

Biography

of Francesco Pellicano

Francesco Pellicano is Aeronautical Engineer and Ph.D. in Theoretical and Applied Mechanics, he is currently Full Professor, Head of the Centre Intermech MoRe, General Chair of the ISVCS (International Symposium on Vibrations of Continuous Systems), Track Chair of the ASME-IMECE Conference, he was committee president of 2 BsC and 2 MsC programmes. He is coordinator (PI or local) of several projects: COMETA, NATO (composite metamaterials), THEORETIC (Electric Powertrain), DIADEM (Diagnostics and Innovative sensors), REFIMAN (industrial retrofitting), METaGEAR POR-FESR (Gears, Materials, Robotics), INDGEAR, EU-Fp7 (condition monitoring) and HPGA Fortissimo, EU-Fp7 (applications of high performance computing). He published 2 Books, more than 80 Journal papers and more than 100 conference papers. Bibliometry: 176 papers on Scopus, h-index 37, more than 3800 citations.

His research activities are:

Fluid-structure interaction: models for vibration and stability analyses of shells interacting with incompressible heavy fluids, compressible and supersonic fluids; experiments on interactions with non-Newtonian fluids.

Gear stress and vibration modelling and testing: vibration aspects of gears including non-smooth dynamics, complexity and chaotic vibration, optimization using Genetic Algorithms, Diagnostics and Prognostics.

Vibration control using active passive techniques: active control through piezo-electric actuators, active control of suspension through variable stiffness for civil applications; linear and nonlinear dynamic absorbers and applications to railways bridges; quasi-zero stiffness suspension for earthquake applications; origami isolators and applications to automotive.

Shell dynamics and stability: modal interactions, nonlinear random responses and synchronization phenomena, thermal effects and their impact on the dynamic scenario.

Vibration of carbon nanotubes: development of new continuous shell models for investigating the vibration characteristics of single and multiwalled nanotubes considering size effects and van der Waals interactions.