

The Cassini's RADAR instrument was one of the 12 instruments on the Cassini mission to Saturn and its moons -1997-2017. The RADAR SAR and high-resolution radiometry capability to pierce through the atmosphere of Titan moon allowed revealing Titan's surface characteristics. Several areas were covered by multiple RADAR passes providing opportunities for integrated data approaches to aid the interpretation of Titan's surface features.

The Cassini's SAR and high-resolution radiometry data are explored for their intrinsic contribution to the study of Titan's surface features and geology through different methodology for data extraction, parametric modeling, and integration. Examples on Cassini's SAR geometry and characteristics for surface features identification, SAR and high-resolution radiometry data extraction and integration for compositional characterization, SAR rms classification, SAR PCA, DEM and SARTopo for surface features and tectonics elements identification are presented, along lessons learned and future work.