



OSH education at the Faculty of Safety Engineering, VSB - Technical University of Ostrava from the perspective of emerging risks



Bratislava , 24.10.2016

Faculty of Safety Engineering



- established on the 1st August 2002
- 78 persons of staff, 1200 students



Future view

Departments



- Fire Protection



- Occupational and Process Safety



- Civil Protection



- Security Services



- Laboratory for Risk Research & Management

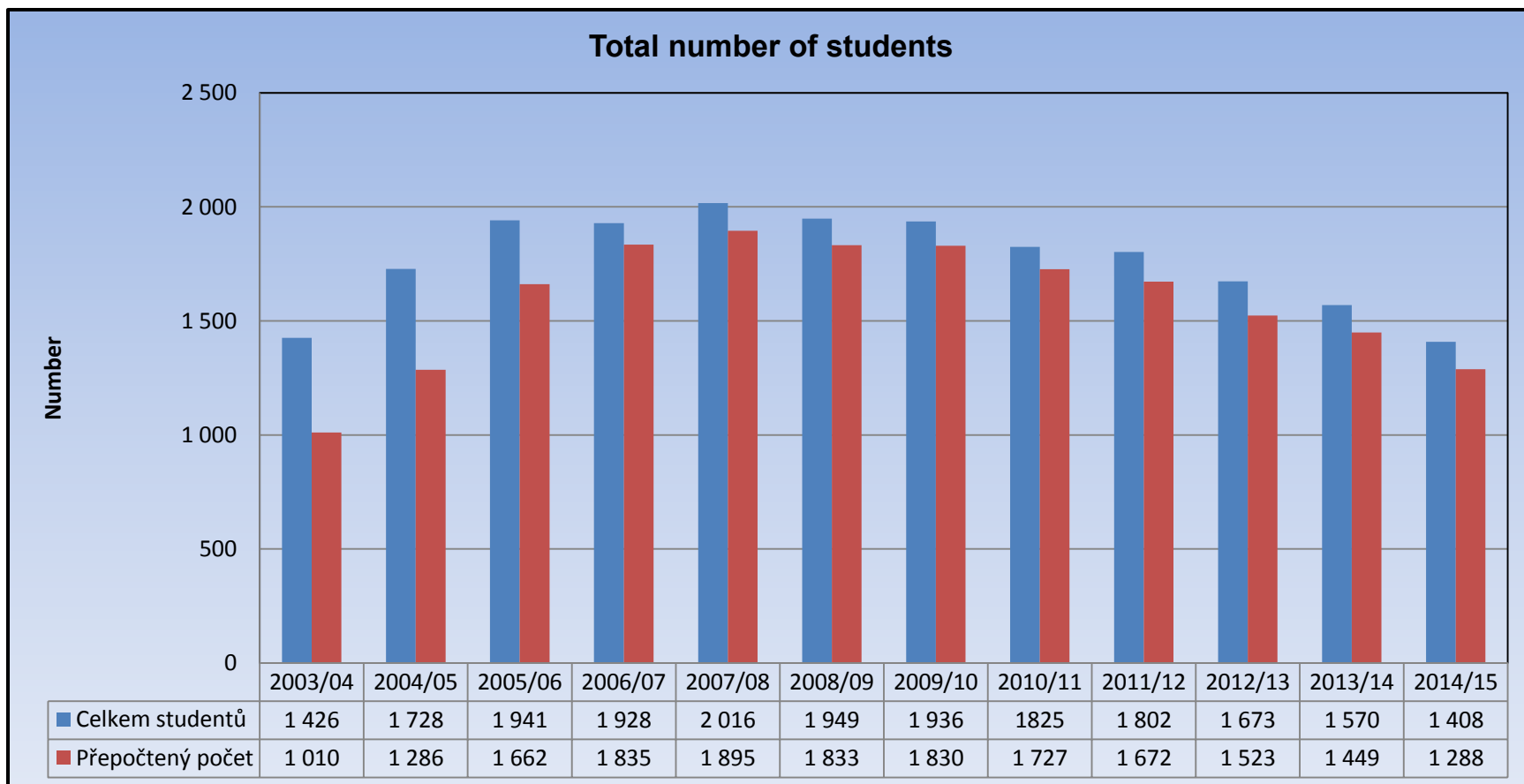


FSE's Mission



- Provision of university education in the field of safety engineering (SE)
- Research activities in the field of SE
- Lifelong education in the field of safety engineering
- Supplementary activity in the field of SE

