

# INTRODUCTION OF THE FIRST YEAR Ph.D. STUDENT

**Aneta Cahová**

Institute of Machine and Industrial Design  
Faculty of Mechanical Engineering  
Brno University of Technology

Brno, 22.10.2025



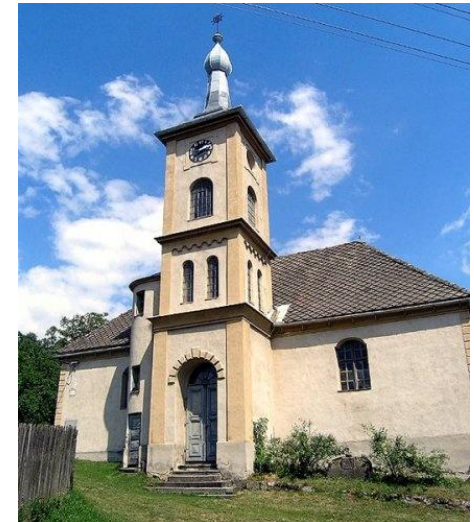
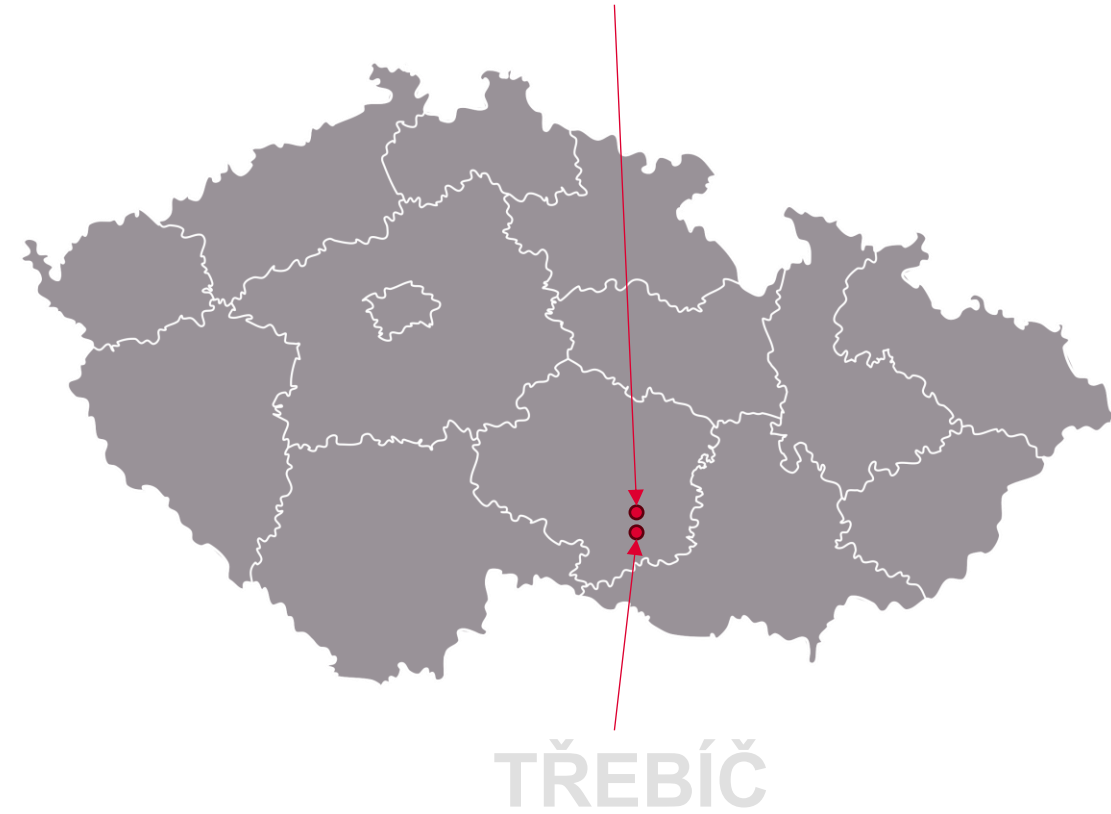
INSTITUTE OF MACHINE  
AND INDUSTRIAL DESIGN

# CONTENT

- Home town
- Hobbies and interests
- Education
- Work experience
- My theses
- Dissertation
- Educational activities

