STUDY AT FFA, ACTIVITIES AT IMID

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INSTITUTE OF **MACHINE**
AND **INDUSTRIAL DESIGN**

CONTENT

INTRODUCTION

PHD STUDENT

Faculty: Faculty of Fine Arts

Programme: Research in Art and Design

Year of study: 4

2022 - present

ASSISTANT - DID, IMID

2022 - present

STUDY AT FFA

ENTRANCE EXAMS

- dissertation project concept
- Portfolio
- personal resume
- Interview (english)

STUDY PLAN

- block lectures - 1st + 2nd year
- doctoral colloquium
- teaching practice – 26 h/semester
- foreign internship
- state doctoral exam – 3rd year

PHD THESIS

The impact of manufacturing technologies on automotive design → **Digital Ceramics: Generative Strategies in the Context Additive Manufacturing**

- **Original topic:** purely theoretical, with no direct link to the author's practice
- **New topic:** aligned with the author's long-term focus in both teaching and professional practice.
- Results applicable both at FFA and IMID.
- The topic is linked to teaching activities and projects. (DiSTT), practical outputs (RUV)

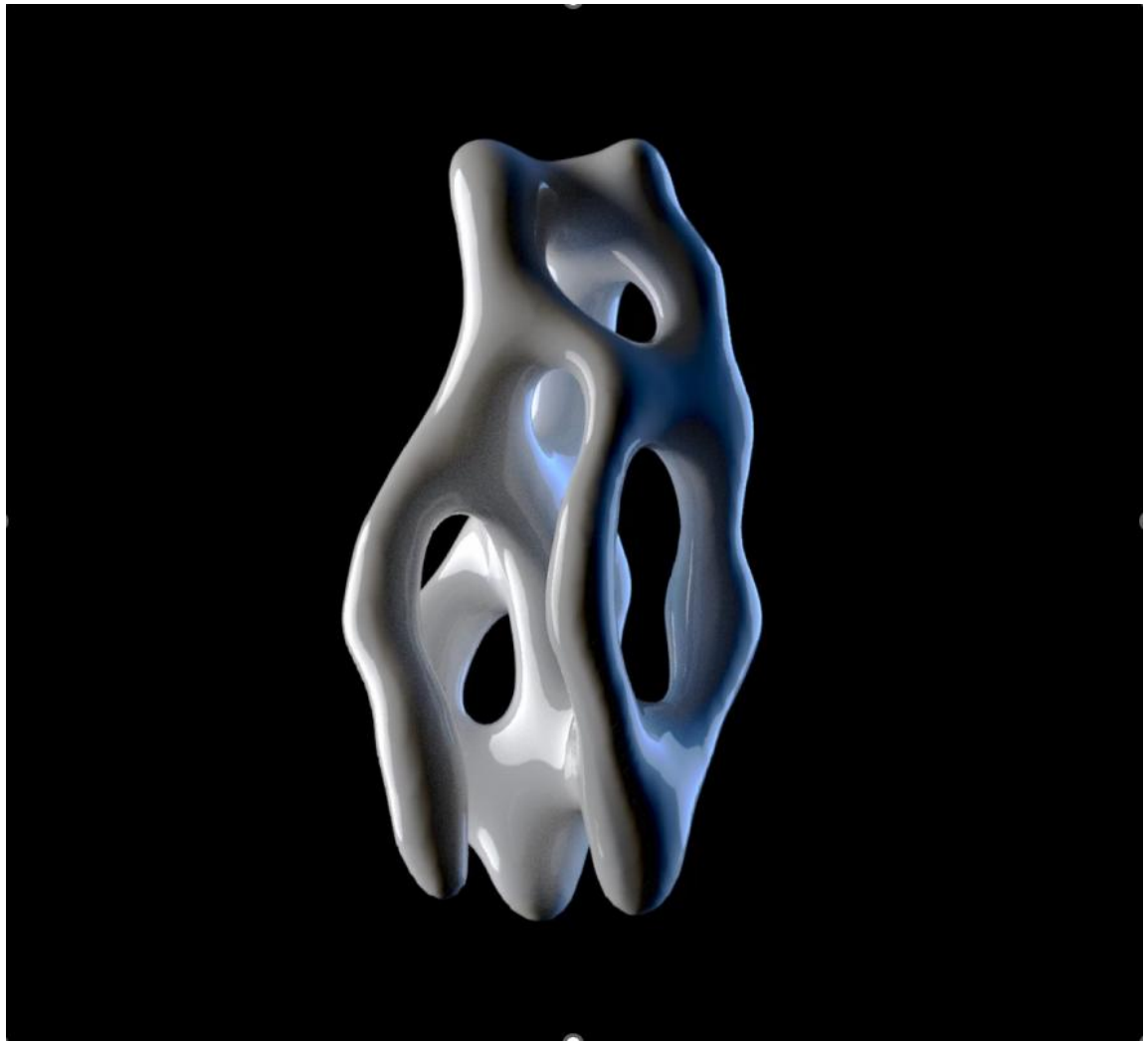
PHD THESIS

Algorithmic design in design and artistic practice, illustrated through the context of ceramic 3D printing

- Parametric strategies often shape the author’s creative thinking – leading to predictable outcomes and visual repetitiveness
- Repeated use of the most intuitively accessible methods
- The result is aesthetic unification and a limited formal repertoire in a field that could otherwise be experimental

