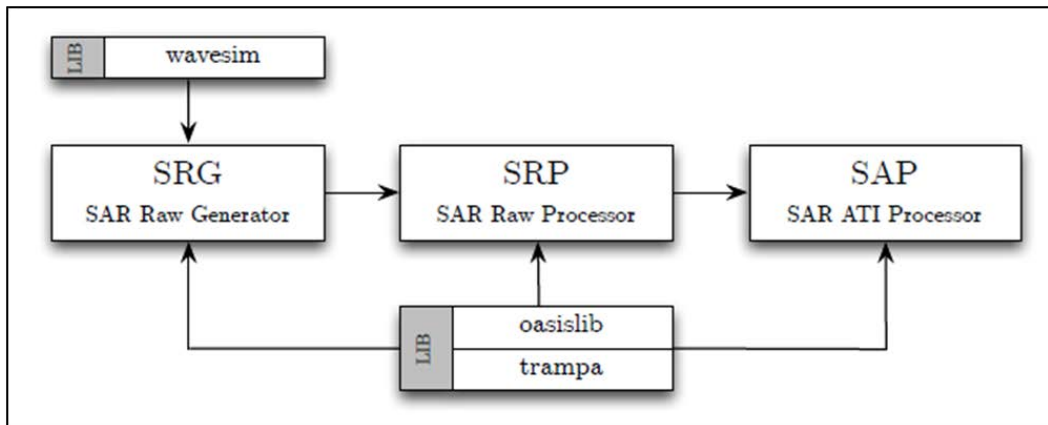
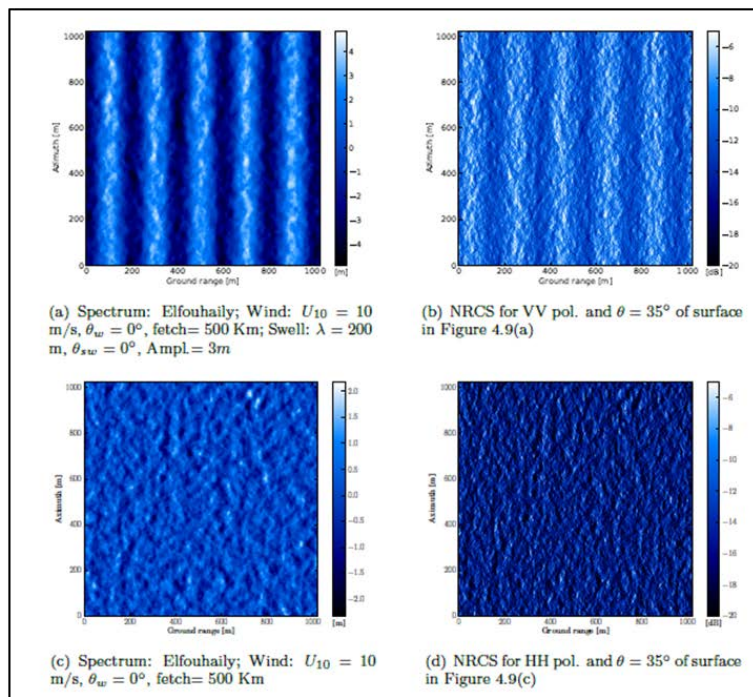


## Development of an Efficient Tool for the Simulation of Radar Images of Ocean Surfaces with Real and Synthetic Apertures



Simplified schematic of the ocean simulator



Student Telecommunications Engineering, Electrical Engineering, Computer Science, Physics, Mathematics

### Starting date

Immediate

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**Duration of contract**

6 months

**Remuneration:**

According to German TVöD 05

**Your mission:**

Radar observations over oceans provide the scientific community with useful information on physical characteristics such as sea states, sea topography, as well as the retrieval of surface currents and wind velocity vectors at different temporal and spatial scales. In order to support the performance estimation and test the observation concepts of future ocean SAR missions, we are currently developing an interferometric SAR data simulator for sea, ocean and fluvial surfaces. As a nuclear part of this simulator, the candidate shall be responsible for the design and implementation of a radar image generator of water surfaces, a task which involves radar theory, propagation aspects, linear and non-linear wave theory, and stationary and non-stationary statistical signal processing techniques. This multi-disciplinarity offers a great training potential for the candidate, but also requires analytical thinking, and a solid background in physics, signal processing or programming. The tool shall be integrated in an orbital SAR end-to-end simulation software, which will simplify the debugging and validation of the tool. Working language will be English or German.

**Your qualifications:**

- experience with scientific programming languages (e.g., IDL)
- good knowledge of English (written and oral)
- knowledge of SAR theory and processing is beneficial

**Your benefits:**

Look forward to a fulfilling job with an employer who appreciates your commitment and supports your personal and professional development. Our unique infrastructure offers you a working environment in which you have unparalleled scope to develop your creative ideas and accomplish your professional objectives. Disabled applicants with equivalent qualifications will be given preferential treatment.

**Location:** DLR Oberpfaffenhofen (Germany)

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