Branimir **Pervan**

POSTDOCTORAL RESEARCHER

✉ branimir.pervan@unibo.it | ⌂ https://bpervan.github.io/ | ⌨ bpervan | in branimirpervan | 🎓 Branimir Pervan

Education

University of Zagreb, Faculty of Electrical Engineering and Computing
Zagreb

PH. D. IN COMPUTING
March 2016 - March 2022

- Thesis title: Programming Model for Heterogeneous Computing Systems with Customizable Accelerators
- GPA: 5.00/5.00

University of Zagreb, Faculty of Electrical Engineering and Computing
Zagreb

M. SC. IN COMPUTER ENGINEERING
September 2013 - July 2015

- Thesis title: Recommender Systems in Ubiquitous Computing
- GPA: 4.61/5.00

Work experience

Alma mater studiorum - Università di Bologna
Bologna

POSTDOCTORAL RESEARCH FELLOW
October 2023 - October 2024

- Key skills: Research
- I am a Postdoctoral research fellow in the group led by prof. Luca Benini
- Compiler-centered research for PULP-based (Parallel Ultra Low Power) energy-efficient heterogeneous systems
- Research is performed in terms of compiler optimizations and compiler support for customized hardware developed under the PULP platform
- Project pages are available at `https://pulp-platform.org/`

University of Zagreb Faculty of Electrical Engineering and Computing
Zagreb

POSTDOCTORAL RESEARCHER
June 2022 - Ongoing

- Key skills: Research, mentoring, leadership, teaching
- Conducting research, teaching, and mentoring activities
- Completed workshop on improving teaching competencies
- Representative of TAs and Postdocs in the Faculty Council and associated committees
- Performing teaching activities on the following courses: Computer Architecture 1C, Open Computing, Parallelism and Concurrency

University of Edinburgh
Edinburgh

VISITING RESEARCHER
June 2022 - August 2022

- Key skills: Research
- I was a visiting researcher in the group led by prof. Michel Steuwer (School of Informatics at The University of Edinburgh)
- Performance and energy efficiency evaluation of the code generated by the RISE / Shine stack for the GAP8 platform
- Development of the advanced memory management schemes for the GAP8 platform in the RISE programming language and Shine compiler

University of Zagreb Faculty of Electrical Engineering and Computing
Zagreb

RESEARCH AND TEACHING ASSISTANT
April 2016 - May 2022

- Key skills: Research, teaching, leadership, mentoring
- Students' evaluation average: 4.58/5.00
- Representative of TAs and Postdocs in the Faculty Council and associated committees
- Conducting tasks in the domain of research, teaching (laboratory exercises), and mentoring
- Performing teaching activities on the following courses: Computer Architecture 1C, Open Computing, Parallelism and Concurrency

Green Light Technologies
Zagreb

SOFTWARE ENGINEER
August 2019 - May 2022

- Key skills: Java, Spring, Javascript, Typescript, Angular
- Development of customized web services
- Business systems integration

University of Edinburgh
Edinburgh

VISITING RESEARCHER [REMOTE WHILE AT UNIZG]
March 2021 - November 2021

- Key skills: Research
- Adaptation of the functional programming language RISE for heterogeneous and energy-efficient embedded devices. The integration was prototyped on the GAP8 platform

University Computing Centre
Zagreb

SMALLCAPS: LECTURER · _September 2017 - July 2019_

- Key skills: Presenting, teaching
- I held lectures for courses: Introduction to PHP and MySQL and Introduction to WordPress

Croatian bishop conference
Zagreb

WEB DEVELOPER · _October 2014 - November 2017_

- Key skills: PHP, MySQL, WordPress, HTML, CSS, Javascript
- Development of a customized web solution based on open-source technologies

Sedam IT
Zagreb

JUNIOR SOFTWARE ENGINEER · _March 2015 - March 2016_

- Key skills: Java, C#, .NET, Javascript, Scala, Cisco APIs
- Development of the internal software support stack in the Research and development department

Ericsson Nikola Tesla
Zagreb

SOFTWARE ENGINEERING INTERN · _June 2014 - September 2014_

- Key skills: Java, Android, OpenCV, REST, Google Glass
- Development of the application prototype for Google glass in the Research and development department

University of Zagreb Faculty of Electrical Engineering and Computing
Zagreb

STUDENT TEACHING ASSISTANT · _February 2013 - July 2013_

- Key skills: PHP, MySQL, HTML, Javascript
- Reviewing of students' assignments for the PHP Application Development Basics course

