept. of Informatics, Aristotle University, Thessaloniki, Greece.
2006–2008	**MSc in *Medical Informatics*** / *Wireless Networks for Medical Environments*, [ISCED 6] School of Medicine, Aristotle University, Thessaloniki, Greece.
1999–2004	**BSc in *Electrical and Computer Engineering*** (5-year degree) / *Telecommunications,* [ISCED 5] Faculty of Engineering, Aristotle University, Thessaloniki, Greece.
Languages	**English (C2), Greek**

Professional Experience

Mar 2014–today	Foundation of Research and Technology - Hellas (FORTH): Postdoctoral Researcher on **Evolving the Internet with Software-Defined Networking Principles,** (Funded by the European Research Council - Project "NetVolution").
	Secondary topic: **Electromagnetic Communication in Nanoscale**. Information diffusion in nanonetworks and novel applications in active metamaterials.
2008–2013	Aristotle University: PhD Researcher on **Wireless Communications**, **Full Scholarship** (EU/GSRT Funded). Produced 30 publications (13 journals) on the Data Push Scheduling problem. The approach was primarily analytical, with emphasis on multi-objective optimization and complexity evaluation.

2010	International Hellenic University: **Contractor**/Developer of the Virtual Laboratories on Wireless Communications and Sensor Networks (link). Creation of software packages simulating multiple layers and setups in wireless communications. 2D-3D GUI creation in MATLAB^{TM}. Intended use: MSc-level education support tool.
2004–2006	Military Service.
2004	C++ programmer [Internship], "Cardisoft", 60 Monastiriou street, 54627, Thessaloniki, Greece (link).
2000–2004	Computer Networks Administrator, "Vasiliadis Computers", Karipidi 11, 56533, Thessaloniki, Greece.

Teaching Experience

Typical responsibilities	**Preparation of educational material (theory and exercises), teaching in class, correcting semester tests.**
2014–2016	Teaching Assistant for the Computer Networks course (6th semester), Computer Science Department, University of Crete (course code: HY335). The course followed the textbook "*Computer Networking: A Top-Down Approach Featuring the Internet*" by J.F. Kurose and K. W. Ross, 6th Edition, 2013.
	Special sessions on network programmability for the Software-Defined Networks course, Computer Science Department, University of Crete (course code: HY436). Topics: collaborative inter-Autonomous System routing, Software-defined Materials - a novel merge of nanonetworks and meta-materials.
2008–2013	Teaching Assistant for the courses of Communication Networks (5th semester) and Digital Communications (4th semester), Dept. of Informatics, Aristotle University, Thessaloniki, Greece. The former focuses on "communication protocols for MAC/NET/APP layers" and the latter on "signal processing, coding, PHY layer".
2006–2008	Teaching Assistant for the courses of Medical Informatics and Dental Informatics (1st semester), School of Medicine, Aristotle University, Thessaloniki, Greece.
2008–2009	Teaching Associate [Computer training for adults], "JASON" training center, 25 Tsorlini street, Thessaloniki, 54627, Greece.

Collaborators

Ian Akyildiz	**Georgia Tech. USA.** (*81,095 Citations*). Novel applications of nanonetworks.
Costas Soukoulis	**AMES Labs, Iowa, USA.** (*43,852 Citations*). Novel applications of nanonetworks.
Leandros Tassiulas	**Yale Univ., USA.** (*19,993 Citations*). Collaborative inter-AS routing schemes.
Andreas Pitsillides	**Univ. of Cyprus.** (*3,015 Citations*). Collaborative data dissemination and routing in nanonetworks.
Eiko Yoneki	**Univ. of Cambridge - UK.** (*3,556 Citations*). Novel platforms for the commercialization of networking research knowledge.
Sotiris Ioannidis	**FORTH-ICS.** (*2,698 Citations*). Data routing in nanonetworks.
Maria Kafesaki	**FORTH-IESL.** (*7,036 Citations*). Novel applications of nanonetworks.

Xenofontas Dimitropoulos	**FORTH-ICS.** (*2,186 Citations*). Novel Inter-AS routing schemes based on the SDN paradigm, SDN-enabled defense mechanisms against new variants of link-flooding attacks.

Student Supervision

Michalis Bamiedakis	**Univ. of Crete - MSc.** Collaboration on Farcaster: extending the SDN controller regime with forecasting techniques (ongoing).
Manos Lakiotakis	**Univ. of Crete - MSc.** Collaboration on Teleorchestra: Enabling new application paradigms by exploiting SDN capabilities (ongoing).
Gabriel Chaviaras	**Univ. of Crete - BSc.** Collaboration on massive SDN/Openflow emulation software (ongoing).
Lefteris Pachis	**Univ. of Crete - BSc.** Collaboration on data routing in Nanonetworks (*winner of best paper award at ICT'16*).
Kostas Kantelis, Stamatios Amanatiadis	**A.U.Th. - PhD.** Collaboration on simulation techniques for electromagnetic nanonetworks (*published at IEEE Comm. Letters*).
Remo Belaguer	**ETH Zurich - MSc.** Collaboration on Genetic Algorithms applied to Software Defined Audio Networking (SDAN).

