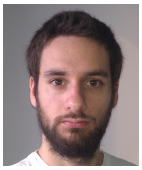
Filippos Vasilakis



Date of Birth: December 12th, 1988
Address: 6 Uddvagen Street, 13 151, Sickla Stockholm, Sweden
Phone: +46 0739157242
Email: vasilakisfil@gmail.com
website: fil.vasilak.is

Profile

My intention is to solve *real world* problems using science, especially mathematics. I believe that behind every practical solution there is an extensive 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.

Interests

- Online Social Networks
  Distributed Reputation and Trust challenges that Distributed OSNs really intrigue me.
- Data Networks
  Wireless Sensor Networks, Wireless Rechargeable Sensor Networks, Wireless Networks, Fault-tolerant Networks
  Algorithms and models for such networks are in my interests.
- Distributed Trust and Reputation Management
  Prevention and Detection of selfish, malicious and misbehaved users.

Education

Sept 2006 - Sept 2012	Undergraduate student of Computer Engineering and Informatics Department (*CEID*), School of Engineering(5-year Degree), University of Patras GPA: 7.94/10 (ranked 12^{th}/196)
July 2006	Lyceum of Agios 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. Nikoletseas. My work involved theoretical research of graph and probability models (my favorite) in order to achieve novel results in the area of sensor networks that use mobile rechargers. A part of my thesis was published 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 the head of AndroidWiselib team which aimed to porting Wiselib library(C++) in Android using JNI and Native Developement 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.

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. Nikoletseas, T. P. Raptis, C. Raptopoulos and F. Vasilakis
  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. Gkatziouras, N. Kapetanos, 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

- **New challenges that emerge from 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:	Ruby, Java, C++, C, Matlab, ARMv7 Assembly, Bash scripting
Frameworks:	POSIX, OpenMP, Qt, Boost, GNU GMP, JNI, Android NDK,SDK, BlueZ, Wiselib
Web Development:	HTML/XHTML, CSS, SCSS, HAML, Javascript, PHP, MySQL, Rails, AJAX, XML, Google Maps API, Apache, Nginx
Testing:	Rspec and Capybara
Versioning Systems:	Git, Mercurial, Subversion
Utilities:	GNU Make, Bison, Flex, TEX, LATEX 2_ε
Operating Systems:	Linux/Unix, Windows

Software Development (Selected)

- Development of a multi-threaded HTTP1.1 Server in Ruby with tests (Ruby, Celluloid, Rspec)
- Development of an Online Social Application in which everyone can upload experiences (HAML, SASS, Bootstrap, Ruby, Ruby on Rails, Rspec, Capybara, Unibtrusive Javascript, JSON, deployed on heroku)
- 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 environement (C, Linux IPC, PThreads, OpenMP)
- Implementation of a lexical analysis and grammar parsing tools for HTML language (C, Flex, Bison)
- Implementation of Miller-Rabin priminality 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://fil.vasilak.is/#work`

bitbucket: https://bitbucket.org/vasilakisfil
github: https://github.com/vasilakisfil

Languages

Greek: Native

English: Fluent

- Cambridge Certificate of Proficiency in English (December 2009)
- Michigan Certificate of Proficiency in English (December 2009)
- TOEFL, 100/120 (November 2012)

French: Advanced, B2, Diplome d'études en langue française (Feb 2005)

Interests and Activities

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