Publications

- **B. Pervan**, S. Tomic, H. Ivandic, and J. Knezovic, "MIDOM — A DICOM-Based Medical Image Communication System," Appl. Sci., vol. 13, no. 10, pp. 1–19, 2023, doi: https://doi.org/10.3390/app13106075.
- **B. Pervan**, J. Knezović, and E. Guberović, "Energy-efficient distributed password hash computation on heterogeneous embedded system," Automatika, vol. 63, no. 3, pp. 399–417, 2022, doi: 10.1080/00051144.2022.2042115.
- **B. Pervan** and J. Knezovic, "A Survey on Parallel Architectures and Programming Models," in 2020 43rd International Convention on Information, Communication and Electronic Technology (MIPRO), Sep. 2020, pp. 999–1005, doi: 10.23919/MIPRO48935.2020.9245341.
- J. Knezović, **B. Pervan**, Z. Relja, and J. Knezović, "Project Houseleek - A Case Study of Applied Object Recognition Models in Internet of Things," in 2019 proceedings of the 42nd international convention MIPRO, 2019, no. May, pp. 1051–1055, [Online]. Available: https://www.bib.irb.hr/1021658/download/1021658.04_cts_5327.pdf.
- **B. Pervan**, E. Guberovic, and F. Turcinovic, "Hazelnut - An Energy Efficient Base IoT Module for Wide Variety of Sensing Applications," in Proceedings of the 6th Conference on the Engineering of Computer Based Systems, Sep. 2019, pp. 1–4, doi: 10.1145/3352700.3352702.
- L. Strizic, **B. Pervan**, and J. Knezovic, "Deep Learning Accelerator on Programmable Heterogeneous System with RISC-V Processor," in 2019 proceedings of the 42nd international convention MIPRO, 2019, pp. 1126–1131, [Online]. Available: https://www.bib.irb.hr/1021661/download/1021661.16_cts_5493.pdf.
- **B. Pervan**, J. Knezovic, and K. Pericin, "Distributed Password Hash Computation on Commodity Heterogeneous Programmable Platforms," 2019, [Online]. Available: https://www.usenix.org/conference/woot19/presentation/pervan.

Research activities

HiPEAC

2021	**Seventeenth Summer School on Advanced Computer Architecture and Compilation for High-Performance and Embedded Systems**	_Fiuggi, Italy_
2019	**Fifteenth Summer School on Advanced Computer Architecture and Compilation for High-Performance and Embedded Systems**	_Fiuggi, Italy_

Academic visits

2023	**Professor Michel Steuwer**	_Edinburgh, UK_
2019	**Professor Philip A. Wilsey**	_Cincinnati, USA_
2018	**Professor Lennart Johnsson's research group**	_Houston, USA_

Grants

2023	**Research Fellowship for a one year stay at Alma Mater Studiorum - Università di Bologna**	_Bologna, IT_
2023	**Academic mobility grant by the University of Zagreb for a visit to the University of Edinburgh**	_Edinburgh, UK_
2022	**Academic mobility grant by the University of Zagreb for a visit to the University of Edinburgh**	_Edinburgh, UK_

2021	**HiPEAC Collaboration grant for a visit to the University of Edinburgh**	*Edinburgh, UK*
2021	**Academic mobility grant by the University of Zagreb for the ACACES 2021 summer school**	*Fiuggi, IT*
2021	**HiPEAC grant for the ACACES 2021 summer school**	*Fiuggi, IT*
2019	**HiPEAC Collaboration grant for a visit to ETH Zürich**	*Zürich, CH*
2019	**USENIX Student grant for USENIX Security Symposium**	*Santa Clara, USA*
2019	**HiPEAC Travel grant for HiPEAC 2019 conference**	*Valencia, ES*
2019	**HiPEAC grant for ACACES 2019 summer school**	*Fiuggi, IT*
2019	**Academic mobility grant by the University of Zagreb for a visit to the University of Cincinnati**	*Cincinnati, USA*
2018	**Academic mobility grant by the University of Zagreb for a visit to the University of Houston**	*Houston, USA*

Certificates

COURSERA, UNIVERSITY OF CALIFORNIA, IRVINE

2015	**Initiating and Planning Projects, Licence no. WVC9W3P59SFU**	*Online*
2016	**Budgeting and Scheduling Projects, Licence no. ZSFT99WUG3TU**	*Online*
2016	**Managing Project Risks and Changes, Licence no. 4RKLYYN8LN6W**	*Online*

COURSERA, EPFL

2016	**Functional Program Design in Scala, Licence no. DSLAMS5ZZFET**	*Online*
2016	**Functional Programming Principles in Scala, Licence no. WRB467R83SD3**	*Online*
2016	**Big Data Analysis with Scala and Spark, Licence no. F5U63SVGYLZQ**	*Online*

UNIVERSITY OF HELSINKI

| 2020 | **Elements of AI, Licence no. w8qv1bjj12** | *Online* |

COURSERA, UNIVERSITY OF MINNESOTA

| 2015 | **Introduction to Recommender Systems, Licence no. JL52FDLRQHAV** | *Online* |

MICROSOFT

| 2014 | **MTA: Software Development Fundamentals (C, 98–361)** | *Zagreb* |

Volunteering

Croatian bishop conference *Zagreb*
TEACHING INSTRUCTOR *April 2010 - August 2016*
- Conduction of the "Youth for Youth" programme through multiple weekend or weekly workshops

Salesian Youth Movement *Zagreb*
PRESIDENT FOR THE ZAGREB REGION *February 2011 - February 2013*
- Coordination of local and regional activities