COURSE: NUMERICAL METHODS IN ELECTROMAGNETICS

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Main topics:
- Introduction to Computational Electromagnetics (CEM)
- Domain discretisation methods, Finite Differences, Finite elements
- Boundary discretisation methods, Boundary Elements
- Integral equation methods, Method of Moments
- Stochastic Collocation Method (SCM)

Programme structure:
- 5-day course
- Sample data will be provided for practice and for final presentation
- Every student gets lecture notes bound into a booklet, as well as a CD containing a digital version of the booklet

Important dates:
Course dates: 31/08/2020 – 04/09/2020
Deadline for application: 01/08/2020
Confirmation of the course: 15/08/2020
Payment due by: 24/08/2020

Price of the course: 300 € (tax included)

Programme plan:

Day 1
- Introduction to domain, boundary and source discretization methods, Finite Difference Method (FDM), Finite Difference Time Domain (FDTD) method (3h)
- Individual work/exercise (1h)

Day 2
- Finite Element Method (FEM), Boundary Element Method (BEM), Hybrid Element Methods (HEM) (3h)
- Individual work/exercise (1h)

Day 3
- Integral Equation Method, Method of Moments (MoM) (3h)
- Individual work/exercise (1h)

Day 4
- Stochastic Collocation Method for Uncertainty Quantification and Sensitivity Analysis (3h)
- Individual work/exercise (1h)

Day 5
- Students’ final projects (3h)
- Final presentations (1h)

Programme lecturers:
D. Poljak, PhD,  
Full Professor at the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Split, Croatia.

M. Cvetković, PhD  
Assistant Prof, at the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Split, Croatia.

Anna Šušnjara, PhD Student,  
Teaching/research assistant at the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Split, Croatia.