Total numbers of FSE's students

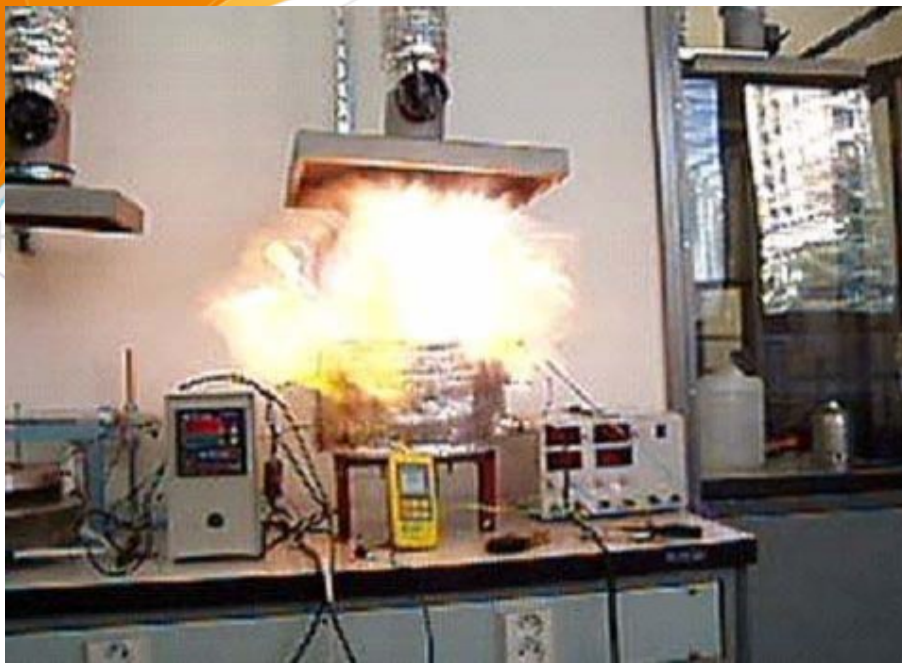




Fields of Study

- **Bachelor Study**
 - Fire Protection Engineering and Industrial Safety
 - Occupational and Process Safety
 - Emergency Planning and Crisis Management
 - Engineering Safety of Persons and Property
- **Following Master Study**
 - Fire Protection Engineering and Industrial Safety
 - Safety Engineering
 - Safety Planning
 - Engineering Safety of Persons and Property

Laboratories



Laboratories of FSE



- Fire-Technical Laboratory orientated especially to the flammability and toxicity of solid substances, liquids, vapors and gases and smoke optical properties
- Technology Safety Laboratory (Explosion Prevention)
- Laboratory for Fire and Alarm Systems
- Laboratory for Occupational Safety (noise, vibration, protective clothing, ...)

Laboratory of Explosion Prevention



Laboratory for Fire Safety



Priorities of R & D



HORIZONT 2020

???

