

# Tomas Petricek

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## Employment

- **Assistant Professor, Charles University, Prague**, 2022 – present

I joined the [Department of Distributed and Dependable Systems](#) at Faculty of Mathematics and Physics to pursue fundamental research on simple, open and trustworthy programming systems, using theoretical, applied and interdisciplinary research methods.

- **Lecturer, University of Kent**, 2018 – 2022

As a member of the [Programming Languages and Systems](#) group, I worked on making programming with data easy, trustworthy and accessible. I applied for grants from [EPSRC](#) (UK) and [ERC](#) (EU), [Dstl & GCHQ](#) (UK), taught graduate and undergraduate modules, supervised a PhD student and initiated interdisciplinary collaboration with a colleagues from [Department of Philosophy](#).

- **Collaborating Fellow and Visiting Researcher, The Alan Turing Institute**, 2016 – 2020

I led a project [Programming Tools for Open Data Journalism](#) funded through [Google Digital News Initiative](#), joined the flagship ATI project [Artificial Intelligence for Data Analytics](#) as a co-investigator and obtained funding from [Dstl and GCHQ](#) for a follow-up project on semi-automated data wrangling.

- **Post-doctoral Researcher and Contractor, Microsoft Research Cambridge**, 2014 – 2016

I led the development of an open-source projects focused on doing data science with F#. Resulting research was awarded a [Distinguished Paper](#) award and selected as an [SIGPLAN Research Highlight](#).

## Education

- **PhD, Computer Laboratory, University of Cambridge**, 2011 – 2016

Thesis [Context-aware Programming Languages](#) develops coeffects, a theory for tracking information about environment in which programs are executed. I also devised a novel way of presenting the results in the form of widely read interactive essay ([tomasp.net/coeffects](http://tomasp.net/coeffects)). Supervised by [Prof. Alan Mycroft](#).

- **BSc and MSc, Computer Science, Charles University, Prague**, 2004 – 2010

MSc completed with distinction. Final thesis [Reactive Programming with Events](#), supervised by Dr Don Syme, developed abstractions for reactive and concurrent programming that were presented in workshop papers.

## Research Funding

- **PRIMUS Research Programme, Charles University**, 2024 – 2028

Awarded €610,000 for research on [Types for data-centric programming](#) to cover 60% FTE of my time, two post-docs for 24 months each and 2 PhD students for the duration of the project.

- **Fellowship, ACM History Committee**, 2018

Awarded \$4000 to study the history of programming errors, looking at technical, formal and social means for mitigating them, resulting in a work-in-progress book [Cultures of Programming](#).

- **Dstl & GCHQ grants, The Alan Turing Institute**, 2017 – 2020

Awarded £420,000 for research on tooling for data science to cover a post-doc for 6 months, Research Software Engineer for 3 years, 3 summer interns, my salary/buyout for 1 day/week.

- **Innovation Fund, Google Digital News Initiative**, 2016

Awarded €50,000 for research on [Programming tools for data journalism](#). My proposal was selected as one of 128 out of 1,200 and allowed me to develop an independent research project at The Alan Turing Institute.

- **Travel Grants, ACM**, 2010, 2012, 2014

As an ACM Student Research Competition finalist, I was repeatedly awarded travel grants covering travel and registration expenses for top-tier programming language conferences PLDI 2010, ICFP 2012, ICFP 2014.

## Awards

- **Reviewers' Choice Award**, «Programming» 2023. Awarded for a paper on programming systems.
- **Reviewers' Choice Award**, «Programming» 2020. Awarded for a paper on data exploration tools.
- **ACM SIGPLAN Research Highlight**. My first-author paper was chosen as an ACM SIGPLAN Research Highlight, making it one of the three best programming language papers of the past year.
- **Editors' Choice Award**, «Programming» 2018. Awarded for a paper on the history of monads.
- **Reviewers' Choice Award**, «Programming» 2017. Awarded for a paper on the history of errors.
- **Distinguished Paper Award**, PLDI 2016. Awarded for a paper on types for semi-structured data
- **ACM Student Research Competition**. 1st place at ICFP 2014 and 2nd place at ICFP 2012
- **Microsoft MVP Award**, 2004 – 2023. Awarded annually for contributions to the F# community

## Project Participation

- **Language, Picture, Gesture: Forms of Discursivity** (Junior Researcher), UNCE, MFF UK (2024 – present)  
Studying programming and interactive systems from a broader inter-disciplinary perspective.
- **ExtremeXP** (Member), Horizon Europe, MFF UK (2023 – present)  
Contributing to the design of novel data visualization tools and gamification systems.
- **PROGRAMme: What is a computer program?** (Member), ANR France (2017 – present)  
Interdisciplinary collaborative project, serving as co-editor for the resulting work-in-progress book.
- **AIDA: AI in Data Science** (Co-Investigator), The Alan Turing Institute (2016 – 2018)  
Joined and reshaped the project to allow integration of work by 3 post-docs and 1 PhD student.

## Publications

I'm the author of 17 papers in highly selective conferences and journals, academic monograph that will be published by Cambridge University Press, as well as 24 other conference and workshop publications. The following lists selected interdisciplinary publications.

- **Tomas Petricek**. *Cultures of Programming: The Development of Programming Concepts and Methodologies*. 351 pages, Cambridge University Press, ISBN 9781009492379, 2025  
The book documents important episodes from the history of programming, interprets them using a novel conceptual framework and provides programmers, computer scientists and historians of computing with a comprehensive account of the history of programming.
- **Tomas Petricek**, Joel Jakubovic. *Complementary Science of Interactive Programming Systems* (Extended Abstract). HaPoC '21: 6th International Conference on the History and Philosophy of Computing, <https://tomasp.net/academic/drafts/complementary>, 2021
- **Tomas Petricek**. *Programming as Architecture, Design, and Urban Planning*. Onward! '21: Proceedings of the 2021 ACM SIGPLAN International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software, pp 114-124, [10.1145/3486607.3486770](https://doi.org/10.1145/3486607.3486770), 2021
- **Tomas Petricek**. *What we talk about when we talk about monads*. The Art, Science and Engineering of Programming, vol. 2, issue 3, no. 12, [10.22152/programming-journal.org/2018/2/12](https://doi.org/10.22152/programming-journal.org/2018/2/12), 2018
- **Tomas Petricek**. *Miscomputation in software development: Learning to live with errors*. The Art, Science and Engineering of Programming, vol. 1, issue 2, no. 14, [10.22152/programming-journal.org/2017/1/14](https://doi.org/10.22152/programming-journal.org/2017/1/14), 2017
- **Tomas Petricek**. *Against a Universal Definition of 'Type'*. Onward! '15: Proceedings of the 2015 ACM SIGPLAN International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software, pp. 254-266, [10.1145/2814228.2814249](https://doi.org/10.1145/2814228.2814249), 2015
- **Tomas Petricek**. *What Can Programming Language Research Learn from the Philosophy of Science?*. AISB '14: Proceedings of the 40th Annual Convention of the Society for the Study of Artificial Intelligence and the Simulation of Behaviour, <https://tomasp.net/academic/papers/philosophy-pl/>, 2014