

The Future of Spaceborne Synthetic Aperture Radar

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The presentation will focus on new developments and concepts for future spaceborne SAR systems. Examples are bistatic and multistatic SAR systems for single-pass interferometry and tomography, multi-channel and digital beamforming systems for fully polarimetric high-resolution wide-swath SAR imaging and advanced concepts for adaptive and cognitive radar systems that employ space and time variant transmit patterns to make optimum use of the available system and downlink resources. The roots of many of these developments can be traced back to the work performed by Kiyoo Tomiyasu. It is exciting to see how his ideas together with the technological progress enable a new generation of extremely powerful spaceborne SAR systems, thereby laying the foundation for a wealth of novel remote sensing applications.