

# EMMANOUIL ALIMPERTIS

Graduate Student - Research Assistant  
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## EDUCATION

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- **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](http://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** (top 8%).

## AWARDS AND DISTINCTIONS

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- **Finalist**, at the AppWARDS contest, [www.appwards.gr](http://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

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- 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

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- E. Alimpertis, N. Fasarakis-Hilliard and A. Bletsas, “Community RF Sensing for Source Localization”, submitted for publication in *IEEE Wireless Communication Letters*.

## ACADEMIC EXPERIENCE

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- **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

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

## WORKING EXPERIENCE

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- **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

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- 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 micro-controllers (MCUs), TI/Chipcon Embedded radios, VHDL and IDE Xilinx.
- Application Software: T<sub>E</sub>X, L<sup>A</sup>T<sub>E</sub>X, 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

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### 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

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- **“Community RF Sensing - Mobile Coverage Maps”**, [www.mysignals.gr](http://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](http://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.”
- **“Artificial Intelligent agent for the reversi game”**, semester project:

Course: *Artificial Intelligence*. “A minimax implementation for the reversi game designed for the course of Artificial Intelligent. To achieve high execution speed the a-b pruning approach has been implemented.”

## LANGUAGES

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

## OTHER INTERESTS - EXTRA CURRICULAR ACTIVITIES

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

## REFERENCES

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Available upon request