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Constant Modulus Sequence Set Design with Good Correlation Properties

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## HIGHLIGHTS

- This paper considers the design problem of constant modulus sequence set which could be applied in multiple-input multiple-output (MIMO) radar and communication societies, to achieve desired correlation properties.
- A new and general weighted integrated sidelobe level (WISL) accounting for both auto- and cross-correlation functions is proposed.
- An iteration algorithm based on iteration direct search is devised to optimize the WISL without limitations on the weights  
filling the gap in the open literature and involves the FFT operation at each iteration ensuring the convergence speed
- Results highlight that the proposed algorithm possesses excellent superiority both in correlation properties and computation complexity compared with the related WeCAN algorithm.

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