

## Work experience

- 6/2023 – 12/2023 **University Lucerne, Competence Center Thermal Energy Storage: Research Assistant** *Lucerne, Switzerland*
- Assist and improve CT measurements
  - Prepare and measure phase change materials for use in thermal energy storages
- 3/2023 – 5/2023 **ETH Zurich, Mechanics & Materials Laboratory: Research Assistant** *Zurich, Switzerland*
- Develop phase field model to predict the structural evolution of Magnesium during mechanical load
- 9/2019 – 5/2022 **ETH Zurich, Particle Technology Laboratory: Research Assistant** *Zurich, Switzerland*
- Investigate influence of organic carbon on soot optical properties
  - Assist laboratory with papers, posters and presentations
- 9/2020 – 8/2021 **Siemens: Intern** *Zug, Switzerland*
- Improve calibration speed of fire detectors
  - Predict influence of lens condensation on the fire detector signals
  - Automate detection of faulty LEDs in fire detectors
- 1/2017 – 2/2017 **Rhätische Bahn RhB: Intern** *Landquart, Switzerland*
- Manufacturing, repairing and processing of train-components
- 8/2015 **Oy A. Urho Ab: Intern** *Helsinki, Finland*
- Manufacturing and replacing breaker box components

## Education

- 9/2019 – 5/2023 **MSc in Mechanical Engineering** *ETH Zurich, Switzerland*
- Final grade: 5.32/6
  - Focus: Mechanics, Materials and Structures
  - MSc thesis: "Phase-Field modeling of Twins and Twin-interaction in Magnesium", 5.5/6
  - Semester project: "Tunable Damping in Dynamic Hybrid Double Network Hydrogels", 6/6
- 9/2016 – 4/2020 **BSc in Mechanical Engineering** *ETH Zurich, Switzerland*
- Final grade 4.8/6
  - Focus: Energy, Flows and Processes
  - BSc thesis: "Impact of Organic Carbon on Soot Optical Properties", 5.5/6
- 8/2012 – 6/2016 **High school diploma (Matura)** *Gymnasium Immensee, Switzerland*
- Focus: Physics and Mathematics

## Technical Skills

Languages	Python, C++, Shell, C, Lisp
Libraries	Pandas, Numpy, Matplotlib, GeoPandas, Shapely, Scipy, Scikit-Learn, OpenMP, OpenCV
Tools	Matlab, Emacs, LaTeX, SQL, Office Suite, Blender, Gimp, Inkscape, Siemens NX, Adobe Products
OS	Linux, macOS, Windows

## Extracurricular activities

Since 4/2024 **IT Specialist** *selfm.aid*

- Support and Development of organizational IT system (website, cloud and mail)
- Member of the board

2/2023 - 12/2023 **Collaborative work** *City of St. Gallen, Switzerland*

- Follow-up project to the Open Data Hack St. Gallen
- Development of an algorithm to efficiently predict the unsealing potential on a large scale

## Honors

2022 **2nd Place Open Data Hack** *St. Gallen, Switzerland*

- Hackathon based on using open data

2020 **Best Poster Award** *Aachen, Germany*

- European Aerosol Conference

2019 **Best Poster Award** *Zurich, Switzerland*

- ETH-Conference on Combustion Generated Nanoparticles

## Publications

2024 **A fully coupled solid particle microphysics scheme for stratospheric aerosol injections within the aerosol-chemistry-climate-model SOCOL-AERv2** *EGUsphere*

Sandro Vattioni, Rahel Weber, Aryeh Feinberg, Andrea Stenke, John A. Dykema, Beiping Luo, Georgios A. Kelesidis, Christian A. Bruun, Timofei Sukhodolov, Frank N. Keutsch, Thomas Peter, and Gabriel Chiodo

2021 **Characterization of Nuisance Aerosols for scattered light Smoke Detection** *Aube*

Aleksandar Duric, Martin Sepiol, Christian A. Bruun, Armend Zendeli, Thomas Attinger, Christian Spagno, Ulrich Kuhn-Matysia

2021 **The impact of organic carbon on soot light absorption** *Carbon*

Georgios A. Kelesidis, Christian A. Bruun, Sotiris E. Pratsinis

## Languages

German	Native language
Finnish	Native language
Swedish	Native language
English	Fluent reading, writing and speaking
French	Fair reading, writing and speaking

## References

Available on request.