

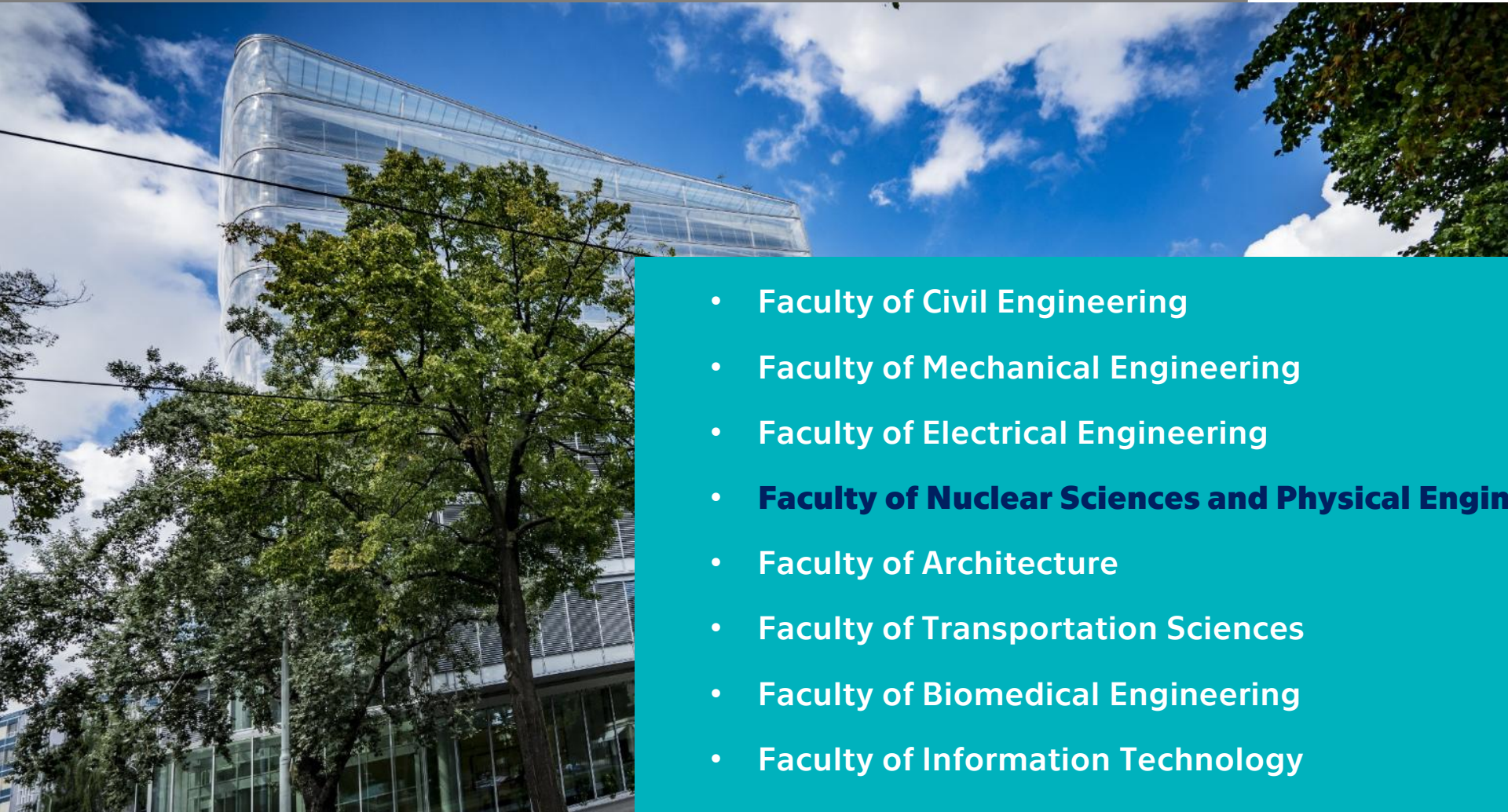
# FACULTY OF NUCLEAR SCIENCES AND PHYSICAL ENGINEERING



**Václav Čuba**

dean of FNSPE CTU in Prague

# Faculties of CTU in Prague



- Faculty of Civil Engineering
- Faculty of Mechanical Engineering
- Faculty of Electrical Engineering
- **Faculty of Nuclear Sciences and Physical Engineering**
- Faculty of Architecture
- Faculty of Transportation Sciences
- Faculty of Biomedical Engineering
- Faculty of Information Technology

