

Gustav Philipp

Mandlstr. 11 • Munich, Bavaria 80802 • contact@guph.eu • +49 174 1873725
LinkedIn • Portfolio
German Citizen • EU work authorization

Experience

- WARR** Munich, Bavaria
Thermal Engineer April 2025 - now
- Conduct orbital thermal simulations of a satellite using COMSOL Multiphysics, including transient thermal analysis and domain-level temperature evaluation.
 - Model aerodynamic heating for a sounding rocket experiment, combining Python-based trajectory with COMSOL thermal simulations of a free-falling payload.
- Technical University of Munich** Munich, Bavaria
Tutor - Technical Thermodynamics October 2022 - February 2023
- Tutored students in technical thermodynamics, explaining core concepts, supporting exercise sessions, and helping students prepare for exams.
- MT-Aerospace AG** Augsburg, Germany
Intern June 2020 - September 2020
- Worked in metalworking, assembly, and work preparation for Ariane 6 related production activities, including CAD-supported manufacturing preparation.
- Construct Hombach Christoph** Munich, Bavaria
Intern March 2020 - May 2020
- Assisted with practical metalworking, assembly, and repair tasks in a locksmith workshop, gaining hands-on experience with tools, materials, and workshop procedures.

Education

- Technical University of Munich** Munich, Bavaria
M.Sc. Aerospace October 2023 - May 2026
- Master thesis: Feasibility study of water electrolysis propulsion for an Enceladus plume-diving probe, focused on power, thermal, ISRU, and electrolyser systems analysis.
 - Group project: JANUS design study of a modular oxygen-based gridded ion propulsion unit for LEO debris removal.
 - Term paper: Verification and optimisation of a heat-grid model for an ISRU-supported lunar base.
- Technical University of Munich** Munich, Bavaria
B.Sc. Mechanical Engineering October 2020 - September 2023
- Bachelor thesis: Simulation framework to estimate heat losses of a high-temperature payload on the lunar surface.
 - Final grade: 2.6.
- ETH Zurich** Zurich, Switzerland
Physics - Three Semesters September 2018 - February 2020
- Began university studies in physics, building a foundation in mathematics and scientific problem-solving before transferring into engineering.

Technical Skills

Simulation and Engineering: COMSOL Multiphysics, OpenModelica, ANSYS CFX, ANSYS ICEM, Autodesk Inventor
Programming and Tools: Python, MATLAB, C, C++, Git, LaTeX
Languages: German native, English C2