

# Profir-Petru Părătachi

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Education	Ph.D. in Computer Science <i>Centre for Research on Evolution, Search and Testing</i> Ph.D. Thesis: 'Improving Software Project Health Using Machine Learning' Supervised by Prof. Earl T. Barr ( <a href="mailto:e.barr@ucl.ac.uk">e.barr@ucl.ac.uk</a> )	September 2016 – December 2020 University College London, Gower Street, London WC1E 6BT
	<b>Computer Science Tripos</b> <i>King's College, University of Cambridge</i> BA in Computer Science <b>BA Thesis:</b> 'Deck building in Hearthstone Using a Genetic Algorithm.'	September 2013 – July 2016 Cambridge, United Kingdom
Work Experience	<b>Assistant Professor</b> <i>Institute of Science Tokyo</i> Research and Teaching position at the School of Computing, Kobayashi Laboratory	May 2025 – Present Midori-ku, Kanagawa, Japan
	<b>Post-doctoral Researcher</b> <i>National Institute of Informatics</i> Research into the naturalness properties of structured representations of source code. Supervised by Assoc. Prof. Mahito Sugiyama	April 2022 – April 2025 Chiyoda-ku, Tokyo, Japan
	<b>Freelance Researcher</b> <i>National Institute of Informatics</i> Research into the naturalness properties of structured representations of source code. Consulting for Assoc. Prof. Mahito Sugiyama	April 2021 – April 2022 Chișinău, Republic of Moldova
	<b>Research Internship</b> <i>National Institute of Informatics</i> Worked on the efficient processing of spatiotemporal data for anomaly detection using Graph Kernels. Supervised by Assoc. Prof. Mahito Sugiyama	October 2018 – April 2019 Chiyoda-ku, Tokyo, Japan
	<b>Hardware/Software Engineer Intern</b> <i>Computer Laboratory, University of Cambridge</i> 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>	June 2016 – September 2016 Cambridge, United Kingdom
	<b>Software Developer Intern</b> <i>Amazon Instant Video</i> 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>	June 2015 – October 2015 London, United Kingdom
Publications	[1] Părătachi, P.-P., & 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. [2] Părătachi, P.-P., White, D. R., & 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> [3] Părătachi, P.-P., Dash, S. K., Allamanis, M., & Barr, E. T., <b>Flexeme: Untangling Commits Using Lexical Flows</b> . In <i>28th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, (ESEC/FSE 2020)</i> . Sacramento, California, United States; ACM., November, 2020; <a href="https://partachi.com/Flexeme">https://partachi.com/Flexeme</a>	

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

<b>Teaching Experience</b>	<b>Data Mining @ SOKENDAI (NII)</b> <i>Teaching Assistant</i> Leading the introduction to Graph Neural Networks lecture <b>COMPM203 Verification and Validation</b> <i>Teaching Assistant</i> Coursework writing and marking, leading problem-based workshops, assisting exam setting, and exam marking <b>COMP103P Applied Software Development</b> <i>Teaching Assistant</i> Laboratory Supervisor and Group Project Supervisor <b>COMP213P Systems Engineering</b> <i>Teaching Assistant</i> Group Project Supervisor	<b>October 2023 – January 2024</b> <i>SOKENDAI/National Institute of Informatics</i> <b>January 2018 – April 2018, January 2020 – July 2020</b> <i>University College London</i> <b>January 2018 – April 2018</b> <i>University College London</i> <b>October 2017 – April 2018</b> <i>University College London</i>
<b>Awards</b>	<b>Cambridge Commonwealth Trust 2013-2014</b> <i>For the purpose of BA Computer Science Tripos at King's College, Cambridge</i> <b>HMC Reduced Fee Scheme 2012</b> <i>For the purpose of attending Seaford College for UK A-levels</i>	
<b>Reviews</b>	<b>Conferences</b> <ul style="list-style-type: none"><li>– Program Committee member for: Research Track at <b>ICSE 2026</b>, Research Track at <b>FSE 2025</b>, Research and Experience at <b>CAIN 2026, 2025, 2024</b>, Artefact Track at <b>ICSE 2024</b>, <b>InteNSE 2023</b>, Registered Reports at <b>MSR 2026</b>, Research Track at <b>SANER 2023, 2022</b>, Mining Challenge at <b>MSR 2021</b>.</li><li>– Reviewing for: <b>AAAI 2026, 2025, ICML 2024, ICLR 2026, 2025, 2024, NeurIPS 2025, 2023</b>.</li><li>– Sub-reviewing for: <b>ASE 2022, ISSTA 2021, SANER 2021, ICSE 2021</b>, Registered Studies at <b>ICSME 2020, ASE 2020, MSR 2020, FSE 2019, ISSTA 2019, ASE 2018, ECOOP 2018, ISSTA 2018</b>, and <b>MSR 2017</b>.</li></ul> <b>Journals</b> <ul style="list-style-type: none"><li>– Reviewing for: <b>TSE 2024 , TOSEM 2023, 2022, JSS 2022, 2021, EMSE 2021</b>, and <b>MTAP 2020</b>.</li><li>– Sub-reviewing for: <b>EAAI 2020</b>, and <b>TSE 2017</b></li></ul>	
<b>Technology Skills</b>	<b>Programming Languages:</b> Python, Java, Haskell. <b>Theorem Proof Assistants:</b> Coq.	
<b>Language Skills</b>	<b>Native:</b> Romanian. <b>Fluent:</b> English, Russian. <b>Intermediate:</b> Czech, German. <b>Basic:</b> Japanese.	