

Data-Centric-Engineering approaches to vibroacoustics and structural dynamics

Machine Learning techniques have boosted the development of innovative strategies in vibroacoustic and structural dynamics for: (i) reduced order modelling; (ii) design optimization; (iii) extracting information; (iv) improving modelling and forecasting; (v) uncertainty quantification; (vi) reducing computational costs; (vi) virtual sensing; and (vii) identification of system parameters and nonlinear relationships, to name some.

This special session welcomes contributions on advanced techniques and industrial applications showcasing recent progress, strengths and limitations of using data-driven strategies and physics-informed Machine Learning strategies in vibroacoustic and structural dynamics.

Alice Cicirello, University of Cambridge