

## Profir-Petru Pârțachi

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| Education       | <b>Ph.D. in Computer Science</b><br><i>Centre for Research on Evolution, Search and Testing</i><br><b>Ph.D. Thesis:</b> 'Improving Software Project Health Using Machine Learning'<br>Supervised by Prof. Earl T. Barr ( <a href="mailto:e.barr@ucl.ac.uk">e.barr@ucl.ac.uk</a> )  | <b>September 2016 – December 2020</b><br><i>University College London, Gower Street, London WC1E 6BT</i> |
|                 | <b>Computer Science Tripos</b><br><i>King's College, University of Cambridge</i><br>BA in Computer Science<br><b>BA Thesis:</b> 'Deck building in Hearthstone Using a Genetic Algorithm.'  | <b>September 2013 – July 2016</b><br><i>Cambridge, United Kingdom</i>                                    |
| Work Experience | <b>Post-doctoral Researcher</b><br><i>National Institute of Informatics</i><br>Research into the naturalness properties of structured representations of source code.<br>Supervised by Assoc. Prof. Mahito Sugiyama  | <b>April 2022 – now</b><br><i>Chiyoda-ku, Tokyo, Japan</i>   |
|                 | <b>Freelance Researcher</b><br><i>National Institute of Informatics</i><br>Research into the naturalness properties of structured representations of source code.<br>Consulting for Assoc. Prof. Mahito Sugiyama   | <b>April 2021 – April 2022</b><br><i>Chișinău, Republic of Moldova</i>                                   |
|                 | <b>Research Internship</b><br><i>National Institute of Informatics</i><br>Worked on the efficient processing of spatiotemporal data for anomaly detection using Graph Kernels.<br>Supervised by Assoc. Prof. Mahito Sugiyama   | <b>October 2018 – April 2019</b><br><i>Chiyoda-ku, Tokyo, Japan</i>                                      |
|                 | <b>Hardware/Software Engineer Intern</b><br><i>Computer Laboratory, University of Cambridge</i><br>Worked within the lowRISC team to provide: <ul style="list-style-type: none"><li>• Hardware implementations of DCT, IDCT, and colour space conversions for MPEG2 as AXI-stream accelerators.</li><li>• Hardware logic to interface AXI-stream accelerators with the lowRISC CPU chip.</li></ul>   | <b>June 2016 – September 2016</b><br><i>Cambridge, United Kingdom</i>                                    |
|                 | <b>Software Developer Intern</b><br><i>Amazon Instant Video</i><br>Worked on providing an auditing infrastructure by: <ul style="list-style-type: none"><li>• Writing a plug-in to wrap calls to backend systems to log calls and responses.</li><li>• Storing intercepted calls and pre-processing stored data in Amazon Redshift for auditing reports.</li></ul>   | <b>June 2015 – October 2015</b><br><i>London, United Kingdom</i>   |
|                 |  |  |
| Publications    | <ul style="list-style-type: none"><li>[1] Pârțachi, P.-P., &amp; Sugiyama, M., <b>Bringing Structure to Naturalness: On the Naturalness of ASTs</b>. In <i>Proceedings of the 2024 IEEE/ACM 46th International Conference on Software Engineering (ICSE'24): Companion Proceedings</i>, ACM., April, 2024.</li><li>[2] Pârțachi, P.-P., White, D. R., &amp; Barr, E. T., <b>Aide-mémoire: Improving a Project's Collective Memory via Pull Request-Issue Links</b>. In <i>ACM Transactions on Software Engineering and Methodology</i>, ACM., May, 2022. <a href="https://github.com/PPPI/a-m">https://github.com/PPPI/a-m</a></li><li>[3] Pârțachi, P.-P., Dash, S. K., Allamanis, M., &amp; Barr, E. T., <b>Flexeme: Untangling Commits Using Lexical Flows</b>. In <i>28th ACM Joint European Software Engineering Conference and</i></li></ul> |  |

*Symposium on the Foundations of Software Engineering, (ESEC/FSE 2020). Sacramento, California, United States; ACM., November, 2020; <https://partachi.com/Flexeme>*

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

## Teaching Experience

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|---|--|
| <b>Data Mining @ SOKENDAI (NII)</b>   | <b>October 2023 — January 2024</b>                         |
| <i>Teaching Assistant</i>   | <i>SOKENDAI/National Institute of Informatics</i>          |
| Leading the introduction to Graph Neural Networks lecture   |  |
| <b>COMPM203 Verification and Validation</b>   | <b>January 2018 – April 2018, January 2020 – July 2020</b> |
| <i>Teaching Assistant</i>   | <i>University College London</i>                           |
| Coursework writing and marking, leading problem-based workshops, assisting exam setting, and exam marking |  |
| <b>COMP103P Applied Software Development</b>  | <b>January 2018 – April 2018</b>                           |
| <i>Teaching Assistant</i>   | <i>University College London</i>                           |
| Laboratory Supervisor and Group Project Supervisor  |  |
| <b>COMP213P Systems Engineering</b>   | <b>October 2017 – April 2018</b>                           |
| <i>Teaching Assistant</i>   | <i>University College London</i>                           |
| 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 2024**, Artefact Track at **ICSE 2024**, **InteNSE 2023**, Research Track at **SANER 2023**, Research Track at **SANER 2022**, Mining Challenge at **MSR 2021**.
- Reviewing for: **AAAI 2025**, **ICML 2024**, **ICLR 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**, **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, Haskell.  
**Theorem Proof Assistants:** Coq.

## Language Skills

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