Together with Dr-Ingr Frederico Tocchetti from University Roma II Tor Vergara, we would like to propose a minisymposium in the domain

Computational Mathematics and Numerical Methods

Called :

A background to several computational difficulties : the non-smooth evolution of mechanical systems due to discontinuities of the velocities in time or in space.

In this minisymposium, we propose to discuss the consequence of the choice of the mechanical model describing time or space discontinuities of the velocity on the efficiency of numerical simulations : When time or space discontinuities such as collisions or discontinuous deformations appear in mechanical systems, specific models have to be used to take them into account. Several models of discontinuity have been developed and are in use. The mathematical properties of each model influences the choice of the algorithm that is used in the numerical computation and, as a consequence, the performance of the computation.

For this reason, all contributions related with advances and applications in the domain of mechanical modelling or numerical computation of systems with time- or space-discontinuities are welcome in this minisymposium (collisions, unilateral contact, friction, etc... for the time discontinuities and fracture, discrete models, discontinuous deformations, etc... for the space discontinuity).

Pr Eric Dimnet,

LCPC Paris