



150
YEARS

Welcome to School of Engineering

Prof. Dr. Dirk Wilhelm
Dean

Four profile areas



Energy



Information



Mobility



Health



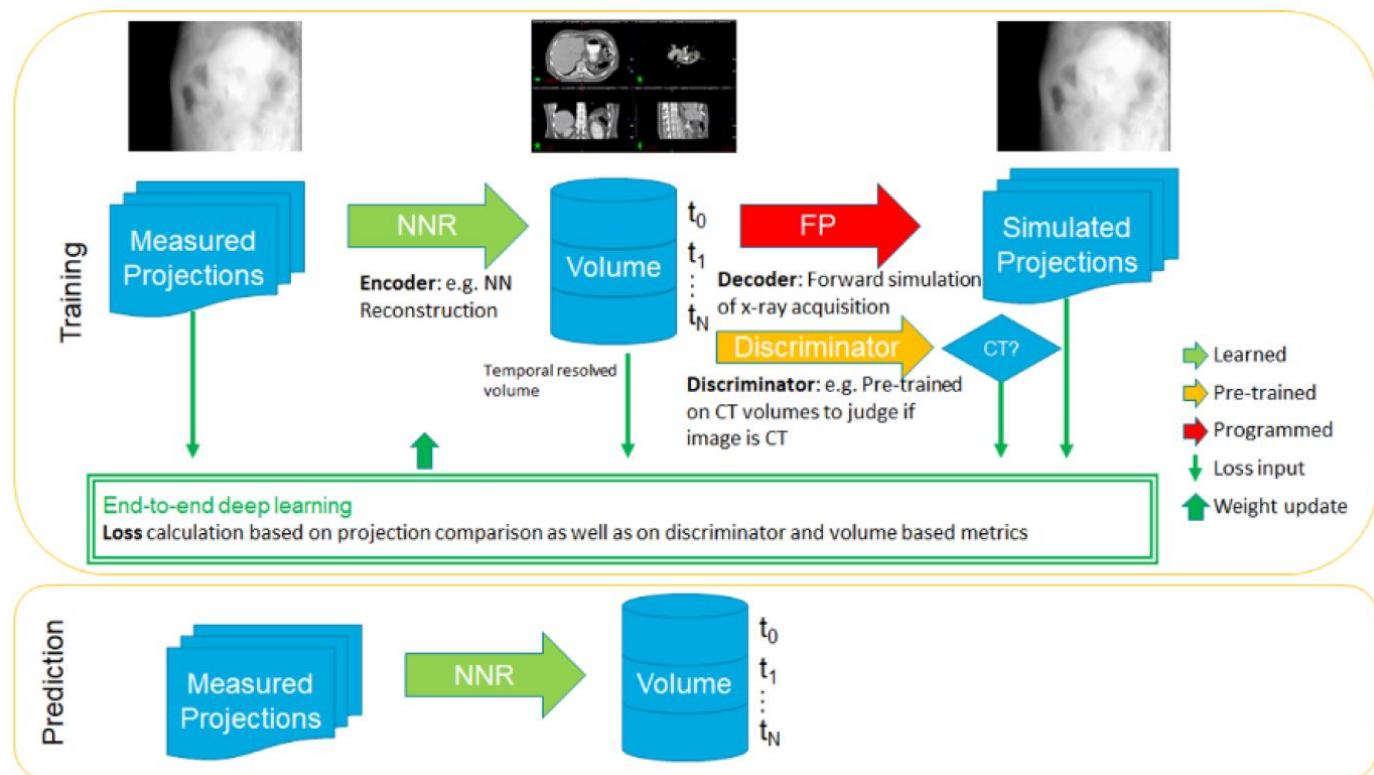


DIR3CT. Deep Image Reconstruction through X-Ray Projection-based 3D Learning of Computed Tomography Volumes



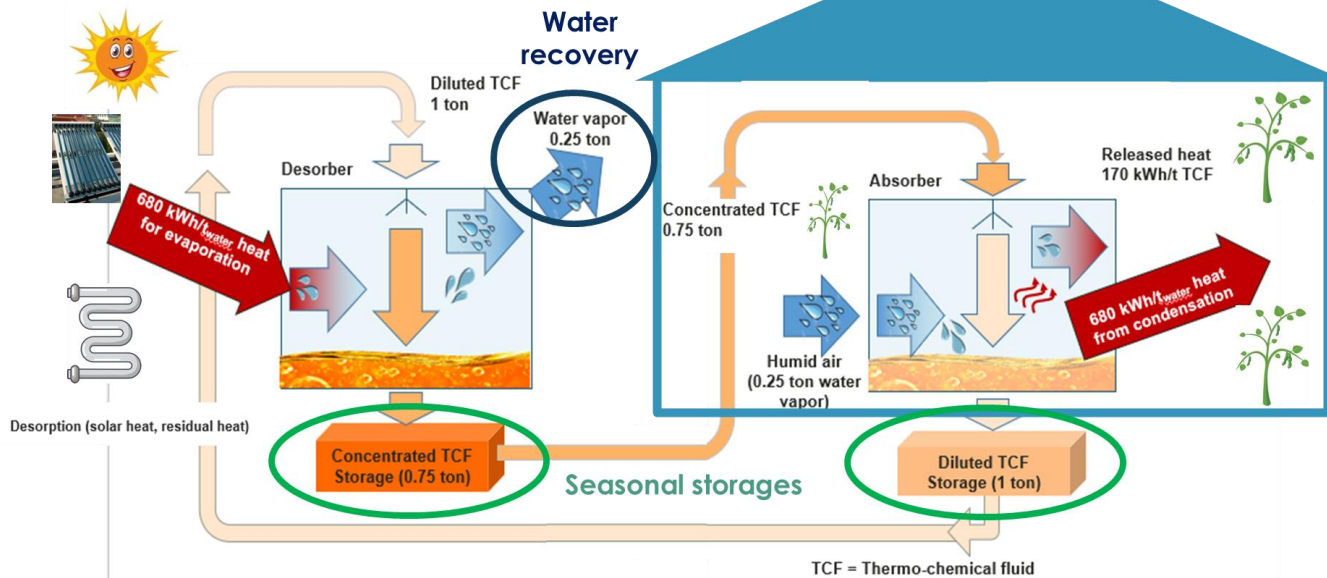
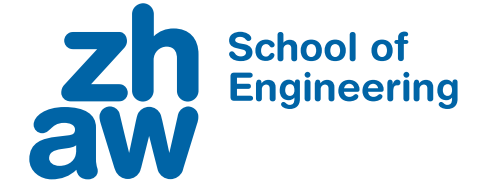
Compensation of motion artefacts in 3D CBCT reconstructed volumes using deep learning