PHD THESIS

- The research examines how the very choice of design strategy influences creative decision-making
- “Reverse engineering” of commonly used parametric strategies and their systematization
- Alternative generative approaches based on modified growth algorithms inspired by natural processes
- An iterative “author–script” process, in which the script acts as a generator of stimuli that the author evaluates based on aesthetic judgment and subsequently modifies



PHD THESIS

- A series of 3D-printed objects made from ceramic clay
- The aim is not to imitate specific forms, but to work with the growth principles on which natural forms are based
- These principles are translated into a computational script and further modified
- The result is a series of objects that share a common visual logic

PHD THESIS

TECHNICAL ASPECTS

- Designed a material tank and screw extruder for ceramic clay
- Installed on a TriLAB DeltiQ printer (originally a Prusa i3 MK1)
- Used in teaching (YRP) and in DiSTT project workshops (FAB 25), among others

LECTURES

YRP - Generative Design and Digital Production

YDE - Design of Machines and Instruments

YAM - Advanced Materials in Design

ZPC - How to Make (Almost) Anything

YE3 - Design Project Realization

LECTURES

YRP - Generative Design and Digital Production

- Parametric design with a focus on applications in product and industrial design
- Includes a practical workshop – linking parametric design with digital fabrication (strojLAB)

LECTURES

YDE - Design of Machines and Instruments

LECTURES

YAM - Advanced Materials In Design

- Lectures – fundamental manufacturing technologies and materials used in industry – study materials for the final state examination
- Studio – product design using production waste materials (hands-on)
- Company visits / industrial excursions

LECTURES

ZPC - How to Make (Almost) Anything

- Lectures and assignments focused on cutting with a vinyl plotter and a laser cutter
- Supervision of four projects

