962-35-145 **Michael Sever*** (sever@math.huji.ac.il), Department of Mathematics, The Hebrew University of Jerusalem, Jerusalem, Israel. *Viscous structure of singular shocks.* Preliminary report.

Singular shocks have been used for solvng the Riemann initial value problem for systems of conservation laws for which no such classical solution exists. We describe a viscous structure for singular shocks, employing the identity viscosity matrix and approximating the regularized system in the space of measures. A general existence theorem is given for this structure. For a model problem which has real characteristic speeds but is not hyperbolic, singular shocks of the described structure exist but fail to solve the Riemann problem. However, for initial data satisfying a special condition, the corresponding initial value problem is solvable using singular shocks. (Received August 09, 2000)