

Integral methods



Component

École Nationale
Supérieure
d'Électrotechnique
d'Électronique
d'Informatique
d'Hydraulique
et des
Télécommunications

In brief

- **Ametys Code:** M34HONTM
- **Open to exchange students:** Yes

Presentation

Objectives

To supplement knowledge for the numerical solution of Maxwell's equations and to deepen understanding of numerical programming methods

Description

Introduction to integral methods, in particular boundary integral methods, for solving Maxwell's equations:

- o Green's function and integral formulations
- o Boundary finite elements
- o Method of moments: Different formulations in free space EFIE, MFIE, CFIE
- o Other formulations

BE: Development in Fortran of the solution by boundary integral equations of the problem of diffraction by a metal obstacle

Pre-requisites

Numerical methods, Partial Differential Equations 1st year, Finite elements 2nd year