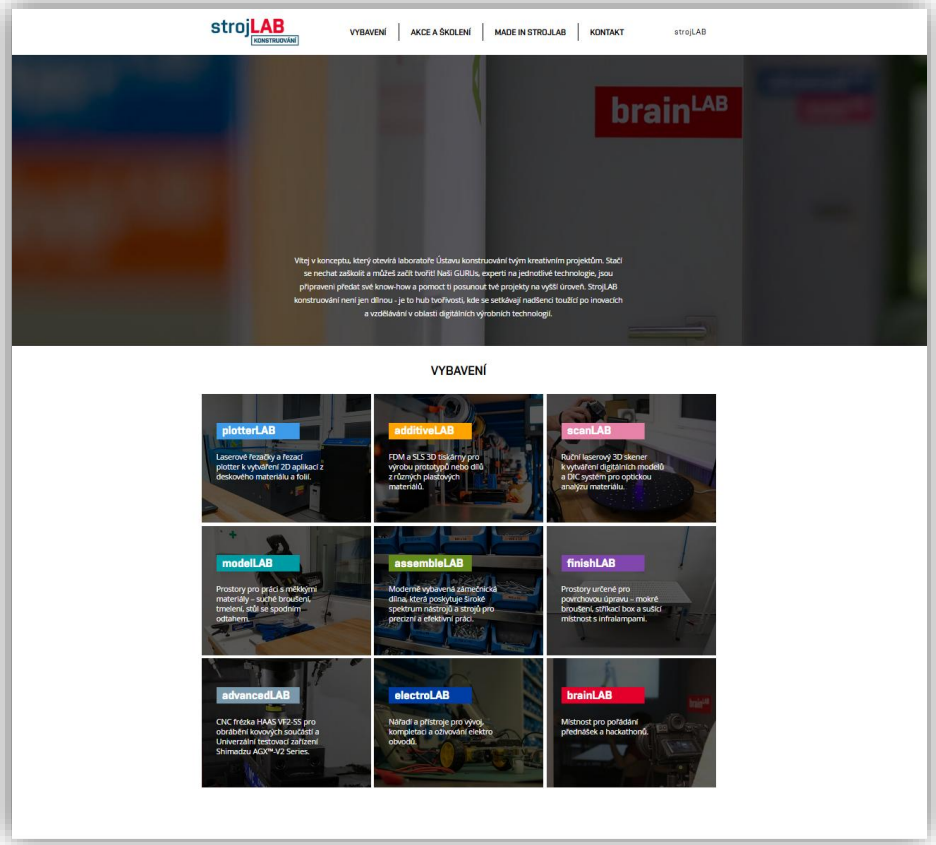
STROJLAB

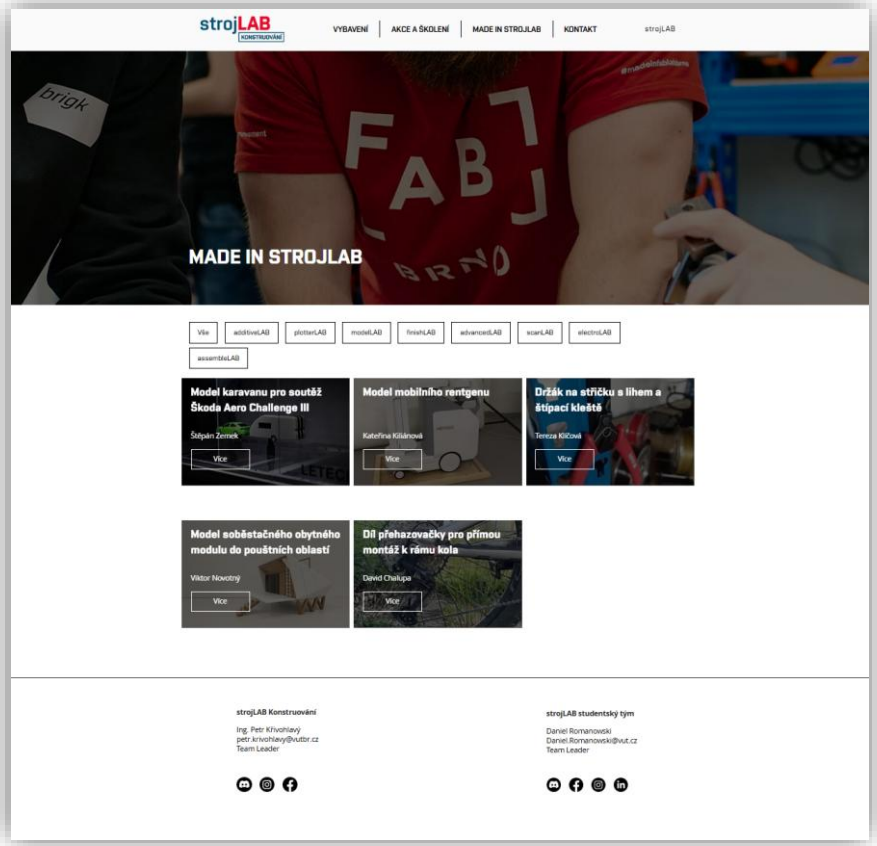
PLOTTER LAB

- Training on laser cutters
- Training on the vinyl plotter
- Machine maintenance
- Development of teaching materials