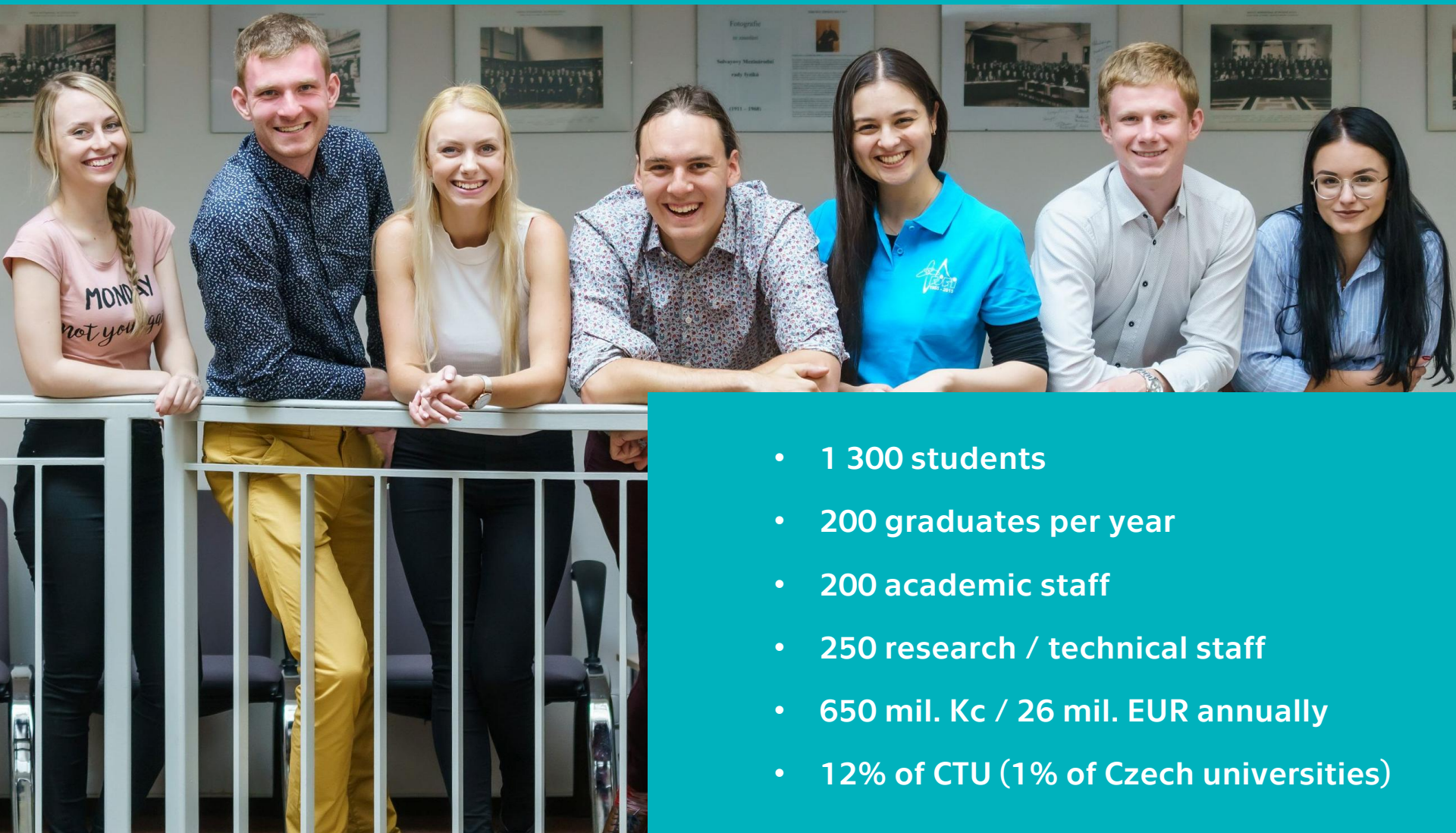


# ROLE OF FNSPE

- Founded in 1955 to educate nuclear engineers in the Czech Republic (former Czechoslovakia)
- Fostering and developing nuclear sciences in the country, maintaining knowledge related to nuclear fields.
- Although we have approached many new areas of research and education since then, we remain faithful to our original purpose.
- The mission of FNSPE is to educate highly skilled professionals equipped with a robust foundation in mathematics, physics, and computer science
- Our alumni excel in various fields, including science, technology, informatics, medicine, and environmental policy.
- The faculty emphasizes interdisciplinary problem-solving and actively involves students in scientific and research teams early in their studies and academic



# FACULTY IN NUMBERS



- 1 300 students
- 200 graduates per year
- 200 academic staff
- 250 research / technical staff
- 650 mil. Kč / 26 mil. EUR annually
- 12% of CTU (1% of Czech universities)

