SAR-EDU - An education initiative for applied Synthetic Aperture Radar remote sensing

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Since the 1970s, radar remote sensing techniques have evolved rapidly and are increasingly employed in all fields of earth sciences. Applications are manifold and still expanding due to the continuous development of new instruments and missions as well as the availability of very high-quality data. The trend worldwide is towards operational employment of the various algorithms and methods that have been developed. However, the utilization of operational services does not keep up yet with the rate of technical developments and the improvements in sensor technology.

With the enhancing availability and variety of space borne Synthetic Aperture Radar (SAR) data and a growing number of analysis algorithms the need for a vital user community is increasing. Therefore the German Aerospace Center (DLR) together with the Friedrich-Schiller-University Jena (FSU) and the Technical University Munich (TUM) launched the education initiative SAR-EDU. The aim of the project is to facilitate access to expert knowledge in the scientific field of radar remote sensing. Within this effort a web portal will be created to provide seminar 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 going to be taught using test data sets and open-source as well as commercial software packages. The material that is provided by SAR-EDU will be accessible at no charge from a DLR web portal. The educational tool will have a modular structure, consisting of separate modules that broach the issue of a particular topic.

The aim of the implementation of SAR-EDU as application-oriented radar remote sensing educational tool is to advocate the development and wider use of operational services on the base of pre-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. SAR-EDU therefore combines the knowledge, expertise and experience of an excellent German consortium.