

MB Dyn - multibody system dynamics, interactions with FEM

Pierangelo MASARATI

Dipartimento di Ingegneria Aerospaziale

Politecnico di Milano (Italy)

This seminar discusses the multibody approach to system dynamics modeling, in view of its coupling to finite element analysis. Multibody analysis is presented, based on the categorization of formalisms and of software formulations. Issues related to the formulation of kinematic constraints, and to constraint stabilization, are discussed. The free general-purpose multibody solver MBDyn (<http://www.aero.polimi.it/~MBDyn/>) is presented and discussed, along with typical applications of this software; the underlying development philosophy is sketched.