Profir-Petru Pârțachi

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Education

PhD in Computer Science — **September 2016 – December 2020**
Centre for Research on Evolution, Search and Testing — *University College London, Gower Street, London WC1E 6BT*
PhD Thesis: 'Improving Software Project Health Using Machine Learning'
Supervised by *Prof. Earl T. Barr (e.barr@ucl.ac.uk)*

Computer Science Tripos — **September 2013 – July 2016**
King's College, University of Cambridge — *Cambridge, United Kingdom*
BA in Computer Science
BA Thesis: 'Deck building in Hearthstone Using a Genetic Algorithm.'

Work Experience

Post-doctoral Researcher — **April 2022 – now**
National Institute of Informatics — *Chiyoda-ku, Tokyo, Japan*
Research into the naturalness properties of structured representations of source-code.
Supervised by Assoc. Prof. Mahito Sugiyama

Freelance Researcher — **April 2021 – April 2022**
National Institute of Informatics — *Chișnău, Republic of Moldova*
Research into the naturalness properties of structured representations of source-code.
Consulting for Assoc. Prof. Mahito Sugiyama

Research Internship — **October 2018 – April 2019**
National Institute of Informatics — *Chiyoda-ku, Tokyo, Japan*
Worked on the efficient processing of spatiotemporal data for anomaly detection using Graph Kernels.
Supervised by Assoc. Prof. Mahito Sugiyama

Hardware/Software Engineer Intern — **June 2016 – September 2016**
Computer Laboratory, University of Cambridge — *Cambridge, United Kingdom*
Worked within the lowRISC team to provide:

- Hardware implementations of DCT, IDCT and colour space conversions for MPEG2 as AXI-stream accelerators.
- Hardware logic to interface AXI-stream accelerators with the lowRISC CPU chip.

Software Developer Intern — **June 2015 – October 2015**
Amazon Instant Video — *London, United Kingdom*
Worked on providing an auditing infrastructure by:

- Writing a plug-in to wrap calls to backend systems to log calls and responses.
- Storing intercepted calls and pre-processing stored data in Amazon Redshift for auditing reports.

Publications

[1] Pârțachi, P.-P., White, D. R., & Barr, E. T., **Aide-mémoire: Improving a Project's Collective Memory via Pull Request-Issue Links**. In *ACM Transactions on Software Engineering and Methodology*, ACM., May, 2022. https://github.com/PPPI/a-m

[2] Pârțachi, P.-P., Dash, S. K., Allamanis, M., & Barr, E. T., **Flexeme: Untangling Commits Using Lexical Flows**. In *28th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, (ESEC/FSE 2020)*. Sacramento, California, United States; ACM, November, 2020; https://partachi.com/Flexeme

[3] Pârțachi, P.-P., Treude, C., Dash, S. K., & Barr, E. T., **POSIT: Simultaneously Tagging Natural and Programming Languages**. In *42nd International Conference*

on Software Engineering (ICSE '20).Seoul, Republic of Korea; ACM., July 2020; https://partachi.com/POSIT

[4] Pârțachi, P.-P.. **Improving Software Project Health Using Machine Learning**. PhD diss., UCL (University College London), 2020.

Teaching Experience

COMPM203 Verification and Validation — **January 2020 – July 2020**
Teaching Assistant — *University College London*
Leading problem based workshops, assisting exam setting, and exam marking

COMP103P Applied Software Development — **January 2018 – April 2018**
Teaching Assistant — *University College London*
Laboratory Supervisor and Group Project Supervisor

COMPM203 Verification and Validation — **January 2018 – April 2018**
Teaching Assistant — *University College London*
Coursework writing and marking

COMP213P Systems Engineering — **October 2017 – April 2018**
Teaching Assistant — *University College London*
Group Project Supervisor

Awards

Cambridge Commonwealth Trust 2013-2014
For the purpose of BA Computer Science Tripos at King's College, Cambridge

HMC Reduced Fee Scheme 2012
For the purpose of attending Seaford College for UK A-levels

Reviews

Conferences

- Program Committee member for: **InteNSE 2023**, Research Track at **SANER 2023**, Research Track at **SANER 2022**, Mining Challenge at **MSR 2021**.
- Sub-reviewing for: **ASE 2022**, **ISSTA 2021**, **SANER 2021**, **ICSE 2021**, Registered Studies at **ICSME 2020**, **ASE 2020**, **MSR 2020**, **FSE 2019**, **ISSTA 2019**, **ASE 2018**, **ECOOP 2018**, **ISSTA 2018**, and **MSR 2017**.

Journals

- Reviewing for: **TOSEM 2022**, **JSS 2022**, **JSS 2021**, **EMSE 2021**, and **MTAP 2020**.
- Sub-reviewing for: **EAAI 2020**, and **TSE 2017**

Technology Skills

Programming Languages: Python, Java, Haskel.
Theorem Proof Assistants: Coq.

Language Skills

Native: Romanian.
Fluent: English, Russian.
Intermediate: Czech, German.
Beginner: Japanese.