

Synthetic Aperture Radar

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In Synthetic Aperture Radar (SAR) imaging, a plane or satellite carrying an antenna flies along a (usually straight) flight path. The antenna emits pulses of electromagnetic radiation; this radiation scatters off the terrain and is received back at the same antenna. These signals are used to produce an image of the terrain.

One of the key technologies involved in SAR imaging is mathematics. This talk will show some SAR images and explain the basic mathematics behind the formation of high-resolution images.