



## **XIX. Call for the Junior Fund, 2026**

### **Faculty Proposal for a Research Project**

Faculty:	Faculty of Mathematics and Physics
Department:	Department of Distributed and Dependable Systems
<b>Research project title</b>	Theory and Practice of Programming Systems
Project description	<p>Programming languages research is enormously successful area of computer science that has transformed everyday practice of programming – but programming languages research has an immense blind spot.</p> <p>Programs are not created just by writing code using programming languages, but by interacting with rich, stateful and interactive programming systems or environments. The aims of the project are to devise new theories of programming systems and imagine new interactive programming systems.</p> <p>There is a number of possible research directions that are in the broad scope of the project. They include, but are not limited to: (i) development of formal models of interactive programming systems in order to study their properties; (ii) exploring programming systems that reduce the separation between the programmer and the user, as well as the gap between program editing and program execution; (iii) design of AI-assisted programming systems that are built around interaction with an environment rather than around code.</p>
What do we offer?	<p>Department of Distributed and Dependable Systems conducts research on software architectures, programming languages and systems, adaptation, model-driven development and testing, formal verification of software, performance measurement and modelling.</p> <p>You will be working as part of the <a href="#">Programming Languages and Systems group</a>, which focuses on understanding, designing and implementing programming languages and systems that make programming simpler, more efficient, more accessible and trustworthy.</p> <p>We are an international group and our recent work was published at top programming language and human-computer</p>



	<p>interaction conferences (OOPSLA, POPL, PLDI, UIST), but also as academic monographs (Cambridge University Press).</p> <p>The offered post-doc salary is equivalent to 2800 EUR/month.</p>
Profile of an ideal candidate:	<ul style="list-style-type: none"> <li>• The ideal candidate will have a PhD (or be close to completion) in research related to programming languages and systems or human-computer interaction.</li> <li>• They have demonstrated their expertise by having their work published at high-quality conferences or journals in their field.</li> <li>• We welcome candidates who can identify and explore novel research directions within the scope of the project.</li> <li>• Prospective candidates are encouraged to contact the supervisor informally in order to discuss possible projects and research directions prior to submitting the formal application.</li> </ul>
Position available from:	October 1, 2026
Workplace location:	Department of Distributed and Dependable Systems
Supervisor(s):	Tomáš Petříček
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Application deadline:	May 15, 2026
Applicants must submit required documents to:	<a href="mailto:petricek@d3s.mff.cuni.cz">petricek@d3s.mff.cuni.cz</a>