

Simon LABRUNIE -- Université de Lorraine

Foundations of full-wave simulation of plasma heating

This course will review the foundations of the mathematical and numerical modelling of electromagnetic wave propagation in "cold" magnetised plasmas.

More specifically it focuses on three main aspects :

- The derivation and well-posedness of the equations.
- The methodology for domain decomposition, which is mandatory to simulate realistic tokamak configurations.
- A possible approach to numerical simulation.