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Jiabao Wang received the Ph.D. degree in Computational Intelligence from the PLA University of Science and Technology, Nanjing, China, in 2013. He is currently an Associate Professor at the Army Engineering University of PLA, Nanjing, China. He is primarily engaged in research on fine-grained visual recognition, object re-identification, small object detection, and model lightweighting, and has published over 50 papers in related international conferences and journals, including IEEE TGRS, JSTARS, SPL, ect.		
Speech Title (English):		
Prior Knowledge Enhanced Infrared Small Target Detection		
Speech Abstract		
Infrared small target detection (IRSTD) is critical for long-range early warning, precision guidance, and UAV reconnaissance, yet it remains challenging due to tiny target sizes, low intensities, blurred edges, and complex backgrounds. Existing model-driven and data-driven approaches lack effective integration of prior knowledge, resulting in limited adaptability and sub-optimal performance. Our work systematically enhances IRSTD by incorporating domain-specific (local contrast, edge) and generic priors into data-driven frameworks, significantly boosting detection accuracy while reducing data and computational costs. We develop both supervised modules and unsupervised strategies that achieve state-of-the-art performance across public benchmarks. Our approach offers a practical, prior-enhanced paradigm for robust and efficient IRSTD in complex environments.		