Skills

■ Scientific Programming and Authoring

- Programming Languages — $MATLAB^{TM}$, *C/C++, RUBY, JAVA*; *any OS.*
- Simulation/emulation software — *OMNET++, AnyLogic^{TM}*, MiniNET.
- Scientific authoring — *LyX, LATEX*.
- Reference management and analysis — *Citavi^{TM}, Citespace II.*

Miscellanea (tech-related, hobbies)

- *Knowledge of OMP* for parallel computing; *PostGRE, MySQL,* CouchDB *databases; HTML, JS/CSS3 with JQuery & Node.JS*; *Mercurial Source Control system*.
- In-depth technical and administrative knowledge of PCs and networks.
- Building automations with Arduino, Raspberry Pi and Beaglebone Black.
- Android programming.
- Building web services with JQuery, Node.JS and CouchDB.
- Hand-drawing skills.

■ Social and organizational competences

- **Research group organization: Has completed more than 40 joint publications as a PhD student and Post-doc researcher,** involving both students and renowned experts.
- more than 10 joint publications with **foreign universities**.
- Successfully completed a research program as **sole contractor** (Virtual Labs, International Hellenic University).
- Local arrangements chair for PAM'16, Organizing committee member for ISSPIT'16, TPC Member for CITS 2012-14 and OPTICS 2013-14.

■ Preparation of Funded Research Proposals

- Received training for **preparing proposals for EU funded research and development projects**, Research Committee, Aristotle University, October, 2012.
- Has contributed to the writing, organization and development of **8 multi-institutional scientific funding proposals** (H2020 ICT, FP7-STREP & National Research Funds).

Awards and Honors

- Best paper award at the 23rd International Conference on Telecommunications (ICT'16) for the paper "N^β: Addressing and Routing in 3D Nanonetworks" by A. Tsioliaridou, C. Liaskos, L. Pachis, S. Ioannidis, A. Pitsillides.

- "Heracletus II" National PhD scholarship 2010-2013.
- Aristotle University PhD scholarship 2010.
- Local Arrangements Committee for the 2016 Passive-Active Measurements (PAM'16) Conference.
- Organizing Committee for the 16th IEEE Symposium on Signal Processing and Information Technology (ISSPIT'16).
- TPC Member for ACM NANOCOM'16, CITS 2012-14, OPTICS 2013-15.
- Recognized Reviewer of Elsevier, 2012-2014 (top 10th percentile).
- Award for exceptional MSc research activity, 5th scientific conference, School of Medicine, Aristotle University of Thessaloniki, Greece, 2009.
- Honors Pass (exams-based), MSc in Medical Informatics, Aristotle University, School of Medicine, 2006.
- Invited talk: Aalto University, Finland, Department of Computer Science and Engineering, Apr 2013.
- Invited talk: Democritus University, Greece, Department of Electrical and Computer Engineering, Apr 2013.
- Invited talk: FORTH, Heraklion, Crete, Greece, Mar 2014.
- Invited talk: Department of Informatics, University of Crete, Heraklion, Crete, Greece, Dec 2014.

Reviewing Activities

- IEEE/ACM Transactions on Networking.
- IEEE Communications Magazine.
- Wireless Networks (Springer).
- Computer Communications (Elsevier).
- Ad Hoc Networks (Elsevier).
- Journal of Scheduling (Springer).
- Knowledge and Information Systems (Springer).
- IEEE Transactions on Wireless Communications.
- IEEE Transactions on Systems, Man, and Cybernetics.
- IEEE Transactions on Computers.
- IEEE Transactions on Knowledge and Data Engineering.
- IEEE Transactions on Vehicular Technology.
- IEEE Sensors Journal.
- IEEE Transactions on Education.

•	International Journal of Digital Multimedia Broadcasting.
•	International Journal of Sensor Networks.
•	International Journal of Computer Science.
•	IEEE INFOCOM 2016.
•	ACM IMC 2014.
•	IEEE GLOBECOM 2011.
•	IEEE ICC 2014.
•	IEEE ICT 2011, 2016.
•	IEEE ISCC 2011,2013.
•	ACM NANOCOM 2016.
•	PAM 2015.
•	DISC 2016.
•	IEEE BCFIC 2011.
•	WWIC 2012.
•	IEEE EDUCON 2013-15, TALE 2012-14.
•	CITS, OPTICS 2012-14.

