# LEONIDAS M. TZEVELEKAS

## Research Associate

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### **EDUCATION**

2010 **PhD in Informatics and Telecommunications,** Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, Greece.

<u>Dissertation title</u>: "Study of efficient algorithms for topology control and information dissemination/ retrieval in large scale Wireless Sensor Networks"

Dissertation advisor: Prof. Ioannis Stavrakakis

2002 **Master of Science in Communications Engineering**, Department of Electrical Engineering and Information Technology, Technical University of Munich (TUM), Germany

2000 **Diploma in Physics**, Department of Physics, National and Kapodistrian University of Athens, Greece

## **RESEARCH INTERESTS**

- Performance analysis via simulation in multi-layer, scalable video encoding/ decoding techniques for mobile communication networks (UMTS, 4-G networks)
- Energy-efficient topology control and information collection/ dissemination algorithms in wireless, multi-hop communication networks (Ad-Hoc networks, Wireless Sensor Networks)
- Performance analysis of topology control and information collection/ dissemination algorithms in Wireless Sensor Networks using object-oriented simulation languages
- Collection/ dissemination and analysis of user provided information within/ from large scale social networking platforms

### **RESEARCH GRANTS**

Title: "Topology Control Algorithms for Wireless Sensor Networks," Funded by SATIN-European Doctoral School on Advanced Topics In Networking, EDRF − European Doctoral Research Foundation, Funding Agency: EU, Grant Period: 10/2004 − 12/2005, Grant Amount: 15,000€

### RESEARCH PROJECT EXPERIENCE

Title: "BROADWAY (Broadway, the way to broadband access at 60GHz)", Program: Information Societies Technology – IST, Funding Agency: European Union (EU), 2002 – 2004. Amount (for NKUA): 398,277€

Title: "E-NEXT: Network of Excellence in Emerging Networking Experiments and Technologies", Program: Information Societies Technology – IST, Funding Agency: European Union (EU), 2004 – 2006. Amount (for NKUA): 87,800€

Title: "ANA: Autonomic Network Architectures", Program: Information Societies Technology – Future Emerging Technologies (IST-FET), Funding Agency: European Union (EU), 2006 – 2009. Amount (for NKUA): 438,000€, [project proposal coauthor]

Ttile: "BIONETS: BIOlogically-inspired autonomic NETworks and Services", Program: Information Societies Technology – Future Emerging Technologies (IST-FET), Funding Agency: European Union (EU), 2006 – 2009. Amount (for NKUA): 300,112€ [project proposal coauthor]

Title: "CASCADAS: Component-ware for Autonomic, Situation-aware Communications And Dynamically Adaptable Services", Program: Information Societies Technology – Future Emerging Technologies (IST-FET), Funding Agency: European Union (EU), 2006 – 2008. Amount (for NKUA): 370,720€

Title: "Ad-hoc Wireless and Sensor Networking: Algorithms, protocols and architectural studies". Program: PENED2003, Funding Agency: General Secretariat for Research and Technology (G.S.R.T) of Greece, 2005 −2008. Amount (for NKUA):215,000€ [project proposal co-author]

Title: "CONTENT: Content Networks and Services for Home Users" (Network of Excellence), Program: Information Societies Technology – IST, Funding Agency: European Union (EU), 2006 – 2008. Amount (for NKUA): up to 350,000€

Title:"KING: (Key-)Components for the mobile internet of the next generation", Subject Area: Communications systems, protocols and architectures, Funding Agency: Federal Ministry of Education and Research, Germany, 2001 – 2003.

## OTHER PROFESSIONAL EXPERIENCE

2012 Multi-tier Technical Support Agent at Greek NREN, GRNET, Athens, Greece

- Tier 1, 2 & 3 incident management for the E-presence teleconferencing platform (providing HD teleconferencing services to users of the GR academia)
- Incident Management Knowledge Base updating/ documentation of workflow for unresolved incidents resolution
- Documentation of usage statistics for E-presence teleconferencing platform
- 2011 R&D Engineer at TELETEL S.A, Athens, Greece
  - Programmer analyst for the AFDX® Network Simulation Tool analysis and programming in Omnet++ simulation language (EU R&D project in cooperation with Airbus Gmbh)
  - Software tester for the AFDX® Network Simulator Tool

- 2002 Summer Intern at Siemens CT (Corporate Technology), Research department of SIEMENS in Multimedia and Networking, Munich, Germany
  - Development of 3<sup>rd</sup> generation scalable video coder/ decoder for UMTS networks programming using Octave programming language experience with Unix OS.