STROJLAB

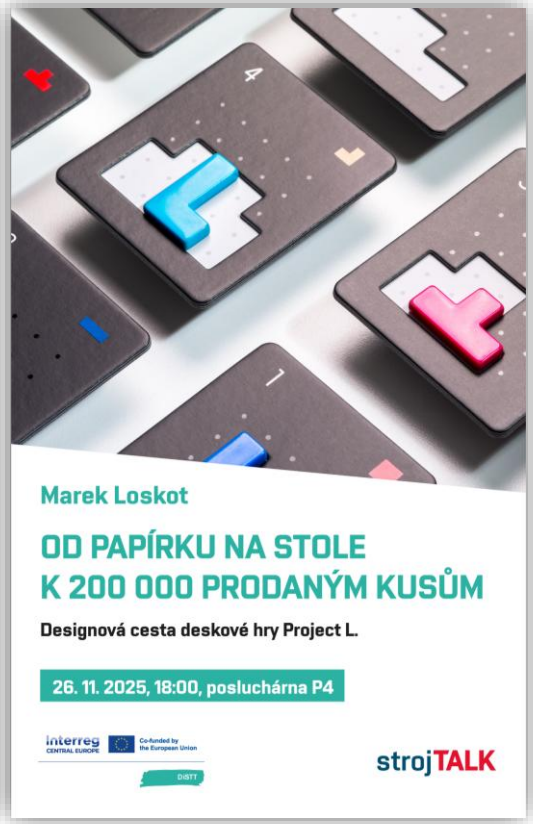
DEVELOPMENT AND MANAGEMENT OF THE STROJLAB.CZ WEBSITE

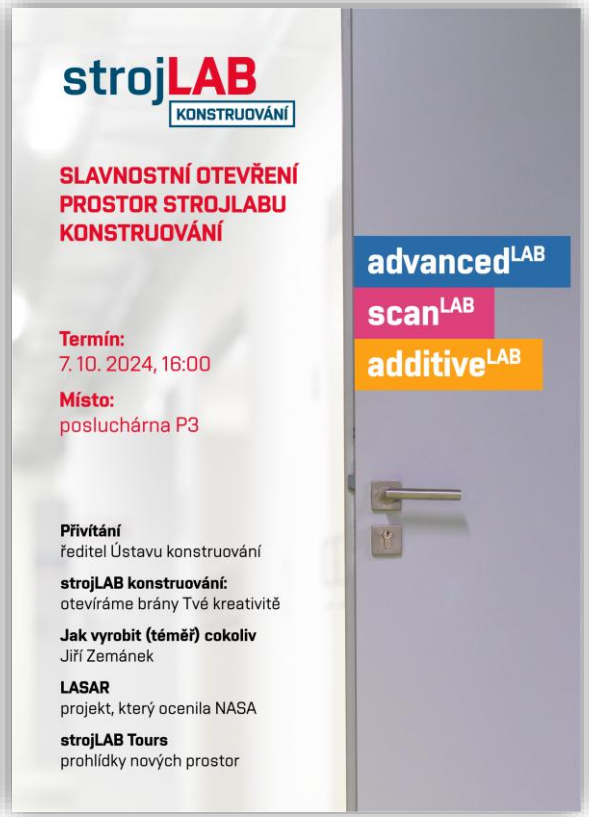




STROJLAB

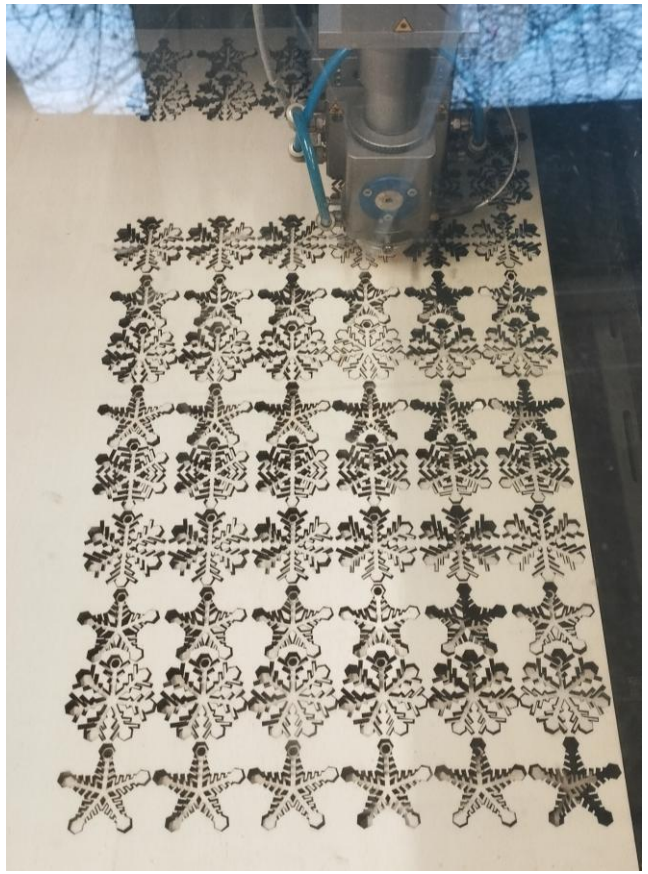
GRAPHIC AND PROMOTIONAL MATERIALS





STROJLAB

OTHER EVENTS - Christmas workshop, Strojlab Challenge, …



DISTT PROJECT

PILOT RUNS - WORKSHOPS

- Parametric design
- Laser cutting
- Ceramic 3D printing

GRAPHIC MATERIALS

- Posters, rollu-ps and flyers
- Materials for social media

DISTT PROJECT

FAB 25 – CLAY 3D PRINTING WORKSHOP

DISTT PROJECT

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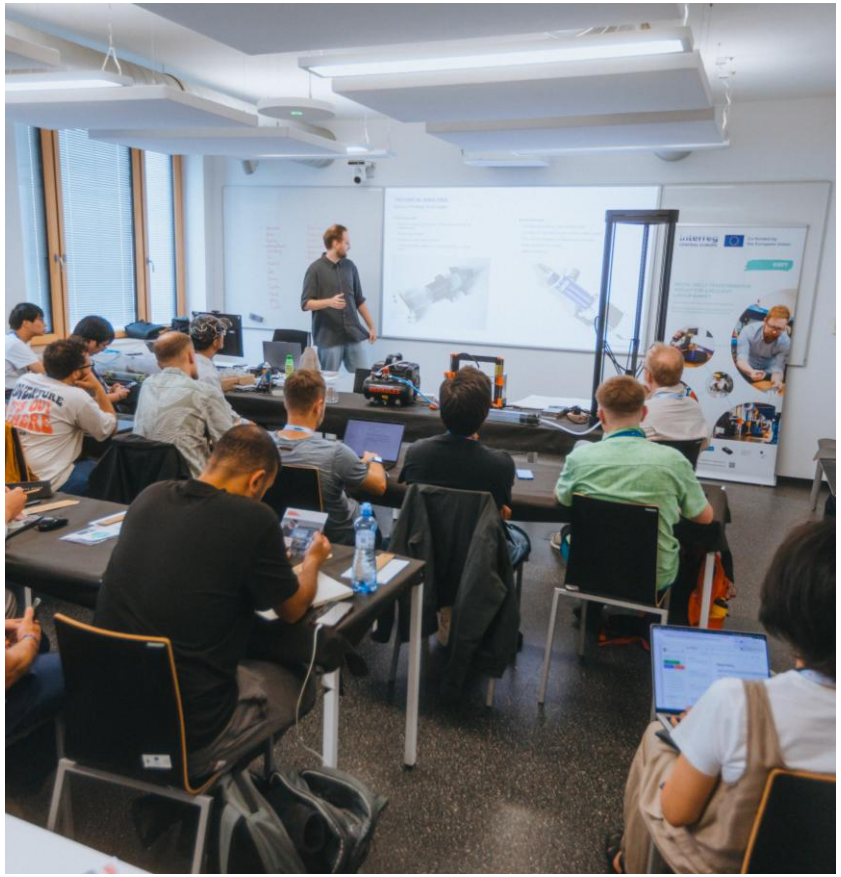