Publications

• Current research topics	**Software-Defined Networking:**
•	Detection and mitigation of link-flooding attacks [15, 24, 46];
•	Collaborative schemes for Inter-AS Traffic Engineering [13, 45];
•	**Nanonetworks:**
•	Simulation techniques, node addressing and data routing approaches [16, 18–20, 34, 37, 44];
•	Novel applications of nanonetworks + metamaterials [12, 33];
•	
• Past research topics	Optimal data push scheduling (*PhD-related*) [2–8, 10, 26–32, 35, 39–43];
•	Collaborative data dissemination (*Project-related*) [9, 43];
•	Security in voting systems (*Project-related*) [14, 17];
•	Medical Informatics (*MSc-related*) [11, 36];
•	IT in education (*Project-related*) [1, 23, 25];

CONFERENCES
(■ denotes top significance,
click to visit.)

[1] C. Liaskos, G. Koutitas, and I. Vlahavas. Virtual Laboratories on Wireless Communications: A Contemporary, Extensible Approach. In *Proceedings of the 3rd IEEE EDUCON conference on Engineering Education, Marrakesh, Morroco, April*, pages 1–10, 2012.

[2] C. Liaskos and G. Papadimitriou. Ultra lightweight adaptation processes for scheduling Servers in Push-based Systems. In *Proceedings of the 17th IEEE Symposium On Communications And Vehicular Technology (SCVT'10), Enschede, Netherlands, October*, pages 1–6, 2010.

[3] C. Liaskos and G. Papadimitriou. Minimizing mean client serving time and broadcast schedule cost in wireless push systems. In *2011 IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*, pages 1–6. IEEE, 2011.

[4] C. Liaskos, S. Petridou, and G. Papadimitriou. A new approach to the design of wireless data broadcasting systems: An analysis-based cost-effective scheme. In *2009 International Conference on Ultra Modern Telecommunications & Workshops*, pages 1–8. IEEE, 2009.

[5] C. Liaskos, S. Petridou, and G. Papadimitriou. Combining optimal performance with cost-efficiency in adaptive wireless broadcast-based systems. In *Melecon 2010 - 2010 15th IEEE Mediterranean Electrotechnical Conference*, pages 1221–1226. IEEE, 2010.

[6] C. Liaskos, S. Petridou, G. Papadimitriou, P. Nicopolitidis, M. Obaidat, and A. Pomportsis. A Novel Clustering - Driven Approach to Wireless Data Broadcasting. In *Proceedings of the 15th IEEE Symposium On Communications And Vehicular Technology (SCVT'08), Antwerpen, Belgium, November*. IEEE, 2008.

[7] C. Liaskos, S. Petridou, G. Papadimitriou, P. Nicopolitidis, and A. Pomportsis. An analytical approach to the design of wireless broadcast disks systems. In *2009 International Symposium on Autonomous Decentralized Systems*, pages 1–8. IEEE, 2009.

[8] C. Liaskos, A. Tsioliaridou, and G. Papadimitriou. More for Less: Getting more clients by broadcasting less data. In *Proceedings of the 10th International Conference on Wired/Wireless Internet Communications (WWIC 2012), Santorini, Greece, June*, pages 64–75, 2012.

[9] C. Liaskos, A. Xeros, G. Papadimitriou, and A. Pitsillides. Information hovering: A new approach for performance acceleration of wireless push systems. In *2011 IEEE Symposium on Computers and Communications (ISCC)*, pages 809–814. IEEE, 2011.

[10] C. Liaskos, A. Xeros, G. Papadimitriou, and A. Pitsillides. Periodic Scheduling with Costs: A Novel Approach to Wireless Data Broadcasting. In *Proceedings of the 10th International Conference on Wired/Wireless Internet Communications (WWIC 2012), Santorini, Greece, June*, pages 52–63, 2012.

[11] P. Malindretos et al. Sound Assessment and Sound Analysis of Arteriovenous Fistula (AVF) in Hemodialysis Patients. In *Proceedings of the XLVIII European Renal Association-European Dialysis and Transplant Association Congress (ERA-EDTA 2011), Prague, Czech Republic, June*, 2011.

[12] S. Amanatiadis, C. Liaskos, M. Kafesaki, and N. Kantartzis. Modified perfectly matched layers in finite-difference time-domain schemes for the efficient truncation of propagating graphene surface waves (poster). In *Proceedings of the METAMATERIALS Conference*, 2016.