Founding	Total volume 1.13 MCHF, Innosuisse
Duration	02/2020 – 05/2022
Industry partner	Varian Medical Systems World market leader radiation therapy
ZHAW	About 8 ZHAW researchers from two institutes InIT and IAMP are involved. - InIT Institute of Applied Information Technology focuses on 3D reconstruction using deep learning (supervised & unsupervised) - IAMP Institute of Applied Mathematics and Physics are working on Physical modeling and simulation of motion, anatomical constraints
Challenge	Highly ambitious and technologically challenging





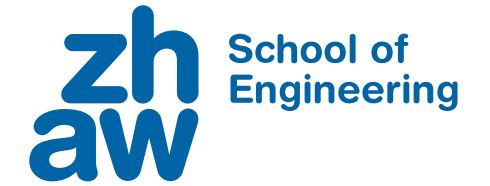
TheGreefa Thermochemical Fluids in Greenhouse Farming



New concept for air temperature / humidity control and water recovery in greenhouses,

Funding	EUR 4,6 Mio. EU Horizon 2020 research and innovation program.
Duration	44 months started 1st Oct 2020
Industry partner	12 partners from Europe and Africa
ZHAW	IEFE Institut for Energy Systems and Fluid-Engineering is coordinating this project
Challenges	<ul style="list-style-type: none">- Reduction of energy consumption- Large use of renewable energy- Cost effectiveness

