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"Compensation for elements discrepancies in array development using genetic algorithms", pp.269-273

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Abstract – The impact of discrepancies between idealized and realized array elements on the performance of implemented antenna arrays, compared to the theoretically expected one, is examined in this paper. A new technique for the recomputation of an array's excitatio n coeffi cients, in order to take into account these discrepancies, is presented. The proposed technique is based on a simple experimental measurements procedure, regarding each element individually, and employment of a Genetic Algorithm (GA). The presented results indicate that the performance of an antenna array can be significantly improved by using the proposed technique.