**HOME TOWN**

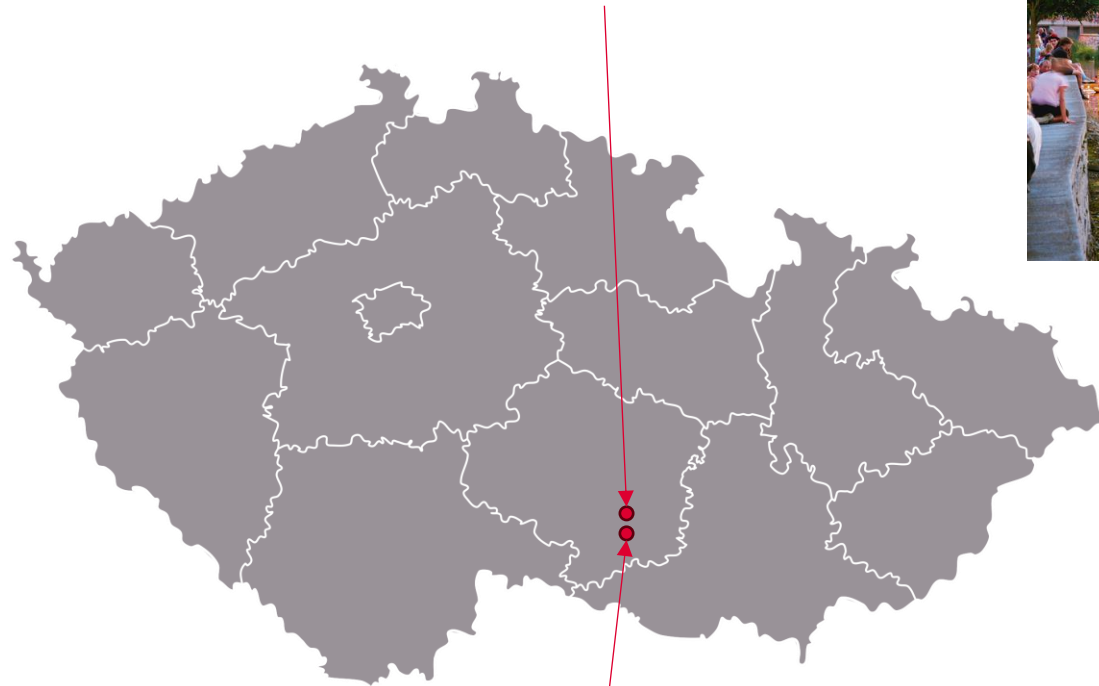
**HORNÍ VILÉMOVICE**





# HOME TOWN

HORNÍ VILÉMOVICE



**TŘEBÍČ**



INTRODUCTION OF THE FIRST YEAR Ph.D. STUDENT

4/13



# HOBBIES AND INTERESTS

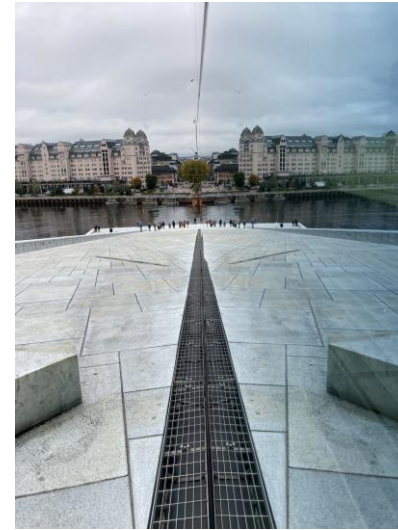


**SUMMER CAMPS  
FOR CHILDREN  
FABLAB BRNO**





# HOBBIES AND INTERESTS



**TRAVELING**  
**PHOTOGRAPHY**  
**BOULDERING**





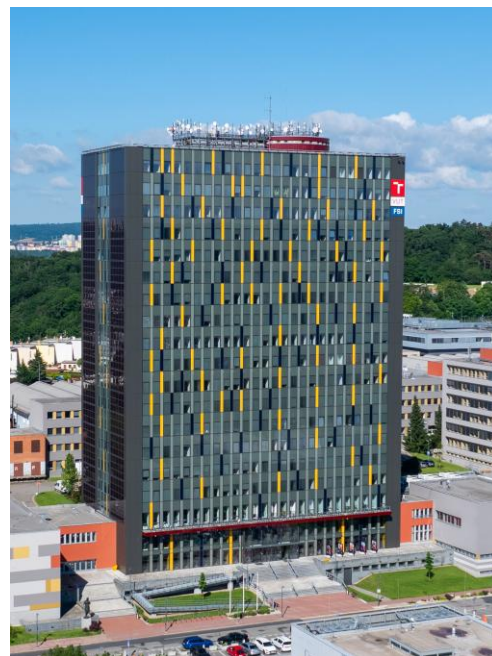
