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Recent Mathematical Methods in Nonlinear Wave Propagation

Lectures given at the 1st Session of the Centro Internazionale Matematico Estivo (C.I.M.E.), held in Montecatini Terme, Italy, May 23–31, 1994

Editor: T. Ruggeri



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PREFACE

The book contains the text of the lectures presented at the first session of the Summer School 1994 organized in Montecatini Terme by the C.I.M.E. Foundation.

The aim of the School was the presentation of the state of the art on recent mathematical methods arising in Nonlinear Wave Propagation.

The lecture notes presented in this volume were delivered by leading scientists in these areas and deal with *Nonlinear Hyperbolic Fields and Waves* (by Professor G. Boillat of Clermont University), *The Theory of Hyperbolic Conservation Laws* (by Professor C. M. Dafermos of Brown University), *Outline of a Theory of the KdV Equation* (by Professor P. D. Lax of Courant Institute NYU), *Nonlinear Waves for Quasilinear-Hyperbolic-Parabolic Partial Differential Equations* (by Professor T.-P. Liu of Stanford University).

About fifty people (including research students and senior scientists) participated actively in the course. There were also several interesting contributions from the seminars on specialized topics.

We feel that the volume gives a coherent picture of this fascinating field of Applied Mathematics.

Tommaso Ruggeri

Contents

G. Boillat, Non Linear Hyperbolic Fields and Waves	1
C.M. Dafermos, Entropy and the Stability of Classical So-	
lutions of Hyperbolic Systems of Conservation Laws	48
P.D. Lax, Outline of a theory of the KdV equation	70
TP. Liu, Nonlinear Hyperbolic-Dissipative Partial Differen-	
tial Equations	103