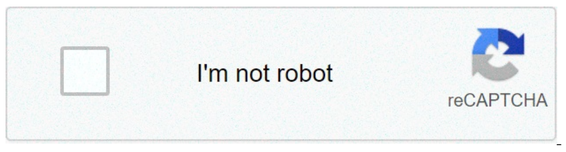

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Design technology of synthetic aperture radar

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Prosiding Sinas Inderaja 2014. Tjahjaningsih A., Kustiyo, Trisakti B., Komarudin MR, Sambodo KA, (2009), Kajian Spesifikasi Dan Aplikasi Satelit SAR (Synthetic Aperture Radar). Technical report, LAPAN. Ulaby, F.T., R.K. Moore and A.K. Fung (1982). Microwave Remote Sensing, Vol. 2, Addison Wesley, Reading, MA. Skip to Main Content The Indian Space Research Organization (ISRO) and the National Aeronautics and Space Administration (NASA) in the United States have embarked on the formulation of a Earth-orbiting science and applications mission that will exploit synthetic aperture radar to map the Earth’s surface. The mission’s primary objectives are the study of Earth land and ice deformation, and ecosystems, in areas of common interest to the US and Indian science and applications communities. The science requirements demand complete coverage of land and ice covered surfaces at fine spatial resolution, sampled at least twice (ascending and descending orbits) each 12 day repeat cycle. This observational approach can be beneficial to disaster response activities, as estimation of areas of damage or significant change due to a disaster within a few days of the event can be of significant value to disaster workers responding to a humanitarian crisis. This webinar will illustrate this benefit with examples from existing satellites, and demonstrate the potentials offered by NISAR in the context of the international constellation of satellites. Dear Colleagues, A new generation of synthetic aperture radar (SAR) instruments mounted on-board to space and aerial vectors has been emerging over recent years, thus guaranteeing improved temporal sampling and spatial resolutions of remote-based investigations. In this framework, of particular relevance is the development of new approaches for the effective processing of long-term sequences of SAR images. Use of novel High Computing paradigms and the development of new methods for the integration of information derived from different sets of SAR images acquired at complementary frequency bands represent the new challenging frontiers of SAR technologies. SAR-driven cutting-edge technologies also concern: combination/fusion of SAR and optical data; development of new multi-temporal/multi-mode InSAR methods based on the use of mono/multi-static SAR configurations; advances of Polarimetric InSAR and Tomography SAR techniques with new-generation of high-resolution SAR images; computer science applications for high-speed computing. The Special Issue is open to all researchers. Papers are solicited on the following general themes: - Exploitation of the existing and planned SAR missions - Advances of Interferometric SAR techniques: development of new algorithms and methodologies for the estimation of the height topography, the deformation, the atmospheric phase screen as well as other contributions regarding the InSAR signal. - Potential of new-generation SAR instruments onboard the principal spaceborne platforms: the Sentinel constellation of the European Union, the COSMO-SkyMed constellation of the Italian Space Agency, the ALOS-2 mission of the Japanese Space Agency, the TerraSAR-X constellation operated by DLR, other SAR instruments. - Future perspectives in the use of SAR data for the development of new emerging cutting-edge technologies for Earth's remote sensing. - Synergic use of SAR and optical data (e.g., Sentinel-2, LANDSAT, etc) for agricultural applications and/or for the study of land-use, land-cover of imaged scenes. - High Performance Computing (HPC) for SAR data processing. - Geophysical Investigations of the deformation sources that are responsible for the detected movements of the Earth's crust retrieved by InSAR measurements, due to heterogeneous causes, such as earthquakes, volcanic eruption, ground-water extraction in urban areas, landslide movements, etc. - Integration of information provided through space-, aerial- and terrestrial-based InSAR data systems. Dr. Antonio PepeGuest Editor Manuscript Submission InformationManuscripts should be submitted online at www.mdpi.com by registering and logging in to this website. Once you are registered, click here to go to the submission form. Manuscripts can be submitted until the deadline. All papers will be peer-reviewed. Accepted papers will be published continuously in the journal (as soon as accepted) and will be listed together on the special issue website. Research articles, review articles as well as short communications are invited. For planned papers, a title and short abstract (about 100 words) can be sent to the Editorial Office for announcement on this website. Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere (except conference proceedings papers). All manuscripts are thoroughly refereed through a single-blind peer-review process. A guide for authors and other relevant information for submission of manuscripts is available on the Instructions for Authors page. Sensors is an international peer-reviewed open access semimonthly journal published by MDPI. Please visit the Instructions for Authors page before submitting a manuscript. The Article Processing Charge (APC) for publication in this open access journal is 2200 CHF (Swiss Francs). Submitted papers should be well formatted and use good English. Authors may use MDPI's English editing service prior to publication or during author revisions. Synthetic Aperture Radar InSAR deformation space high performance computing cutting-edge technologies agricultural, optical data geodesy new challenges LIDAR ALOS Sentinel TerraSAR-X COSMO-SkyMed SRTM aerial SAR ground-based SAR Published Papers (24 papers) Printed Edition Available! A printed edition of this Special Issue is available here. Dear Colleagues, Synthetic Aperture RADAR (SAR) became a well-established and powerful remote sensing technology used worldwide for several applications thanks to the possibility of sensing the Earth surface at night and day and in any weather condition. Recent advances have dramatically raised on SAR monitoring potential by improving spatial resolution, revisit time, swath width, polarimetric capability. Moreover, the present and forthcoming space-borne missions allow SAR imaging at different bands and acquisition modes (e.g. spotlight, wide swath, bistatic, multistatic, geosynchronous). All these advances stimulated the investigation of new processing algorithms, products, and applications able to fully exploit new sensor capabilities (e.g. wide spectral band, short revisit time, multi-angle view), and the large SAR data archive. Based on this, papers are requested, dealing with the following research issues concerning both algorithm developments and applicative examples: Innovative SAR sensors, concepts, and acquisition modes; innovative SAR products; SAR signal modeling, simulation, and processing; SAR imaging from Unmanned Aerial Vehicles (UAV), ground based sensors, and geosynchronous platforms; advances in SAR polarimetry, SAR across/along track interferometry, and SAR tomography; new opportunities for SAR applications to land, sea, and natural disasters. Dr. Fabio BovengaGuest Editor Manuscript Submission InformationManuscripts should be submitted online at www.mdpi.com by registering and logging in to this website. Once you are registered, click here to go to the submission form. Manuscripts can be submitted until the deadline. All papers will be peer-reviewed. Accepted papers will be published continuously in the journal (as soon as accepted) and will be listed together on the special issue website. Research articles, review articles as well as short communications are invited. For planned papers, a title and short abstract (about 100 words) can be sent to the Editorial Office for announcement on this website. Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere (except conference proceedings papers). All manuscripts are thoroughly refereed through a single-blind peer-review process. A guide for authors and other relevant information for submission of manuscripts is available on the Instructions for Authors page. Sensors is an international peer-reviewed open access semimonthly journal published by MDPI. Please visit the Instructions for Authors page before submitting a manuscript. The Article Processing Charge (APC) for publication in this open access journal is 2200 CHF (Swiss Francs). Submitted papers should be well formatted and use good English. Authors may use MDPI's English editing service prior to publication or during author revisions. New SAR sensors / concepts New SAR acquisition modes New SAR products SAR image processing SAR signal modeling and simulation SAR imaging from Unmanned Aerial Vehicles (UAV) Ground based SAR Geosynchronous SAR SAR polarimetry Across / along track SAR interferometry SAR tomography SAR for land applications SAR for sea applications SAR for natural disasters Published Papers (20 papers) 1. Chang W., Tao H., Sun G., Wang Y., Bao Z. A Novel Multi-Angle SAR Imaging System and Method Based on an Ultrahigh Speed Platform. Sensors. 2019;19:1701. doi: 10.3390/s19071701. [PMC free article] [PubMed] [CrossRef] [Google Scholar]2. Wei Z., Zhang B., Wu Y. Accurate Wide Angle SAR Imaging Based on LS-CS-Residual. Sensors. 2019;19:490. doi: 10.3390/s19030490. [PMC free article] [PubMed] [CrossRef] [Google Scholar]3. Wang Y., Yang W., Chen J., Kuang H., Liu W., Li C. 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