Emmanouil Alimpertis

Graduate Student - Research Assistant
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Education

- **Master of Science** (Oct. 2012 - Present)
  School of Electronic and Computer Engineering, Technical University of Crete, Chania, Greece
  Research Topic: "Source and target localization by handheld & smart sensors of RF and backscatter signals."
  Advisor: Assistant Prof. Aggelos Bletsas.
- **Diploma** (5-year program) (2006-2012)
  School of Electronic and Computer Engineering, Technical University of Crete, Chania, Greece
  Diploma Thesis: "Community RF Sensing" (www.mysignals.gr/thesis_ealibertis.pdf)
  Thesis Advisor: Assistant Prof. Aggelos Bletsas.
  Committee: Prof. Minos Garofalakis & Associate Prof. Michail G. Lagoudakis.
  GPA: **8.32/10.0**.

Awards and Distinctions

- **Finalist**, at the AppWARDS contest, www.appwards.gr, in the field of "The Most Innovative Mobile Applications", presented "MySignals: Community RF Sensing", Oct. 2013, Athens, Greece.
- **Graduate Fellowship Award**, Special Graduate Studies Scholarship (EMY), Technical University of Crete, Oct. 2012 - Feb. 2013.
- **Undergraduate Fellowship Award**, Office of Sponsored Research (ELKE), awarded to the top 10% of class. Technical University of Crete, for the academic years 2006-2007, 2007-2008, 2008-2009.

Research Interests

- Signal Processing for Source (emitter) and Target Localization, Applications of Probabilistic Graphical Models and Inference Algorithms in Communications.
- Cellular Telephony Systems, Community Radio Frequency (RF) and Social Sensing via Smartphones.
- Geographical Information Systems and Wireless Sensor Networks (WSN) for Environmental Applications.

Submitted Publications

- E. Alimpertis, N. Fasarakis-Hilliard and A. Bletsas, "Community RF Sensing Localization of GSM Base Stations", submitted for publication in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP),* Florence, Italy, May 2014.

Academic Experience

- **Graduate Researcher**, ERC-04-BLASE Research Project "Backscatter Networks for Large-Scale Environmental Sensing", executed in the context of the Education & Lifelong Learning Program of General Secretariat for Research & Technology (GSRT) of Greece, October 2012 - Present.
- Teaching Assistant for the "Communication Systems II" course, *ECE School, Technical University of Crete,* Spring 2013.
- Teaching Assistant for the "Communication Systems I" course, *ECE School, Technical University of Crete,* Fall 2012.

Manuscripts

- E. Alimpertis, N. Fasarakis-Hilliard and A. Bletsas, "Community RF Sensing and Localization of Base Stations: Theory and Experimental Validation", *under preparation for submission in IEEE Transactions on Communications.*

Working Experience

- **Editor and Columnist**
  Top Scorer Magazine, Selena Press, April 2009 - December 2012.
  Editor of the column "Ask Mr Byte" for computers, technology news and video games.
- **Technical and Supporting Staff**
  Network Operation Center (NOC), TUC, November 2007 - December 2010.
  Undergraduate student work for the Internet and telephony infrastructure of the institution.
- **Editor and Columnist**
  www.gameworld.gr, February 2007 - October 2010.
  Editor of the column "Tech" for news from computers, telecommunication & technology field.
- **Radio Producer**
  Champions 89.2, June 2004 - September 2004
  www.gamesradio.gr, September 2006 - April 2007
  Radio Programs "Man2man" and "Tech" for Computer Football Manager Games and technology.

Technical Skills

- Programming Languages: C\C++, Java, Objective C - iOS SDK, Matlab, Python, Bison and Flex.

- Web Development - Databases Systems: HTML, CSS, Javascript, PHP, MySQL, SQLite, OS X Core Data Framework.
- Software and Applications Development Tools: Apple XCode IDE, Eclipse IDE, Netbeans IDE, Microsoft Visual Studio, Mathworks Matlab, Silicon Laboratories IDE.
- Embedded Systems and Hardware: Real-time systems design and prototyping, Silabs C8051 microcontrollers (MCUs), TI/Chipcon Embedded radios, VHDL and IDE Xilinx.
- Application Software: TEX, LATEX, Microsoft Office, Libre Office, Adobe Illustrator, and others.
- Operating Systems: Microsoft Windows, Mac OS X, Linux (Unix Shell Scripting).
- Experience at network upgrades and maintenance, as well as parametrization of networking and telecommunication equipment (routers, switches, Wi-Fi Access Points, network analysis tools, etc).

Selected coursework

Undergraduate Courses

- *Analysis and Design (Synthesis) of Telecom Modules.* Instructor: A. Bletsas, Grade: 10.0/10.0.
- *Wireless Communications.* Instructor: A. P. Liavas, Grade: 9.0/10.0
- *Digital Computers.* Instructor: D. Pnevmatikatos, Grade: 10.0/10.0
- *Autonomous Agents.* Instructor: M. G. Lagoudakis, Grade: 9.0/10.0
- *Computer Networks II.* Instructor: A. Bletsas, Grade: 9.0/10.0
- *Modeling and Performance Evaluation of Com. Networks.* Instructor: P. Koutsakis, Grade: 9.5/10.0
- *Differential and Difference Equations.* Instructor: D. Manousaki , Grade: 10.0/10.0.

Graduate Courses

- *Probabilistic Robotics.* Instructor: M. G. Lagoudakis, Grade: 10.0/10.0
- *Information Theory.* Instructor: A. P. Liavas, Grade: 8.0/10.0
- *Introduction to Probabilistic Graphical Models and Inference Algorithms.* Instructor: A. Bletsas, fall 2013

Selected Projects

- **"Community RF Sensing - Mobile Coverage Maps",** `www.mysignals.gr`
  "This site provides mobile coverage maps by users themselves, it demonstrates the whole concept of the Community RF Sensing platform and it offers tools analysing current cellular telephony deployments."
- **"Remote Sensor Network via GPRS"**, `semester project: www.mysignals.gr/GPRS_project.pdf`
  Course: *Analysis and Design (Synthesis) of Telecom Modules.* "A WSN can be deployed remotely from a wired internet access and provide measurements feedback everywhere in the world using the cellular mobile telephony network and more specifically a GPRS module controlled and driven by a MCU 8051."

Languages

- English: Very Good, University of Cambridge, First Certificate in English.
- Greek: Native Speaker.

Other Interests - Extra Curricular Activities

Member of the TUC (ECE) Digital Garden Team, Reading Literary and History Books, Board Games, strolls and games with his dog.

References

Available Upon Request