

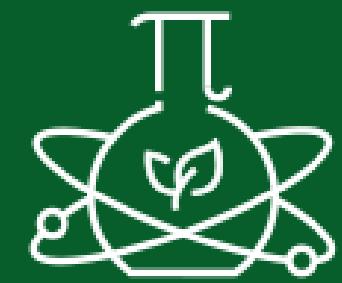
UPJS

wisdom of the past - **knowledge** of
the present - **education** of the future



**Pavol Jozef Šafárik University
in Košice**

Faculty of Science
Michal Gallay vice dean



FACULTY OF SCIENCE

PAVOL JOZEF ŠAFÁRIK UNIVERSITY
IN KOŠICE

200 academic staff
100 support staff
900 students





výročie Prírodovedeckej fakulty UPJŠ

60 years of changing the world by science



60 years of changing the world by science



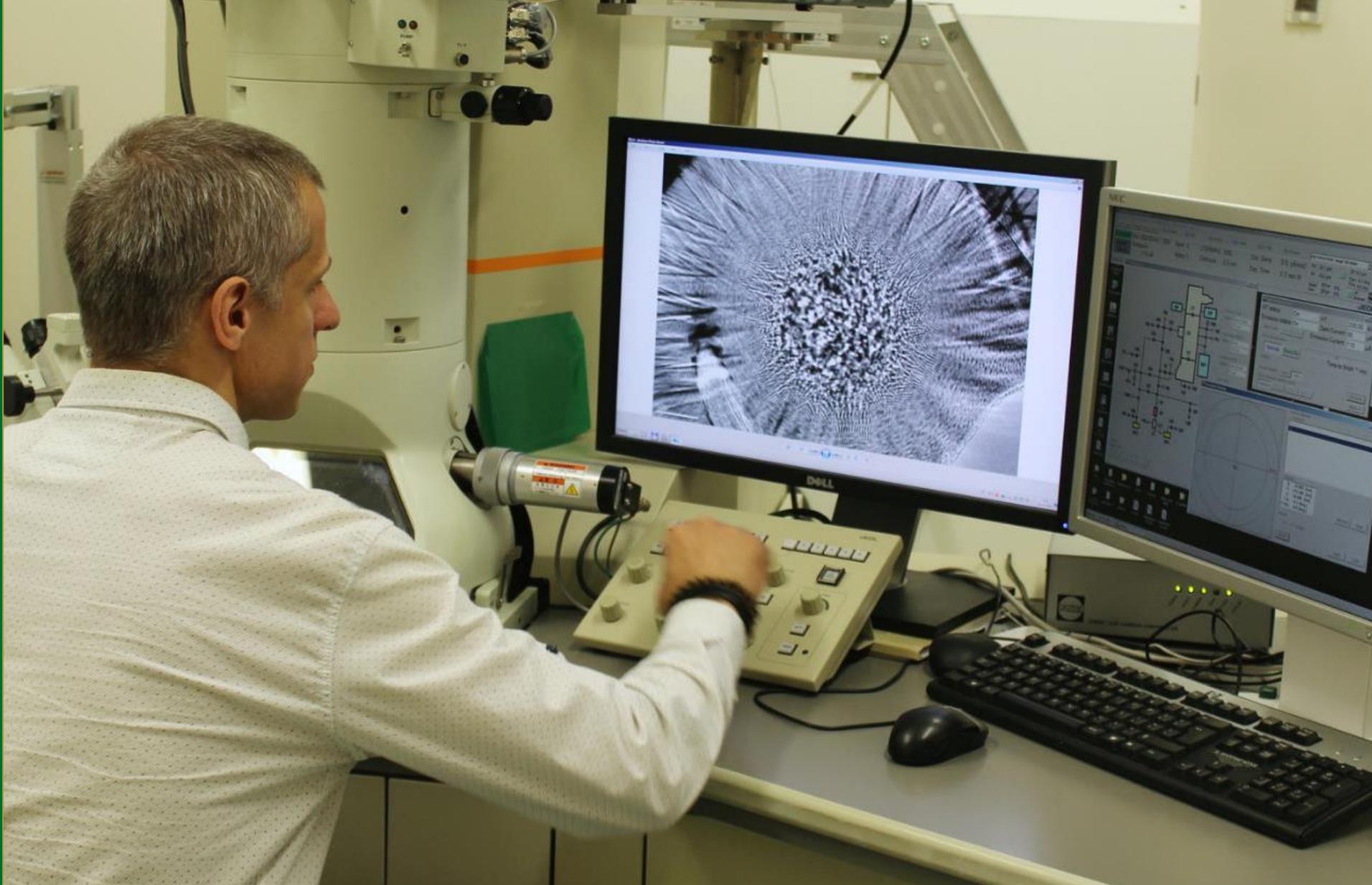
60 years of changing the world by science