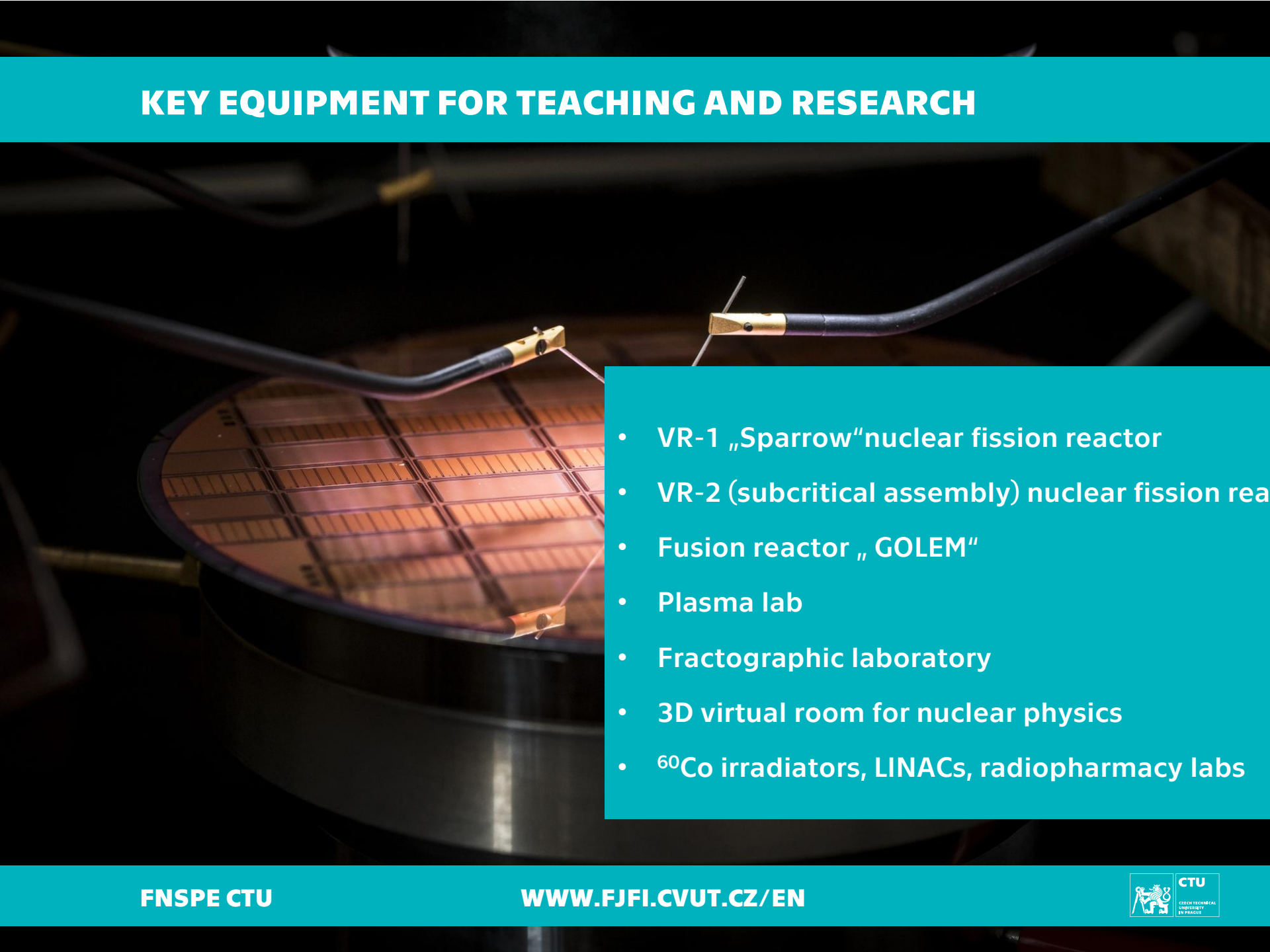
## FIELDS OF EDUCATION / RESEARCH

**WE OFFER full curricula  
(Bc/MSc/PhD programmes)  
in nuclear physics,  
engineering  
and chemistry!**

- Nuclear engineering
- Nuclear and particle physics
- Plasma physics and thermonuclear fusion
- Nuclear chemistry
- Medicinal physics and dosimetry
- Quantum technologies and lasers
- Materials sciences
- Applied mathematics and informatics



# KEY EQUIPMENT FOR TEACHING AND RESEARCH

- 
- VR-1 „Sparrow“ nuclear fission reactor
  - VR-2 (subcritical assembly) nuclear fission reactor
  - Fusion reactor „GOLEM“
  - Plasma lab
  - Fractographic laboratory
  - 3D virtual room for nuclear physics
  - $^{60}\text{Co}$  irradiators, LINACs, radiopharmacy labs

