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Marius Mubenga Nkashama. *Bounded Solutions of Nonlinear Parabolic Systems.*

We consider coupled systems of two nonlinear parabolic equations on a domain which is bounded in space and unbounded in time (namely the entire real line). We establish the existence of bounded solutions existing for all time by using a combination of a priori estimates, comparison techniques, nonlinear approximations, embedding of function spaces, and Gagliardo-Nirenberg type interpolation inequalities which we derive. Additional conditions ensure uniqueness or multiplicity of solutions. Some examples will be given to illustrate the results. (Received September 07, 2007)