

Iakovos G. Kolokasis

ICS-FORTH, 100 N. Plastira Av. Vassilika Vouton, Heraklion, GR-70013, Greece

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Research Interests

- Large Scale Distributed Systems
- Memory and Storage Systems
- Big Data Computations
- Java Virtual Machines
- Computer Systems
- Operating Systems

Research Experience

ICS-FORTH

GRADUATE RESEARCH ASSISTANT

Heraklion, Greece

Sep. 2017 - Present

- Evaluate different approaches to expand memory address space for JVM-based large-scale data analytics frameworks using fast storage devices
- Implement an extra storage level on Apache Spark to cache data off-heap on non-volatile memories.
- **Supervision:** Angelos Bilas and Polyvios Pratikakis

ICS-FORTH

UNDERGRADUATE RESEARCH ASSISTANT

Heraklion, Greece

Jan. 2017 - Aug. 2017

- Schedule techniques for data placement for large scale graph analytics (Apache Spark GraphX).
- **Supervisor:** Polyvios Pratikakis

Industrial Experience

SAP HANA VORA

INTERN RESEARCH STUDENT

Walldorf, Germany

Jun. 2019 - Sep. 2019

- Improve/Enhance the Data Structure of the Syntax Tree of the SQL Parser

Education

University of Crete

M.Sc. IN COMPUTER SCIENCE

Heraklion, Greece

Sep. 2017 - Present

- **Area of Study:**
 - Parallel and Distributed Systems
 - Architecture of Microelectronic Systems
- **GPA (until now):** 9.43/10
- **Thesis Topic:** Caching Beyond DRAM in Data Analytics – From Off-heap to On-heap Caches with Memory-Mapped I/O
- **Supervision:** Angelos Bilas and Polyvios Pratikakis

University of Crete

B.Sc. IN COMPUTER SCIENCE

Heraklion, Greece

Sep. 2011 - Jul. 2017

- **GPA:** 7.62/10 (9th out of 65 in B.Sc. Graduates 2017)
- **Thesis Topic:** Locality optimizations for distributed graph analytics computations
- **Supervisor:** Polyvios Pratikakis

Publications

FULL PAPERS / ARTICLES

Iakovos G. Kolokasis, Anastasios Papagiannis, Foivos Zakkak, Polyvios Pratikakis, and Angelos Bilas. Say Goodbye to Off-heap Caches! Redesign them Using Memory-Mapped I/O. **Under submission.**

Iakovos G. Kolokasis and Polyvios Pratikakis. Cut to Fit: Tailoring the Partitioning to the Computation. 2nd Joint International Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA), June 30-July 2019, Amsterdam, Netherlands

TECHNICAL REPORTS

Iakovos G. Kolokasis and Polyvios Pratikakis. Cut to Fit: Tailoring the Partitioning to the Computation. Technical Report 469, ICS – FORTH, Apr 2018

Teaching Experience

Introduction to Computer Science (CS-100)

TEACHING ASSISTANT | INSTRUCTOR: POLYVIOS PRATIKAKIS

- Part of my responsibilities was to teach tutorials for students, design assignments with the professor and another TA, and mark assignments and exams

University of Crete

Fall 2018, 2019

Parallel Computing (CS-342)

TEACHING ASSISTANT | INSTRUCTOR: POLYVIOS PRATIKAKIS

- Part of my responsibilities was to teach tutorials for students on a weekly basis, mark assignments and exams

University of Crete

Spr. 2018, 2019

Data Structures (CS-240)

TEACHING ASSISTANT | INSTRUCTOR: PANAGIOTA FATOUROU

- Part of my responsibilities was to co-design the project with the professor and another TA, project presentation, answer students questions, and mark assignments and exams

University of Crete

Spr. 2018, 2020

Digital Design (CS-120)

TEACHING ASSISTANT | INSTRUCTOR: MANOLIS G.H. KATEVENIS

- Responsible for two hour laboratories where undergraduate students learn the basics of digital design and implement a simple processor, mark assignments and exams

University of Crete

Fall 2017

Talks

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|-----------|---|------------------------|
| Oct. 2019 | In-Memory Computing at Scale? Look Beyond Physical DRAM , University of Crete | Heraklion, Greece |
| Sep. 2019 | Improve/Enhance the Data Structure of the Syntax Tree of the SQL Parser , SAP HANA | Walldorf, Germany |
| Sep. 2019 | Scaling In-Memory Computing for JVM-based Big Data Analytics , SAP HANA | Walldorf, Germany |
| Sep. 2019 | Cut to Fit: Tailoring the Partitioning to the Computation , SAP HANA | Walldorf, Germany |
| Jun. 2019 | Cut to Fit: Tailoring the Partitioning to the Computation , GRADES-NDA 2019 | Amsterdam, Netherlands |
| Jul. 2018 | Cut to Fit: Tailoring the Partitioning to the Computation , 14th ACACES Summer School - HIPEAC | Fiuggi, Italy |

Honors & Awards

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| Oct. 2019 | Scholarship , Received a full scholarship from Huawei to attend the 27 th ACM Symposium on Operating Systems Principles | Ontario, Canada |
| Sep. 2018 | Scholarship , Received a full scholarship from SAP SE to attend the 6 th Heidelberg Laureate Forum | Heidelberg, Germany |
| Jul. 2018 | Scholarship , Received a full scholarship from HIPEAC to attend the 14 th ACACES Summer School | Fiuggi, Italy |
| Mar. 2017 | Scholarship , Received five full graduate research scholarships from ICS-FORTH while I was working on my master thesis | Heraklion, Crete |
| Jul. 2017 | Scholarship , Received a full undergraduate research scholarship from ICS-FORTH (3 months) while I was working on my thesis | Heraklion, Crete |
| Sep. 2012 | Scholarship , My second year at the university was supported fully by fellowships "Stelios Orphanoudakis" | Heraklion, Greece |
| Jun. 2009 | Finalist , Programming contest organized by CYTA | Nicosia, Cyprus |

Service

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| Present | Co-head of Organization Committee , 1st Career Fair CSD, UoC | Heraklion |
| Mar. 2020 | Member , ASPLOS'20 Artifact Evaluation Committee | Switzerland |
| Oct. 2019 | Co-head of Organization Committee , 1st Graduate Students Conference CSD, UoC | Heraklion, Greece |
| Sep. 2019 | Deputy Graduate Students Representative , Computer Science Dept., University of Crete (2019-2020) | Heraklion, Greece |
| Jan. 2018 | Graduate Students' Association Representative , Computer Science Dept., University of Crete (2018-2020) | Heraklion, Greece |
| May 2012 | Public Relation Officer , Board Council of the Cypriot Students' Union (2012-2015) | Heraklion, Greece |

Skills

Languages Greek (native), English (fluent; TOEFL), French

References

Angelos Bilas

PROFESSOR AT UNIVERSITY OF CRETE & ASSOCIATE RESEARCHER AT ICS-FORTH
bilas@ics.forth.gr

Heraklion, Greece

Polyvios Pratikakis

PROFESSOR AT UNIVERSITY OF CRETE & ASSOCIATE RESEARCHER AT ICS-FORTH
polyvios@ics.forth.gr

Heraklion, Greece

Christos Kozanitis

RESEARCH SCIENTIST AT ICS-FORTH
kozanitis@ics.forth.gr

Heraklion, Greece