

# Nonlinear Parabolic-Hyperbolic Systems

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Parabolic-hyperbolic equations are an important class of partial differential equations. A classical example is the porous medium equation, a nonlinear parabolic equation which, due to degeneracy, exhibits also certain hyperbolic features. In this talk, we discuss on the one hand side various aspects regarding solvability, regularity and asymptotics of typical representatives of parabolic and hyperbolic equations. On the other hand, we consider a variety of coupled parabolic-hyperbolic systems arising in various fields of applications ranging from thermoelasticity to compressible fluids. Based on methods from the theory of evolution equations, we discuss local and global well-posedness results for these type of equations.