Univerza v Mariboru

FRAMEWORK PROGRAMME OF EARLY STAGE RESEARCHER TRAINING[1]

1. BASIC DATA

Mentor's name and surname	**Aleš Hace**	Mentor's register number at ARIS (SICRIS)**:**	**15373**
Mentor's e-mail:	ales.hace	Mentor's tel. no.:	02 2207301
Research programme (RP) leader's name and surname:	Mitja Truntič	RP leader's register number at ARIS (SICRIS):	25427
Title of research programme:	Mechatronic Systems	RP's Register number at ARIS (SICRIS):	P2-0028
Research organisation (RO) of University of Maribor, where training shall be conducted:	FERI	RO Register number at ARIS (SICRIS):	796
Research field according to ARIS classification:	2.06, 2.10	Research field according to Ortelius classification (EURAXESS)	15.11, 37.31

2. DEFINITION OF RESEARCH PROBLEM AND GOALS OF DOCTORAL RESEARCH[2]

Starting point of research task of the early stage researcher and its position in the research programme, where the mentor is included, work hypothesis, research goals and foreseen result with emphasis on an original contribution to science:

The training of the young researcher will take place at the doctoral school of the Faculty of Electrical Engineering, Computer Science and Informatics. Research will be in the field of robotics towards new and improved approaches to robot-human interaction and their flexibility in practical applications. Collaborative robots represent a relatively new paradigm in the design of robotization of production processes, but also a research challenge, as practical robotic systems of this kind still remain relatively primitive, and effective applications of collaborative robotics are consequently severely lacking. Therefore, we want to direct the young researcher to the field of robotics using

[1] Term early stage researcher (ESR) is written in male form and used as neutral for women and men.

[2] Research and study programme of training have to harmonise with contents of the research programme, where the mentor is a member.

advanced collaborative robotic systems, which may include haptic interaction, advanced visual systems and augmented reality, and in the future, artificial intelligence as well, to improve autonomous performance, flexibility, learning and user experience. We anticipate that the research will contribute to the advanced robotization of new areas of production processes, which we want to confirm after theoretical study and computer simulations with a practical demonstration in a laboratory case.
Electrical Engineering The position of Young Researcher will be placed in the Mechatronic Systems program (P2-0028). The work will be carried out in accordance with the guidelines and objectives of the program group in the segment of industrial robots, which represent typical mechatronic systems.

3. STUDY PROGRAMME

Foreseen study programme, to which early stage researcher shall be enrolled in academic year 2025/2026:

Electrical Engineering

4. DESCRIPTION OF WORK AND TASKS

Research work in the field of robotics

5. REQUESTED LEVEL OF EDUCATION

8., master degree

6. REQUESTED FIELD OF EDUCATION

electrical engineering,
mechatronics,
computer science,
mechanical engineering

7. KLASIUS SRV

18202, Education leading to doctorate of science
(third Bologna cycle)/Doctorate of science

8. KLASIUS P

0714, Electronics and automation
072, Manufacturing and processing

9. REQUESTED KNOWLEDGE

robotics, math, programming

10. REQUESTED SPECIAL REQUIREMENTS

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

11. REQUESTED LANGUAGES

English

12. REQUESTED WORK EXPERIENCE

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

13. FORESEEN POSTDOCTORAL TRAINING

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

Mentor's signature:

Aleš Hace Digitally signed by Aleš Hace Date: 2025.02.04 13:51:20 +01'00'

Research programme leader's signature:

MITJA TRUNTIC 2025.02.04 14:31:49 +01'00'

Name and surname of Dean or authorised person[3]:
Kliknite ali tapnite tukaj, če želite vnesti besedilo.

Signature of dean or authorised person:

Gorazd Štumberger Digitalno podpisal Gorazd Štumberger Datum: 2025.02.05 11:26:19 +01'00'

Barbara Ojsteršek Digitalno podpisal Barbara Ojsteršek Datum: 2025.02.05 09:35:59 +01'00'

Place and date:

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

Kliknite ali tapnite tukaj, če želite vnesti datum.

[3] The training program is signed by the dean of the member where the ESR's employment and training will take place.

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