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The shock development problem. (English)

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The book considers the shock development problem in fluid mechanics. The flow of a compressible perfect fluid is described by Euler equations and thermodynamic laws. The relativistic case is also included in the consideration. The initial data may be singular, the problem includes a free boundary, which is the shock surface. New geometric and analytical methods are proposed, including the acoustical structure on the spacetime manifold of the fluid.

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