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(57) Abstract :

Difference patterns find applications in target tracking radars for accurate target detection. Such patterns must be generated with minimum sidelobe levels to reduce the effect of interfering signals like clutter, jamming signals. The present work is focused on designing concentric circular arrays(CCA) of practical elements producing low sidelobe difference patterns using thinning. In the present work, dipole antenna arrays are thinned and an amplitude distribution is designed for ON elements to yield low sidelobe difference patterns. The optimum amplitudes and thinning coefficients are derived using Differential Evolution algorithm.

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