

SAR-EDU – An education initiative for applied Radar Remote Sensing

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ABSTRACT:

Since the 1970s, radar remote sensing techniques have evolved rapidly and are increasingly employed in all fields of Earth sciences. Applications are manifold and expanding due to the continuous development of new instruments and missions and the availability of high-quality data. An increasing number of algorithms and methods for SAR data is developed. However, the utilization of operational services does not yet keep up with the rate of technical developments and the improvements in sensor technology. With the enhancing availability and variety of space borne SAR data and a growing number of analysis algorithms the need for a vital user community is increasing. Therefore, DLR together with Friedrich-Schiller-University Jena launched the education initiative SAR-EDU.

The aim of the project was to facilitate access to expert knowledge in the scientific field of Radar remote sensing. Within this effort a web portal was created to provide teaching material on SAR basics, methods and applications to support both, lecturers and students. The overall intension of the project SAR-EDU is to provide seminar material for higher education in Radar remote sensing covering the topic holistically from the very basics to the most advanced methods and applications that are available. The principles of processing and interpreting SAR data are taught using test data sets and open-source as well as commercial software packages. The material provided by SAR-EDU is accessible at no charge from a DLR web portal. The educational tool has a modular structure, consisting of separate packages that broach the issue of a particular topic. The aim of the implementation of SAR-EDU is to advocate the development and wider use of operational services on the base of existing algorithms and sensors on the one hand, and to aid the extension of Radar remote sensing techniques to a broader field of application on the other.

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