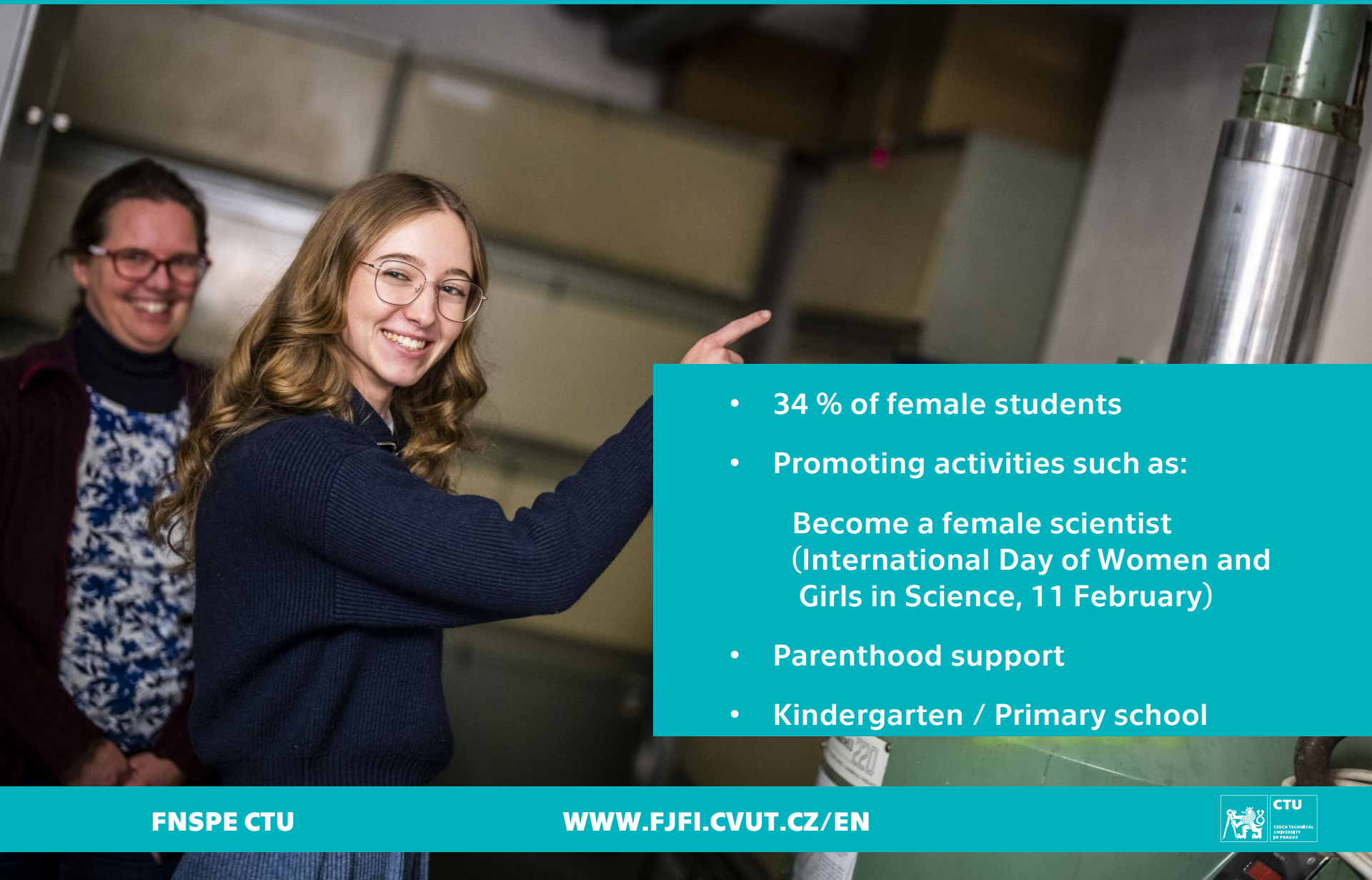
# STUDENTS' ACTIVITIES



- Student Union at FNSPE
- EPS Young Minds
- Tralalalala Sports Team
- Nucleus – theatre group
- Tutors for younger students



# PROMOTING FAIR APPROACH



- 34 % of female students
- Promoting activities such as:
  - Become a female scientist  
(International Day of Women and  
Girls in Science, 11 February)
- Parenthood support
- Kindergarten / Primary school

