## Models of thermo-diffusion in 1d

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**Abstract** The goal of the paper is to study the Cauchy problem for 1d models of thermodiffusion. We explain qualitative properties of solutions. In particular, we show which part of the model has a dominant influence on well-posedness, propagation of singularities,  $L^p - L^q$ decay estimates on the conjugate line and on the diffusion phenomenon.