ZHAW's eight departments



Architecture, Design and Civil Engineering



Health Professions



School of Management and Law



School of Engineering



Applied Psychology



Social Work



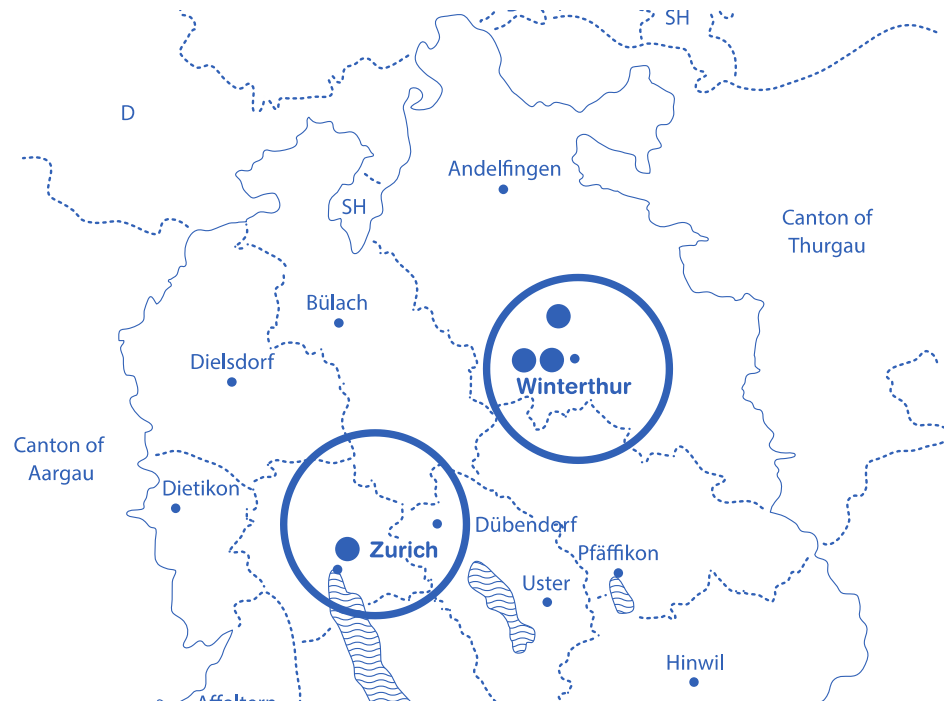
Applied Linguistics



Life Sciences and Facility Management

Volume share by department

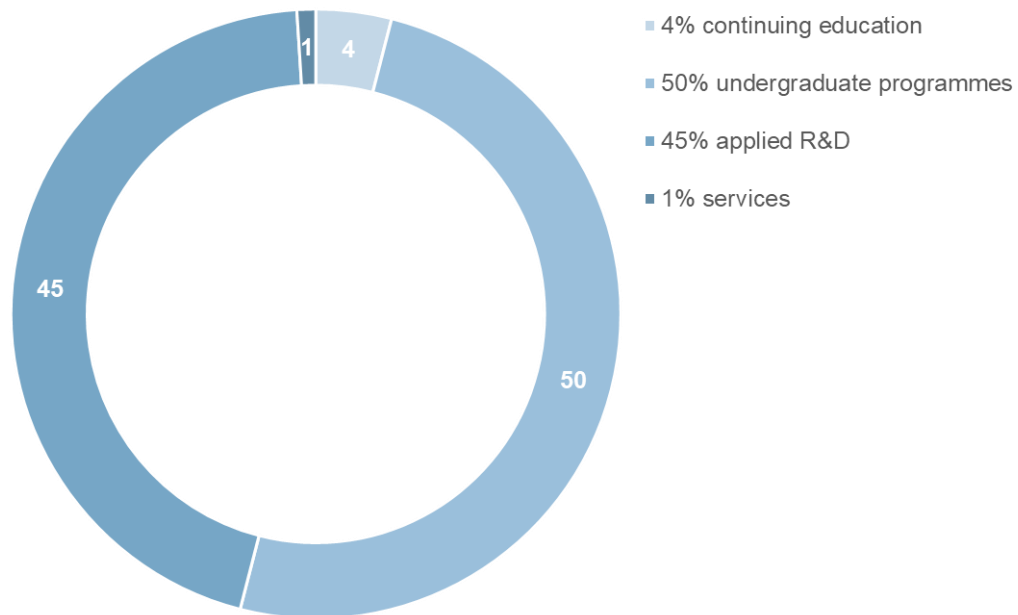
- 26% School of Engineering
- 22% Life Sciences
- 21% School of Management and Law
- 11% Health Professions
- 6% Applied Psychology
- 6% Applied Linguistics
- 5% Social Work
- 3% Architecture



