Philippos Papaphilippou

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Gender Male | Date of birth 1993 | Nationality Cypriot

Academic Education

PhD in High Performance, Embedded and Distributed Systems (HiPEDS) (1 October 2017–present)
Imperial College London – London (UK)
EPSRC – HiPEDS Centre for Doctoral Training (CDT), with sponsorship from Dunnhumby

Graduate teaching assistant : (Msc) 332 Advanced Computer Architecture, (BSc) 202 Algorithms II
Topic: "Optimising Big Data Calculation of Key Customer Metrics through Specialised Processing"
Supervisor: Prof. Wayne Luk

M.Phil in Advanced Computer Science (1 October 2016–30 June 2017)
University of Cambridge - Wolfson College, Cambridge (UK)

MPhil project: "Performance Tuning for Deep Learning on a Many-core Processor"
Supervisor: Dr. Robert Mullins
Module selection: Chip Multiprocessors, Advanced Operating Systems, Algebraic Path Problems, with applications to Internet Routing, Machine learning and algorithms for data mining, System on Chip Design and Modeling
Grade: 75.53/100 [Distinction]

Bachelor Of Computer Science (BSc) (11 September 2012–15 June 2016)
University of Cyprus, Nicosia (Cyprus)

Course Specialization: Computer Systems and Networks
Thesis: "Designing a Modern Block Replacement Policy for Last-Level Cache"
Supervisor: Associate Professor Yanos Sazeides
GPA: 8.82/10.0 [Excellent] (Rank: 2/67)

Research Internships

Summer of HPC 2017 Participant – The project aimed to eliminate the simulation time of a Quantum Monte Carlo simulator for carbon nanotubes by using data science techniques. This was achieved by creating an online optimization algorithm that balances the accuracy of the simulator for better

performance - PRACE (Partnership for Advanced Computing in Europe) – Supervisor: Dr. Stefan Krieg – Forschungszentrum Jülich, Germany, 07-08/2017

Studied about CPU Last-Level Cache Block Replacement Policies, implemented Cache simulators and tested various Cache Algorithms (LRU based, DRRIP based and new variations) for single and multi-program workloads in functional and timing simulations; explored a wide Design Space of cache configurations using the Cy-Tera HPC Facility - with Associate Professor Yanos Sazeides - Xi Computer Architecture Research Lab - University of Cyprus, 06/2013 – 9/2016

Intern at CaSToRC – Computation-based Science and Technology Research Center, The Cyprus Institute. Constructed and evaluated different Neural Network Architectures to assist parameter optimisation and runtime elimination in LatticeQCD Simulations – with Prof. Constantia M. Alexandrou – 06-08/2016

Developed a small GATE (General Architecture for Text Engineering) plug-in to assist collecting verbs that connect specific strings using Natural Language Processing in texts for estimating article similarity – with Assistant Professor Georgia M. Kapitsaki – Software Engineering and Internet Technologies Laboratory (SEIT) - University of Cyprus, 08/2014

Developed a Windows Phone geolocation application with another student. Utilized the smartphone sensors to draw real-time path on maps for indoor navigation - with Assistant Professor Demetris Zeinalipour - Data Management Systems Laboratory - University of Cyprus, 06-07/2013

Computing skills

Programming in Java, C and Python
Scripting in Bourne shell and gnuplot
Experience with Pascal, Javascript, Actionscript, C#, C++, VHDL, Verilog, SystemC, JavaFX and with Android and Windows phone development
Good command of Unix shell, Linux (RPM-based and Debian-based), FreeBSD and Windows
Frameworks – Pthreads, OpenMP, MPI, OpenCL, MapReduce/Hadoop
IDEs – NetBeans, Atom, Solaris Studio, Eclipse, VisualStudio, Xilinx ISE, ArgoUML, Microsoft Visio
Tools – PCSpim, MARSSx86, Model-Sim, SimAlpha, CMP$im, Qemu, VirtualBox, Intel Pin, Condor, Slurm, Opnet, GTKWave, gnuplot, GATE, Gephi, Neuroph Studio/API

Other Information

Languages
Greek (native)
English (CEFR: C1 – IELTS Overall Score: 7.5/9)
German (CEFR: B1 – Zertifikat Deutsch B1)

