Project:
In the framework of the EIVE Project the Institute of Robust Power Semiconductor Systems (ILH) is developing a 6-Unit CubeSat, flying in the Low Earth Orbit (LEO).

Scientific Mission:
• (1) PRBS transmission with various modulation schemes (QPSK, n-QAM, ...) for in-depth data-link analysis;
• (2) Live video streaming of the camera once Line-of-Sight (LoS) data transmission is possible;
• (3) Video recording during e.g. one orbital period and data transmission once LoS Data Link is possible.

Your Tasks(*):
1. Program the FPGA so that it fulfills the mission requirements;
2. Understand the FPGA and DAC configurations and implement the connection between them (circuit design, software programming) through IP Cores;
3. Develop the DC power supply for all the components.

Your Qualifications:
• Hands-on experience in developing FPGA algorithms;
• Familiar with software development: VHDL and/or Verilog, Xilinx Vivado;
• Passionate for producing high-quality, space-ready and well-tested code;
• Knowledge of RF circuit design is advantageous;
• Knowledge of communication protocols is an asset.

Contact:
Laura Manoliu, M.Sc.
Pfaffenwaldring 32, 70569 Stuttgart
Interimsgebäude 1
+49 711 685-61685
laura.manoliu@ilh.uni-stuttgart.de
www.ilh.uni-stuttgart.de

(* ) each task can be a separate activity for a BA/MA/FA/HiWi