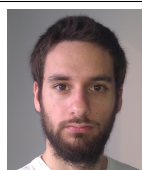


FILIPPOS VASILAKIS



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PROFILE

My intention is to solve real world problems using science, especially mathematics. I believe that behind every practical solution there is an extensively mathematical model that can characterize its performance evaluation. I always tend to lie in between theoretical foundations of computer science and software engineering for the implementation of these practical solutions.

STATUS

I have just finished my thesis with my Professor [S. Nikolettseas](#) in wireless rechargeable sensor networks. I am looking forward to start my next research project which most probably will have to do with energy aware algorithms that detect and isolate malicious nodes in sensor networks ¹. Also, in my free time, I conduct a study on the state of the art papers on decentralized OSNs ². My intention is to understand the progress that has been made in this field, the research challenges that these networks oppose and develop a new distributed OSN (build upon Ruby on Rails) that differentiates from such networks like [DIASPORA*](#).

RESEARCH INTERESTS

- **Data Networks**
Wireless Sensor Networks, Wireless Rechargeable Sensor Networks, Wireless Networks, Fault-tolerant Networks
Algorithms and models for such networks are in my interests.
- **Online Social Networks**
I am really interested in the challenges that Distributed OSNs oppose.
- **Distributed Systems**
Distributed systems and algorithms especially for Routing & Flow control in networks

EDUCATION

SEPT 2006 - now Undergraduate student of Computer Engineering and Informatics Department (*CEID*),
 School of Engineering(5-year Degree), University of Patras
 Expected GPA: 7.96/10
 JULY 2006 Lyceum of St. Stefanos, Athens

RESEARCH EXPERIENCE

09/11 – 7/12 **Thesis: Efficient Energy Management in Wireless Rechargeable Sensor Networks**
 I worked on energy matters in sensor networks under the supervision of Professor [S. Nikolettseas](#). My work involved theoretical research of graph and probability models (my favourite) in order to achieve novel results in the area of sensor networks that use mobile rechargers. A [part](#) of my thesis will appear as a publication in [MSWIM 2012](#) conference.

03/11 – 7/11 **cBox: A decentralized system for resources sharing that enables peer communication in an heterogeneous environment** The cBox system is a collection of services, libraries and applications that can be used to share resources, such as Internet connectivity, with other members of an ad-hoc network, in a transparent and safe way. The system features include delay tolerant networking, caching of the web requests and fully decentralized operation using well established technologies such as ZeroConf, mDNS to allow the devices to discover compatible services. **I was heading** the AndroidWiselib team which aimed to porting Wiselib library(C++) in Android using JNI and Native Development Kit. It involved C/C++ code wrapped in Java code using native interfaces. The [cBox project](#) led to [1 paper](#) under the supervision of [Dr. I. Chatzigiannakis](#).

¹inspired by [this](#) paper which addresses the same issue in ad-hoc networks

²a *very* interesting paper [here](#)

ACADEMIC EXPERIENCE

10/10 – 01/11 Assistant in the Distributed Systems I Course, CEID, University of Patras
10/10 – 01/11 Assistant in the Microprocessors Lab, CEID, University of Patras
03/09 – 06/09 Assistant in the Assembly language Lab, CEID, University of Patras

PUBLICATIONS

BACHELOR'S THESIS

- **Efficient Energy Management in Wireless Rechargeable Sensor Networks** (abstract in English)
Filippos Vasilakis
Computer Engineering and Informatics Department, University of Patras, Greece, 2012

CONFERENCE PUBLICATIONS

- **Efficient Energy Management in Wireless Rechargeable Sensor Networks**
C. M. Angelopoulos, S. Nikolettseas, T. P. Raptis, C. Raptopoulos and F. Vasilakis
Accepted in the 15th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems 2012 (ACM MSWiM '12), Paphos, Cyprus
- **cBox: A decentralized system for resources sharing that enables peer communication in an heterogeneous environment**
K. Akasoglou, A. Baltas, E. Gkatzouras, N. Kapetanios, D. Karavias, K. Moustakakis, G. Oikonomou, N. Palaghias, G. Papaneofytou, N. Triantafyllis, F. Vasilakis, O. Akribopoulos, C. Koninis, M. Logaras and I. Chatzigiannakis
Eureka! Conference, October 2011, Kastoria, Greece

TALKS

- **State of the Art research on Wireless Recharging Sensor Networks**
Filippos Vasilakis
Computer Engineering and Informatics Department, University of Patras, Greece, February 2012
- **State of the Art research on WSNs with multiple mobile Sinks**
Filippos Vasilakis
Computer Engineering and Informatics Department, University of Patras, Greece, joined talks that took place between October 2011 and January 2012
- **Porting Wiselib's concepts in Android using JNI**
Filippos Vasilakis
FOSSCOMM, Patras, May 2011

TECHNICAL SKILLS

Programming Languages: C, C++, Java, Ruby, Matlab, ARMv7 Assembly, Bash scripting
Frameworks: POSIX, OpenMP, Qt, Boost, GNU GMP, JNI, Android NDK, SDK, BlueZ, Wiselib
Web Development: HTML/XHTML, CSS, Javascript, PHP, MySQL, AJAX, XML, Google Maps API, Apache Server
Testing: Rspec, Capybara and lately Jasmine
Versioning Systems: Git, Mercurial, Subversion
Utilities: GNU Make, Bison, TeX, LaTeX 2_ε
Operating Systems: Linux/Unix, Windows

SOFTWARE DEVELOPEMENT (SELECTED)

- Development of a web application for house advertising, with management capabilities for Admins and users (HTML, CSS, Javascript, PHP, MySQL, AJAX, XML, Google Maps API, Apache Server)
- Design and implementation of a FAT File System and Shell (C, Posix API)
- Implementation of parallel versions of Conway's Game of Life (C, Pthreads, OpenMP)
- Parallel implementations of the Jacobi algorithm using OpenGL as graphic environment (C, Linux IPC, PThreads, OpenMP)
- Implementation of a lexical analysis and grammar parsing tools for HTML language (C, Flex, Bison)
- Implementation of Miller-Rabin primality test primality test for arbitrary-precision numbers (C++, GNU GMP)
- Design and implementation of a client-server model through Posix using Linux Processes & Threads (C, Posix API)

- Implementation of port knocking (C, Linux Sockets)
- Implementation of parallel Versions of Prim algorithm (C, Pthreads, OpenMP)
- Design and Development of a Train Tickets Booking Software (C++)
- Design and implementation of semaphores and readers-writers locks (C, Posix API)
- Development of a program that finds all the prime numbers in a given range using Wilson's theorem through parallelism (C, Pthreads, OpenMP)

A quick glance in the next links will convince you about my previous experience:

Personal website: <http://filippos.vasilak.is/projects.php>

bitbucket: <https://bitbucket.org/vasilakis/>

github: <https://github.com/vasilakis>

LANGUAGES

Greek: Native

English: Fluent, C2, Cambridge & Michigan, Certificates of Proficiency in English

French: Advanced, B2, Diplome d'etudes en langue francaise

INTERESTS AND ACTIVITIES

Tennis, Paintball, Open-Source, Music, Technology, Programming, Cinema