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Biography (Please provide in paragraph form within 500 words.)		
Wei Wang received the M.S. degree in information and communication engineering from National University of Defense Technology, China, and the Ph.D. degree in geoinformatics from KTH Royal Institute of Technology, Sweden, in 2013, and 2018, respectively. He is currently an associate professor with Automatic Target Recognition (ATR) National Key Laboratory, National University of Defense Technology. His research interests include SAR/PolSAR image processing, automation target recognition, target characteristics and data engineering. He has published more than 60 journal and conference articles, and obtained two provincial-level scientific research awards. He was recognized as Young Talent of Hunan Province in 2023. He is an editorial board member of Aero Weaponry, and acts as a guest editor of Electronics. He is also a reviewer of high-level international journals, such as IEEE Transactions on Geoscience and Remote Sensing, IEEE Transactions on Intelligent Transportation Systems, and Pattern Recognition.		
Speech Title (English): SAR Target Image Generation Based on Deep Learning		
Speech Abstract (Please provide in paragraph form within 500 words.)		
Target detection and recognition in synthetic aperture radar (SAR) images play a vital role in the military and civilian areas. However, satisfactory performance heavily relies on large-scale, high-quality, and diverse SAR target data. Acquiring SAR data through actual flight tests is highly costly, especially in military contexts where the collection of non-cooperative target data is constrained. Approaches relying on electromagnetic computation and simulation are prone to geometric and electromagnetic calculation errors, which can cause the generated images deviate from real SAR images. In recent years, methods such as autoencoder (AE), generative adversarial network (GAN) and Diffusion Model have been applied to SAR image generation, and related research has been widely concerned and developed rapidly. Existing deep learning-based intelligent generation methods, despite their significant advantages, have models that depend on large amounts of training data. Moreover, the deep features during the training process are not interpretable, making it difficult for the generated target images to follow the true scattering mechanism. To tackle the issue of poor interpretability in the image generation process, we have realized the decoupling of target features and achieved information increment at the feature level, thereby reducing the complexity of model learning. In addition, we have enhanced the authenticity of the generated data through the guidance of scattering information and the integration of scattering center features. To achieve effective control of azimuth angle during SAR image generation, we have implemented feature alignment and angle synthesis to achieve relatively accurate SAR target angle extrapolation.		