

**“Formation of wideband sector-shaped nulls in the array pattern with a phase-only method”,**  
pp.147-150

Alexander S. Kondratiev

**Abstract** – A fast iterative method is proposed for the phase only synthesis of the array pattern nulls in prescribed directions at a specified set of frequencies. The method lies in writing a positive semi definite functional composed of the residuals of the original set of the problem equations and minimizing this functional using a monotonically convergent relaxation iterative procedure. A lower-bound estimator for the number of the array elements required for the synthesis of a prescribed number of nulls at given frequencies is proposed along with an estimator for the null depth. Numerical examples confirming the efficiency of this method are presented.