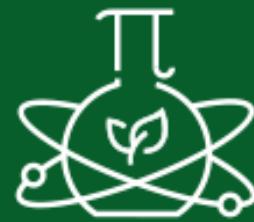


60 years of changing the world by science

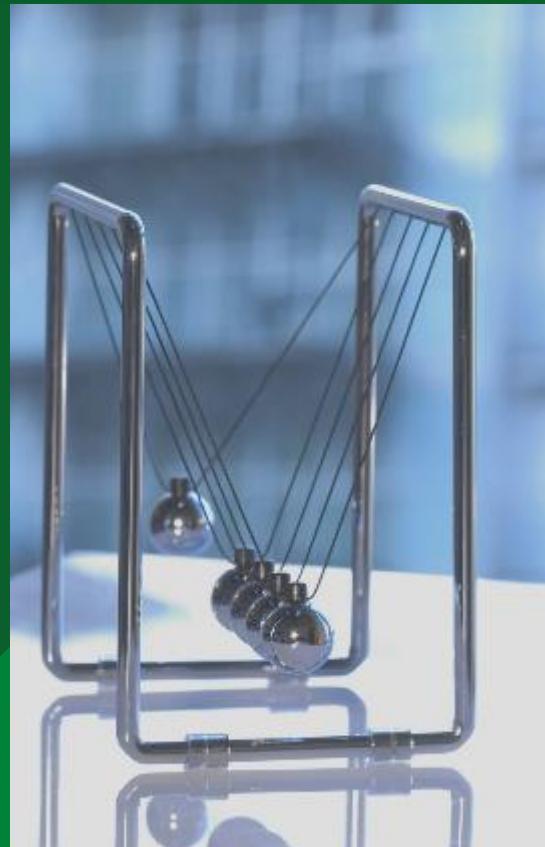


60 years of changing the world by science





FACULTY OF SCIENCE – Research & Education units



INSTITUTE
OF PHYSICS

55 acad.staff



INSTITUTE
OF CHEMISTRY

46 acad.staff



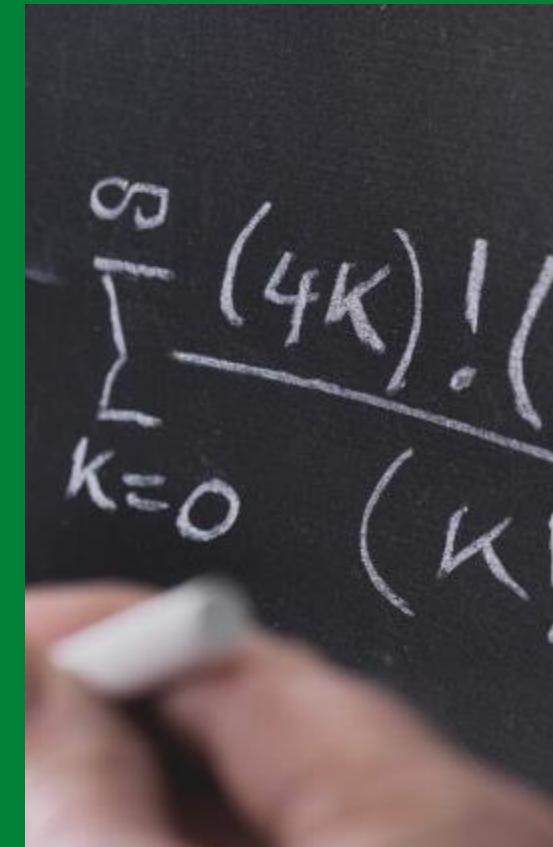
INSTITUTE
OF BIOLOGY
AND ECOLOGY

52 acad.staff



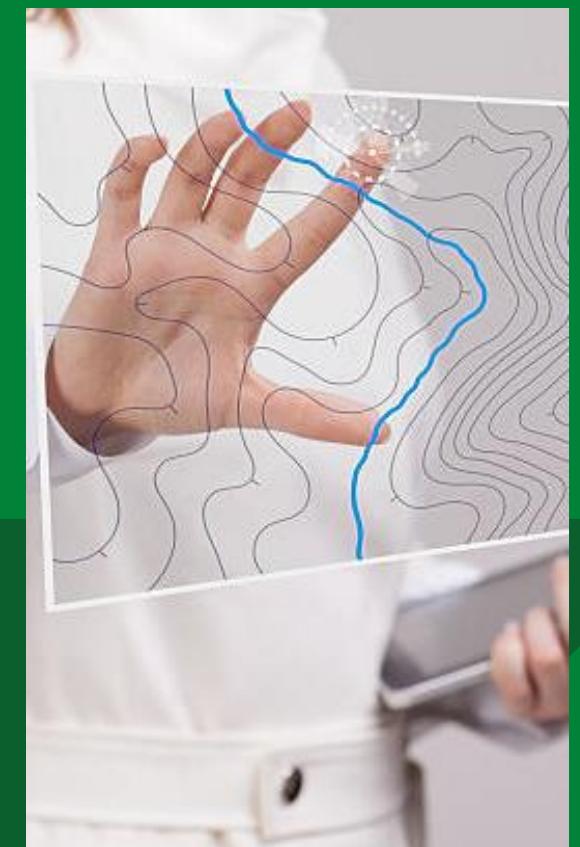
INSTITUTE
OF INFORMATICS

21 acad.staff



INSTITUTE
OF MATHEMATICS

26 acad.staff



INSTITUTE
OF GEOGRAPHY

14 acad.staff



RESEARCH AND SCIENCE

Excellent infrastructure and research teams

Faculty of Science produces high-quality research from various aspects and in various disciplines. Our strengths are concentrated in **10 centres of excellence, 2 university parks, and several laboratories.**



