

INTRODUCTION OF THE FIRST YEAR Ph.D. STUDENT

Tomáš Slezák, Ing.

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

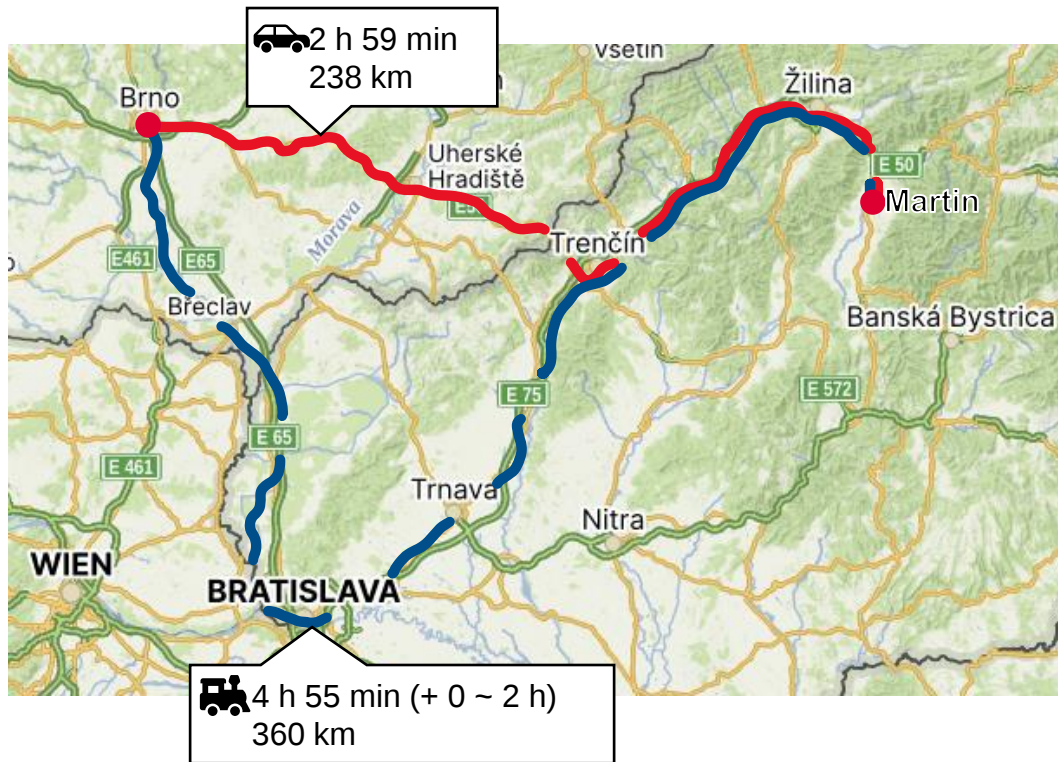
Brno, 15.10.2025



INSTITUTE OF MACHINE
AND INDUSTRIAL DESIGN

HOMETOWN

MARTIN



HOMETOWN

MARTIN



Matica slovenská



Kostol sv. Martina



Malá a Veľká Fatra



ZTS Martin

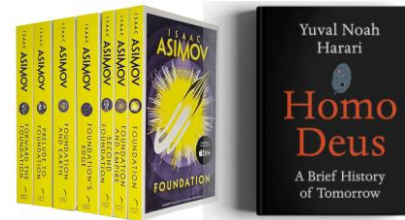
HOBBIES



Hiking



Scale modelling



Reading Books



Drawing

EDUCATION

SPŠT
Martin



Maturita 2020

IPM Student
Awards 2020
1st place

BUT
FME



Bc. 2023

Ing. 2025

SVS FEM
2025
2nd place

Ph.D. 20XX

DIPLOMA THESIS

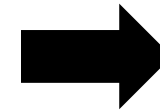
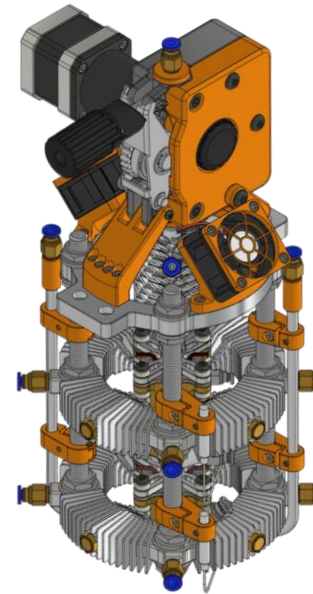
Design of Extruder for 3D Printing Low-Melting Metal Alloys

- Supervisor: doc. Ing. Daniel Koutný, Ph.D.