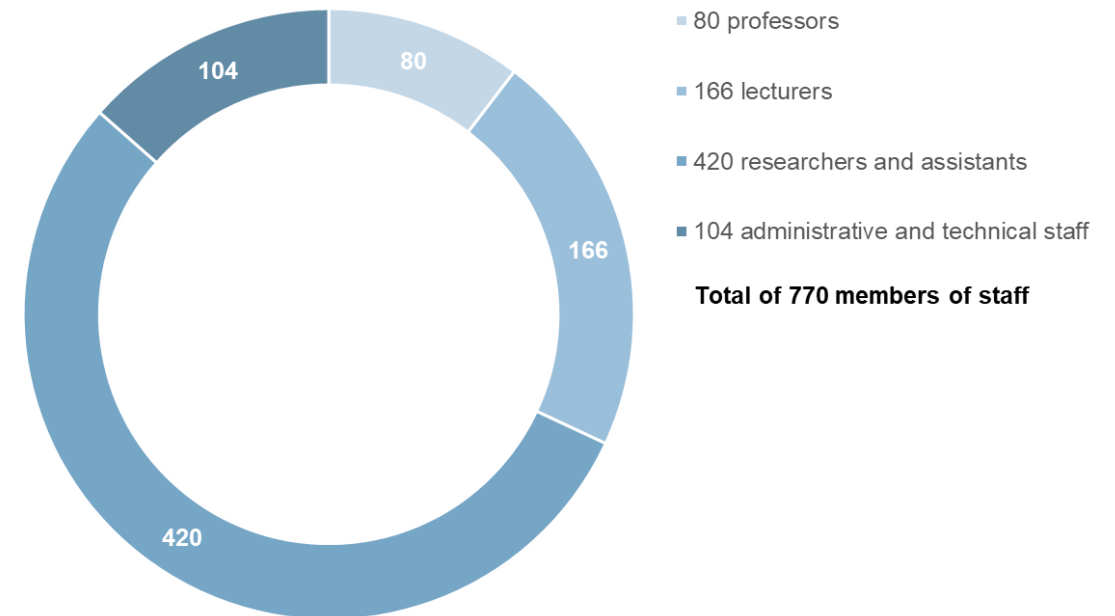
ZHAW School of Engineering

Figures of School of Engineering

Volume share by area of activity



Members of staff

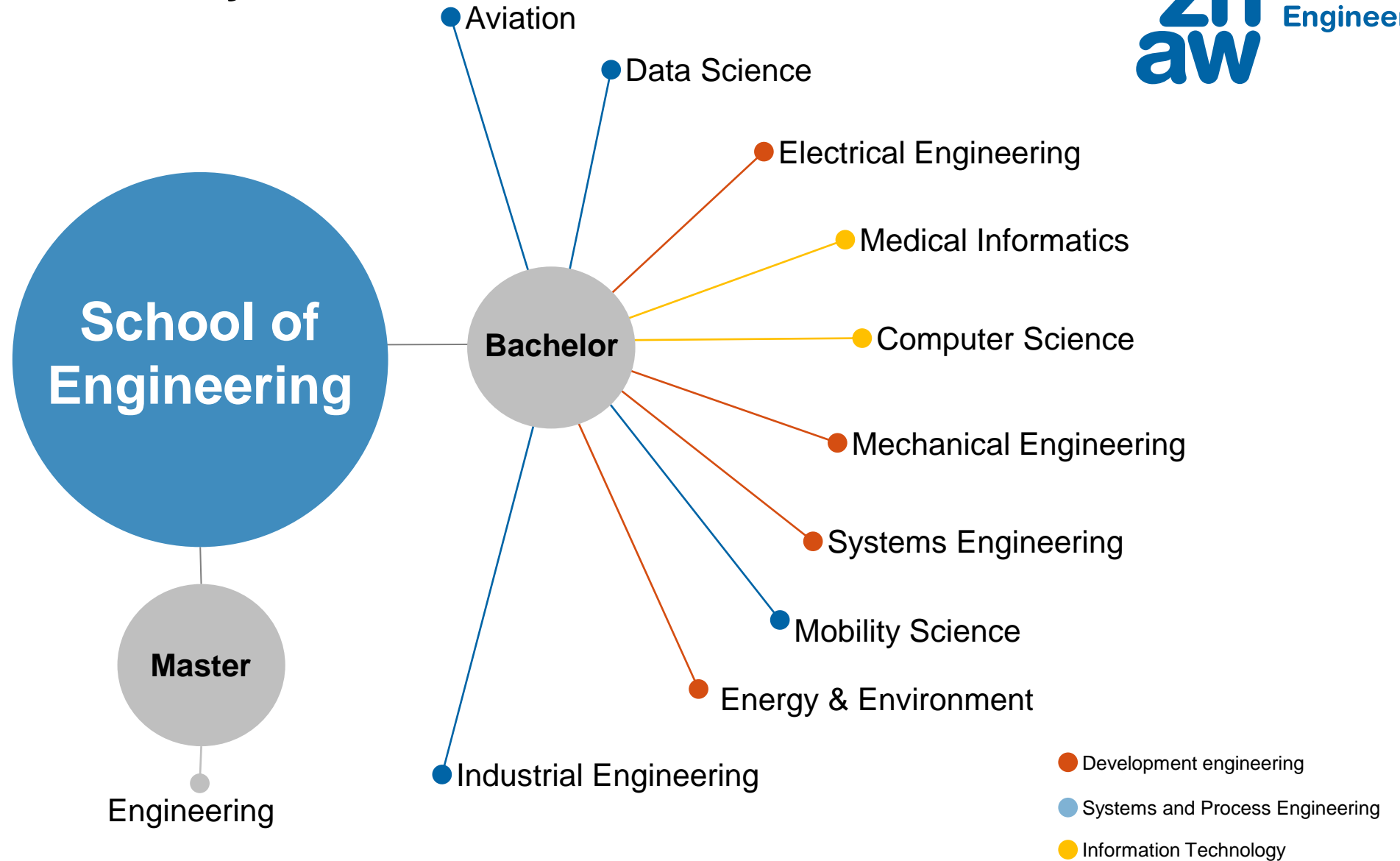


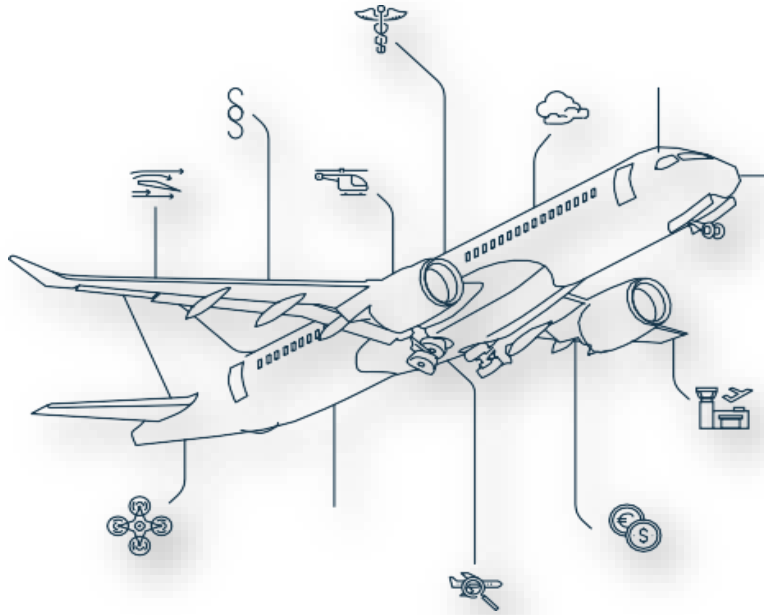


Course of Study



Course of study