“ RESILIENCE “

“ PRŮMYSLOVÁ BEZPEČNOST (Industrial safety) “

“ POŽÁRNĚ BEZPEČNOSTNÍ VĚDY (Fire Safety Science) “

Department of Occupational and Process Safety

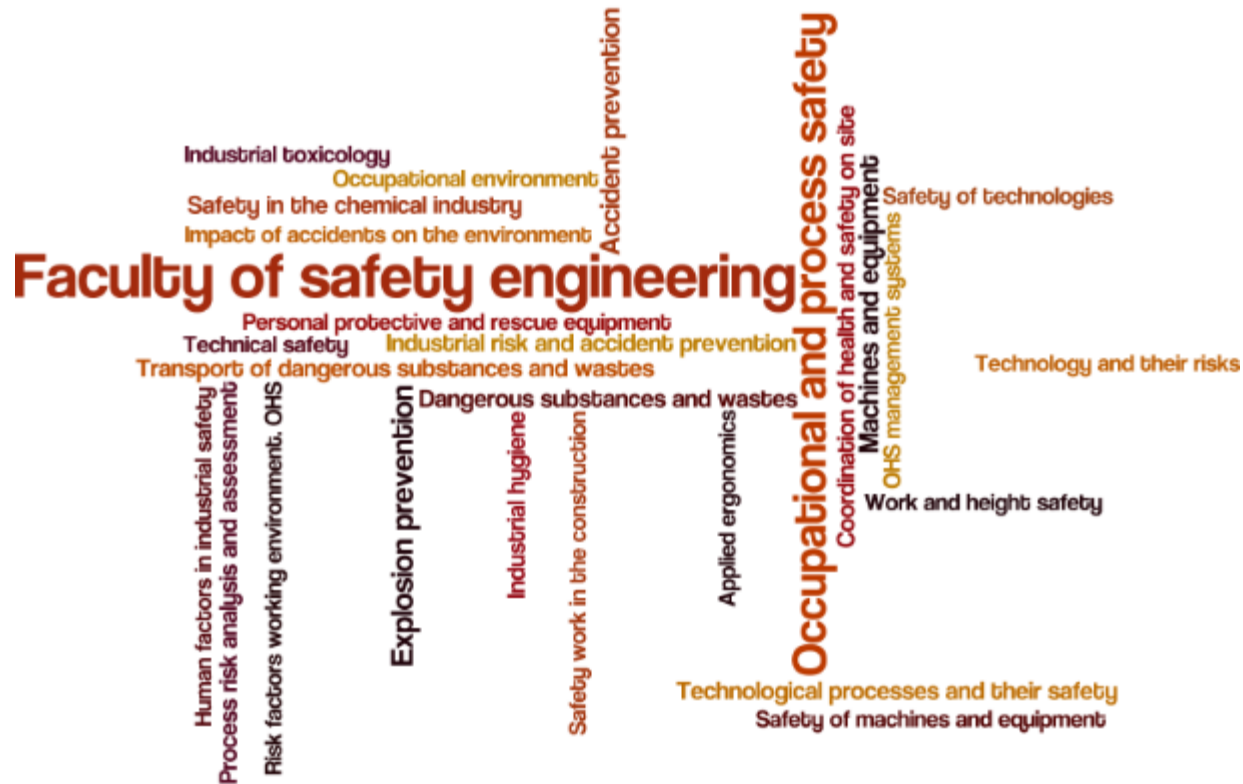


Teaching Activity of the Department



The Department offers two fields of study:

- Occupational and Process Safety (*Bachelor's degree study*)
- Safety Engineering (*Master's degree study*)



Who should pursue our fields of study?

- Creative person
- Individual with analytical and systematic thinking
- Who has a willingness and desire to continue in education
- Who is not afraid of people
- Who likes working in a team



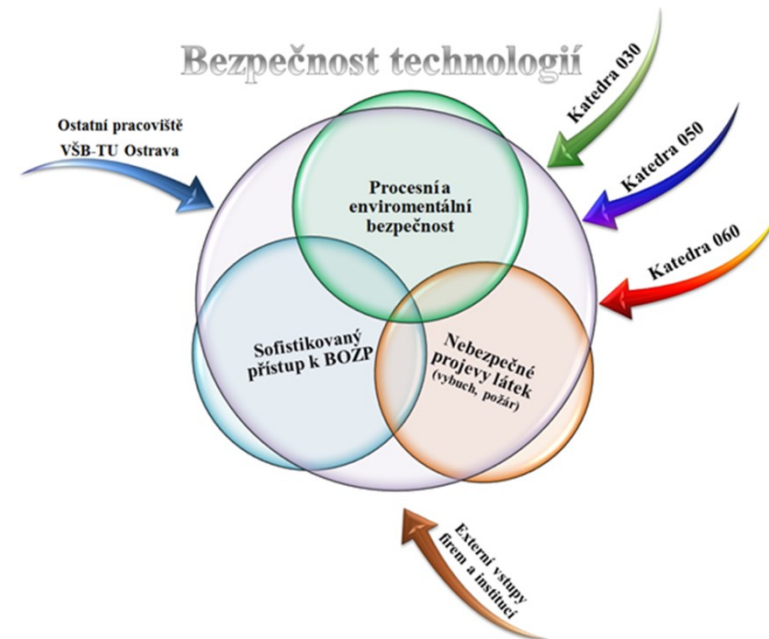
Who SHOULD NOT pursue this field of study?

