Christina K. Pavlopoulou

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22 Aliakmonos Street
Patras, Greece 26442

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1 Souliou Street , Galatsi
Athens, Greece 11141

CONTACT INFORMATION
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RESEARCH INTERESTS
Wireless sensor networks
Pattern recognition
Machine Learning
Data Analysis
Feature Extraction
Neural Networks
Databases

EDUCATION

- University of California, Riverside
  Computer Science Department
  PhD in Computer Science
  September 2015 to Present

- University of Patras
  Computer Engineering and Informatics Department
  MSc in Computer Science and Technology
  January 2014 to June 2015
  GPA 8.55/10
  Master Thesis: *"Development of User's Activity Recognition Methods using Smartphone Sensors"*
  Advisor: Associate Professor Sotiris Nikoletseas

- University of Patras
  Computer Engineering and Informatics Department
  Diploma
  September 2008 to February 2014
  GPA 7.40/10
  Diploma Thesis: *"Theory and applications of cellular automata: The topology control problem in wireless ad-hoc networks"*
  Advisor: Professor Christos Kaklamanis

- Private General School of Irakleio Attikis: "Ellhnikh Paideia"
  Apolythrion
  September 2005 to June 2008
  GPA 19.5/20

ACADEMIC EXPERIENCE

- **Teaching Assistance**
  Databases Laboratory, Computer Engineering and Informatics Department
  December 2013 - February 2014

  Introduction to C Laboratory, Computer Engineering and Informatics Department
  October 2013 - February 2014

Architecture Laboratory, Computer Engineering and Informatics Department
March 2014 - June 2014

Object Oriented Programming (Java) Laboratory, Computer Engineering and Informatics Department
March 2014 - June 2014

- **Research Assistance**
  "Iot Lab", European research project
  Development of android applications which enable detection of human motion
  Using funf framework to schedule smartphones' sensors (such as accelerometers, gyroscopes) and by suitably processing their readings, it is possible to create a classification model using the weka tool to infer human activity (sitting, lying, walking)
  2014-2015

- **Diploma Thesis**
  Topic: "Theory and applications of cellular automata: The topology control problem in wireless ad-hoc networks"
  2013
  Advisor: Professor Christos Kaklamanis

  A cellular automaton is an idealization of a physical system in which space and time are discrete entities and physical quantities that correspond in a finite number of values. Cellular automata have been used in many different science fields like physics, biology, chemistry, cryptography, e.t.c., in traffic control and also as models for some games. Wireless networks consist of a number of autonomous nodes, geographically dispersed in a surface. They have the ability to monitor an area within their range and collect its data. The most important in wireless networks is the need of low energy consumption since they consist of a number of nodes which have an energy source (usually batteries). Batteries have limited energy storage.

  Topology control is a technique used to minimize the initial topology of a wireless network in order to minimize the energy consumption, to avoid interference and to maximize the network lifetime. All these can be achieved by finding the least nodes configuration which can monitor an area equivalent to that which can be monitored by all nodes. Efficient topology control techniques in wireless networks are very important since nodes operate with limited energy. The evaluation of topology control algorithms requires simulation since the creation of real wireless networks is an expensive procedure. As a result, cellular automata are used as simulators. In this thesis, we focus on topology control algorithms in wireless sensor networks with the use of cellular automata as models.

PROJECTS

- **2011:** "Implementation in C of a TCP proxy server and a TCP client using sockets"
  4th year of my undergraduate studies
  Networks Lab
  Computer Engineering and Informatics Department, University of Patras, Greece

- **2011:** "Implementation in Prolog of a program that solves the 3 water cans problem"
  4th year of my undergraduate studies
  Artificial Intelligence
  Computer Engineering and Informatics Department, University of Patras, Greece

- **2011:** "Design and implementation of two indices (regular and inverted) for a collection of documents"
  4th year of my undergraduate studies
  Linguistics Technology
  Computer Engineering and Informatics Department, University of Patras, Greece

- **2012:** "Implementation in matlab of a system that associates a graphic pattern with an ASCII character, using artificial neural networks"

5th year of my undergraduate studies
Computational Intelligence
Computer Engineering and Informatics Department, University of Patras, Greece

- **2013:** "Creation of an online managing cafeteria orders system"
  5th year of my undergraduate studies
  Programming and Systems in the World Wide Web
  Computer Engineering and Informatics Department, University of Patras, Greece

PAPERS

- **Technical Report:** Efficient Parameterized Methods for Physical Activity Detection using only Smartphone Sensors
  Authors: Christina Pavlopoulou, Gabriel Filios, Sotiris Nikoletseas
  Submitted to MOBIWAC 2015

COMPUTER SKILLS

- **Programming:** Matlab, C , Python, Sql, Prolog, Assembly, Unix Shell Scripting, Java
- **Web Programming:** PHP, HTML, Javascript
- **Operating Systems:** Windows XP/ Vista/8, Ubuntu
- **Computer Programs:** Microsoft Office
- **API:** Android, Weka

LANGUAGES

Greek: Native language

English: Excellent knowledge
- Michigan Certificate of Proficiency in English
- Cambridge Certificate of Proficiency in English

French: Good knowledge
- Sorbonne 1

HONORS AND AWARDS

- **2008:** Entrance in Computer Engineering and Informatics Dt, University of Patras, Greece (34th among 200 students).
- **2008:** Graduated from General High School. Ranking 3d among 44 students.
- **2015:** Admitted for PhD studies to **University of California, Riverside** with the **dean's fellowship**.

OTHER INTERESTS

Piano
Ballet
Literature