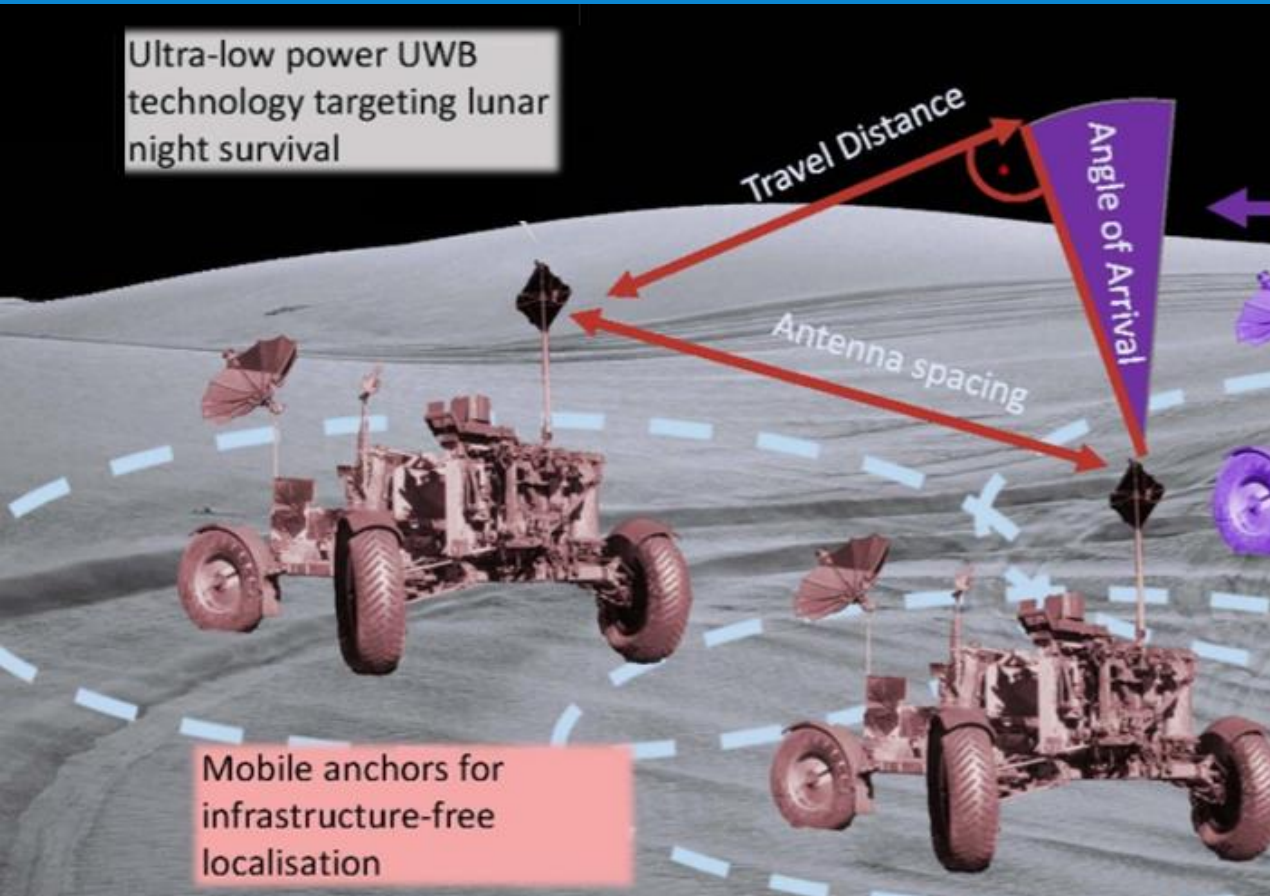# PBL Flagship Project 2024
Localization for Robotic Swarms
With Bachelor/Semester/Master Thesis / FreeLancer and Staff at PBL

Ultra-low power UWB technology targeting lunar night survival

Travel Distance

Angle of Arrival

Antenna spacing

Mobile anchors for infrastructure-free localisation

Would you like to develop an energy-aware infrastructure-free localization system targeting autonomous robotic swarms for future missions on the lunar south pole?

Would you like to work with embedded systems with extreme requirements regarding autonomy, robustness, and energy efficiency?

We are looking for students to design an energy-aware UWB-based localization system for a dynamic swarm of robots. Targeted skills are:

- PCB Design and System Integration
- HF Simulation
- Wireless Communication and Firmware Design
- Hardware-software Co-design
- Robotics and Control

Machine learning assisted formation strategies for power-optimisation

CENTER FOR PROJECT-BASED LEARNING

Project in collaboration with:

esa

ublox

ST life.augmented

Find this and more projects at PBL
https://pbl.ee.ethz.ch/project.html
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