

TRANSFORM TECHNIQUES FOR RADAR IMAGE ANALYSIS

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PREFACE

In day to day life and in most of the military tasks, SAR imaging, with its unique imaging capability in all types of weather circumstances whether day or night, sunny or cloudy, has become so popular. SAR is operated in microwave frequencies. Unfortunately, noise caused by the coherent imaging, makes understanding and analyzing of these images very much complicated. So the aim of preprocessing steps in these images is to eliminate this speckle noise and preserve and interpret all texture features efficiently.

Speckle generally contains the information about the imaging system. Analyzing the SAR images without removing the speckle gives interpretation of the scene. It is mandatory to remove or minimize the speckle noise before the interpretation and analysis of the images.

This book aims to despeckle the speckle noise to the possible extent while preserving the edge characteristics. The major concentration of the research work is on the Indian microwave imagery. RISAT-1 (RADAR Imaging Satellite) is the first and only Indian microwave active mode satellite that is capable to operate in day, night and in all weather conditions even during cloudy times. It is C-band radar mainly designed for monitoring and analyzing the agriculture.

✍ Prof. Y. Muralimohanbabu

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