Iacovos G. Kolokasis

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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   *Heraklion, Greece*

GRADUATE RESEARCH ASSISTANT   *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   *Heraklion, Greece*

UNDERGRADUATE RESEARCH ASSISTANT   *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   *Walldorf, Germany*

INTERN RESEARCH STUDENT   *Jun. 2019 - Sep. 2019*

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

Education

University of Crete   *Heraklion, Greece*

M.SC. IN COMPUTER SCIENCE   *Sep. 2017 - Present*

- **Area of Study:**
  - Parallel and Distributed Systems
  - Arhitecture 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   *Heraklion, Greece*

B.SC. IN COMPUTER SCIENCE   *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 ....

Iacovos G. Kolokasis, Anastasios Papagiannis, Foivos Zakkak, Polyvios Pratikakis, and Angelos Bilas.Say Goodbye to Off-heap Caches! Redesign them Using Memory-Mapped I/O. In Presented as part of the 12th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage '20), Boston, MA, 2020. USENIX.

Iacovos 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 ....

Iacovos 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)
University of Crete

TEACHING ASSISTANT | INSTRUCTOR: POLYVIOS PRATIKAKIS · *Fall 2018, 2019*
- Part of my responsibilities was to teach tutorials for students, design assignments with the professor and another TA, and mark assignments and exams

Parallel Computing (CS-342)
University of Crete

TEACHING ASSISTANT | INSTRUCTOR: POLYVIOS PRATIKAKIS · *Spr. 2018, 2019*
- Part of my responsibilities was to teach tutorials for students on a weekly basis, mark assignments and exams

Data Structures (CS-240)
University of Crete

TEACHING ASSISTANT | INSTRUCTOR: PANAGIOTA FATOUROU · *Spr. 2018, 2020*
- 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

Digital Design (CS-120)
University of Crete

TEACHING ASSISTANT | INSTRUCTOR: MANOLIS G.H. KATEVENIS · *Fall 2017*
- Rensponsible for two hour laboratories where undergraduate strudents learn the basics of digital design and implement a simple processor, mark assignments and exams

Talks

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

Oct. 2019	**Scholarship,** Received a full scholarship from Huawei to attend the 27th ACM Symposium on Operating Systems Principles	*Ontario, Canada*
Sep. 2018	**Scholarship,** Received a full scholarship from SAP SE to attend the 6th Heidelberg Laureate Forum	*Heidelberg, Germany*
Jul. 2018	**Scholarship,** Received a full scholarship from HiPEAC to attend the 14th 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

Apr. 2020	**Volunteer (Lead EuroSys'20 Slack workspace and be a co-host in zoom sessions),** EuroSys 2020	*Virtual Conference*
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 *Heraklion, Greece*

Professor at University of Crete & Associate Researcher at ICS–FORTH

bilas@ics.forth.gr

Polyvios Pratikakis *Heraklion, Greece*

Professor at University of Crete & Associate Researcher at ICS–FORTH

polyvios@ics.forth.gr

Christos Kozanitis *Heraklion, Greece*

Research Scientist at ICS–FORTH

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