## **SEMINARS ATTENDED**

- 2007 Topic: "Administration and assessment of Research and Technology and their incorporation in process of Economic and Social growth", General Secretariat for Research and Technology (G.S.R.T) of Greece, National and Kapodistrian University of Athens, Greece. Duration: 120h
- 2004 Topic: "Wireless Sensor Networks and Applications," March 14 19, 2004, Dagstuhl Seminar 04122, Schloss Dagstuhl, Germany
- 2003 Nextworking'03, Cost(EU) NSF(USA) Workshop on exchanges and trends in networking, Chania Greece (attendee)

#### TEACHING EXPERIENCE

- 2013 Instructor in class "Finding entertainment and information on the Internet", Winter semester 2012-2013, Center for Life-Long Learning, Megara, Greece, General Secretariat for Life Long Learning, Greek Ministry of Education, Greece
- 2012 Instructor in class "Digital communications and Internet protocols", Summer semester 2011-2012, Institute for Professional Education, Acharnai, Athens, General Secretariat for Life Long Learning, Greek Ministry of Education, Greece
- 2012 Instructor in class "Communication Networks III", Summer semester 2011-2012, Institute for Professional Education, Peristerion, Athens, General Secretariat for Life Long Learning, Greek Ministry of Education, Greece
- 2004 Teaching assistant in post-graduate class: "Advanced Networking Technologies", Summer semester 2004-2005, Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, Greece.
- 2001 Lab instructor in "Digital Communications Lab", Inst. for Communications Engineering, Department of Electrical Engineering and Information Technologies, Technical University of Munich. Germany.

### **PUBLICATIONS**

## **Dissertations**

- ❖ Leonidas Tzevelekas, "Study of efficient algorithms for topology control and information dissemination/ retrieval in large scale Wireless Sensor Networks", Doctoral Thesis, Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, Greece, May 2010.
- Leonidas Tzevelekas, "Stability of a self-regulating traffic-distribution in a KING network", Master of Science Thesis, Department of Electrical Engineering and Information Technology, Technical University of Munich (TUM), Germany, June 2002.

## Journal articles

1. Leonidas Tzevelekas, Konstantinos Oikonomou and Ioannis Stavrakakis, "Random Walk with Jumps in large-scale Geometric Random Graphs", Computer Communications Journal, Volume 33 Issue 13, August, 2010.

## Peer-reviewed conference proceedings

- 1. L. Tzevelekas, I. Stavrakakis, "Sink mobility schemes for data extraction in large scale WSNs under single or zero hop data forwarding", 16th European Wireless Conference, Apr. 12-15, 2010, Lucca, Italy
- 2. Konstantinos Oikonomou, Dimitrios Kogias, Leonidas Tzevelekas, and Ioannis Stavrakakis, "Investigation of Information Dissemination Design Criteria in Large-scale Network Environments," 13th Panhellenic Conference on Informatics, 10 12 September 2009, Corfu, Greece.
- 3. Leonidas Tzevelekas and Ioannis Stavrakakis, "Improving Partial Cover of Random Walks in large scale Wireless Sensor Networks," 3rd IEEE WoWMoM Workshop on Autonomic and Opportunistic Communications (AOC'09), 15 June 2009, Kos, Greece
- 4. Leonidas Tzevelekas and Ioannis Stavrakakis, "Random Walks with Jumps in Wireless Sensor Networks," poster session, MED-HOC-NET'07, June 13-15, 2007, Corfu, Greece.
- 5. Leonidas Tzevelekas and Ioannis Stavrakakis, "Directed Budget-Based Clustering for Wireless Sensor Networks," In 2nd International Workshop on Localized Communication and Topology Protocols for Ad-hoc Networks (LOCAN2006) held in conjunction with IEEE MASS 2006, October 9-12, 2006
- 6. Leonidas Tzevelekas, Artur Ziviani, Marcelo Dias De Amorim, Petia Todorova and Ioannis Stavrakakis, "Towards Potential-based Clustering for WSNs," student workshop, coNEXT2005, October 24-27, 2005.

#### LANGUAGES

**English:** Excellent

German: Excellent Greek: Native speaker