DISTT PROJECT

WORKSHOP - PARAMETRIC SEATING ELEMENTS

PROJEKT DISTT

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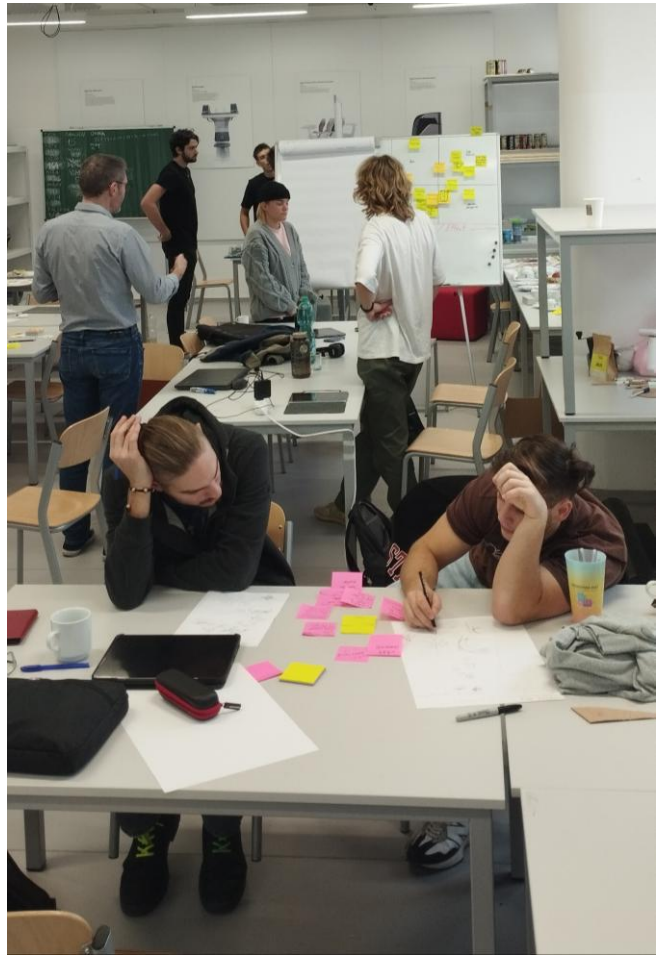
PROJEKT DISTT

WORKSHOP - PARAMETRIC SEATING ELEMENTS

OTHER ACTIVITIES

HONEYWELL WORKSHOP

- Design thinking workshop
- Two workshops – winter and summer semester
- Topic: automated warehouse systems
- Excursion to Honeywell



