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Abstracts of Short Communications and Posters

Section:

10. Partial Differential Equations

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Klingenberg, Christian, Universität Würzburg, Germany
Conservation laws with source terms
Compressible flow may be modeled by systems of conservation laws with a source in case of flow through variing ducts, in case of reacting flows or in case of a kinetic model. We investigate three such models analytically and prove existence of weak solutions. Where applicable we also study the relationship between these and their related equilibrium systems obtained by modeling the reactions as occurring instantaneously. This is joint work with Y. Lu.
References: K., Lu: *Existence to solutions to hyperbolic conservation laws with a source*, Comm. Math. Physics, 187 (1997)
Lu, K. : *The Cauchy problem for hyperbolic conservation laws with three equations*, Journ. Math. Anal. Appl., 202 (1996)
Lu, K. : *The relaxation limit for systems of Broadwell type*, Differential and Integral Equations (1998)