- Who is afraid of people
- Who is lazy and who any diploma is enough for
- Who is not willing to accept new things and stimuli from the surroundings
- Who does not want to get an interesting and creative job



Research activities

- **Sophisticated approach to OSH**
 - Safety of environment „Human - Robot“
 - Evaluation of occupational exposure to nanomaterials
- **Process and environmental safety**
- **Hazardous substances effects**



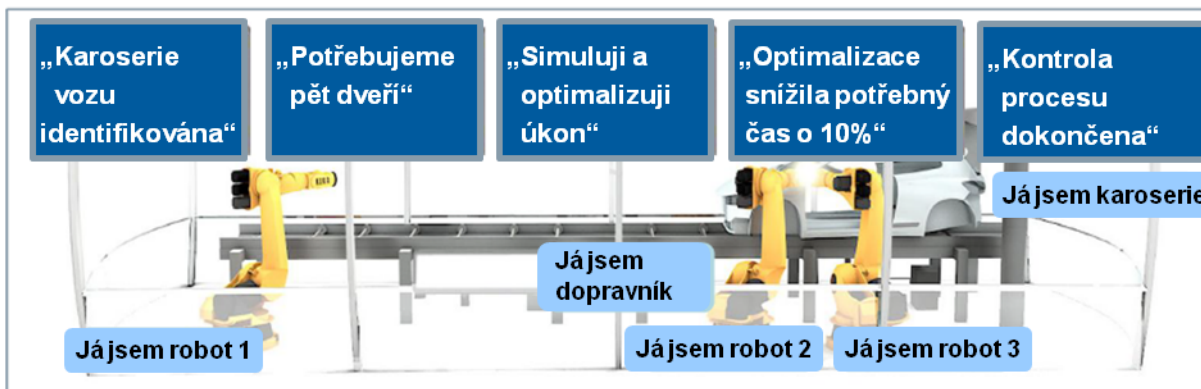
OSH education from the perspective of emerging risks



- Strategy Industry 4.0
- the need to ensure safety "human - robot"



Dnes:
Průmysl 3.X

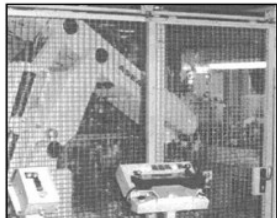


Budoucnost:
Průmysl 4.0

OSH education from the perspective of emerging risks



Safety trends in Human Robot Cooperation focus on researching passive safety that means to prevent the operator to get injured or at least to minimize the injury consequences in case of a collision.



absolute separation of robot and human workspaces



LOW



Safety controllers
→ Limited HRC



HIGH



complete union of robot and human workspaces

Discrete safety
→ No HRC

Harmless manipulators
→ Full HRC

OSH education from the perspective of emerging risks



- Safety of collaborative robots
- The safe and interactive interaction between robots and human operators is the special requirement in real industrial system in the future



Direct cooperation humans with robots = ensure the safety

OSH education from the perspective of emerging risks



- Nanosafety - assessment of occupational exposure to nanomaterials



NanoScan SMPS 3910 - Portable sorter and counter of particles, size range 10-350 μm



CPC 3007 - Handheld particle counter



SidePack AM 510 - Personal monitor of the mass concentrations of particles (Personal laser photometer)

National conference OSH



- Bezpečnost a ochrana zdraví při práci 2017
- 19. - 20. duben 2017, hotel Sepetná, Ostravice





Conference Secretariat: GUARANT International spol. s r.o.

Na Pankráci 17, 140 21 Prague 4, Czech Republic, tel.: +420 284 001 444, fax.: +420 284 001 444, e-mail: wosnet2017@guarant.cz

WOS.net



Workingonsafety.net is an international network of decision-makers, researchers and professionals responsible for the prevention of accidents and trauma at work.



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Keynotes



MAIN THEME

SAFETY MANAGEMENT COMPLEXITY IN CHANGING SOCIETY

Motto:

DO WE NEED A HOLISTIC APPROACH?