Specialisations:

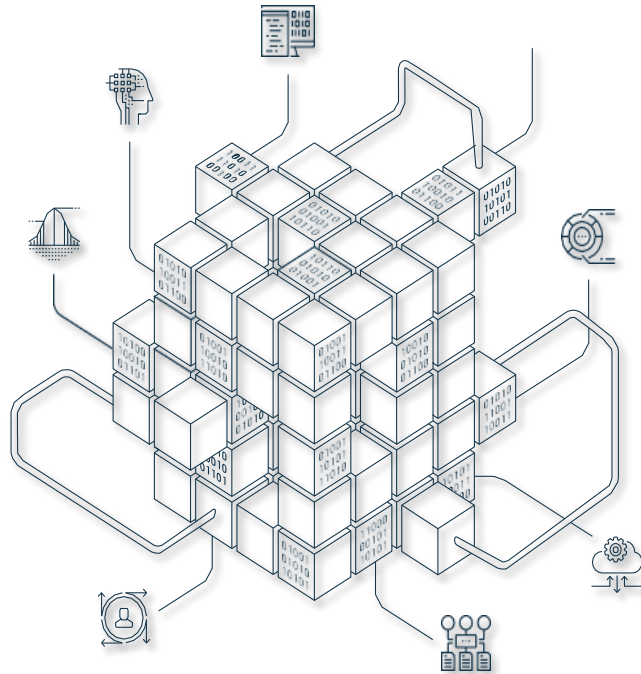
- Technical engineering
- Operational engineering
- Combined qualification as airline transport pilot

“If you study aviation, you may not learn to fly, but you do learn how to understand flight, in all its complexity.”

