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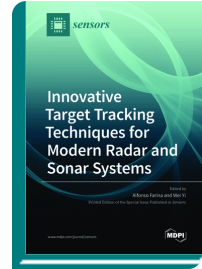


*Special Issue Reprint*

## **Innovative Target Tracking Techniques for Modern Radar and Sonar Systems**

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Edited by  
Alfonso Farina  
Wei Yi



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The aim of this Special Issue is to gather recent advances and development in target tracking techniques to determine how they can be adapted for modern radar and sonar systems. After peer review, 17 articles in related areas have been accepted for publishing in this Special Issue. The published articles cover a range of topics and applications central to target tracking. There are eight papers about general multi-target tracking, including the topics of joint tracking and classification [3], adaptive estimation using clutter measurement probability [6], joint localization and tracking [7], extended target tracking [8], tracking with smoothing [11], DOA tracking [12], tracking under low detection probability [14], and sonar tracking and interception [17]. Three papers address multi-sensor multi-target tracking methods. Specifically, a multi-target estimating method for pulsed radar systems is proposed in [2], a joint dwell time and bandwidth optimization method in a radar network is proposed in [4], and a multiple marine ship tracking method with unknown backgrounds is presented in [9]. There are 2 papers [10,15] on the problem of target assignment in multi-sensor multi-target tracking. Moreover, Mallick et al. considered measures of nonlinearity of a polynomial curve in two dimensions [1], Zhao et al. explored the use of calibration targets for which the positions are known to the MPR system, to counter the loss in target localization accuracy arising from transmitter/receiver position errors [13], and Li et al. proposed an algorithm to apply the frequency diversity technique to passive azimuth estimation in [16].



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