MAIN TOPICS

- **Foundations of safety science:** theories, principles, methods and tools
- **Research to practice:** achievements, lessons learned and challenges
- **Risk management and safety culture:** case studies, best practices and further needs
- **Safety regulation:** reasonable practicable approach
- **Education and Training:** prerequisite for safety
- **Complexity and safety:** multidisciplinary and inter-stakeholder views

COMPLEXITY
AND SAFETY

FOUNDATIONS
OF SAFETY SCIENCE

EDUCATION
AND TRAINING

RESEARCH
TO PRACTICE

SAFETY
REGULATION

RISK MANAGEMENT
AND SAFETY CULTURE



Keynotes



1. Foundations of safety science

Terje AVEN

confirmed

- Professor of Risk analysis and Risk Management at University of Stavanger (Norway);
Principal researcher at International Research Institute of Stavanger (IRIS)
- Plenary talk:
Review of important milestones in risk assessment and management with the focus on contentious issues and further challenges
- Profile: https://www.researchgate.net/profile/Terje_Aven

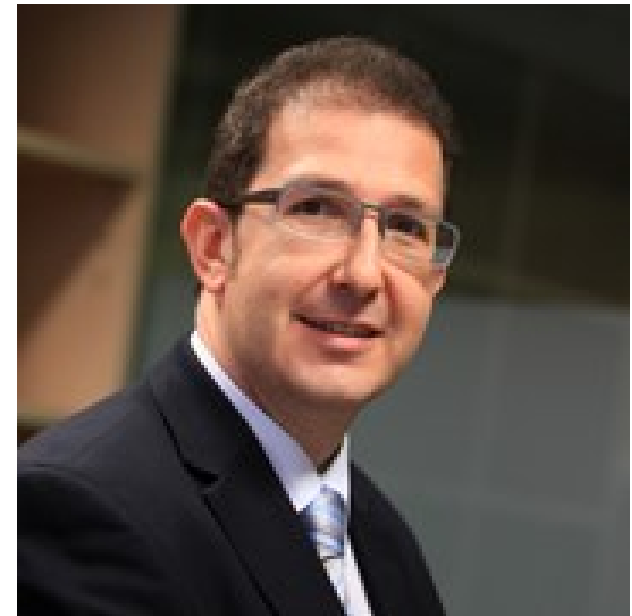


Keynotes

2. Research to practice

Olivier SALVI

- President of INERIS DÉVELOPPEMENT SAS (France);
General manager of EU-Vri;
Secretary General of ETPIS
- Plenary talk:
Effective implementation of research into practice
- Profile:
https://www.researchgate.net/profile/Olivier_Salvi



confirmed



Deadlines

Action	WOS 2017
Registration open	1 st November 2016
Abstracts	31 st January 2017
Notification of acceptance	31 st March 2017
Full papers	30 th June 2017
Early registration	30 th June 2017
Presentations	15 th September 2017
Conference	3-6 October 2017

Meeting Venue



- Hotel Diplomat Prague****



Social Programme



+
Get together event →
Great Monastery Restaurant and Brewery



Social Programme



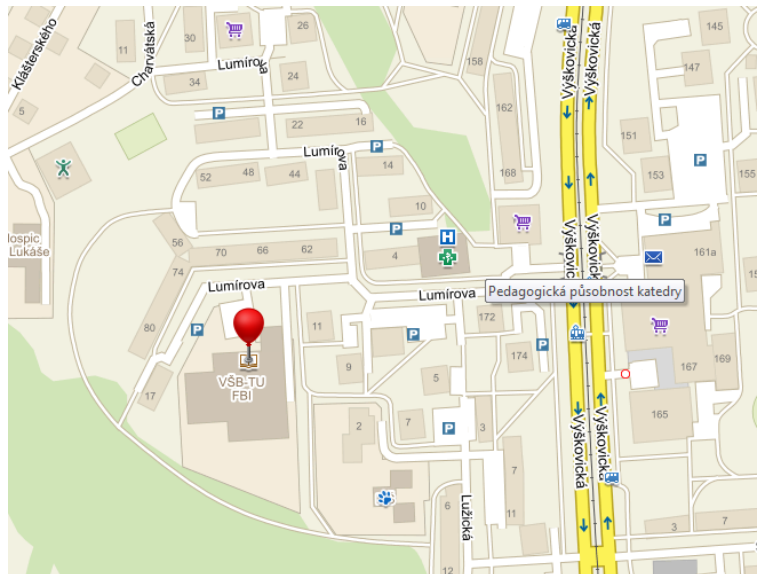
+
Gala dinner →
Boat trip



Contact Information



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FBI !!!

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of graduates in practice