Mathieu Wanner
Aviation graduate



BSc Data Science



Specialisation

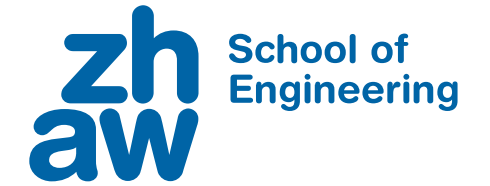
- Information Engineering
- Artificial Intelligence
- Finance/Banking
- Data-Supported Service Engineering
- Quantitative Methods in Marketing
- Digital Health
- Mobility Data
- Computational Life Sciences

“In the course of digitalisation, more and more data is becoming available, which is just waiting to be analysed and evaluated.”

Daniele Mele
Computer Science graduate



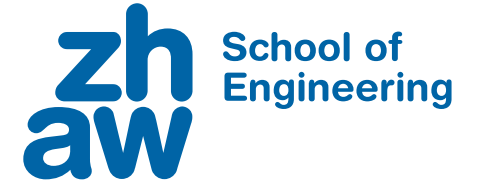
Partner Companies in Education





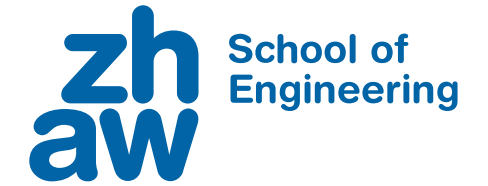
International exchange

International profile

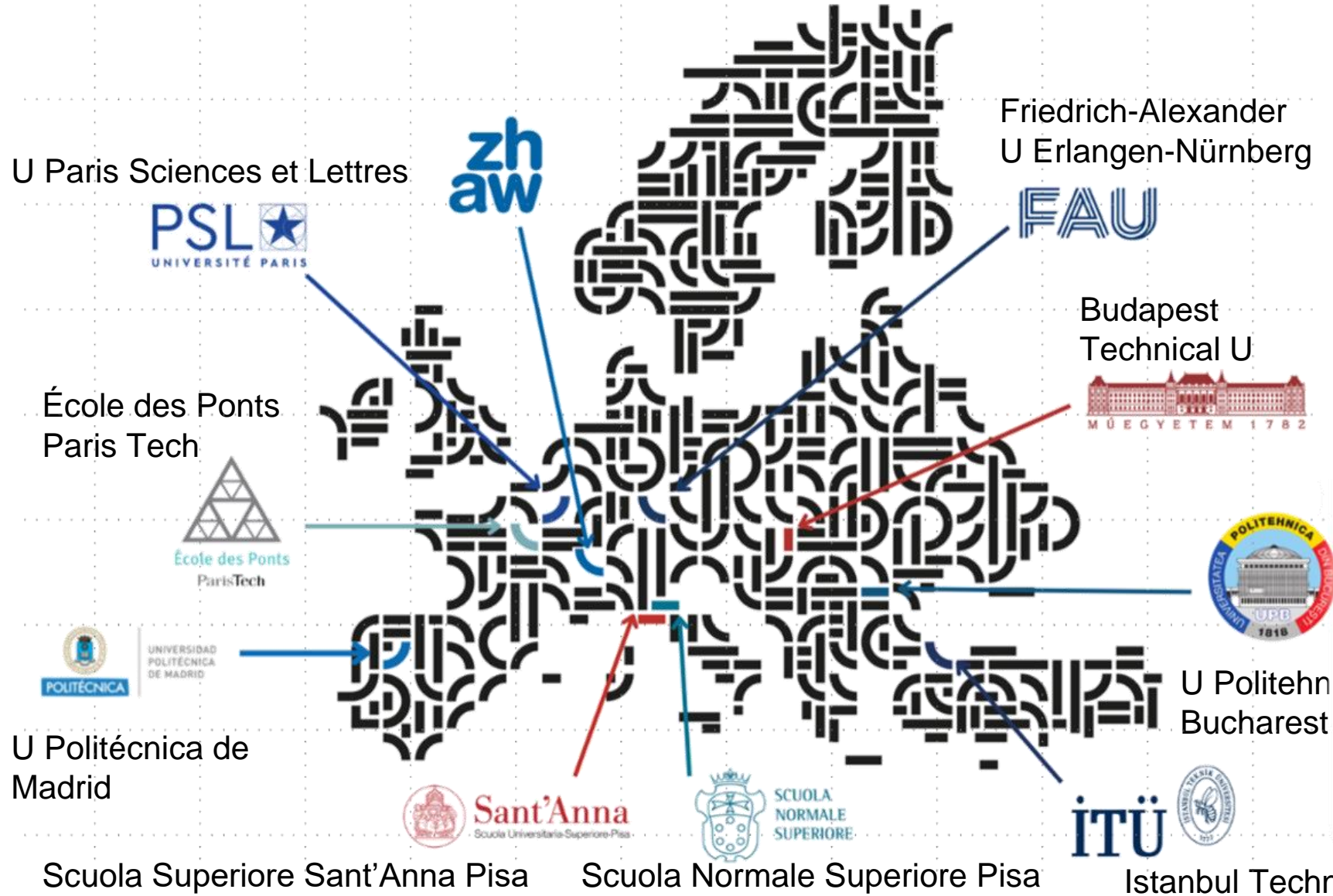
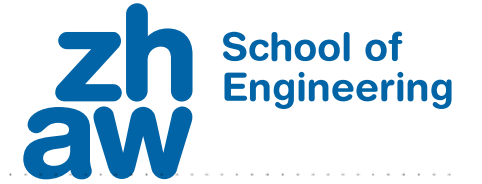


- At least 20 ECTS of the regular course content are completed at the School of Engineering in English.
- Students complete a semester abroad or internship abroad or write their dissertation abroad.
- The elective module ‘Intercultural Communication and Management’ must be completed successfully.
- Upon request, students must act as a support ‘buddy’ for a foreign student at least once.
- Acquisition of an internationally recognised English certificate at C1 level (TOEFL, Cambridge Certificate in Advanced English or equivalent).
- Registration during the first year of study.