# EDUCATION

Maturita  
Gymnázium Třebíč  
2017

Bc.  
BUT FME, Brno  
2020

Erasmus+  
NTNU, Trondheim  
2021-2022

Ing.  
BUT FME, Brno  
2025



# WORK EXPERIENCE

## THERMO FISHER SCIENTIFIC BRNO

- Intern – System Design Engineer
- 2023-present



*thermofisher.jobs.cz*

## GARETT MOTION

- Student Engineer
- 2020-2021



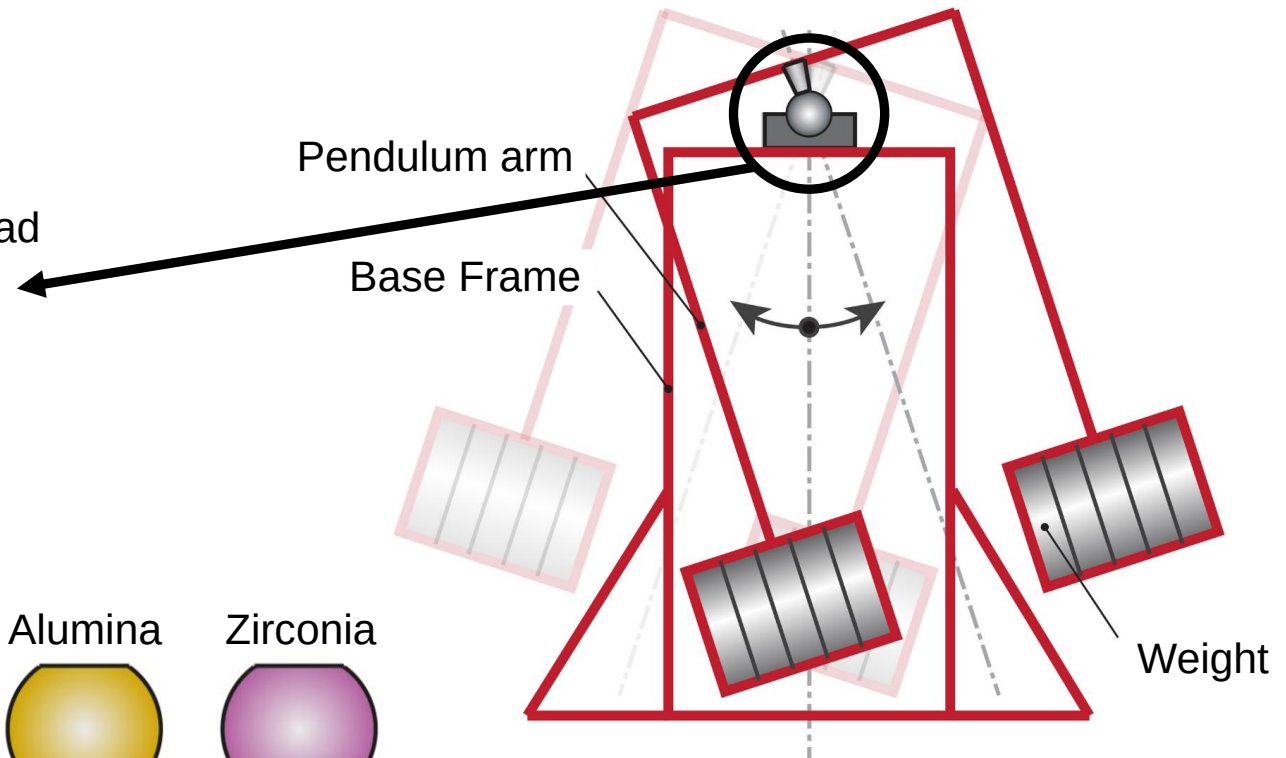
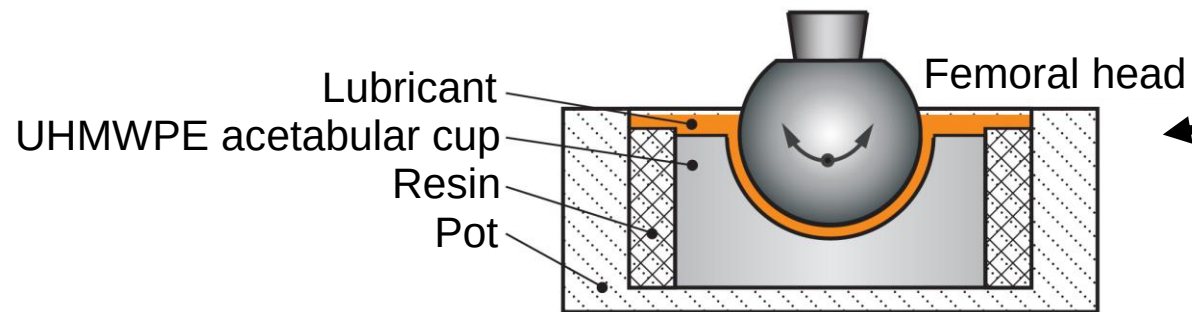
*garrettmotion.com*



