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### Denis Serre I N Sneddon

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**Local existence of smooth solutions 91 3 7 The wave equation 101 4 Dimension d D1 the Riemann problem 106 4 1 Generalities on the Riemann problem 106 4 2 The Hugoniot locus 107 4 3 Shock waves 111 4 4 Contact**"Non convex entropies for conservation laws with February 18th, 2020 - The paper discusses systems of conservation laws endowed with involutions and contingent entropies Under the assumption that the contingent entropy function is convex merely in the direction of a cone in state space associated with the involution it is shown that the Cauchy problem is locally well posed in the class of classical solutions and that classical solutions are unique and stable'

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May 5th, 2020 - eral systems by using certain kinds of Goursat entropies whose regularities are ensured by the strict hyperbolicity of the systems Regarding work on other related topics on hyperbolic conservation laws with umbilic points we refer the reader to Isaacson Marchesin and Plohr IMP for"**Hyperbolic Conservation Laws in Continuum Physics** April 24th, 2020 - Home » MAA Publications » MAA Reviews » Hyperbolic Conservation Laws in Continuum Physics Hyperbolic Conservation Laws in Continuum Physics Constantine M Dafermos'

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'*Hyperbolic conservation laws i c2000*

February 7th, 2020 - 3?1 Hyperbolicity 37 3?2 Entropy Entropy Flux Pairs 38 4?2 The Burgers Equation and Nonuniqueness of Weak Solutions 51 4?3 Entropies and Admissible Solutions 52 4?4 The Vanishing Viscosity Approach 54 15?3 Measure Valued Solutions for Systems of Conservation Laws and pensated pactness 375"**Bahadoran Guiol Ravishankar Saada Euler**

May 6th, 2020 - **Keywords** Hydrodynamic limit Attractive particle system Scalar conservation law Entropy solution Random environment Quenched disorder Generalized misanthropes Scaling Limits of Interacting Particle Systems Grundlehren der Mathematischen Systems of Conservation Laws 1 Hyperbolicity Entropies Shock Waves Cambridge University Press"Systems of

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**worldwide" *Duality for systems of conservation laws* arXiv**

**August 5th, 2019 - Definition 3 Two systems of conservation laws**

**admitting 2 additional conservation laws are dual to each other if**

**their ruled surfaces are dual Remark Exploiting the geometric ideas**

**manifested in Theorems 1 and 2 we easily construct systems of**

**conservation laws with one additional conservation law via envelope**

**of an  $n$  parameter'**

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**'Canonical form and symmetry group of systems of**

**February 4th, 2020 - Multidimensional first order systems of**

**conservation or balance laws are widely adopted mathematical models**

**Here we address the bination or modification of such systems so as to**

**obtain hyperbolicity and a desired symmetry group for the resulting**

**system However desirable or necessary in a particular application**

**such features may prove elusive'**

**'On the symmetric form of systems of conservation laws with**

**March 12th, 2020 - The symmetrizability of systems of conservation**

**laws with entropy may and should be utilized in the design and**

**analysis of numerical solutions to such problems For example it offers**

**the possibility of locally linearizing the equations in a way which**

**preserves the hyperbolicity and conservation properties see Roe 7 8**

**the next section and 5'**

**'Front tracking approximations for slow erosion**

**February 1st, 2020 - In this paper we study an integro differential**

**equation describing slow erosion in a model of granular flow Systems of**

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**'Decay of solutions of hyperbolic systems of conservation**

**March 7th, 2020 - We study solutions of the Cauchy problem for**

**strictly hyperbolic systems of conservation laws of the form  $U_t + F(U)_x = 0$**

**Here  $U \in \mathbb{R}^n$  takes on values in  $\mathbb{R}^n$  and  $F$  is a smooth**

**nonlinear mapping from  $\mathbb{R}^n$  to  $\mathbb{R}^n$  The condition of strict hyperbolicity**

**requires the Jacobian  $F'(U)$  of Systems of Conservation Laws 2**

**ResearchGate**

**April 19th, 2020 - Systems of conservation laws arise naturally in physics**

**and chemistry Continuing where the previous volume left off the author**

**considers the maximum principle from the viewpoints of both viscous'**

**'Entropies and Symmetrization of Hyperbolic Stochastic**

**May 1st, 2020 - Hyperbolic conservation laws have this property which**

**explains why these equations are widely used to model fluid dynamics 49**

**and other applications like traffic flow 50 Most physically motivated**

**systems are endowed with an entropy that describes the decay of energy**

**which in turn guarantees well posed classical solutions 9 29 45 A famous'**

**'Accurate numerical schemes for approximating initial**

**February 21st, 2020 - Solutions of initial boundary value problems for**

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systems of conservation laws depend on the underlying viscous mechanism namely different viscosity operators lead to different limit solutions Standard numerical schemes for approximating conservation laws do not take into account this fact and converge to solutions that are not necessarily physically relevant'

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