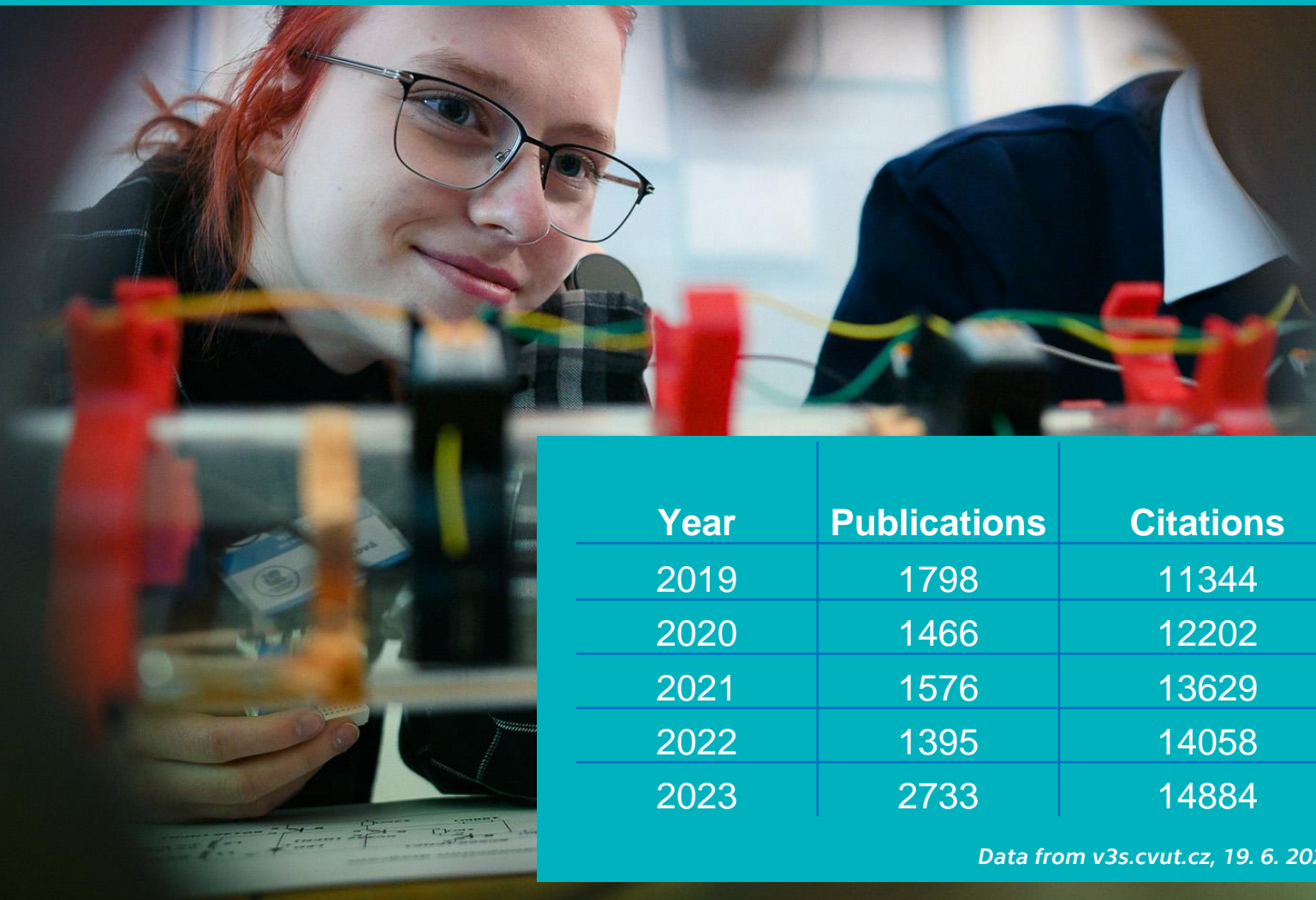


# OPEN POSITIONS



- Tenure track positions (assistant / associate / full professors)
- Research positions (both indefinite and limited contracts)
- Post docs (usually limited contracts, project related, both internal and CTU-cofunding)

# PUBLICATIONS AND IMPACT



Year	Publications	Citations
2019	1798	11344
2020	1466	12202
2021	1576	13629
2022	1395	14058
2023	2733	14884

*Data from v3s.cvut.cz, 19. 6. 2025*



# AWARDS

## L'Oréal UNESCO For Women in Science 2024

- Ing. Monika Kučeráková, Ph.D.  
**Forbes 30 under 30**
- 2023 Kristina Jarůšková (CZE)
- 2023 Peter Švihra (SVK)
- 2021 Petr Hauschwitz
- 2020 Roberta Bimbová

