

**SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA**  
**Faculty of Chemical and Food Technology**

**SUMMARY OF EDUCATIONAL AND SCIENTIFIC RESEARCH ACTIVITIES  
ON THE APPLICATION FOR HABILITATION PROCEEDINGS AS ASSOCIATE  
PROFESSOR OR FOR APPOINTMENT PROCEDURE FOR PROFESSOR**

**in the field:** Automation

Name and surname: Radoslav Paulen  
Born (date and place): 27. 12. 1984, Trnava  
Academic and scientific degrees (title and year of award): Ing., 2008; PhD., 2012; doc., 2017  
Functional classification: docent (associate professor)  
Workplace: Faculty of Chemical and Food Technology, STU in Bratislava  
Employment history: 2012 – 2017 Technische Universität Dortmund  
2017 – FCHPT STU in Bratislava

**1) Pedagogical activity**

1.1 Lectures (subject, period – academic years from-to, scope – number of semesters and number of hours per week)

Subject	Period	Number of semesters	Number of hours per week
Process Optimization	05/2013 – 07/2016	2	2
Introduction to Process Dynamics and Control	10/2013 – 02/2017	4	2
Process Performance Optimization	10/2013 – 02/2017	4	3/4
Introduction to Process Control	02/2018 – 06/2018	1	2
Selected Topics from the Theory of Automatic Control	02/2021 – 06/2023	2	2
Computer-based simulation	02/2021 – 06/2023	1	2
Dynamic Systems	02/2021 – 06/2026	4	2
Identification	02/2021 – 06/2026	4	2
Modeling in the Process Industry	09/2023 – 02/2026	3	2
Modeling and Control of Biotechnological Processes	02/2023 – 06/2025	2	2
Advanced Modeling and Simulations	02/2023 – 06/2026	1	2

1.2 Seminars and laboratory exercises (Subject, Period – academic years from-to, scope – number of semesters and number of hours per week)

Seminars

Subject	Period	Number of semesters	Number of hours per week
Predictive Control	02/2010 – 05/2010	1	3
Batch Process Operations	10/2012 – 02/2013	1	1
Automatic Control Theory I	09/2017 – 02/2021	2	3
Automatic Control Theory II	02/2018 – 05/2018	1	3

### Laboratory exercises

Subject	Period	Number of semesters	Number of hours per week
Laboratory exercises on the basics of automation	02/2009 – 05/2009	1	4
Integrated management in the process industry	09/2009 – 12/2009	1	4
Informatization and Industrial Information Systems II	09/2010 – 12/2010	1	2
Operating systems	02/2011 – 05/2011	1	2

#### 1.3 Supervision of doctoral students: **4**

- Number of successfully trained: **1**
- Number of currently trained students: **3 (1 after dissertation exam)**

#### 1.4 Supervision of final diploma theses - **Number of: 14**

Period	Student	Title of work
2010	Černá Katarína	Creating a graphical user interface for global optimization
2010	Repčíková Ivana	Global and Dynamic Optimization of Processes
2010	Turayová Eva	Optimal management of liquid reservoirs
2019	Boroš Daniel	Two-level optimization methods
2020	Kintler Matej	Guaranteed identification and its use for hybrid modeling
2021	Gömöry Martin	Modeling and optimization of laboratory membrane separation operations
2021	Križan Darko	Software Sensors for Industry
2021	Mateáš Michal	Optimal design of dynamic experiments
2023	Bujdáková Martina	Data-based Input-output System Identification
2023	Mészárosová Tímea	Advanced Control of a Laboratory Distillation Column
2023	Mošková Zuzana	Optimization of RFID Chip Placement in a Tire
2024	Bíreš Martin	Modeling and Optimal Operation of an Alkylation Unit
2024	Ružička Matej	Modeling and Optimal Operation of a Forward Osmosis Process
2025	Micherda Marko	Advanced Control of a Laboratory Distillation Column

#### 1.5 Supervision of final bachelor theses - **Number of: 7**

Period	Student	Title of work
2010	Jelemenský Martin	Optimal process control
2010	Petáková Lívia	Optimal process control
2018	Šatura Lukáš	Modeling and Optimization of Membrane Process Operation
2020	Smetana Mikuláš	Modeling laboratory membrane separation
2021	Mészárosová Tímea	Modeling a laboratory distillation column in gPROMS ModelBuilder
2023	Kruhliak Kateryna	Modeling and design of process control in the gPROMS ModelBuilder environment
2024	Gaborčík Jakub	Experimental operation of the membrane process

#### 1.6 Student supervision within the ŠVOČ (Number of, or placement in the faculty or former national round): **7**

1.7 College textbooks (category **ACA, ACB, ACC** a **ACD**) - **Number of: 0**

1.8 Lecture notes (category **BCI** a **BCK**) - **Number of: 2 (2 x 3 AH)**

Fikar, M. [40%] – Klaučo, M. [30%] – **Paulen, R.** [30%]: *Theory of Automatic Control I. Practice Examples*, FCHPT STU in Bratislava, 2022.