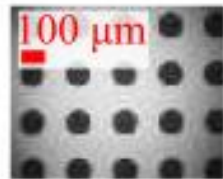
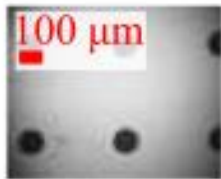
# BACHELOR'S THESIS

## THE EFFECT OF SURFACE MODIFICATION OF ACETABULAR CUP ON FRICTION COEFFICIENT OF HIP IMPLANT

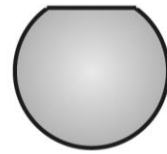
Supervisor: doc. Ing. David Nečas, Ph.D.



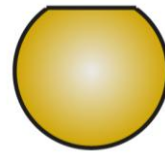
Texture Geometry and Layout



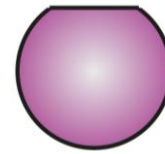
Metal



Alumina



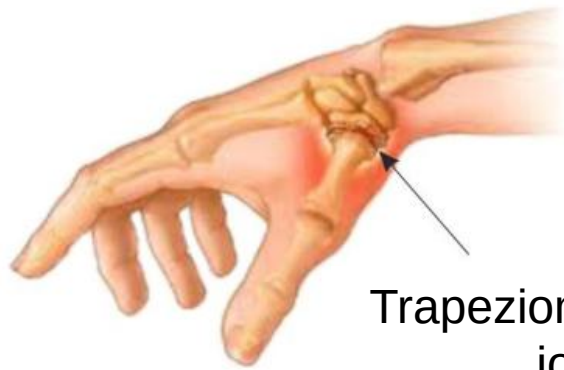
Zirconia



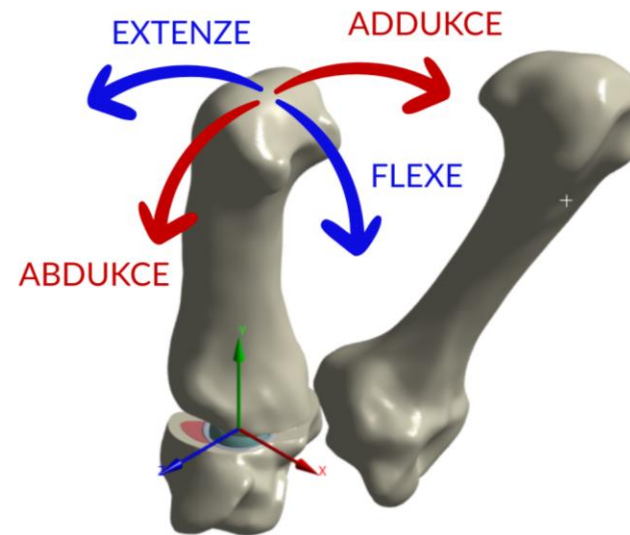
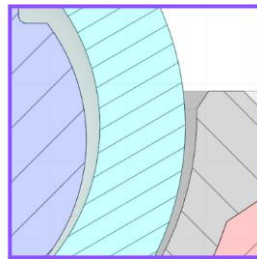
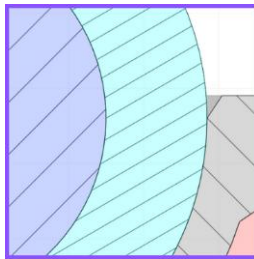
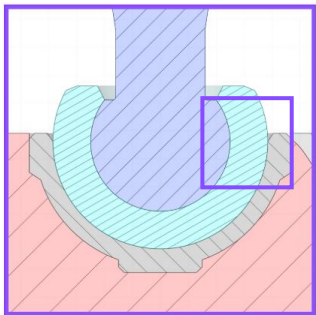
# MASTER'S THESIS

