Efficient Detection Criteria for Model Order Selection of Interferometric SAR signal corrupted by multiplicative noise with a new penalty function

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Abstract : In this paper the problem of estimating the number of components in a multibaseline interferometric synthetic aperture radar (InSAR) signal, corrupted by complex correlated multiplicative noise in the presence of the layover phenomenon, is addressed. Research tasks were carried out by using the information theoretic criteria (ITC). It has been shown that among the ITC, one of the efficient detection criteria (EDC) achieves generally the best performance. We propose then a new penalty function for EDC.

Keywords : Model order estimation, information theoretic criteria, multiplicative noise, SAR interferometry