An ECCOMAS Advanced Course on Computational Structural Dynamics

Prague, Czech Republic, June 15-19, 2020

Programme

Basic Course on Computational Dynamics (June 15-17, 2020)

DAY 1 June 15, 2019
1. Basics of dynamics and introduction with course motivation (K.C. Park)
2. Basics of continuum mechanics and constitutive equations (A. Tkachuk)
3. Dynamics of linear distributed systems (J. Kruis)
4. FEM in linear dynamics (J. González)
5. Implementation aspects of linear FEM I (J. Kopačka)

DAY 2 June 16, 2019
6. Beam, Plate and Shell models (P. Krysl)
7. Signal theory (J. Kober)
8. Advanced FEM (P. Krysl)
9. Linear and eigen-value solvers (J. Kruis)
10. Implementation aspects of linear FEM II (P. Krysl)

DAY 3 June 17, 2019
11. Dynamics of multibody systems (A. Tkachuk)
12. Nonlinear continuum mechanics and nonlinear solvers (A. Popp)
13. Contact problems (A. Popp)
14. Direct time integration in dynamics (R. Kolman)
15. Implementation aspects of nonlinear FEM and contact problems (A. Popp)

Advanced Course on Computational Dynamics (June 18-19, 2020)

DAY 4 June 18, 2019
16. Model order reduction in dynamics (M. Isoz)
17. Structural System identification (K.C. Park)
18. Experiments in structural dynamics (J. Kober)
19. Uncertainty quantification in dynamics (H.S. Choi/K.C. Park)
20. Implementation aspects of time integration and Model order reduction (J. Kopačka)

DAY 5 June 19, 2019
22. Fluid-structural interactions (J. González)
23. Vibro-acoustic problems (P. Krysl)
24. Data-driven modelling and Machine/deep learning in dynamics (A. Tkachuk/J. Kopačka)
25. Implementation aspects of Partitioned analysis and FSI (J. González)