## Prize of the Minister of Education 2022

- Samuel Lukeš

# AWARDS



## **Forbes TOP female scientist of the Czech Republic 2024**

- prof. Jana Bielčíková

## **Best Mathematics Scientists in Czech Republic 2025**

- Prof. Pavel Exner



# AWARDS



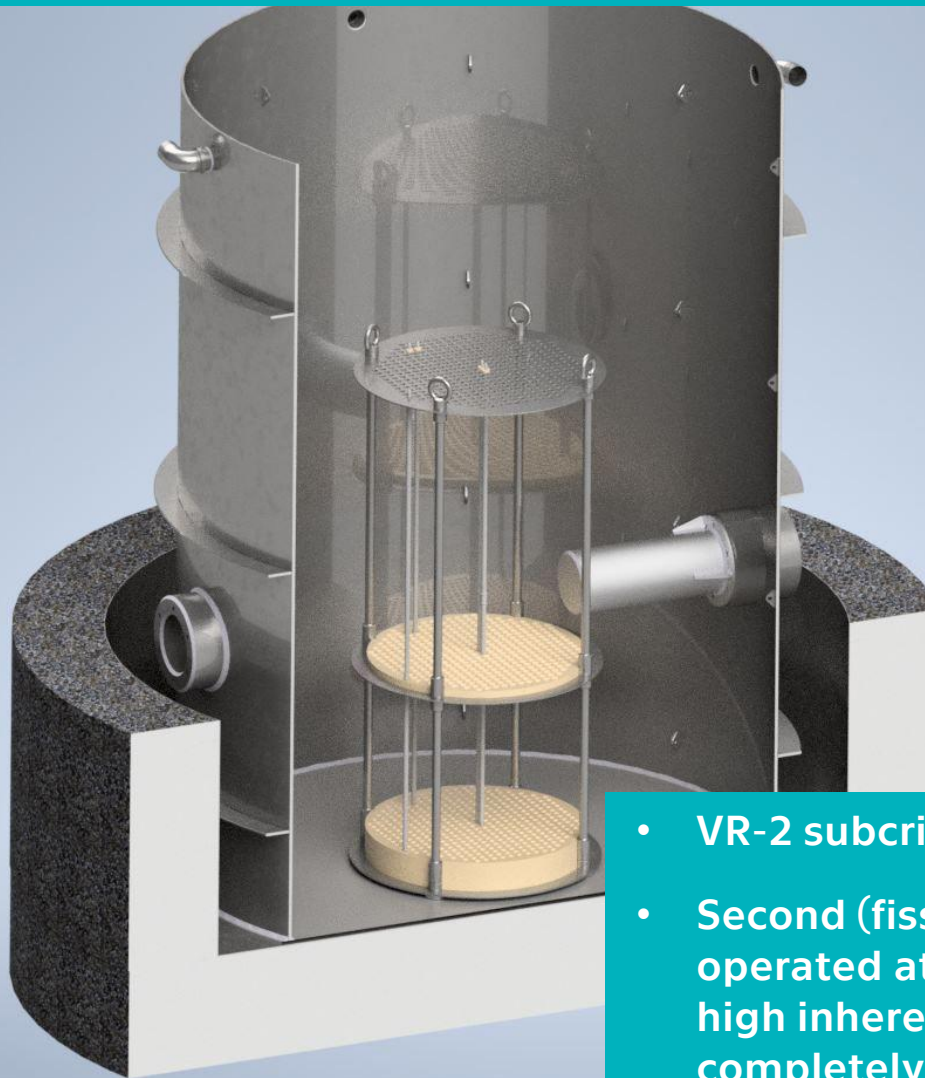
## Henri Becquerel Prize for Nuclear Research

- Students in Top 3 each year

## Werner von Siemens Prize

- Students in Top 10 each year

## RESEARCH PROJECTS - EXAMPLES



- VR-2 subcritical reactor
- Second (fission) nuclear reactor operated at CTU under conditions of high inherent safety and was completely designed by the faculty.



# RESEARCH PROJECTS - EXAMPLES



- Detectors for aerospace applications
- SpacePix2: Advancing Space Radiation Monitoring with First In-Orbit Deployment (VZLUSAT)

# COLLABORATIONS



- Collaborations in particle physics (CERN, BNL, FAIR...)
- International and domestic scientific cooperations (both research institutes and industrial partners)
- Involvement of Academy of Sciences and other Institutes in lecturing and supervision (PhD/MSc/Bc)



# RECOMMENDATIONS



- Keep on track (we try!)
- Strengthening international applied research (we are part of DRD collaborations)
- Increasing economic activities (economic income significantly increased in comparison to previous evaluation)
- Small contribution of private sector (we established fund for talented students from donor contributions)