## STRESS AND DEFORMATION ANALYSES OF THE TRAPEZIOMETACARPAL JOINT WITH SHAPE DEVIATIONS

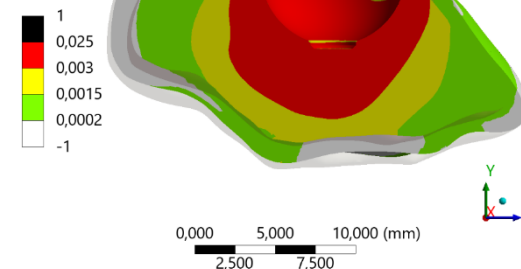
Supervisor: doc. Ing. Vladimír Fuis, Ph.D.



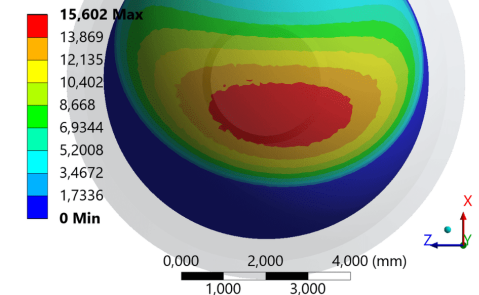
Trapeziometacarpal joint



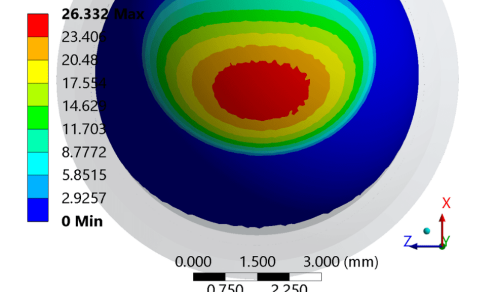
**B: FLEXE MIN vůle**  
Equivalent Elastic Strain 4  
Type: Equivalent Elastic Strain  
Unit: mm/mm  
Time: 2 s  
Max: 0,065349  
Min: 4,3743e-6



**B: ABDUKCE MIN vůle**  
Pressure  
Type: Pressure  
Unit: MPa  
Time: 2 s



**B: ABDUKCE MAX vůle**  
Pressure  
Type: Pressure  
Unit: MPa  
Time: 2 s





# DISSERTATION

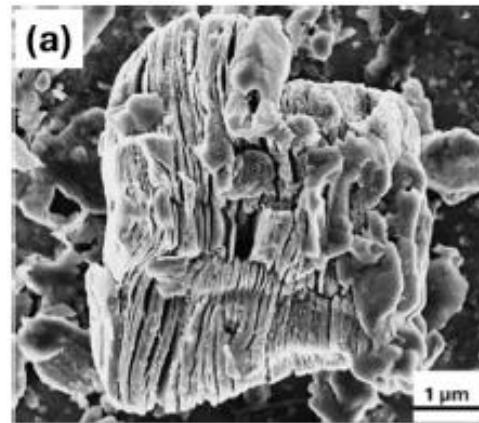
## SURFACE MODIFICATIONS OF 3D-PRINTED BIOMEDICAL IMPLANTS

Supervisor: doc. Ing. David Nečas, Ph.D.

