

## Elia Antoniali

Mechanical Engineer, MSc.

Passionate Mechanical Engineer with experience in the full chain of product development and focus on design, product assembly, test and installation.

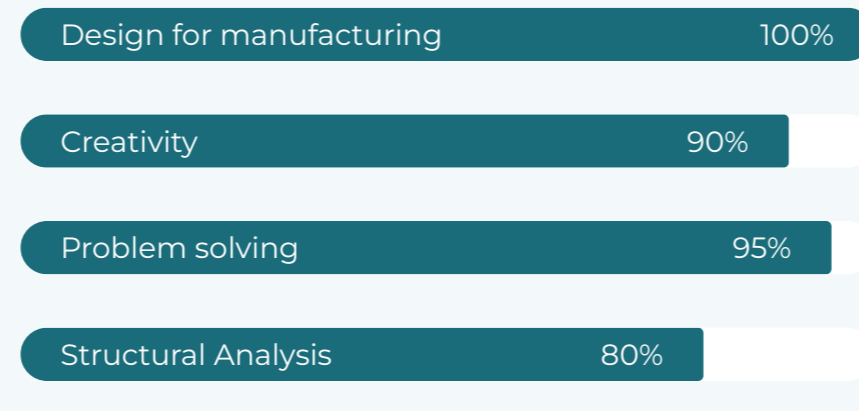
At FDB, I contribute to the development, integration and testing of a modernized, multi-degrees of freedom water injection system aimed at improving the efficiency of hydropower plants.



### Work Experiences

- Mechanical Engineer – Flow Design Bureau AS [Nov. 2020 – Today]
- Mechanical AIT Engineer – Airbus Defence and Space GmbH [Jun. 2023 – Today]
- Test Engineer (Internship) – Flow Design Bureau AS [Jun. 2020 – Nov. 2020]

### Skills



### Professional Skills

- MS Office (Visio, Access)
- SolidWorks
- CATIA V5
- Straus7

### Education

- Technische Universität Berlin – MSc. Global Production Engineering [Ott. 2021 – Nov. 2023]
- Università degli Studi di Padova – BSc. Mechanical Engineering [Ott. 2016 – Mar. 2020]

## Portfolio



### AFC4Hydro & Diffcon

EU Horizon 2020

The overall objective of the AFC4Hydro research project is to design, implement and validate in full-scale water turbine an active flow control system that permit to increase efficiency and reduce the dynamics loads on the structure at any off-design operating conditions and during transient operations.

► [About the project](#)

My role:

- Designed and developed a modernized water injection system (ICM) with multi-degrees of freedom for efficiency improvement reduction of dynamic load on Francis based turbines.
- Definition of product documentation (BOM, FEA reports, PFMEA, User Manual, SOP for manufacturing and safety of installation).
- Successfully completed integration, validation tests, and installation of the ICM on R&D laboratories (Luleå University's hydraulic lab and Vattenfall's R&D center Älvkarleby) and hydropower plants (Vattenfall's Porjus U9 and Statkraft's Svorka).



### LiTRO

NTNU/FDB, 2019

LiTRO is a joint research project with the Norwegian University of Science and Technology (NTNU). It consisted of the design and manufacturing of a mobile test rig for investigating the Lifting and Transportation mechanisms of rocks and sand (hence the name: **L**ift and **T**ransportation of **R**ocks).

► [About the project](#)

My role:

- Assured production scheduling and led installation of the LiTRO test rig.
- Defined Standard Operation Procedures for the facility utilization while executed performance mapping and efficiency implementation.
- Coordinated on-site installation of the LiTRO test rig.