Selection of our partner universities



E uropean E ngineering L earning I nnovation S cience A lliance



IN ASSOCIATION WITH



European Network for Accreditation of Engineering Education

CO-FOUNDED BY

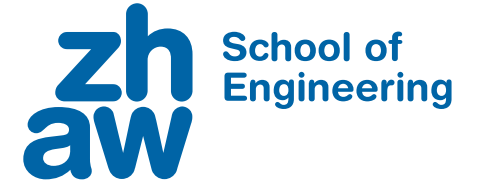


Co-funded by the Erasmus+ Programme of the European Union



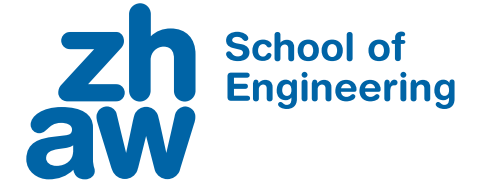
Master of Science in Engineering

Master of Science in Engineering



- The top Bachelor's students who graduate with an A or B have the option of completing a Master of Science in Engineering (MSE).
- In-depth specialisation at a selected institute or centre.
- Participation in real-life industry projects.
- Can be completed on a full-time or part-time basis.
- Option of a 50% assistant role at an institute or centre.
- The course is taught in English.

Master of Science in Engineering: 11 Profile



Aviation

Business Engineering

Civil Engineering

Computer Science

Data Science

Electrical Engineering

Energy and Environment

Mechanical Engineering

Mechatronics and Automation

Medical Engineering

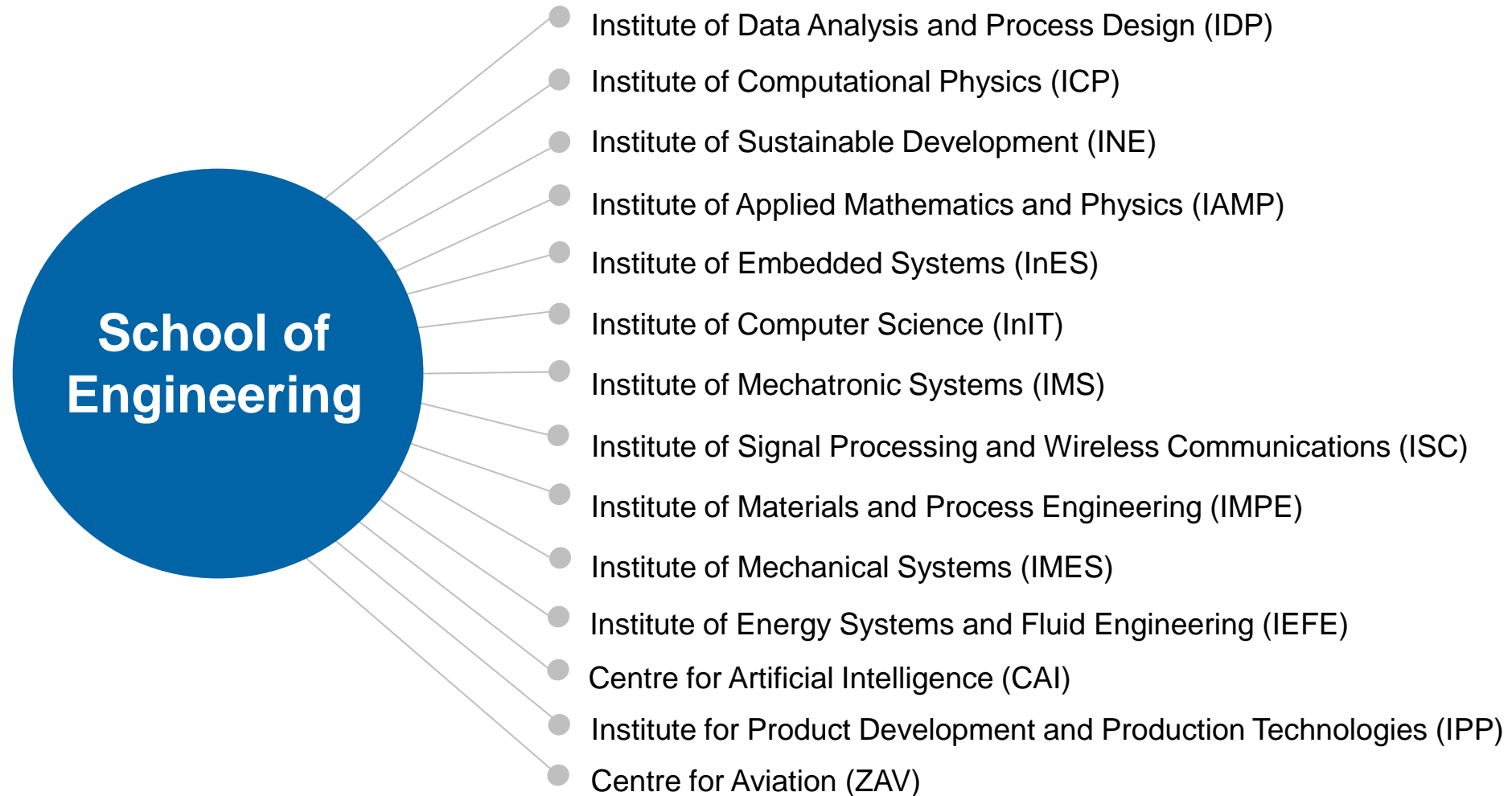
Photonics

- Students are allocated to an institute or centre for the entire duration of the study programme.
- International exchange promoted through a semester abroad or completion of a double degree programme in partnership with Washington State University or Grand Valley State University in the USA.

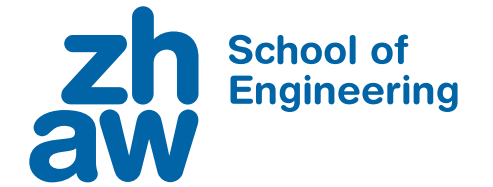


Research and development

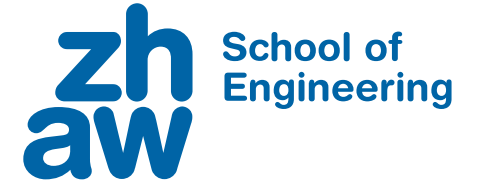
14 Institutes and Centres



Centre for Artificial Intelligence (CAI)



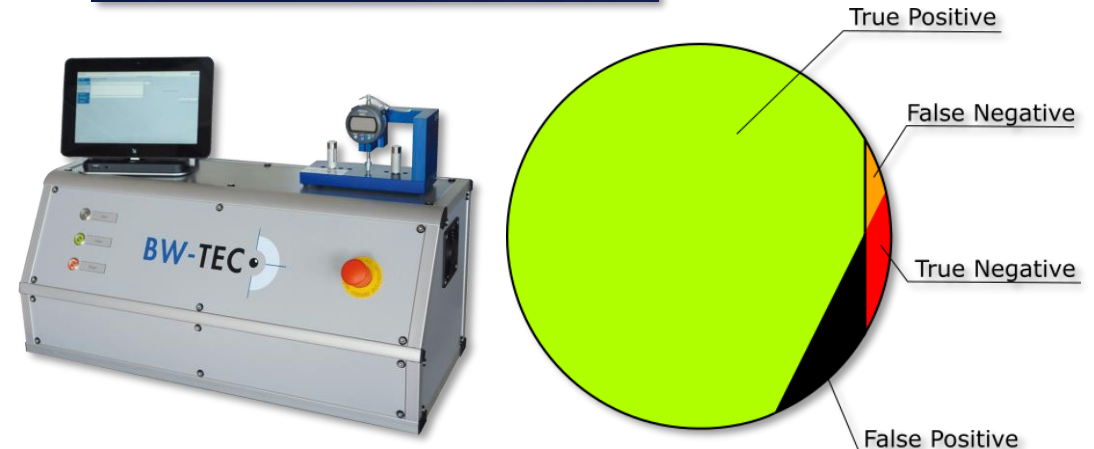
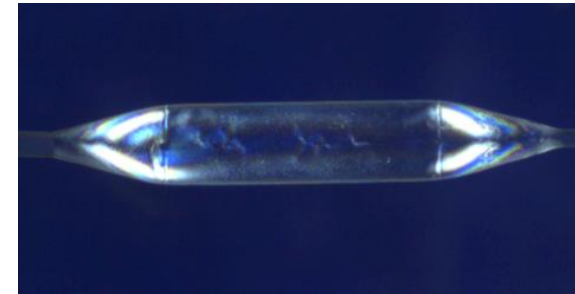
Centre for Artificial Intelligence (CAI)



The Centre for Artificial Intelligence specialises in research and teaching regarding machine learning and deep learning methodologies, with the aim of implementing these in a wide variety of scenarios across all sectors of society.

Focus areas:

- Autonomous Learning Systems
- Computer Vision, Perception and Cognition
- Natural Language Processing
- Trustworthy AI
- AI Engineering



