

FLUID-STRUCTURE INTERACTION: THE MANY YEARS OF OUR COLLABORATIONS WITH ROGER OHAYON

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This talk will present our collaborations with Roger Ohayon in fluid-structure interaction, acoustic-structure interaction, structural vibration and control, and recently on new partitioned formulation of internal flow-structure interaction problems. Our collaborations span over 38 years (It was during the 2nd International Conference on Finite Element Method in Flow Problems, held in Rapallo, Italy 14-18 June, 1976, where we met for the first time), with more intense collaborations during the 1990s.

We will begin with a survey of many specialized modeling of fluid-structure interaction phenomena, and then concentrate on our recent collaborations on structures subjected to internal fluid flow formulated in terms of Lagrangian kinematics formalism. The presentation will conclude with several outstanding problems in fluid-structure interaction, and structural vibration and vibration control problems.