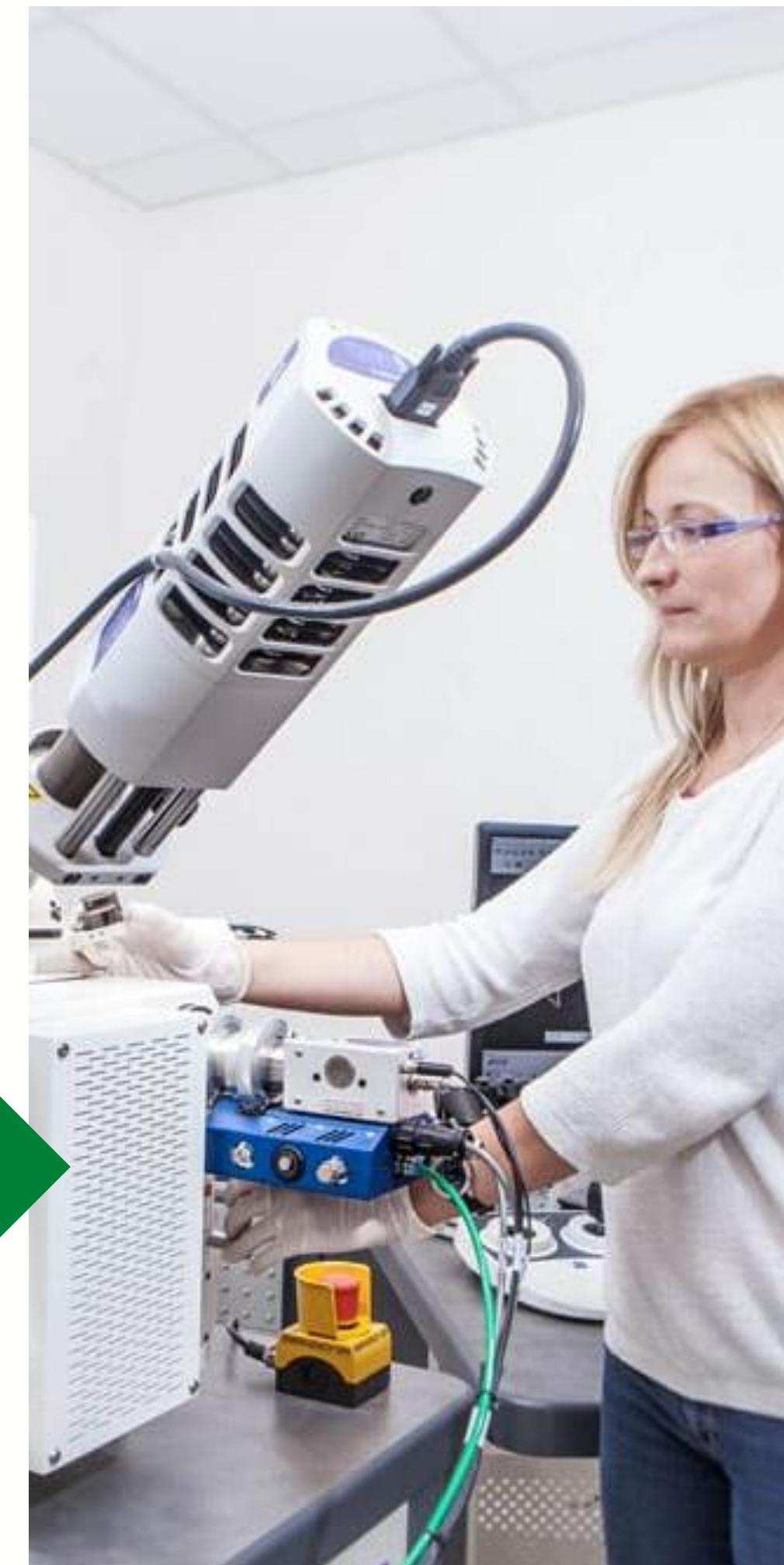


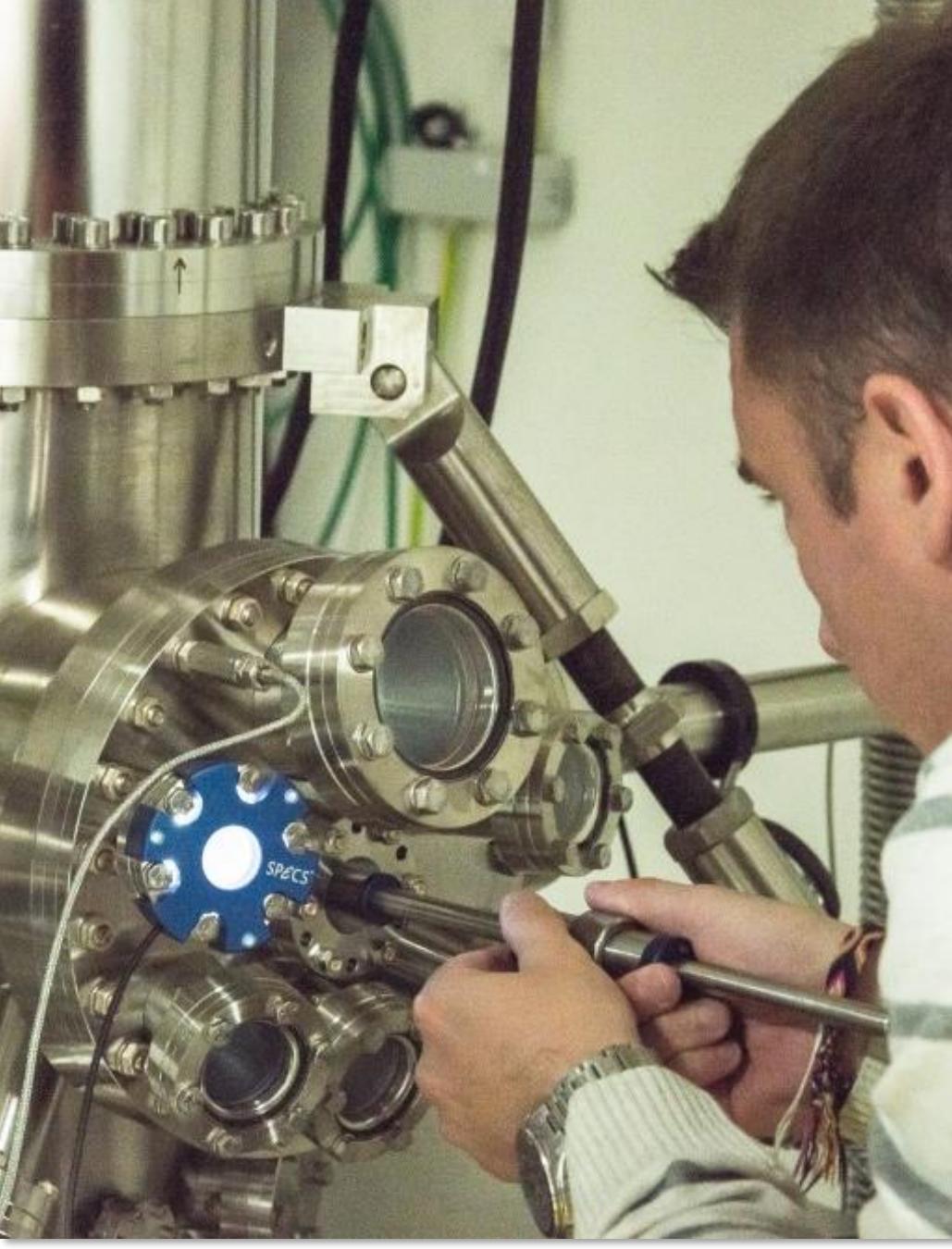
UNIVERSITY RESEARCH PARK TECHNICOM

- Partner with Technical University in Košice
- Information and communication technologies
 - Electronics, Automation, Management systems
 - Environmental and Civil Engineering

RESEARCH CENTRE PROMATECH

- Partner with Slovak Academy of Science
- National research centre for progressive materials and technologies