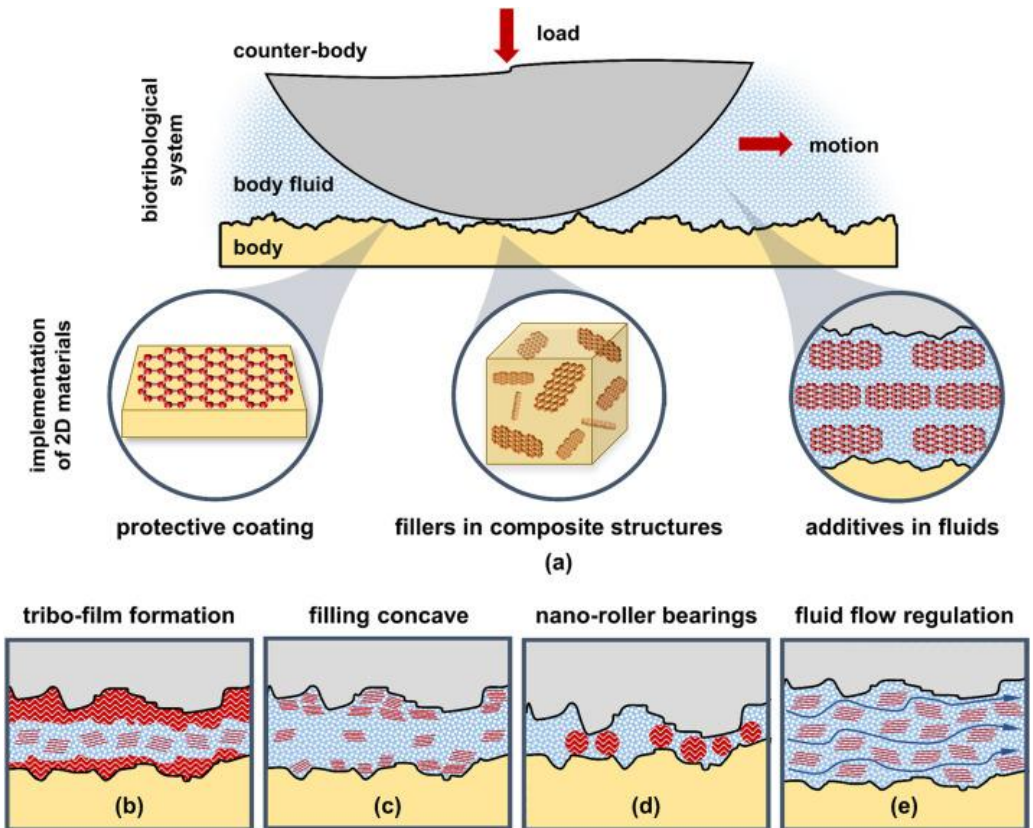
Supervisor specialist: prof. Ing. Martin Vrbka, Ph.D.



fnmotol.cz



Ramteke, 2025



Marian, 2022

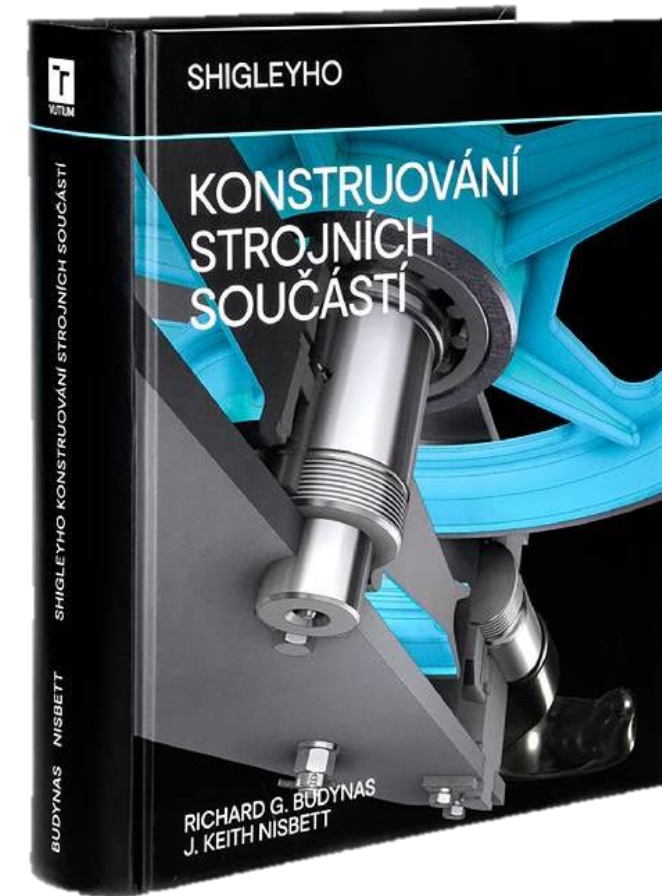
# EDUCATIONAL ACTIVITIES

## TEACHING

- 5KS Machine Design – Machine Elements

## LEARNING

- 9MOP Methodologies of Scientific Work
- 9VPR Research Project and Its Management
- 9EHD Advanced Tribology
- 9EXT Experimental Methods in Tribology
- 9AJ Academic English for Doctoral Studies





# THANK YOU FOR YOUR ATTENTION

**Aneta Cahová**

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INSTITUTE OF MACHINE  
AND INDUSTRIAL DESIGN

[www.ustavkonstruovani.cz](http://www.ustavkonstruovani.cz)