Summary: “The last decades witnessed a renewal of interest in the Burgers equation. Much activity focused on extensions of the original one-dimensional pressureless model introduced in the thirties by the Dutch scientist J. M. Burgers, and more precisely on the problem of Burgers turbulence, that is the study of solutions to the one- and the multi-dimensional Burgers equation with random initial conditions or random forcing. Such work was frequently motivated by new emerging applications of Burgers’ model to statistical physics, cosmology, and fluid dynamics. Also, Burgers turbulence appeared as one of the simplest instances of a nonlinear system out of equilibrium. The study of random Lagrangian systems, of stochastic partial differential equations and their invariant measures, the theory of dynamical systems, the applications of field theory to the understanding of dissipative anomalies and of multiscaling in hydrodynamic turbulence have benefited significantly from progress in Burgers turbulence. The aim of this review is to give a unified view of selected work stemming from these rather diverse disciplines.”

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Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.

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