



On Generalized Microscopic or Infinitely Narrow Solitons in Burguers's and Shallow Water Equations.

Professor Dr. Baldomero Valiño Alonso

Resumo. V.P.Maslov have shown that "infinitely narrow solitons" appear on Burguers's equation as limits of singular solutions of Korteweg de Vries equation with a small dispersion h tending to 0. He also showed that hyperbolic systems of conservation laws in "general position" may have singular solutions of similar type.

In this talk the general form of an infinitely narrow soliton will be considered and the corresponding Hugoniot-Maslov chain will be obtained in the framework of Colombeau's differential algebra for this type of singular solutions. Two problems are considered: the Burguers's equation and the system of "shallow water" equations. In this last case will be considered not only the plane fond case, but also the case when the bottom's profile has a point of discontinuity.

Maslov's infinitely narrow solitons are interpreted as microscopic generalized solitons in Colombeau's differential algebra, so we use the association of generalized functions and the rules of this algebra to calculate the Hugoniot-Maslov chains

Palavras Chave: *Generalized Microscopic Solitons, Infinitely Narrow Solitons, Colombeau's Differential Algebra, Burguers's Equations, Shallow Water Equations.*

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