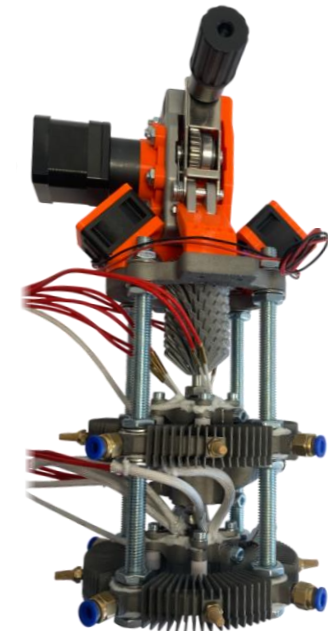


Semi-Solid Al alloy (**610°C**)
(Comptech Rheocasting 2018)

DESIGN



PROTOTYP

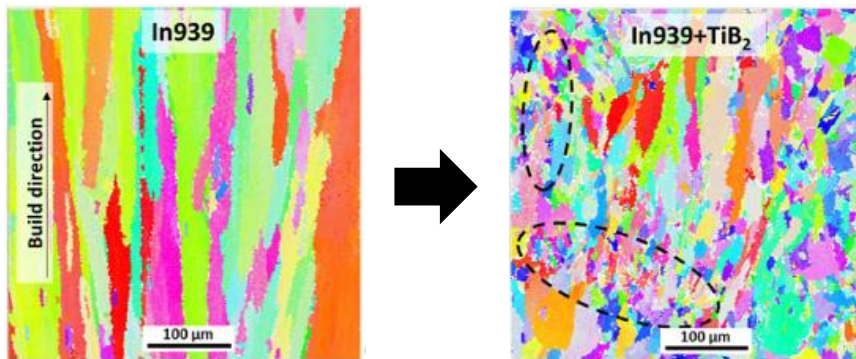


DISSERTATION

ADDITIVE MANUFACTURING OF HIGH TEMPERATURE ALLOYS STRENGTHEN BY NANOPARTICLE DISPERSION

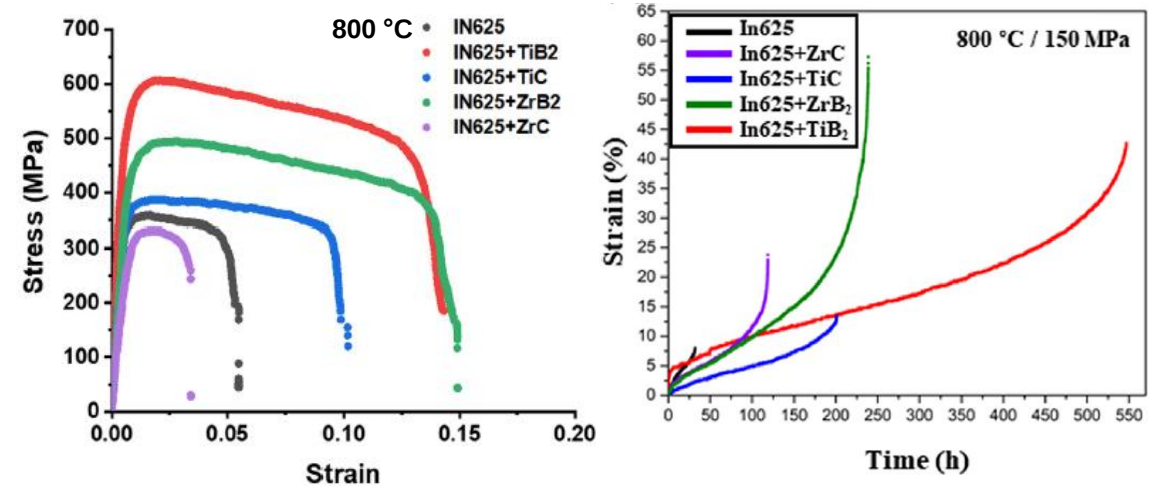
- Supervisor: doc. Ing. Daniel Koutný, Ph.D.
- Supervisor specialist: Ing. Ivo Šulák, Ph.D. (IPM)

Effect of TiB_2 on The Microstructure of IN939



(J. S. Bae et al. 2025)

MMCs Mechanical Properties at Elevated Temperatures



(Y. Zheng et al. 2022)

Ph.D. STUDENT ACTIVITIES

TEACHING ACTIVITIES

- **3CD** – CAD
- **6KM** – Design and 3D Print
- **ZKR** – Research and Development
Project (Consultant)

LEARNING ACTIVITIES

- **9MOP** – Methodologies of Scientific Work
- **9VPR** – Research Project and Its Management
- **9AJ** – English for Doctoral Degree Study
- **9SVK** – Structure and Properties of Metallic
Materials
- **9PLE** – Design of Experiment
- **9DMD** – Dislocation Mechanisms of Plastic
Deformation
- **9FMP** – Fractography and Micromechanisms of
Failure

THANK YOU FOR YOUR ATTENTION

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