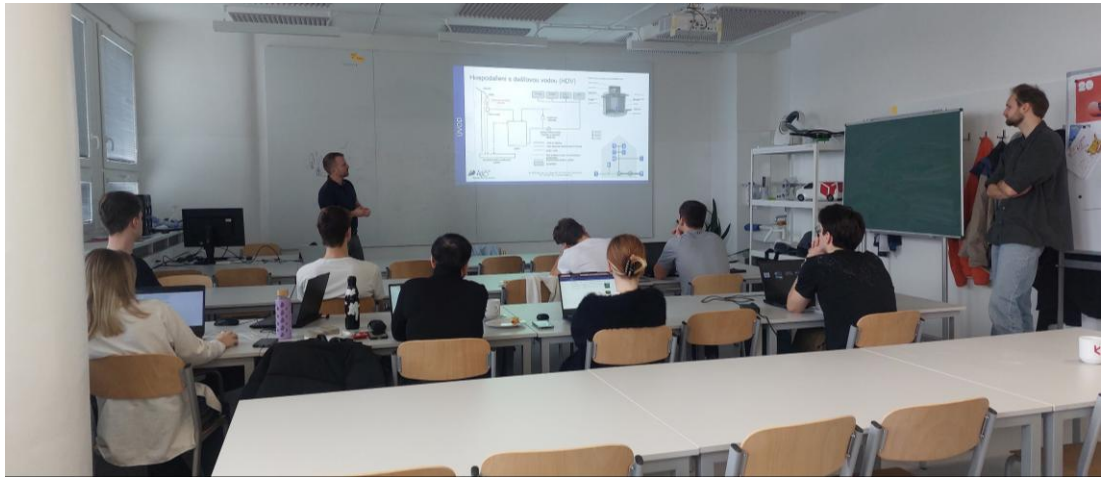
DALŠÍ AKTIVITY

HONEYWELL WORKSHOP

OTHER ACTIVITIES

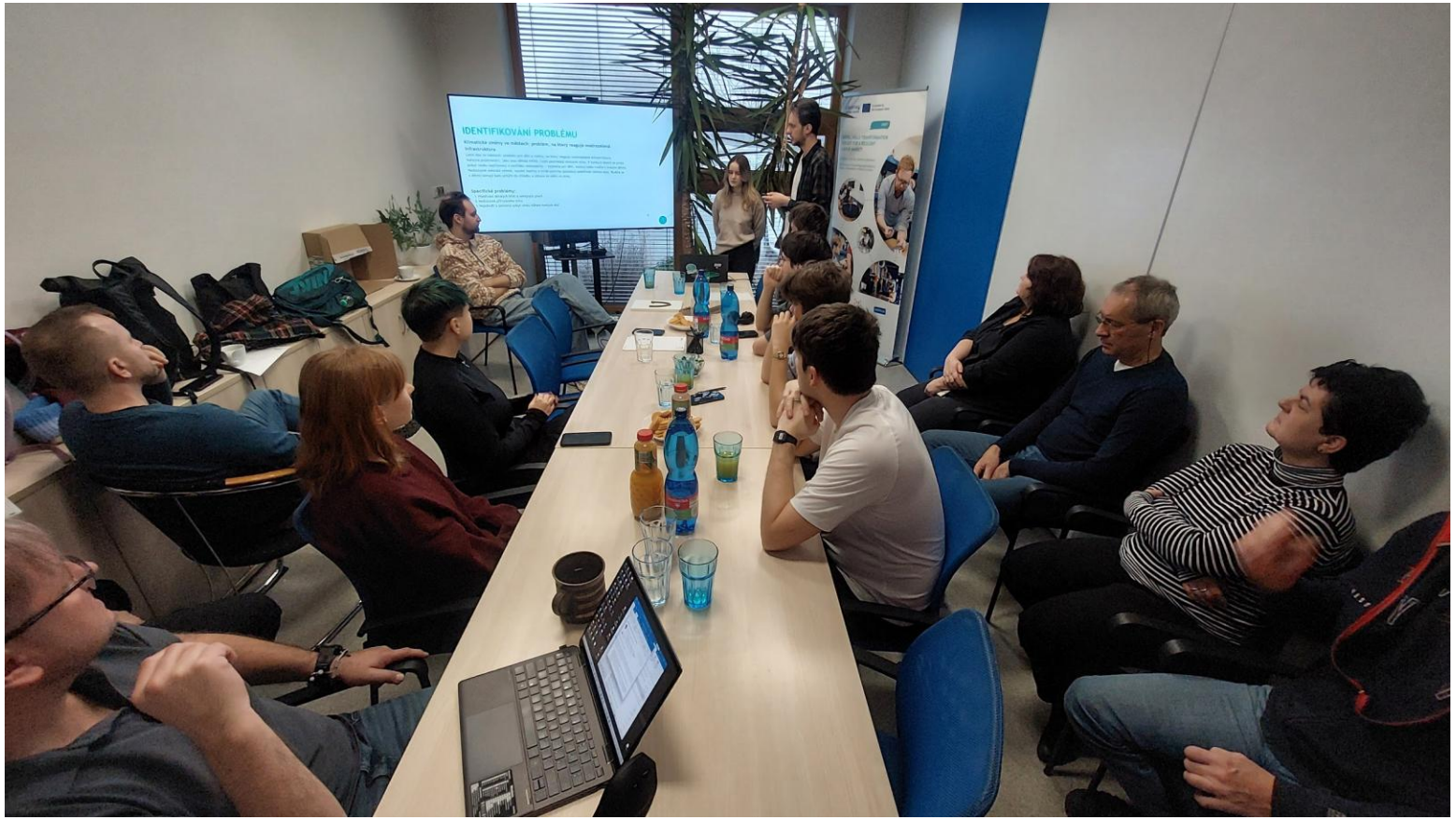
WORKSHOP WITH ASIO

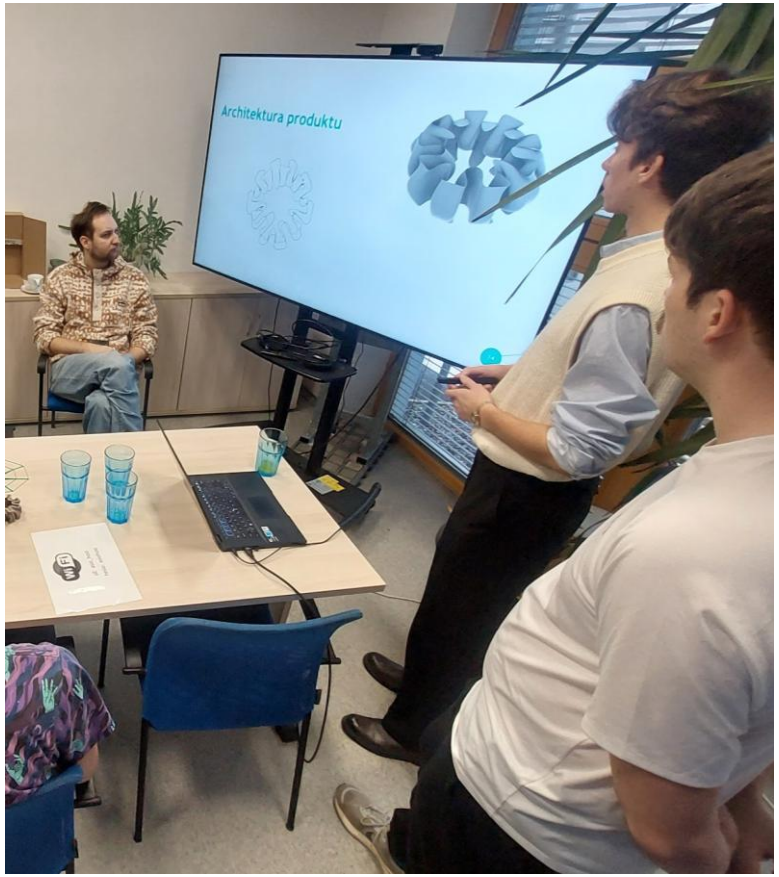
- Design thinking workshop
- Blue–green infrastructure – objects for large-scale 3D printing in concrete or clay
- Greater emphasis on prototyping (ceramic 3D printing)



OTHER ACTIVITIES

WORKSHOP WITH ASIO





REGISTRY OF ARTISTIC OUTPUTS

Id	Kód	Segment	Druh činnosti	Závažnost	Velikost	Název díla
89426	CKZ	DES/Grafický design	Realizovaný design	C	K	Deserting
89433	BKY	DES/Produktový a průmyslový design	Realizovaný design	B	K	Design ovladače k elektrickému longboardu
89414	BKX	DES/Produktový a průmyslový design	Realizovaný design	B	K	Kola pro elektrickou mobilitu
76855	CMZ	DES/Grafický design	Realizovaný design	C	M	Etiketa pro Nový sklep pod Starým vrchem
72649	CMZ	DES/Grafický design	Realizovaný design	C	M	Logo Kavárny na kině
72731	BLY	DES/Produktový a průmyslový design	Vystavený design	B	L	Elektrický motocykl do městského prostředí
100833	BLZ	DES/Produktový a průmyslový design	Vystavený design	B	L	Kreativní Technika
72645	CLZ	DES/Produktový a průmyslový design	Vystavený design	C	L	Deserting
59311	CLY	DES/Produktový a průmyslový design	Vystavený design	C	L	Odpočinková židle Armadillo
72647	BLY	DES/Sklo, porcelán, keramika	Realizovaný design	B	L	Šálek Bostrico Algoritmico