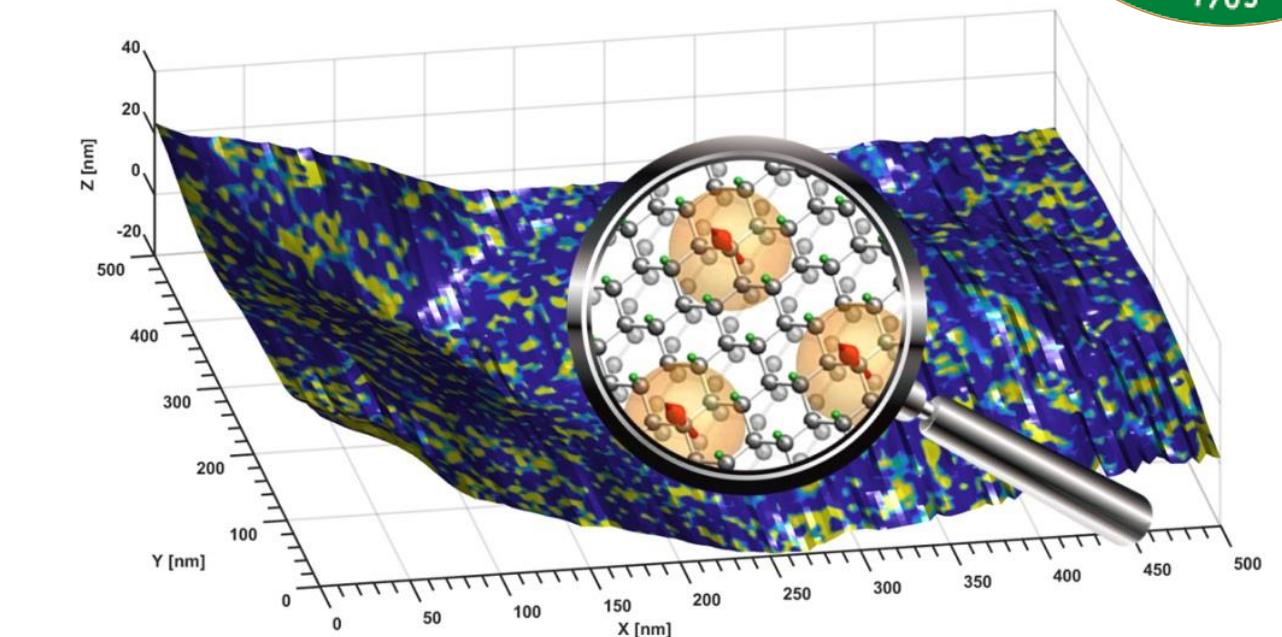


$$\frac{(n-k)!}{(k+1) \cdot k! \cdot (n-k)!} \cdot \frac{(k+1)! \cdot (n-(k+1))!}{(k+1) \cdot n!} + \frac{n! \cdot (n-k)!}{(k+1) \cdot n! + b \left(\sum_{i=0}^k \binom{n}{i} \cdot (n-k)^i \right)} V$$
$$\frac{(k+1)! \cdot (n-k)!}{(k+1) \cdot n! + b \left(\sum_{i=0}^k \binom{n}{i} \cdot a^i b^{n-i} \right)} + P_1 + V_1$$
$$\frac{(k+1)! \cdot k! \cdot (n-k)!}{((k+1) \cdot n!)^2 + \left(\sum_{i=0}^k \binom{n}{i} \cdot a^i b^{n-i} \right)^2} u_1^2 + P_1 + V_1$$
$$\frac{(k+1)! \cdot (n-k)!}{(k+1) \cdot n! + \left(\sum_{i=0}^k \binom{n}{i} \cdot a^i b^{n-i} \right)^2} + b$$
$$\frac{(k+1)! \cdot (n-k)!}{(k+1) \cdot n! + \left(\sum_{i=0}^k \binom{n}{i} \cdot a^i b^{n-i} \right)^2} K = 1 - \sum_{n=1}^{\infty} \frac{1}{(2n-1)^5} \cdot \frac{(n+1)!}{(n+k)! \cdot b^{n+1}}$$
$$\frac{(n+1)!}{(n+k)! \cdot b^{n+1}} = \frac{273.15}{(n+k+1)!}$$



TOP RESEARCH TEAMS

- Quantum Magnetism and Nanophysics (QMAGNA)
- The Research Team of Bioactive Substances for Biomedical Applications (Bioaktiv)
- Excellent Team for the Research into Atherosclerosis (EXTASY)
- Team for Top Research into Anorganic Materials (TRIANGEL)
- The Košice Group of Discrete Mathematics (KOSDIM)
- [more](#)



Unique laboratories



PF UPJŠ

- Laboratory of analytical cytometry(LAC)
- Laboratory of nuclear magnetic resonance (NMR)
- Laboratory of electron paramagnetic resonance (EPR)
- Laboratory of rastering electron microscopy and electron lithography (REM)
- Perception and cognition laboratory (PCL)



PROMATECH

- Laboratory of Powder and Compacted Sample Preparation
- Laboratory of magnetic properties
- Low Temperature Nanolaboratory of Materials Magnetic Properties
- Laboratory for the Preparation of Nanodevices for Electronics, Sensors and Environmental Applications

[more](#)



TECHNICOM

- Laboratory of intelligent data analyses
- Laboratory of geographic information systems
- Laboratory of information and knowledge systems
- Perception and cognition laboratory
- Laboratory of haptics and virtual reality
- IoT laboratory
- Laboratory of unified communication and videoconference systems
- Cyber Security Lab
- Laboratory of computer modelling and simulation

[more](#)



FACULTY OF SCIENCE : INTERNATIONAL RESEARCH

In the year 2022
1.8 mil. EUR of national R&D project
of that 0.3 mil. EUR of international R&D projects

	H- Europe partnerships	Horizon Europe	Acronym	Funding scheme or Type of action	Fakulta	Budget EUR	Role
1	EIT KIC HEALTH						
2	Photonics						Beneficiary
3	EIT Digital KIC						Beneficiary
4	BatteRies Europe						Beneficiary
5	Hydrogen						Beneficiary
6	EIT Clima KIC						Beneficiary
7	EIT KIC SSH/CCI (creative industry)	H2020	ISIDORe	HORIZON-RIA	Medicine	6 250	
	EC strategic initiative		MHz-TOMOSCOPY	HORIZON-EIC	Science	264 000	
8	Open Science		eCREAM	HORIZON-RIA	Medicine	394 625	
9	Clean Energy Transition		InnoChange	HORIZON-EIT	Science	179 750	
				H2020-INFRAEOSC-2018-2020	Medicine	24 000	Third party
			EOSC-Life				
			ALT	MSCA-RISE	Science	270 000	Beneficiary
			UrbanHist	MSCA-ITN-EJD	Arts	924 315	Beneficiary
			CasProt	CSA	TIP	431 062	Coordinator
			EU-RESPONSE	RIA	Medicine	17 125	Beneficiary
			IMMERSE	RIA	Medicine	240 600	Beneficiary
			RIVER-EU	RIA	Medicine	224 375	Beneficiary



