



Master Thesis - 3D reconstruction and registration with SAR images

About Maxar

Maxar Sweden serves the global professional geospatial market with world-leading 3D geodata, 3D visualization solutions, and 3D image processing solutions. We're on a mission to build the Globe in 3D—a revolution in GEOINT tradecraft—that offers decision makers and analysts the entire world in highly accurate, immersive 3D. Maxar's customers are varied and come from the telecommunications, emergency response, defense, and intelligence communities.

We are searching for the best and brightest to join a culture that is open and flexible, inclusive and positive. We offer opportunities for growth and the ability to work with talented people who make a real difference for our clients. Most of our research and development work is done in our Linköping office in Sweden, which employs about 80 engineers who work on cutting-edge technology to produce unparalleled, global, precise 3D geospatial data and software.

The Thesis

Images from Synthetic Aperture Radar (SAR) are becoming more and more publicly available. SAR can produce images where satellite-borne electro-optical (EO) sensors fail, e.g., in cloudy areas. In areas where both types of sensors work, image registration between EO and SAR makes data fusion possible.

Techniques for 3D reconstruction and registration of SAR images are emerging in the literature. Leveraging Maxar's 3D data and publicly open SAR data, this thesis will explore methods for 3D reconstruction from SAR images or methods for registration of SAR images to Maxar's 3D data.

Qualifications

Master of Science student with knowledge and interest in 3D reconstruction and/or image registration techniques.

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