

## PROJECT PARTNER SEARCH FORM

- I offer my expertise to participate as a Partner in a Horizon Europe Project
- I am planning to coordinate a project and I am looking for Project Partners

### TOPICS OF INTEREST

Collaborative intelligence – combining the best of machine and human (AI Data and Robotics Partnership) (RIA), TOPIC ID: HORIZON-CL4-2024-HUMAN-01-07

Novel paradigms and approaches, towards AI-powered robots– step change in functionality (AI, data and robotics partnership) (RIA), TOPIC ID: HORIZON-CL4-2024-DIGITAL-EMERGING-01-03

Piloting emerging Smart IoT Platforms and decentralized intelligence (IA),  
TOPIC ID: HORIZON-CL4-2024-DATA-01-03

Platform Building, standardisation and Up-scaling of the ‘Cloud-Edge-IoT’ Solutions (Horizontal Activities - CSA), TOPIC ID: HORIZON-CL4-2024-DATA-01-05

Explainable and Robust AI (AI Data and Robotics Partnership) (RIA), TOPIC ID: HORIZON-CL4-2024-HUMAN-01-06

### PARTNER INFORMATION

The Institute of Computer Technology and Informatics, situated within the Faculty of Natural Sciences at University of Ss. Cyril and Methodius in Trnava, Slovakia, has a keen interest in becoming a part of a consortium.

Our primary areas of focus encompass the design and analysis of AI, machine learning and statistical methods, deep neural networks design employed in robot control and signal processing. Furthermore, our expertise extends to computer network cybersecurity, with a specific emphasis on securing Internet of Things (IoT) devices, as well as the development of human-machine interaction, including serious games.

We offer broad vertical expertise and comprehensive solutions. Our strength lies in our ability to bridge different research areas; we have analytical skills and the ability to solve complex problems and devise effective strategies and solutions. Despite being a small team, we are highly adaptable, capable of adjusting to project challenges and working within various budget constraints. In international project collaboration, we maintain proactive approach, regularly providing detailed progress reports and identify opportunities in our part of the project.

#### **Description of the Legal Entity**

University of Ss. Cyril and Methodius in Trnava, Slovakia is a dynamic and thriving institution. Founded in 1992, it is of moderate size among Slovakian universities and offers an extensive selection of bachelor's, master's, and doctoral programs in humanities, social sciences, and natural

<https://eraportal.sk/horizont-europa/>

sciences. Moreover, it actively collaborates as a partner in various international research and educational initiatives.

National and international collaborations: <https://www.ucm.sk/en/cooperation/>

Important projects, including Horizont: <https://www.ucm.sk/sk/vyznamne-projekty-03/>

<input checked="" type="checkbox"/> Higher Education	<input type="checkbox"/> Research Institution	<input type="checkbox"/> Public Administration
<input type="checkbox"/> Industry /SME	<input type="checkbox"/> NGO	<input type="checkbox"/> Other: <i>Please specify</i>

### **Description of the (Research) Team**

prof. Jiří Pospíchal, PhD., has a long-standing interest in adaptive optimization techniques and computational intelligence methods, and has supervised six successful Ph.D. students on these topics. <https://scholar.google.sk/citations?user=9OOKL-oAAAAJ>

prof. Iveta Dirgová Luptáková, PhD. has a long-standing interest in computational methods and network issues. <https://scholar.google.sk/citations?user=WkFOg6UAAAAJ>

prof. Ladislav Huraj, PhD. - has long been involved in computational methods and security of computer systems. [https://scholar.google.sk/citations?user=1N\\_oHWQAAAAJ](https://scholar.google.sk/citations?user=1N_oHWQAAAAJ)

Assoc. prof. Michal Čerňanský, PhD. investigates optimization techniques and neural networks, he has more than 220 citations in the Scopus database in the field and h-index 7. <https://scholar.google.com/citations?user=AIU58f4AAAAJ>

Assoc. prof. Marek Šimon, PhD. is an expert in network security, DDoS and network attack detection, has published many articles in this field and has close links to practice.

<https://scholar.google.sk/citations?user=fulgjaEAAAAJ>

Miroslav Őlvecký, PhD. has the ability to process and publicize the results achieved in various fields of applied computer science and to link them to practice.

<https://scholar.google.sk/citations?user=MEvi8nUAAAAJ>

Katarína Pribilová, PhD. will deal with the actual testing of the proposed mechanisms.

<https://scholar.google.com/citations?hl=sk&user=x5Dym0IAAAAAJ>

Assoc. prof. Darja Gabriška, PhD. is able to analyze algorithms also from the security point of view and will participate in the analysis and implementation of individual mechanisms.

<https://scholar.google.sk/citations?user=IsFWRN4AAAAJ>

MSc. Martin Kubovčik - his research interests include machine learning, artificial intelligence, and deep neural networks, where he published already three papers in journals with a high IF.

[https://scholar.google.com/citations?user=0lf\\_Ki0AAAAJ](https://scholar.google.com/citations?user=0lf_Ki0AAAAJ)

Assoc. prof. Jana Jurinová, PhD. – her research is oriented to human-computer interaction and serious games. <https://scholar.google.sk/citations?user=nFrSrNoAAAAJ&hl=sk>

Marián Hostovecký, PhD. is interested in human-computer interaction and serious games.

<https://scholar.google.com/citations?hl=en&user=EEyqCrEAAAAJ>

**Expertise of the Team Leader**

Prof. Jiří Pospíchal is an expert in neural networks, network science, optimization metaheuristics and other machine learning methods, and in cognitive science. He is a co-author of 2 monographs, 73 journal papers and over 52 peer-reviewed conference papers, with Scopus H-index = 13. He is a member of 3 journal editorial boards, a member of numerous conference scientific committees and scientific societies, successfully supervises 6 PhD. students and have lead or participated in various national and international projects.

**Potential role in the project**

- Research  Training  
 Dissemination  Other: *Please specify*

scientific coordinator, workpackage leader

Already experience as a	Coordinator	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	Partner	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	Expert Evaluator	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
<b>CONTACT DETAILS</b>			

<b>Contact Person:</b> Prof. Jiří Pospíchal
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<b>Organization Website:</b> <a href="https://www.ucm.sk/en/">https://www.ucm.sk/en/</a>
<b>Contact Person Webpage:</b> <a href="https://kai.fpv.ucm.sk/zamestnanci/pospichal/pospichal.php#">https://kai.fpv.ucm.sk/zamestnanci/pospichal/pospichal.php#</a>

Date: 27/06/2023

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