---

**Zbl 0861.35055**

**Bampi, Franco; Zordan, Clara**
**Hyperbolicity and second order systems.** (English)
Bull. Tech. Univ. Istanbul 47, No.1-2, 167-180 (1994).

Summary: The equivalence between second-order differential systems and first-order ones is achieved by introducing a set of natural stationary differential constraints. It is proved that the definition of hyperbolicity for a second-order system can be reduced to the definition of constrained hyperbolicity for the equivalent system of first order. Wave propagation theory and an example show how the present approach makes the definition of hyperbolicity for second-order systems unambiguous and appropriate.

*Keywords* : wave propagation; differential constraints
*Classification* :
∗35L40 First order hyperbolic systems, general
35L10 Second order hyperbolic equations, general