

COMBUSTION IN A POROUS MEDIUM WITH n LAYERS

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In this talk we prove the existence of a global solution for a nonlinear system consisting of n parabolic equations coupled to n ordinary differential equations. Such a system models a combustion process in a porous medium with n layers in which compressibility effects are neglected, but heat transfer between the layers as well as heat conduction are taken into account. We obtained a classical solution under the assumptions that the initial data is bounded and Lipschitz.