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Deutsches Zentrum für Luft- und Raumfahrt (DLR) Institut für Robotik und Mechatronik Autonomie und Fernprogrammierung Münchener Straße 20 82234 Oberpfaffenhofen-Weßling, Germany

Mandatory Internship and Master's Thesis: Post-Grasping Inertial Parameter Identification of a Free-Flying Space Robot

Dear AUF Team,

My name is Maximilian, and I would be thrilled to support the DLR through an internship and a master's thesis in the Autonomy and Remote Programming department.

I am currently pursuing a Master's degree in Control Systems Engineering at the University of Padua, Italy. Together with my bachelor's degree in Aerospace Engineering, this equipped me with the skills necessary for the identification, modeling, and control of complex mechanical systems.

For my bachelor's thesis and in several of my master's courses, I have used MAT-LAB and Simulink extensively to simulate dynamic systems and carry out model-based control design. I have experience with both first-principles and data-driven modeling approaches to capture system behavior effectively. In the scope of a Computer Vision course, I gained experience in C++ through several projects. As part of my planned curriculum, I will also gain hands-on experience with ROS2 through several robotics-focused courses in the coming semester.

I aim to pursue a PhD in robotics and control and contribute meaningfully to research in this field. The DLR's commitment to cutting-edge technology reflects the kind of impact I hope to make. I'm excited to bring my skills and motivation to your AUF team and am available to start in March 2026, when my final semester begins.

Sincerely,

Maximilian Pries

encl: Curriculum Vitae, Transcript of Records (Note: The grade for *Computer Vision* is not yet recorded, due to an ongoing project)