Secondary Education
(Lyceum graduate)
Pancyprian Gymnaseum, Nicosia (Cyprus)
Core Subjects: Mathematics, Biology, Physics, Chemistry
Overall grade: 18.1/20

Military Service (July 2011–September 2012)
Cypriot National Guard, (Cyprus)

University of Cyprus - Courses Highlights
I have created a 3d N-Body simulator as a midterm project for the course "FYS 012 – Physics and Applications". The simulator's webpage can be found here

"8-Puzzle solver" - an implementation of the A.I. algorithm was among the first 3 out of 40 2-people team projects – 2013

Participation in Xi and DMSL Research Labs is considered as honour internships for highest rankings in EPL121: Digital Signals and EPL132: Programming Principles II – 2013

Presentations
"Raspberry pi as a Web Server tutorial", Web Development Workshop Series - CCS (2015)

Presented a Windows Phone project with another student at 5th Workshop for High School Students at UCY (2014)

"Graphical Approach of Trigonometric Numbers in a Computer Application", Student Mathematics Seminar by Cyprus Mathematical Society, Paphos (Cyprus) 02/2011

Seminars/Training Schools
MaxCompiler Workshop – London, 20-21 June 2017

2nd International Summer School Training on Manufacturable and Dependable Multi-core Architectures at Nanoscale MEDIAN ISTS 2015 (Prague) 07/2015

2nd Workshop on Cloud Computing in Cyprus: Opportunities and Challenges – Department of Computer Science, University of Cyprus & Microsoft Cyprus – 06/2015

4th LinkSCEEM General User Meeting – Cyprus Institute – 06/2014
Student Mathematics Seminar by Cyprus Mathematical Society, Paphos (Cyprus) 02/2011

Honours and awards
2015 1st prize, "EU Code Week Competition" National Competition for University Students, of Cyprus Computer Society
2014 National Innovation Winner, ImagineCup 2014 of Microsoft Cyprus, in a team of four students
2011 10th place, "Iakovos Patatsos" Provincial competition of Cyprus Mathematical Society

1st place - (Silver Medal) in Informatics, International Kangourou Competition 2010-2011, National competition of Thales Foundation Cyprus

2010 4th place, "Iakovos Patatsos" Provincial competition of Cyprus Mathematical Society
6th place, "Evagoras Palikarides" National competition of Cyprus Mathematical Society

2009 "Iakovos Patatsos" Provincial competition of Cyprus Mathematical Society
12th place, "Evagoras Palikarides" National competition of Cyprus Mathematical Society

2008 "Iakovos Patatsos" Provincial competition of Cyprus Mathematical Society
4th provincially, 4rd Pancyprian Physics Olympiad

2007 Bronze Metal, 8th Mathematics Olympiad of Cyprus Mathematical Society
4th provincially, 3rd Pancyprian Physics Olympiad

2006 10th place, "Iakovos Patatsos" Provincial competition of Cyprus Mathematical Society

2005 Silver Metal, 6th Mathematics Olympiad of Cyprus Mathematical Society

2003 1st place - "Radiomarathon" National Painting Competition for Elementary Schools

Participations

The 2nd Cache Replacement Championship 2017, paper submission with Prof. Yanos Sazeides
ACM International Collegiate Programming Contest 2016
Google Code Jam 2016, Google Hash code 2016
Hack{Cyprus}, Local Hack Day 2015 – Cypriot Enterprise Link
ACM Sigmod 2015 Programming Contest in a team of 3 students (2015)
Microsoft Malware Classification Challenge (BIG 2015)
Windows Hackathon 2013 of Microsoft Cyprus with another student (2013)
IEEEXtreeme Programming Competitions 6.0-9.0 (2012-2015)

Other Qualifications

Coursera - Online Course Statement of Accomplishment - Mining Massive Datasets
GCE O-Level and AS-Level in Physics
GCE A-Level in Mathematics (only modules A1 to FP1)
I.G.C.S.E English

Other Activities

Developed a computer simulation program about light (Physics) later used for teaching pre-service educators (Learning in Science Group - University of Cyprus) (2008)

Participated in Science Summer Club of University of Cyprus and presented a team project (2008)

Memberships

ACM since 2017, IEEE Cyprus Section since 2013, Cyprus Computer Society (2015) and Computer Science UCY student club (2014)

Extracurricular Activities

Violin Playing
Cycling

Listening to Classical (Bach, Fauré), Classical Organ and Jazz Music