FACULTY OF SCIENCE : RECENT INTERREG PROJECTS

EFFUSE – Environment for the Future by Scientific Education
(HUSKROUA/1901/6.1/0075)
2021 – 2023

Pavol Jozef Šafárik University in Košice (SVK)
National University of Uzhhorod (UKR)
Institute for development of Carpathian Basin (UKR)

GEOSES - Extension of the operational "Space Emergency System" towards monitoring of dangerous natural and man-made geo-processes in the HU-SK-RO-UA cross-border region (HUSKROUA/1702/8.1/0065/GeoSES)
2019-2022

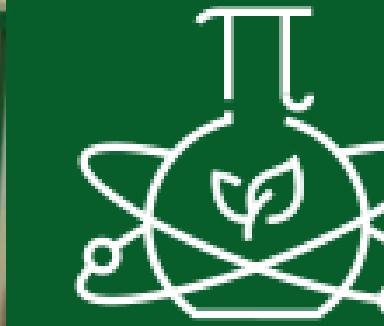
National University of Uzhhorod (UKR)
Technical University of Cluj-Napoca (ROM)
Pavol Jozef Šafárik University in Košice (SVK)
Budapest University of Technology and Economics (HU)
Szabolcs-Szatmár-Bereg County Self-Governement (HUN)

TOKAJGIS - Development of webGIS platform based on big-geodata for the Tokaj Wine Region foster cross-border collaboration,, (SKHU/1601/4.1/052)
2017-2019

Eszterházy Károly University Eger (HUN)
Pavol Jozef Šafárik University in Košice (SVK)



STUDY SCIENCE AT UPJŠ



10 bachelor programmes
19 master programmes
21 doctoral programmes

Joint or double degrees:
Biophysics (FRA, ESP)
Physics of Condensed Matter (ESP)
Astrophysics (CZE)
Inorganic Chemistry (ESP)
Data Analysis and AI (UKR)
Biology Teaching (CZE)

