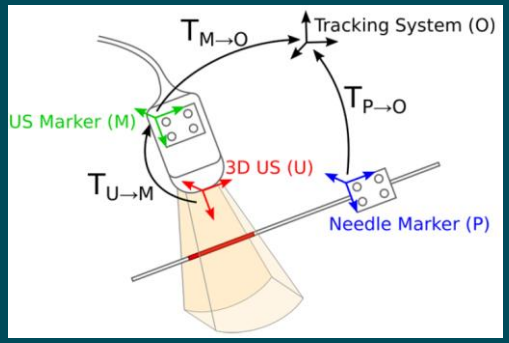
UNIVERSITÄT ZU LÜBECK
INSTITUT FÜR ROBOTIK
UND KOGNITIVE SYSTEME

Institute for Robotics and Cognitive Systems | Prof. Dr. Floris Ernst, Dr. Verónica García Vázquez

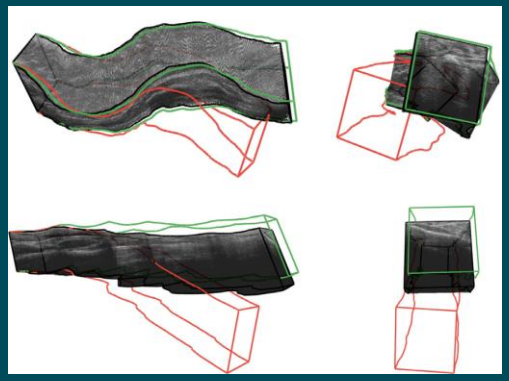
Internship
Spatial Calibration of Ultrasound Probes

By adding a tracking sensor (optical or electromagnetic) to a ultrasound probe and thus locating the probe in space, it is possible to create a large ultrasound volume based on consecutive acquired images or volumes. A thorough calibration between sensor and ultrasound probe is crucial for the alignment of images or volumes. Several approaches have been published within the last decade. A comparison regarding the accuracy is therefore desired.



Tasks

You will acquire ultrasound images and volumes with a state of the art ultrasound station. With your programming skills, you will implement different calibration methods and think of evaluation approaches. A final comparison of the calibration methods will complete this internship.



Qualification

- Interest in image processing and tracking systems
- Willingness to work in a team but also to work independently
- Programming skills (Matlab, Python, 3D slicer)

Interested? Contact Felix von Haxthausen at vonhaxthausen@rob.uni-luebeck.de