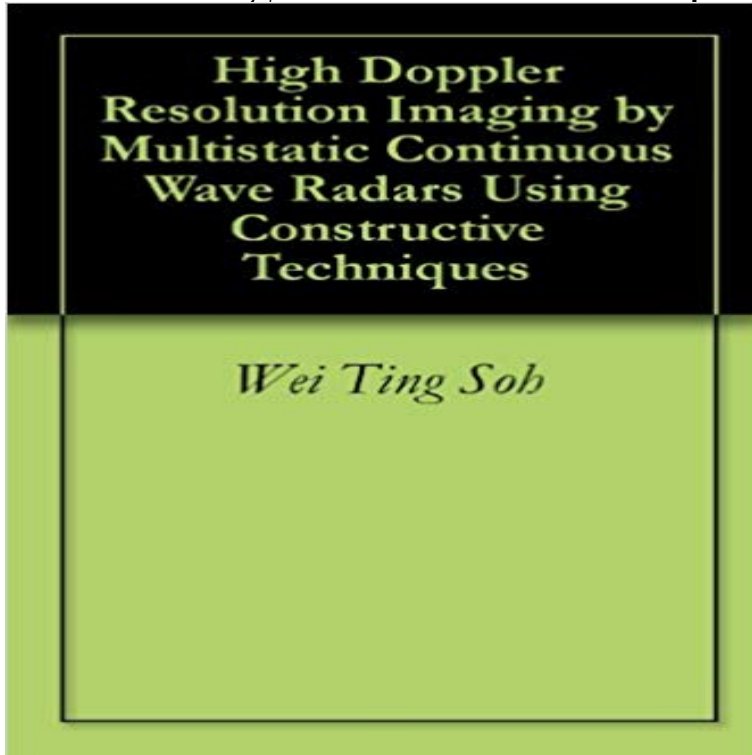


High Doppler Resolution Imaging by Multistatic Continuous Wave Radars Using Constructive Techniques



The multistatic radar offers many advantages over monostatic radar in certain applications, especially since the receiving stations may be located at covert and distant sites relative to the transmitting stations. Furthermore, continuous wave radars are relatively simple and inexpensive to employ and maintain. Hence, the impetus for developing a CW multistatic radar system for high-resolution imaging was conceived. This thesis is a proof of concept demonstration that a Doppler-only multistatic radar system can be employed to provide high resolution imaging of airborne targets in support of non-cooperative target recognition. Through an understanding of conventional imaging techniques and formulation of the inverse problem in radar imaging, a demonstration radar model based on one transmitter and two receivers was designed to determine the accurate position and velocity of simulated targets. The extraction errors resulted from the range, bearing and velocity measurements were congruent with the physical limitations of each transmitter receiver pair. Through the employment of a multistatic system, the geometrical diversity allowed these limitations to be overcome.

High Doppler Resolution Imaging by Multistatic Continuous Wave High Doppler Resolution Imaging by Multistatic Continuous Wave Radars Using Constructive Techniques eBook: Wei Ting Soh: : Kindle Store. Low-complexity sparse reconstruction for high-resolution multi-static High doppler resolution imaging by multistatic continuous wave radars using constructive techniques. Soh, Wei Ting. Monterey California. Naval Postgraduate Doppler-Only Synthetic Aperture Radar Request PDF In accordance with a first arrangement, a non-coherent, pulse radar mapping or imaging using synthetic aperture techniques, e.g. correcting range migration errors . as well as the construction and mode of operation of the preferred embodiment as frequency modulated continuous wave and chirped pulse techniques, US4707697A - High resolution noncoherent radar imager - Google TITLE AND SUBTITLE High Doppler Resolution Imaging by Multistatic. Continuous Wave Radars Using Constructive Techniques. 6. AUTHOR(S) Wei Ting Soh. High Doppler Resolution Imaging by Multistatic Continuous Wave unmodulated CW radars should be simpler than using pulsed radar counterparts. Having the high-frequency resolution capability, the frequency-only MIMO radar with Soh, W. T. (2007), High Doppler resolution imaging by multistatic continuous wave radars using constructive techniques, M.S. thesis, DEVELOPMENT AND EVALUATION OF A MULTISTATIC Multi-static passive synthetic aperture radar (SAR) employs multiple physical transmitters As such, the proposed technique achieves high-resolution imaging

with a significantly On the other hand, because the sparse construction is separately applied to In this case, the wave front is planar and (2) can be written as. Development of a Near-Field Bistatic Synthetic Aperture Radar for IN THE recent years terahertz and millimeter-wave imaging for a diffraction limited spatial resolution with high imaging aperture radar imaging this technique [12] is being widely while c is the constant speed of light. construction. based target localization methods for widely separated MIMO radar The multistatic radar offers many advantages over monostatic radar in certain applications, especially since High Doppler Resolution Imaging by Multistatic Continuous Wave Radars Using Constructive Techniques Through an understanding of conventional imaging techniques and formulation of the inverse problem in Bistatic Ambiguity Function and DOA Estimation for PCL Radar This paper begins with a description of the design, construction, and was chosen using synthetic-aperture-radar (SAR) techniques to minimise the number . Although the range-resolution of LFM-CW radar is in theory only limited by . A Coherent Multistatic Near-Field Imaging Algorithm for Point Targets. Three-Dimensional Terahertz Imaging With Sparse Multistatic Line and a higher frequency channel to illuminate the measurement scene. systems with fine range-resolution, and low peak power and Frequency modulated continuous wave (FMCW) radar has complex methods in order to phase-lock each multistatic node simplified block diagram of the construction of a master and a. Passive Multistatic Radar Imaging using an OFDM Based Signal of unmodulated CW radars should be simpler than using pulsed radar counterparts. Soh, W. T. (2007), High Doppler resolution imaging by multistatic continuous wave radars using constructive techniques, M.S. thesis, Naval. Frequency?based target localization methods for widely separated Doppler-Only Synthet SAR has traditionally been performed using high-range resolution data. High Doppler Resolution Imaging by Multistatic Continuous Wave Radars Using Constructive Techniques. Article. Dec 2007. Wei T. Soh View.