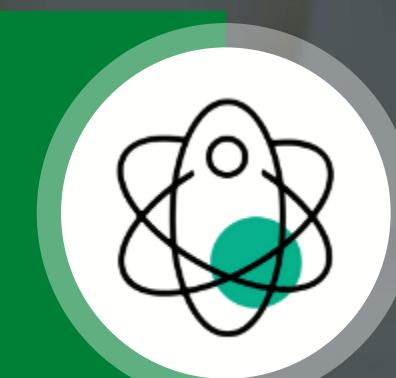
Biophysics



Data analysis and AI



Physics



Biology



Chemistry



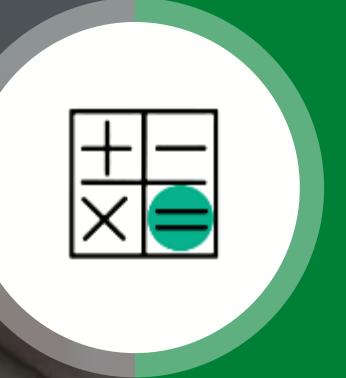
MAIN SCIENCE STUDY FIELDS



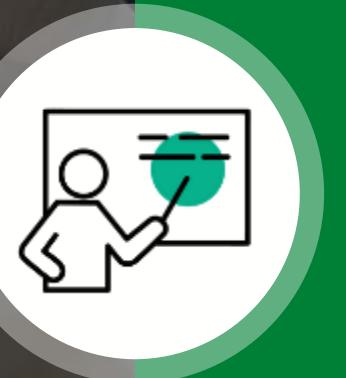
Informatics



Geography and GIS



Mathematics

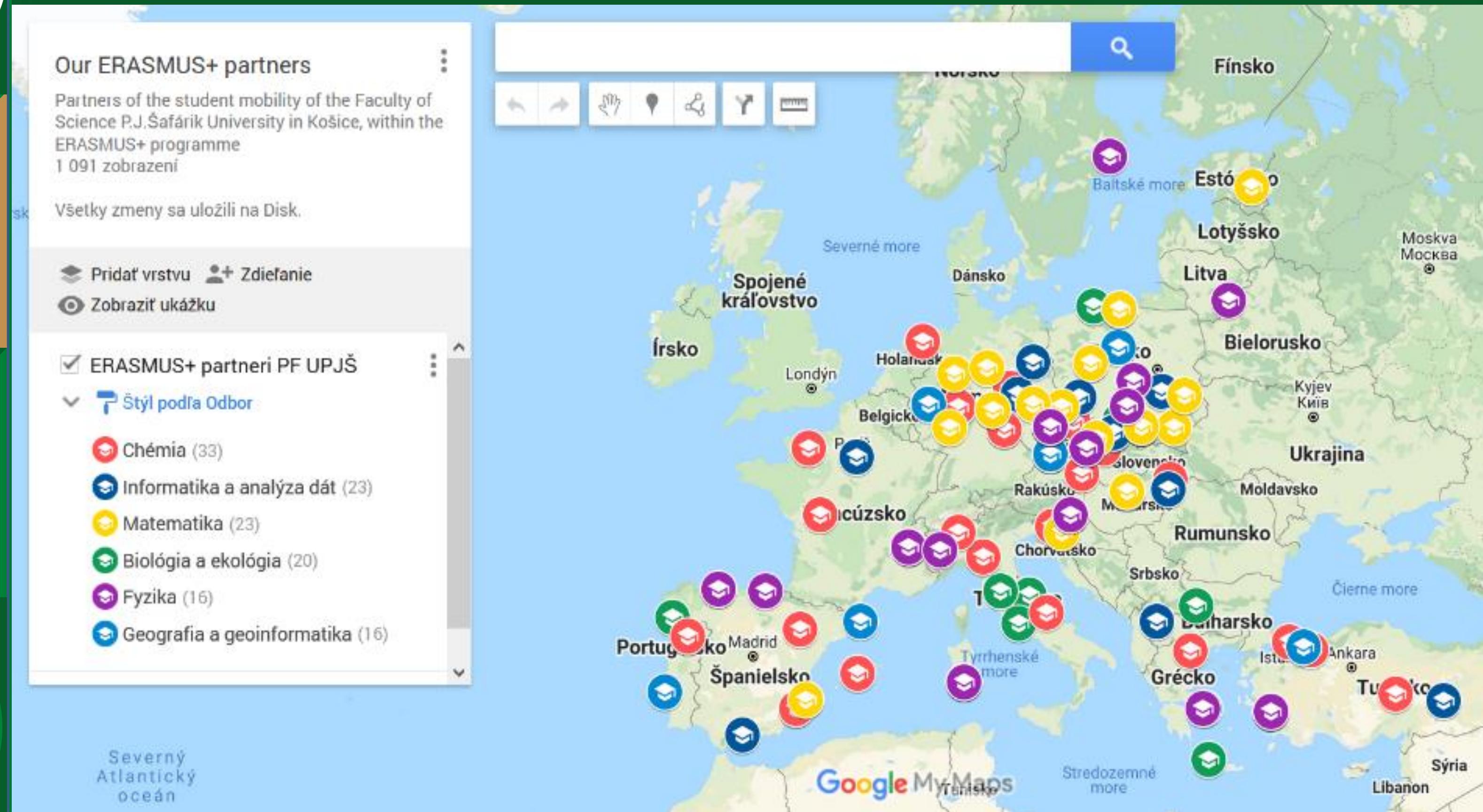


**Teacher
Education**

[more](#)



FACULTY OF SCIENCE – ERASMUS+ partners





FACULTY OF SCIENCE : ERASMUS+ PROJECTS

Enhancing functional thinking from primary to upper secondary school (FunThink)

9/2020 – 8/2023

RNDr. Veronika Hubeňáková, PhD.

RNDr. Ingrid Semanišinová, PhD. (PF)

Padagogische Hochschule Ludwigsburg (GER)

Univerzita Pavla Jozefa Šafárika v Košiciach (SVK)

University of Cyprus (CYP)

Hogeschool Ipho (NHL)

Uniwersytet Pedagogiczny im Komisji Edukacji Narodowej w Krakowie (POL)

Universiteit Utrecht (NHL)

Adaptive Learning Management Platform for STEM

(A.L.E.M.P.)

12/2021 – 11/2024

doc. RNDr. Zuzana Ješková, PhD. (PF)

U4Learn Srl (Palermo, ITA)

Univerzita Pavla Jozefa Šafárika (SVK)