[13] C. Liaskos. A lightweight, non-intrusive approach for orchestrating autonomously-managed network elements. In *IEEE Symposium on Computers and Communication (ISCC)*, pages 335–340. IEEE, 2015.

[14] C. Liaskos, G. Papadimitriou, and C. Douligeris. Sensor swarm query filtering: Heightened attack resilience for broadcast on-demand services. In *2013 IEEE Symposium on Computers and Communications (ISCC)*, page Accepted. IEEE, 2013.

[15] ■ C. Liaskos, V. Kotronis, and X. Dimitropoulos. A novel framework for modeling and mitigating distributed link flooding attacks. In *Proceedings of IEEE INFOCOM*, 2016.

[16] ■ C. Liaskos, A. Tsioliaridou, S. Ioannidis, N. Kantartzis, and A. Pitsillides. A deployable routing system for nanonetworks. In *Proceedings of IEEE ICC*, 2016.

[17] C. Samaras, A. Tsioliaridou, C. Liaskos, D. Spiliotopoulos, and S. Ioannidis. Enhancing the trustworthiness of service on-demand systems via smart vote filtering. In *International Conference on Trust and Trustworthy Computing*, pages 88–103. Springer, 2015.

[18] A. Tsioliaridou, C. Liaskos, E. Dedu, and S. Ioannidis. Stateless linear-path routing for 3d nanonetworks. In *Proceedings of the Third Annual International Conference on Nanoscale Computing and Communication*. ACM, 2016.

[19] A. Tsioliaridou, C. Liaskos, S. Ioannidis, and A. Pitsillides. Corona: A coordinate and routing system for nanonetworks. In *Proceedings of the Second Annual International Conference on Nanoscale Computing and Communication*, page 18. ACM, 2015.

[20] A. Tsioliaridou, C. Liaskos, L. Pachis, S. Ioannidis, and A. Pitsillides. N3: Addressing and routing in 3d nanonetworks. In *Proceedings of ICT*, 2016.

SOFTWARE

[21] C. Liaskos. A crossfire attack simulator. `http://users.ics.forth.gr/cliaskos/#{CODE4CCR}`, 2016.

[22] C. Liaskos. A software platform for evaluating crossfire attack mitigation schemes. `http://users.ics.forth.gr/cliaskos/#{CODE}`, 2016.

[23] C. Liaskos and G. Koutitas. Virtual labs: Wireless telecommunication and sensor networks. `http://www.tech.ihu.edu.gr/index.php/en/research/item/30-virtual-labs.html`, 2011.

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[24] ■ D. Gkounis, V. Kotronis, C. Liaskos, and X. Dimitropoulos. On the interplay of link-flooding attacks and traffic engineering. *ACM SIGCOMM Computer Communication Review*, 46(1):5–11, 2016.

[25] C. Liaskos, G. Koutitas, and I. Vlahavas. A Holistic Virtual Laboratory on Wireless Communications and Sensor Networks. *International Journal of Interactive Mobile Technologies*, 7(3):15–21, 2012.

[26] C. Liaskos and G. Papadimitriou. Optimal Periodic Scheduling Under Multimodel Per-Item Constraints in Wireless Systems. *IEEE Transactions on Systems, Man, and Cybernetics, Part C (Applications and Reviews)*, 42(6):1071–1080, 2012.

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[35] ■ C. Liaskos, S. Petridou, and G. Papadimitriou. Towards Realizable, Low-Cost Broadcast Systems for Dynamic Environments. *IEEE/ACM Transactions on Networking*, 19(2):383–392, 2011.

[36] P. Malindretos, C. Liaskos, P. Bamidis, I. Chryssogonidis, A. Lasaridis, and P. Nikolaidis. Computer assisted sound analysis of arteriovenous fistula in hemodialysis patients. *The International journal of artificial organs*, 37(2):173–176, 2014.

[37] A. Tsioliaridou, C. Liaskos, S. Ioannidis, and A. Pitsillides. Lightweight, self-tuning data dissemination for dense nanonetworks. *Nano Communication Networks*, 8:2–15, 2016.

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[44] A. Tsioliaridou, C. Zhang, and C. Liaskos. Fast and fair handling of multimedia captcha flows. *International Journal of Interactive Mobile Technologies*, 9(4), 2015.

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[45] C. Liaskos, X. Dimitropoulos, and L. Tassiulas. Backpressure on the backbone: A lightweight, non-intrusive traffic engineering approach. under revision, 2016.

[46] C. Liaskos, P. Sermpezis, and X. Dimitropoulos. On the topological vulnerability to ddos attacks. submitted, 2016.

[47] C. Liaskos, E. Yoneki, S. Ioannidis, and X. Dimitropoulos. A novel platform for fostering the commercial exposure of research in computer networks. submitted, 2016.