FIMMWAVE/FIMMPROP

Online Training Course

This is an 8-hour course designed to teach you how to get the best out of FIMMWAVE and FIMMPROP. The course is split in two half-day sessions. It will cover three broad areas:

1. An explanation of the theoretical techniques used
2. A tutorial on the program's user interface
3. More advanced tutorials on modelling more difficult structures with the program

These times and precise topics are subject to change before the course though the topics covered will be broadly the same.

In addition, there will be plenty of time to try out what you have learned with supervised hands-on sessions.

Agenda

Session 1

9:30 FIMMWAVE
- the FMM, FEM and FDM Solvers – theoretical basis, advantages and limitations of each method
- constructing waveguides – the RWG, MWG and FWG geometries
- finding modes, the MOLAB, complex waveguides, boundary conditions, anisotropy
- the General Scanner

10:40 FIMMWAVE hands-on session 1
11:30 Coffee break
11:45 FIMMPROP
- introduction to the EME (EigenMode-Expansion) method – theoretical basis, advantages and limitations
- periodic structures (EME and RCMT methods)
- constructing a device, obtaining data, diagnostics
- the FIMMPROP Scanner

12:35 FIMMPROP hands-on session 1
14:30 Close

Session 2

9:30 FIMMWAVE – advanced usage
- getting the best from each solver, modelling difficult structures, choosing the right solver
- bend modes
- using variables and expressions
- scripting with Python and MATLAB – automation of a calculation

10:15 FIMMWAVE hands-on session 2
11:20 Coffee break
11:35 FIMMPROP – advanced usage
- modelling tapers and z-varying structures - the Planar Section and Taper Section
- using expressions to define z-variations
- modelling bends
- using ports
- guidelines for successful EME modelling

12:20 FIMMPROP hands-on session 2
14:30 Close