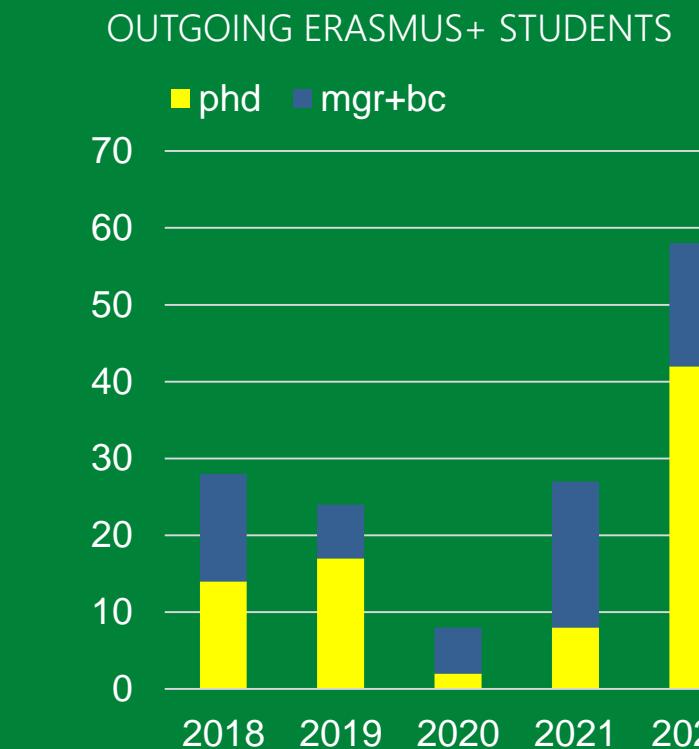
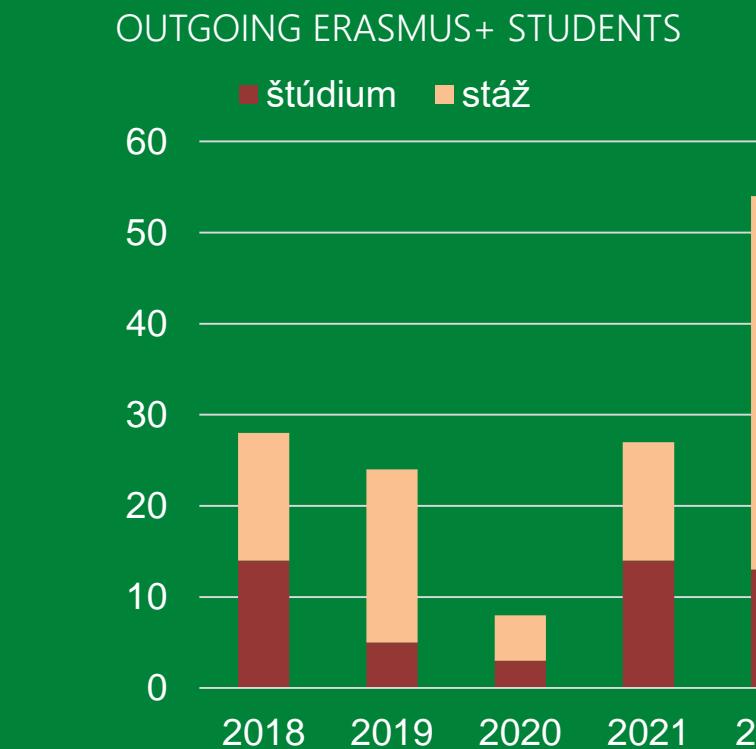
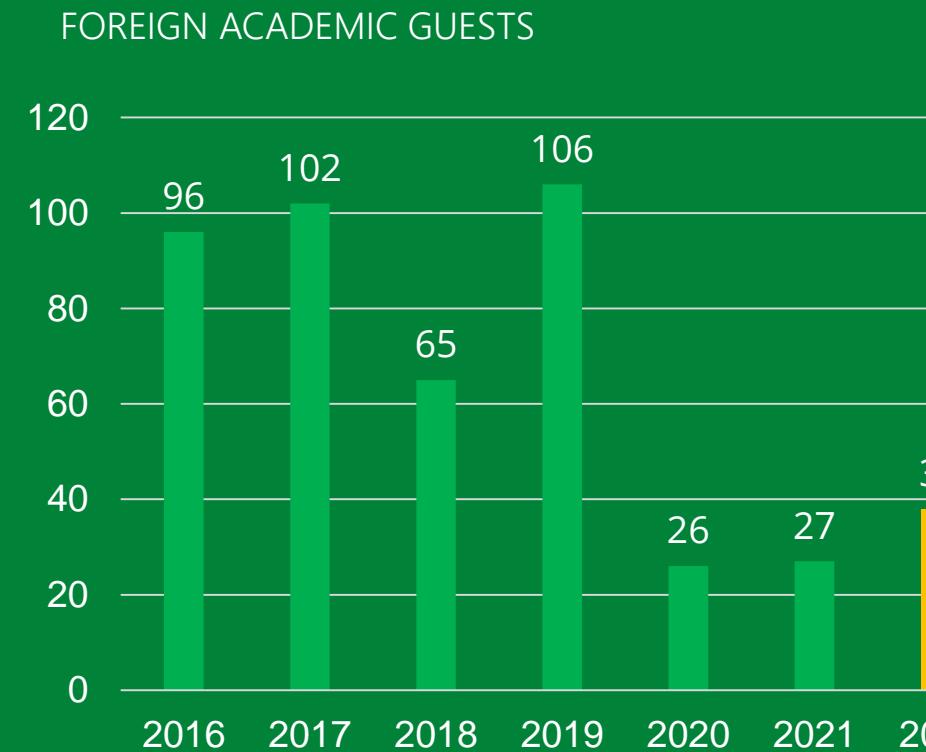
University of Palermo (ITA)

University of Patras (GRE)





FACULTY OF SCIENCE : FOREIGN STUDENTS AND GUESTS



FOREIGN FULL-TIME STUDENTS

- **88 (9%) UKR** (23), ESP (9), IND (7) , other 13 countries
47 Bc., Mgr., 38 PhD.

INCOMMING ERASMUS+ STUDENTS

- **18 (in 2022), 40 (in 2019)**

UNIVERZITA	KRAJINA	POČET ŠTUDENTOV
University of Zaragoza	SPAIN	2
Universidade de Trásos-Montes e Alto Douro	PORTUGAL	2
University of Oviedo	SPAIN	4
V. N. Karazin Kharkiv University	UKRAINE	1
University of Camerino	ITALY	2
University of Murcia	SPAIN	1
Kocaeli University	TURKEY	3
University de Vigo	SPAIN	1
University of Cologne	GERMANY	1
Yildiz Technical University	TURKEY	1

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YOUTUBE

Prírodovedecká
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