Y

NCSD - Národní cena za studentský design

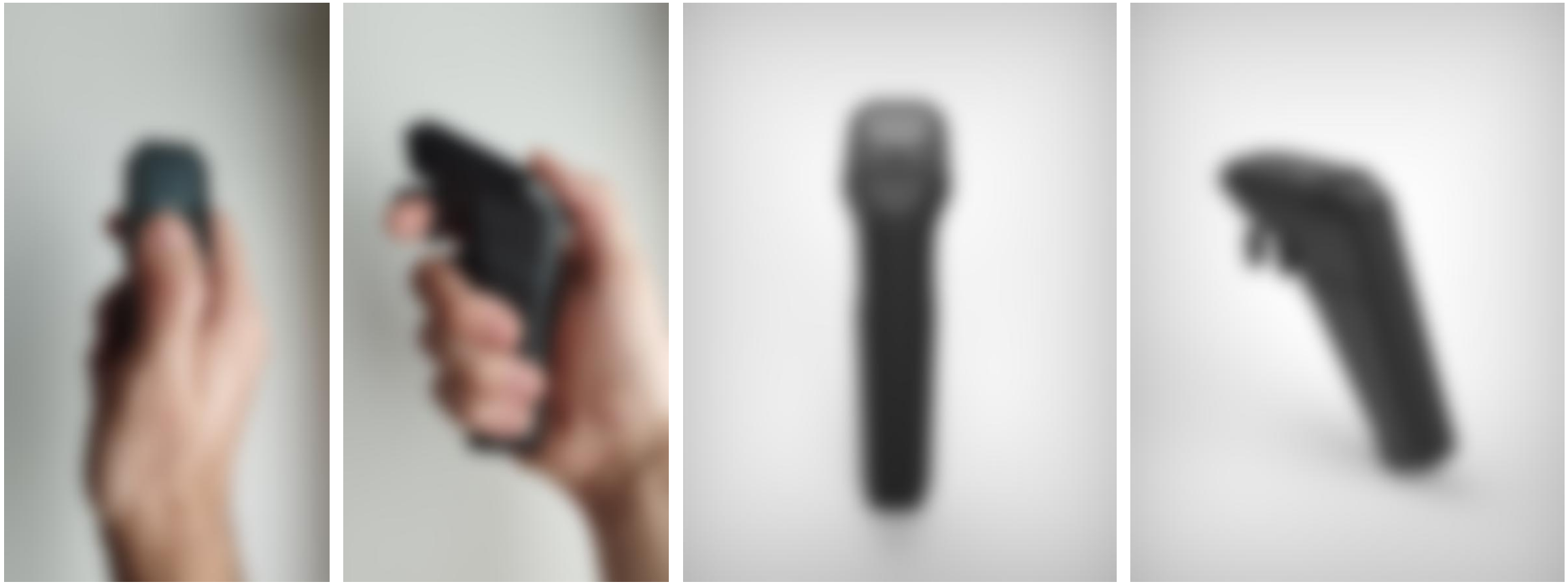
Česká republika, Praha

06.12.2023

Upřesnění: Dobrý studentský design

OTHER ACTIVITIES

JETSURF - design, prototyping and development



OTHER ACTIVITIES

JETSURF - design, prototyping and development

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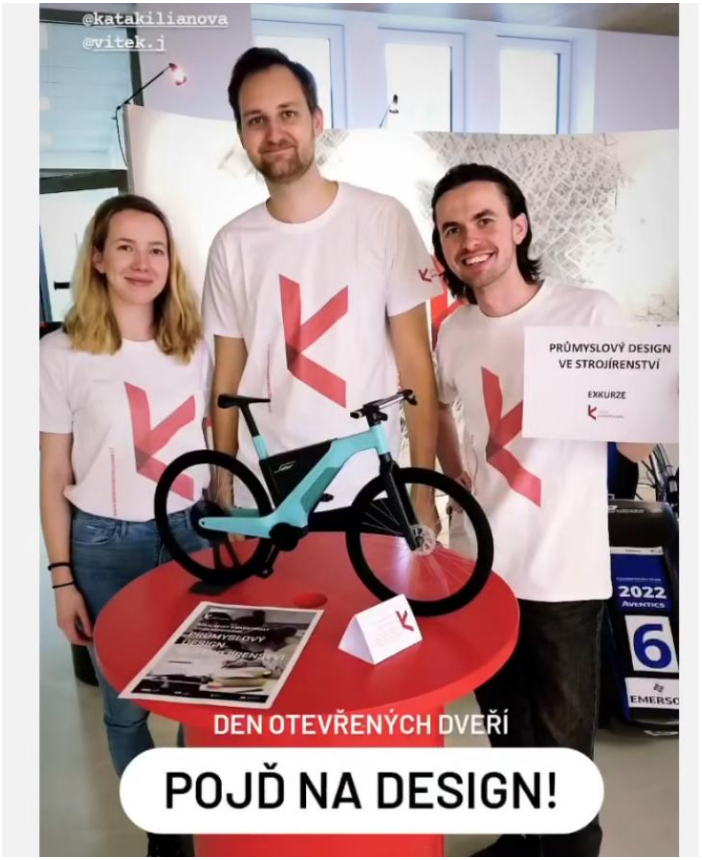
