

## Guidelines for Student Reports

# Array antenna synthesis with sparse sub-arrays

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### Abstract

This project proposes the synthesis of antenna arrays through sparse sub-arrays. An hybrid iterative technique based on particle swarm optimization (PSO) and convex programming (CP) will be implemented: once defined the number of subarrays and the number of elements within them, the PSO algorithm is applied in order to determine the optimized distance between the subarrays; then, the optimal subarray weights are calculated through a CP optimization. These two steps, are then repeated in an iterative procedure.

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