Interdisciplinary platforms

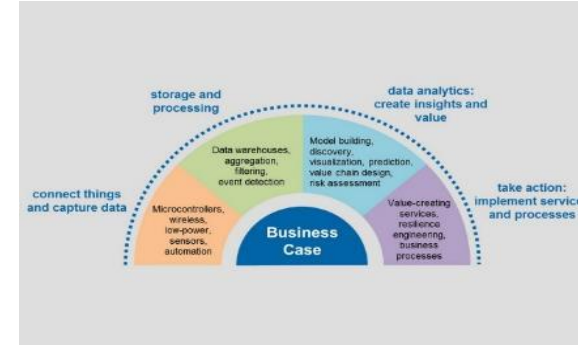
Data Lab



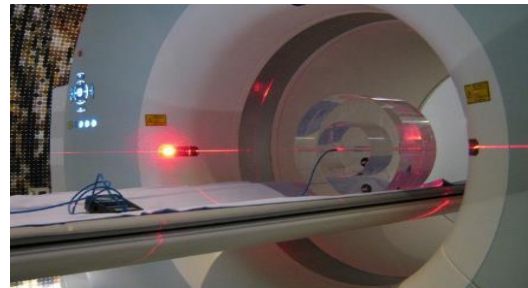
Digital Mobility



Industry 4.0



Medical systems



Photovoltaik



Smart Cities and Regions



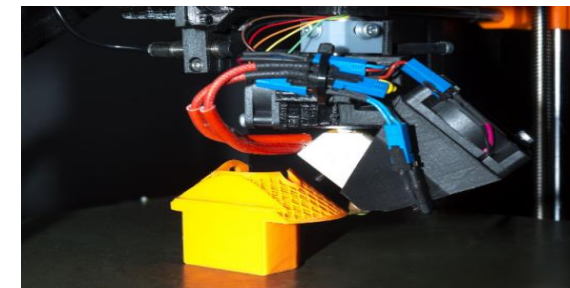
Photonics



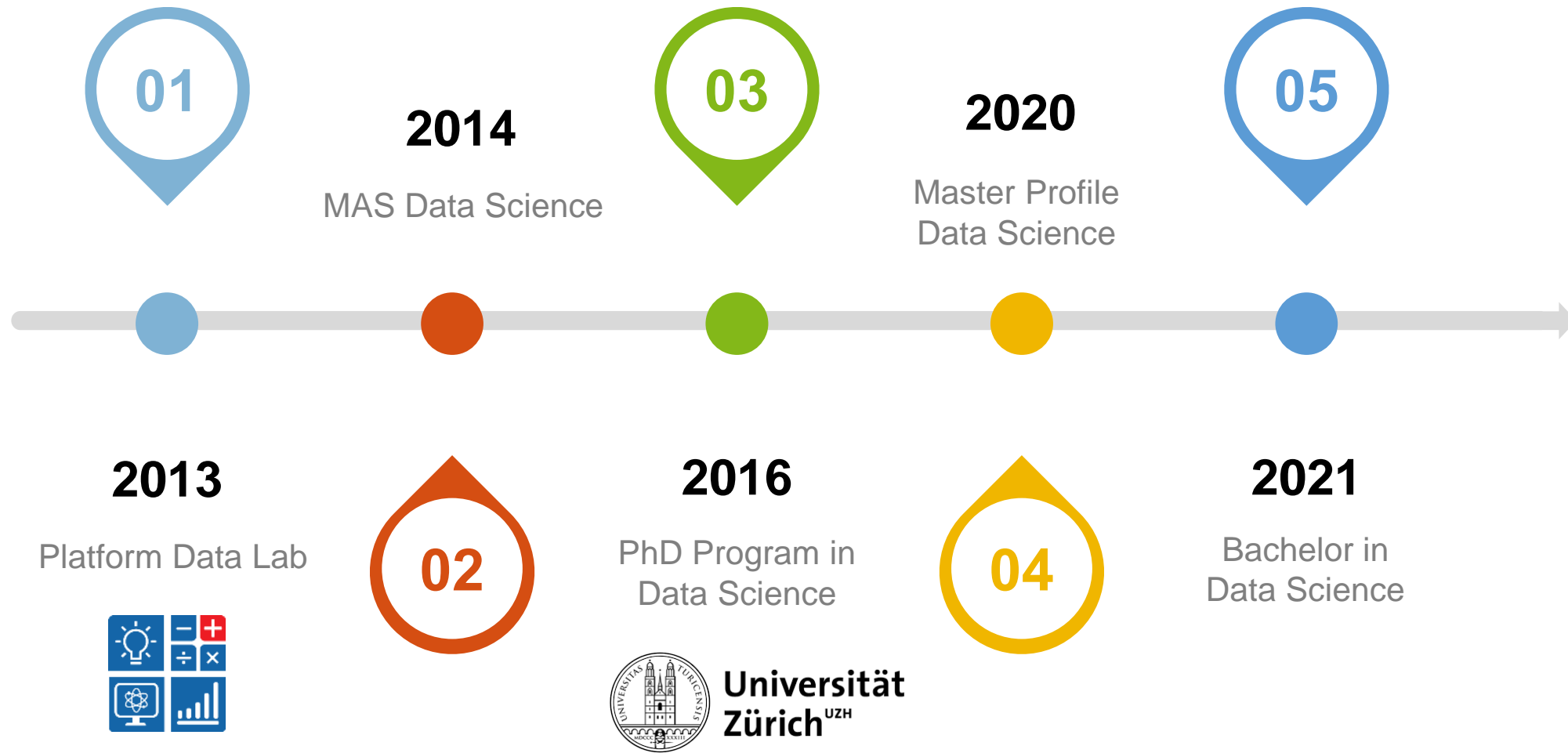
Generative AI



Additive Manufacturing



Data Science as strategic field at ZHAW SoE



Redesign of the campus

An architectural rendering of a modern campus. The background features a large, multi-story building with a prominent glass facade and a grid-like structure. In the foreground, there is a landscaped park area with a wide, multi-level staircase made of stone steps. The park is filled with greenery, including trees and shrubs. Several small figures of people are scattered throughout the scene, providing a sense of scale and activity. The overall atmosphere is bright and clear, suggesting a sunny day.

- New construction of two laboratory buildings and a park
- Occupancy expected in 2027 and 2029
- Use of the Eulach Passage since fall 2021

A night landscape featuring a starry sky with the Milky Way galaxy visible in the upper left. A prominent mountain peak is silhouetted against the dark sky. The scene is reflected in a body of water in the foreground, creating a symmetrical image. The text "Thank you" is centered in the middle of the image.

Thank you