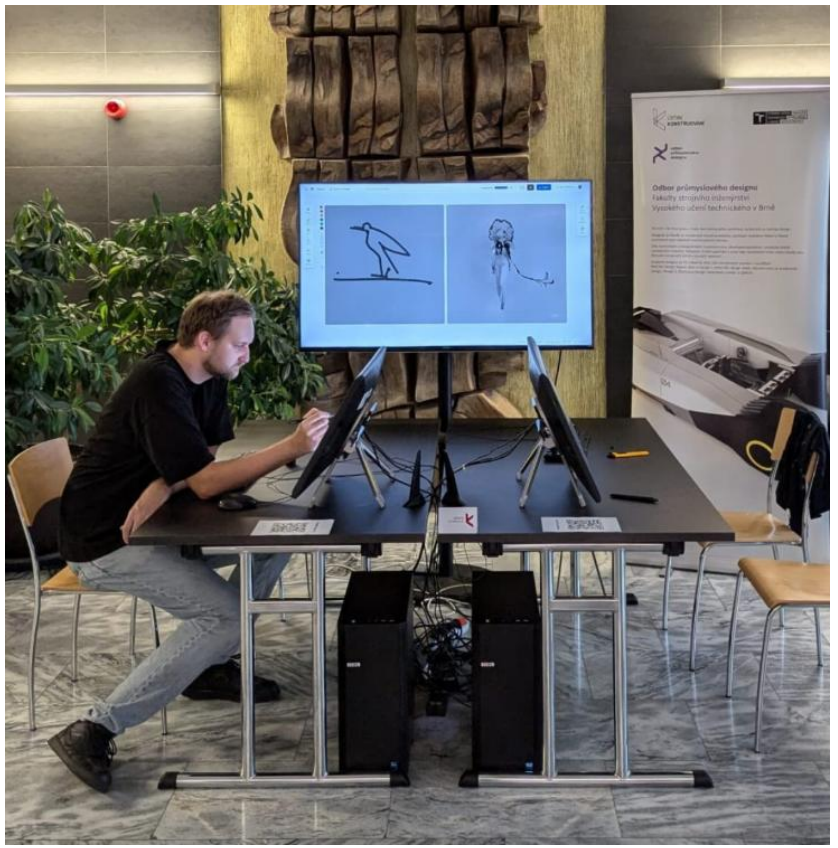
OTHER ACTIVITIES

OPEN DAYS



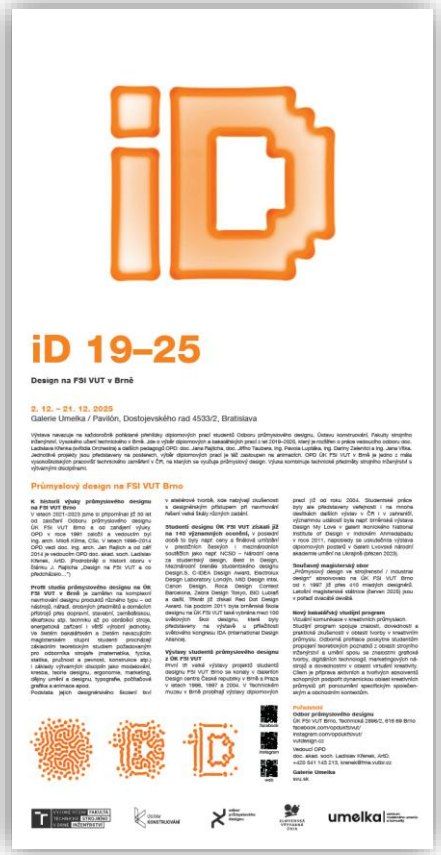
OTHER ACTIVITIES

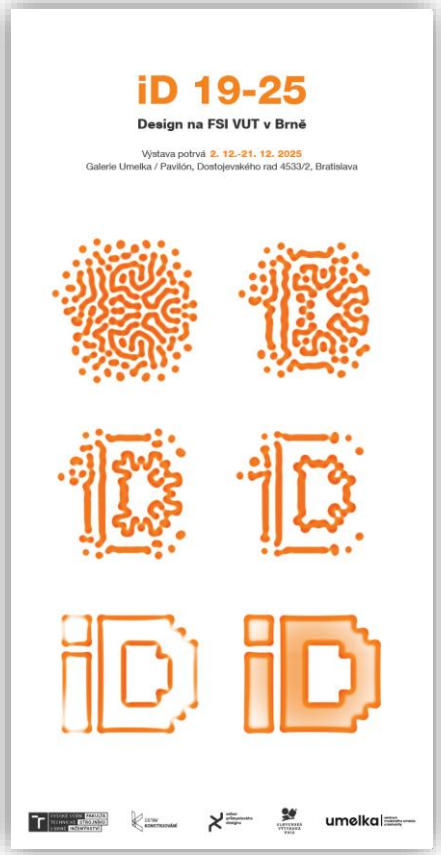
RESEARCHERS' NIGHT



OTHER ACTIVITIES

GRAPHIC DESIGN OF THE EXHIBITION ID 19–25





OTHER ACTIVITIES

GRAPHIC DESIGN OF THE EXHIBITION ID 19–25

THANK YOU FOR YOUR ATTENTION

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