Internship or Master Thesis Project Offer

Company information	
Company name	Sensar
Department name	Technology and Software Engineering
City, Country	Delft, The Netherlands
Company description	Sensar uses satellite-based radar interferometry (InSAR) for tracking millimeter-scale displacements/deformation of the Earth's surface and infrastructure. We offer this service through our proprietary cloud-based processing platform and focus on creating new products while innovating on radar technology. We have in-house expertise on various topics such as physics, signal processing, GIS, mathematics, software engineering, machine learning, and cloud computing.

Project information	
Project subject	Compensation of wave propagation disturbances in InSAR data
Preferred period	4 (to 9) month internship with flexible start date (depending on availability of student)
Suitable for non-Dutch speaking students	Yes
Project description	Synthetic aperture radar interferometry (InSAR) allows for tracking millimeter-scale displacements over time by computing the difference in propagation delay as measured between two subsequent satellite acquisitions. This propagation delay is therefore assumed to be related to the time-varying distance between the satellite and an object moving on the Earth. However, an electromagnetic wave propagating through the troposphere undergoes an additional delay due to the variations in refractive index. The goal of this internship is to investigate numerical weather prediction products for estimating and compensating wave propagation disturbances. The student is expected to be familiar with Python (numpy and scipy), interpolation algorithms, and electromagnetic wave propagation.
Suitable for students with a background in	- Applied Physics, or - Mathematical Sciences, or - Computer Science, or - Electrical Engineering

Contact information	
Contact person/supervisor	Dr. Esteban Aguilera
Email	esteban.aguilera@sensar.nl (preferred)
Phone	+31 (0)15 262 98 89