

Seminário de Equações Diferenciais Parciais

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Local: Sala 302 - Departamento de Matemática -UFSC

Some recent results on dynamical models on shallow Shells

In recent years appeared more interest from Researches on models which are simplifications of much more complete systems. This happens in several fields like elasticity, fluid dynamics, thermo/magneto/electricity and several others. In these Lecture we intend to describe the so called Malgouyres/Vlasov system describing the "deformations" of shallow shells in the presence of temperature effects. When a suitable parameter approaches zero we obtain another model on the shell giving us informations on the vertical component. We study this quasilinear model in the presence of temperature effects in the sense of C. Cattaneo (which is of hyperbolic type). We will describe the asymptotic behavior of the total energy as time approaches infinity.