

RODRIGO BRUNO

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<https://rodrigo-bruno.github.io>

EDUCATION

ETH Zurich Postdoc Researcher in the Systems Group	<i>2018 - present</i>
Técnico, University of Lisbon PhD in Information Systems and Computer Engineering	<i>2014 - 2018</i> Pass with Distinction and Honour
Técnico, University of Lisbon Msc in Information Systems and Computer Engineering	<i>2012 - 2014</i> Final Grade: 18/20
Técnico, University of Lisbon BSc in Information Systems and Computer Engineering	<i>2009 - 2012</i> Final Grade: 17/20

PUBLICATIONS

Runtime Object Lifetime Profiler for Latency Sensitive Big Data Applications

EuroSys'19

Rodrigo Bruno, Duarte Patrício, José Simão, Luís Veiga, Paulo Ferreira

novaVM: Enhanced Java Virtual Machine for Big Data Applications

PhD Thesis'18

Advised by Prof. Paulo Ferreira

Graviton: Trusted Execution Environments on GPUs

OSDI'18

Stavros Volos, Kapil Vaswani, Rodrigo Bruno

Dynamic Vertical Memory Scalability for OpenJDK Cloud Applications

ISMM'18

Rodrigo Bruno, Paulo Ferreira, Ruslan Synytsky, Tetiana Fydorenchyk, Jia Rao, Hang Huang, Song Wu

POLM2: Automatic Profiling for Object Lifetime-Aware Memory Management for HotSpot Big Data Applications

Middleware'17

Rodrigo Bruno, Paulo Ferreira

A study on Garbage Collection Algorithms for Big Data Environments

ACM Computing Surveys'17

Rodrigo Bruno, Paulo Ferreira

freeCycles - Efficient Multi-Cloud Computing Platform

Journal of Grid Computing'17

Rodrigo Bruno, Paulo Ferreira

Locality-Aware GC Optimisations for Big Data Workloadser Computing

C&CT'17

Duarte Patrício, Rodrigo Bruno, José Simão, Paulo Ferreira, Luís Veiga

Improving JVM Application Migration and Profiling with Checkpoint/Restore

Checkpoint-Restore Microconference'17

Rodrigo Bruno, Paulo Ferreira,

NG2C: Pretenuring Garbage Collection with Dynamic Generations for HotSpot Big Data Applications

ISMM'17

Rodrigo Bruno, Luís Picciochi Oliveira, Paulo Ferreira

ALMA - GC-assisted JVM Live Migration for Java Server Application

Middleware'16

Rodrigo Bruno, Paulo Ferreira

NG2C: Pretenuring Garbage Collection with Dynamic Generations for HotSpot Big Data Applications

CloudDP'16

Rodrigo Bruno, Paulo Ferreira

Asynchronous Complete Garbage Collection for Graph Data Stores

Middleware'15

Luís Veiga, Rodrigo Bruno, Paulo Ferreira

Termite: Emulation Testbed for Encounter Networks

MobiQuitous'15

Rodrigo Bruno, Nuno Santos, Paulo Ferreira

freeCycles: efficient data distribution for volunteer computing

CloudDP'14

Rodrigo Bruno, Paulo Ferreira

SCADAMAR: scalable and data-efficient internet MapReduce

CCB'14

Rodrigo Bruno, Paulo Ferreira

freeCycles: Efficient Data Distribution for Volunteer Computing

MSc Thesis'14

Advised by Prof. Paulo Ferreira

TEACHING

Big Data for Engineers - Head Teaching Assistant, Spring 2020, DINFK, ETH Zurich

Advanced Systems Labs - Teaching Assistant, Fall 2019, DINFK, ETH Zurich

Mobile Computing - Teaching Assistant, Spring 2018, MEIC-A, Técnico, ULisboa

Mobile Computing - Teaching Assistant, Spring 2017, MEIC-T/MERC, Técnico, ULisboa

Mobile Computing - Teaching Assistant, Fall 2016, SISE, INESC-ID Lisbon

Operating Systems - Teaching Assistant, Fall 2016, LEIC-A, Técnico, ULisboa

Mobile Computing - Teaching Assistant, Spring 2016, SISE, INESC-ID Lisbon

Mobile Computing - Teaching Assistant, Spring 2016, MEIC-T/MERC, Técnico, ULisboa

Mobile Computing - Teaching Assistant, Fall 2015, SISE, INESC-ID Lisbon

Advanced Programming - Teaching Assistant, Spring 2015, MEIC-A, Técnico, ULisboa

Operating Systems - Teaching Assistant, Fall 2014, LEIC-A, Técnico, ULisboa

Software Engineering - Teaching Assistant, Fall 2014, LEIC-T/LERC, Técnico, ULisboa

SERVICE

2020 EuroSys'20 Shadow Program Committee

2019 Journal of Science Computer Programming, Journal of Grid Computing

MENTORING

Sanaz Tavakoli 2020 - present
Garbage Collection for Modern JVMs, co-advisor, PhD in University of Oslo

Domantas Lionas 2020 - present
Garbage Collection for the Graal Virtual Machine, co-advisor, MSc in University of Oslo

Fernando Moreira 2019 - present
Supporting Encounter Based Apps, co-advisor, MSc in Técnico

Carlos Oliveira 2018 - present
A Performance Comparison of Modern Garbage Collectors for Big Data Environments, co-advisor, MSc in Técnico

WORKING EXPERIENCE

Native Image Memory Compression through Object Inlining 2019 - present
Project funded by Oracle Labs Zurich

Swiss-Scale Multi-Mode Transport Simulation 2019 - present
Project funded by Swiss Federal Rails

External Memory Accounting for the V8 Javascript Engine 2018 - 2018
Internship in Google Munich

Aggressive Heap Resizing for OpenJDK HotSpot JVM 2017 - 2017
Collaboration with Jelastic

Secure Accelerators 2017 - 2017
Internship in Microsoft Research Cambridge

Tail latencies of Big Data platforms 2016 - 2016
Collaboration with Feedzai

Rede das Novas Licenciaturas (RNL), Técnico, ULisboa 2013 - 2015
SysAdmin of the department cluster

Visualization Tools with Eigen 2011 - 2011
Summer Internship at L2F, INESC-ID Lisbon

SINFO XIX 2011 - 2011
Member of the organizing committee

AWARDS & HONOURS

PhD thesis awarded with "Pass with Distinction and Honour"

Awarded the "excellence" grade for teaching Mobile Computing (Spring 2018, MEIC-A, Técnico)

Awarded 2nd place in the Fraunhofer Portugal Challenge 2018 in the PhD category

Awarded the Doctoral Student Merit Award 2017 by the Distributed Systems Group at INESC-ID Lisboa

Awarded the "excellence" grade for teaching Operating Systems (Fall 2016, LEIC-A, Técnico)

Awarded the "excellence" grade for teaching Operating Systems (Fall 2014, LEIC-A, Técnico)

Merit Award from EJEI, given to the top three students finishing under graduate degree