Profir-Petru Pârțachi

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Education	**Ph.D. in Computer Science**	**September 2016 – December 2020**

Centre for Research on Evolution, Search and Testing — *University College London, Gower Street, London WC1E 6BT*
Ph.D. Thesis: 'Improving Software Project Health Using Machine Learning'
Supervised by *Prof. Earl T. Barr (e.barr[at]ucl[dot]ac[dot]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., & Sugiyama, M., **Bringing Structure to Naturalness: On the Naturalness of ASTs**. In *Proceedings of the 2024 IEEE/ACM 46th International Conference on Software Engineering (ICSE'24): Companion Proceedings*, ACM., April, 2024.

[2] 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

[3] 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

[4] 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

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

Teaching Experience	**Data Mining @ SOKENDAI (NII)**	**October 2023 — January 2024**
	Teaching Assistant	*SOKENDAI/National Institute of Informatics*
	Leading the introduction to Graph Neural Networks lecture	

COMPM203 Verification and Validation **January 2018 – April 2018, January 2020 – July 2020**

Teaching Assistant *University College London*

Coursework writing and marking, 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

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: Research Track at **FSE 2025**, Research and Experience at **CAIN 2025, 2024**, Artefact Track at **ICSE 2024** , **InteNSE 2023**, Research Track at **SANER 2023, 2022**, Mining Challenge at **MSR 2021**.

– Reviewing for: **AAAI 2025**, **ICML 2024**, **ICLR 2025, 2024**, **NeurIPS 2023**.

– 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 2023, 2022**, **JSS 2022, 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.