

EMSS Workshop

Application of Numerical Techniques to the Solution of Practical Antenna Problems with FEKO

Workshop Room: Europe 2
Date: Tuesday 8 April
Time: 15:20 - 16:20

Chairs: Dr. Markus Schick, Dipl.-Ing. Benian Chand, EM Software & Systems GmbH, Germany

FEKO is a leading electromagnetic (EM) analysis software suite, based on multiple state of the art computational EM (CEM) techniques for solving a wide range of EM problems for a large variety of industries. It enables you to profit from its outstanding capabilities in numerical field computation with the combination of different methods like Method of Moments (MoM), Multi-Level Fast Multipole Method (MLFMM), Unified Theory of Diffraction (UTD), Physical Optics (PO), Geometrical Optics (GO) and Finite Element Method (FEM) within one software package.

The workshop will start with an overview about different numerical methods. Thereby the frequency based techniques in FEKO like MoM will be described (not going too much into mathematical details, but rather just a more illustrative description). A main part of the workshop illustrates the application of these methods to the solution of typical antenna problems such as antenna design or antenna placement. Different antenna applications will be given and also comparisons with measurements will be presented. Also extensions to the standard numerical methods will be demonstrated such as adaptive frequency interpolation techniques for the fast solution of broadband antenna problems or the coupling of different antennas or cables. The workshop will end with a practical FEKO example showing an antenna workflow using Antenna Magus and Optenni Lab.