**Paulen, R.** [100%]: *Dynamické systémy*, FCHPT STU in Bratislava, 2026.

## **2) Publication and other scientific activity (state the numbers)**

*(The list of publication activities is processed in accordance with Decree No. 456/2012 of the Ministry of Education, Science and Research on the central register of publication activities and the central register of artistic activities - for all collective works, indicate the applicant's share in percentages)*

2.1 Original scientific papers in foreign and domestic CC journals (category **ADC** a **ADD**) -

**Number of: 30**

**of which as 1st author - Number of: 9**

2.2 Original scientific papers in foreign and domestic journals registered in the Web of Science or SCOPUS databases (category **ADM** a **ADN**) - **Number of: 2**

2.3 Original scientific papers in other foreign and domestic journals (category **ADE** a **ADF**) -

**Number of: 3**

2.4 Original scientific papers in foreign and domestic peer-reviewed **non-conference** proceedings, monographs (category **AEC** a **AED**) - **Number of: 12**

2.5 Published **invited** papers in proceedings of foreign and domestic scientific conferences (**include ISBN in the list**) ( **AFA** and **AFB** category ) :

- in the world language<sup>x/</sup> - **Number of : 2** of which with ISBN - **Number of : 2**

- **in the national language - Number of : 0** of which with ISBN - **Number of : 0**

2.6 Published contributions in proceedings of foreign and domestic scientific conferences (**also include ISBN in the list**) ( **AFC** and **AFD** category ) :

- in the world language<sup>x/</sup> - **Number of : 85** of which with ISBN - **Number of : 85**

- in the national language - **Number of : 0** of which with ISBN - **Number of : 0**

2.7 Patent applications, utility model applications, trademark applications, etc. (category **AGJ**) - **Number of: 0**

2.8 Abstracts of scientific papers in foreign and domestic peer-reviewed journals and journals registered in the Web of Science or SCOPUS databases (category **AEG, AEH** a **AEM, AEN**) - **Number of: 0**

2.9 Abstracts of invited and other contributions from foreign and domestic scientific conferences, which were published in the conference proceedings (**also include ISBN in the list**) (category **AFE, AFF** a **AFG, AFH**) - **Number of: 6**

- in world language<sup>x/</sup> - **Number of: 22** of which s ISBN - **Number of: 7**

- in national language - **Number of: 0** of which s ISBN - **Number of: 0**

2.10 Posters from foreign and domestic scientific conferences (category **AFK** a **AFL**) - **Number of: 0**

of which: – foreign<sup>xxx/</sup> - **Number of: 0** – domestic - **Number of: 0**

2.11 Monographs and chapters in monographs<sup>xx/</sup> (category **AAA, AAB, ABA, ABB, ABC, ABD**):

in world language<sup>x/</sup> - **Number of AH: 11**

in national language - **Number of AH: 0**

2.12 Lectures at foreign scientific events<sup>xxx/</sup> (**mark the personally presented in the list**) – **Number of: 67**

of which: - personally delivered invited lectures - **Number of : 0**

- personally delivered registered lectures - **Number of : 15**

2.13 Lectures at domestic scientific events (**mark in the list those delivered in person**) – **Number of: 18** of which personally delivered - **Number of: 4**

2.14 Funds received in € (**only stated by the responsible researcher**):

Grants:

VEGA:

52 000 eur (VEGA 1/0263/25, 2025 – 2029), 78 000 eur (VEGA 1/0691/21, 2020 – 2024)

APVV:

ŠPVaV:

Other:

20 000 eur (projects DAAD, bilateral APVV in 2019 - 2024)

Extra-budgetary resources:

- international projects:

140,000 euros (H2020 MSCA-IF no. 790017, 2019 – 2022)

Other:

240,000 euros (VAIA: Fellowships for excellent researchers R2-R4 no. 09I03-03-V04-00530, 2024 – 2026), 99,000 euros (VAIA Bridging ERC grants no. 09I01-03-V05-00002, 2025 – 2026)

2.15 Citations (**numbers**):

SCI: **371**

in books: **0**

other: **0**

(The list of citations is processed according to *Decree No. 456/2012 of the Ministry of Education, Science and Research on the central register of publication activity and the central register of artistic activity* )

In Bratislava, on 31. 1. 2026

prof. Ing. Miroslav Fikar, DrSc.

.....  
name and signature of the institute director

.....  
signature of the applicant