


Full Name (English):	Shen Liang	Recent Photo 
Affiliated Institution and Title (English):	Test Center of National University of Defense Technology Associate Research Fellow	
<b>Biography</b> (Please provide in paragraph form within 500 words.) <p>Dr. Shen Liang serves as an associate research fellow at National University of Defense Technology. He has published 5 first-author papers in top-tier journals, including ISPRS Journal of Photogrammetry and Remote Sensing and IEEE Transactions on Geoscience and Remote Sensing. He has presided a project of National Natural Science Foundation and participated in 2 major national research initiatives. Additionally, he serves as a reviewer for prestigious journals such as ISPRS and Information Science.</p>		
<b>Speech Title (English):</b> Research on SAR Scene Matching Methods for Robust Guidance under Jamming Conditions		
<b>Speech Abstract</b> (Please provide in paragraph form within 500 words.) <p>As an advanced terminal guidance technology widely employed, SAR scene matching guidance exhibits advantages of all-day/all-weather operability and high precision. Traditional SAR scene matching methods have focused on improving robustness against speckle noise and geometric/radiometric distortions. However, in recent years, the increasingly severe complex electromagnetic environment faced by precision-guided weapons has significantly degraded the signal-to-interference-and-noise ratio of SAR scenes, submerging image information and rendering conventional methods ineffective for accurate SAR scene matching in positioning and navigation.</p> <p>To address the anti-jamming requirements of SAR guidance in complex electromagnetic environments, we have conducted research on reference map selection under jamming conditions, anti-jamming matching methods for corrupted scenes, and evaluation methodologies for anti-jamming matching performance. By deeply analyzing typical jamming characteristics and leveraging cutting-edge image processing techniques and deep learning frameworks, we propose a novel metric for evaluating the anti-jamming capability of reference maps, along with robust scene matching methods tailored to jamming patterns and quantitative assessment approaches for anti-jamming effectiveness. These advancements enhance guidance effectiveness in complex electromagnetic environments from the perspective of matching algorithms, offering innovative methodologies to address the unique challenges of SAR scene matching anti-jamming.</p>		