

Iakovos G. Kolokasis

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

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Research Interests

- Memory and Storage Systems
- Managed Languages and Runtimes
- Garbage Collection

Research Experience

ICS-FORTH

GRADUATE RESEARCH ASSISTANT

- 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

Heraklion, Greece

Sep. 2017 - Present

ICS-FORTH

UNDERGRADUATE RESEARCH ASSISTANT

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

Heraklion, Greece

Jan. 2017 - Aug. 2017

Industrial Experience

SAP HANA VORA

INTERN RESEARCH STUDENT

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

Walldorf, Germany

Jun. 2019 - Sep. 2019

Huawei Research Center

PHD INTERN RESEARCH STUDENT

- Managed Runtime on Dissagregated Memory Environments

Munich

Jun. 2022 - Sep. 2022

Education

University of Crete

PH.D IN COMPUTER SCIENCE

- **Advisor:** Angelos Bilas, **Co-advisors:** Polyvios Pratikakis, Shoaib Akram

Heraklion, Greece

Jan 2021 - Present

University of Crete

M.Sc. IN COMPUTER SCIENCE

- **GPA:** 9.43/10
- **Thesis Topic:** TeraCache: Efficient Caching over Fast Storage Devices
- **Supervision:** Polyvios Pratikakis and Angelos Bilas

Heraklion, Greece

Sep. 2017 - Oct 2020

University of Crete

B.Sc. IN COMPUTER SCIENCE

- **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

Heraklion, Greece

Sep. 2011 - Jul. 2017

Publications

FULL PAPERS / ARTICLES

Iakovos G. Kolokasis, Giannos Evdourou, Shoaib Akram, Christos Kozanitis, Anastasios Papagiannis, Foivos Zakkak, Polyvios Pratikakis, and Angelos Bilas. TeraHeap: Reducing Memory Pressure in Managed Big Data Frameworks. In Proceedings of the 28th ACM International Conference on Architectural Support for Programming Languages and Operating Systems, Volume 3 (ASPLOS '23), March 25–29, 2023, Vancouver, BC, Canada.

Iakovos G. Kolokasis, Anastasios Papagiannis, Foivos Zakkak, Polyvios Pratikakis, and Angelos Bilas. Say Goodbye to Off-heap Caches! On-heap Caches 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. (**Best Presentation Award**)

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

POSTERS

Iacovos G. Kolokasis, Anastasios Papagiannis, Foivos Zakkak, Shoaib Akram, Christos Kozanitis, Polyvios Pratikakis, and Angelos Bilas.TeraCache: Efficient Caching over Fast Storage Devices. MSR Cambridge PhD Virtual Workshop on Next-Generation Cloud Infrastructure’21.

Iacovos G. Kolokasis, Anastasios Papagiannis, Foivos Zakkak, Polyvios Pratikakis, and Angelos Bilas.Garbage Collection or Serialization? Between a Rock and a Hard Place! 16th International Summer School on Advanced Computer Architecture and Compilation for High-Performance and Embedded Systems (ACACES).

TECHNICAL REPORTS

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

Honors & Awards

2022 - 2024	Scholarship , Received a Meta (Facebook) PhD fellowship	US
2021 - 2022	Scholarship , Received a TA scholarship from the Special Account for Research Funds (E.L.K.E) of the National and Kapodistrian University during Spring semester’2022	Heraklion, Greece
2021 - 2024	Scholarship , Received a PhD fellowship from Cyprus State Scholarship Foundation	Nicosia, Cyprus
Jan. 2022	Scholarship , Received a full scholarship to attend ASPLOS 2022 conference	Lausanne, Switzerland
Dec. 2021	Scholarship , Received a full scholarship from Independent Power Transmission Operator (ADMIE)	Heraklion
Jul. 2021	Scholarship , Received a full scholarship from Usenix Association to attend OSDI 2021 conference	Virtual Conference
Feb. 2021	Scholarship , Received a full scholarship from Usenix Association to attend FAST 2021 conference	Virtual Conference
Dec. 2020	Scholarship , Received a full scholarship from Independent Power Transmission Operator (ADMIE)	Heraklion
Jul. 2020	Scholarship , Received a full scholarship from Usenix Association to attend SOSP 2020 conference	Virtual Conference
Sep. 2020	Scholarship , Received Scholarship from Independent Power Transmission Operator (IPTO)	Heraklion, Greece
Jul. 2020	Award , Received Best Presentation Award in HotStorage 2020	Virtual Conference
Jul. 2020	Scholarship , Received a full scholarship from Usenix Association to ATC 2020 conference	Virtual Conference
Oct. 2019	Scholarship , Received a full scholarship from Huawei to attend SOSP 2019 conference	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

May. 2023	Member , EuroSys’23 Artifact Evaluation Committee	Rome, Italy
Oct. 2022	Member , MICRO’22 Artifact Evaluation Committee	Chicago, USA
Oct. 2022	Member of Organization Committee , 2nd Career Day CSD, UoC	Heraklion, Greece
Apr. 2022	Member , EuroSys’22 Shadow Program Committee	Virtual
Oct. 2021	Member , SOSP’21 Artifact Evaluation Committee	Virtual
Jul. 2021	Member , OSDI’21 Artifact Evaluation Committee	Virtual
Apr. 2021	Member , ASPLOS’21 Artifact Evaluation Committee	Virtual
Apr. 2021	Member , EuroSys’21 Artifact Evaluation Committee	Edinburgh
Feb. 2021	Member of Organization Committee , 1st Career Day CSD, UoC	Heraklion, Greece
2019 - Present	Student Member , Association of Computing Machinery (ACM)	
Apr. 2021	Volunteer (Host social media) , EuroSys 2021	Edinburgh, UK
Jun. 2020	Volunteer (Host zoom sessions) , 2nd Summit on Gender Equality in Computing (GEC 2020)	Virtual Conference
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