

# Antenna networks



Component  
École Nationale  
Supérieure  
d'Électrotechnique  
d'Électronique

## In brief

- > **Amety's Code:** N9EE13B
- > **Open to exchange students:** Yes

## Presentation

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### Objectives

Know how to calculate the fundamental descriptors of phased arrays – Know how to physically interpret the radiation of phased arrays – Know the fundamental properties of phased arrays – Design a phased array based on specifications

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### Description

- I- Phased arrays: definition and objectives
- II- Array factor: assumptions and definition
- III- Antenna arrays with uniform amplitudes and progressive phase
  - III-1 Definition
  - III-2 Design and fundamental descriptors in the "large array" assumption
- IV- Antenna arrays with non-uniform amplitudes
  - IV-1 Definition
  - IV-2 Design and fundamental descriptors of a binomial array

IV-3 Design and fundamental descriptors of a Dolph-Tschebyscheff array

V- Prospects in the field of antenna arrays

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## Pre-requisites

The following subjects: Planar Antennas and Radiating Openings (code N8EE08B) – Electromagnetic Radiation and Antennas (code N8EE26A)