SEMINÁRIO DE EQUAÇÕES DIFERENCIAIS

A mathematical analysis of a model for phase transitions of thermoviscoelastic isochoric materials

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Resumo: We consider a system of highly nonlinear partial differential equations modeling phase changes in isochoric materials with viscoelastic properties subject to thermal effects. This system features a balance equation for internal energy, governing the evolution of temperature, an evolution equation for the phase field parameter, whose values determine the state of material, and a moment balance equation governing the displacement.

In this talk, we establish results of existence and uniqueness of solutions for such system.

Joint work with José Luiz Boldrini (IMECC-UNICAMP).