KONRAD WEHKAMP
CURRICULUM VITAE

PROFILE

Master's student in Physics and Technology for Space Applications with a strong focus on spacecraft systems, experimental testing, and hardware-oriented development in laboratory environments.

LANGUAGE SKILLS

German: native speaker **C2**

English: fluent **C1**

French: basic knowledge **B1**

IT SKILLS

Python: advanced

C++: intermediate

LabVIEW: intermediate

CAD (Inventor): intermediate

MS Office / LaTeX / Origin: advanced

GitHub: github.com/konradweh

INTERESTS

Creative projects (electronics, 3D printing, woodworking)

Field hockey and Bouldering

VOLUNTEER EXPERIENCE

Coach and organizer of an inclusive hockey team for athletes with disabilities since 2021.

C-level coaching license, responsibility for training and team development.

EDUCATION

Justus Liebig University Giessen
M.Sc. Physics and Technology for Space Applications
Focus on spacecraft propulsion, plasma physics, and space systems engineering
04.2025 – present (parallel enrollment)

Justus Liebig University Giessen
B.Sc. Physics and Technology for Space Applications
Final grade: 1.9
Bachelor's thesis: Emittance measurements on reference ion sources for electric propulsion characterization (Ref4EP project)
Hands-on work with ion sources, beam diagnostics, and performance evaluation methods
10.2021 – 04.2026

Karl-Rehbein-Gymnasium Hanau
German university entrance qualification, grade: 1.7
Honors for outstanding achievement in Physics
07.2021

RELEVANT PROJECTS & EXPERIENCE

GSI HELMHOLTZ CENTRE FOR HEAVY ION RESEARCH

Internship
Designed and integrated a cooling solution for analogue electronics used in the SHIPTRAP
Supported the integration and operation of experimental hardware in a high-vacuum and radiation-exposed environment
Performed hands-on assembly, maintenance, and troubleshooting of experimental components, including work on the electron gun at the target area
07.2025 – 10.2025

ION THRUSTER RESEARCH GROUP – JLU GIESSEN

Student Researcher
Conducted plasma measurements and diagnostics in the context of electric propulsion research
Supported experimental investigations using THz time-domain spectroscopy (THz-TDS)
04.2023 – 10.2023

Project Work
Developed a global Python-based model for multi-species plasmas in a small team
Used the model to study plasma behavior relevant to electric propulsion systems
10.2024 – 04.2026

Project Work
Developed a Python-based simulation of atmospheric reentry for different space vehicles
Modeled key physical effects including aerodynamic forces, thermal loads, and flight dynamics
10.2025 – 04.2026

KONRAD WEHKAMP

MOTIVATION LETTER

MOTIVATION – INTERNSHIP APPLICATION

I am applying for an internship at ClearSpace because I am strongly motivated to contribute to technologies that enable a sustainable and responsible use of Earth's orbital environment. Active debris removal addresses one of the most critical challenges in modern spaceflight, and ClearSpace's mission-oriented, engineering-driven approach aligns closely with both my academic background and my personal motivation to work on hardware that has a direct operational impact.

I am currently a Master's student in Physics and Technology for Space Applications at Justus Liebig University Giessen. My studies focus on space systems engineering with a strong emphasis on propulsion and spacecraft subsystems, covering topics from plasma physics and electric propulsion to system-level design considerations. While my primary specialization has been in electric propulsion, my academic training and project work have consistently connected physical modeling with practical engineering constraints.

Through my Bachelor's thesis on the development and experimental investigation of a reference ion source for ion thruster characterization, I gained hands-on experience in designing and operating experimental setups, working with diagnostics, and evaluating performance-relevant data. In parallel, my work on global plasma simulations and an atmospheric reentry model in Python strengthened my ability to translate physical models into practical analysis tools that support engineering decisions.

During my internship at the GSI Helmholtz Centre for Heavy Ion Research, I worked in a complex experimental environment where I designed a cooling system for sensitive analogue components and performed hands-on maintenance and repair work on an electron gun in the target area. This experience strengthened my understanding of hardware-oriented development, integration constraints, and the responsibility associated with maintaining reliable operation of mission-critical subsystems within an interdisciplinary team.

For an internship at ClearSpace, I am particularly interested in contributing to spacecraft systems engineering, hardware development, and integration and testing activities. I am motivated to work close to hardware, to understand subsystem interactions, and to support verification and validation efforts that are essential for safe rendezvous, capture, and deorbit missions. I would welcome the opportunity to contribute to defined technical tasks within an ongoing project, while further developing my practical engineering skills in a spaceflight context.

I am available for a full-time, in-person internship starting in April 2026, with a minimum duration of four months. I am flexible regarding the exact start date and would be open to a longer internship period if beneficial. I would be happy to provide further information if needed.