Topics

I. Cauchy-Kovalevsky Theorem and Proof. 3 lectures

II. Characteristics and Symbols; the Holmgren Uniqueness Theorem. 3 lectures

III. Fourier Analysis (Harmonic Analysis, Fourier Synthesis) Methods for Hyperbolic Equations. 13 lectures
    - development of the theory
    - application to the wave equation
    - Hadamard-Petrovsky definition of hyperbolicity and theory for linear hyperbolic equations and systems

IV. Quasilinear Hyperbolic Systems. 9 lectures
    - short-time existence of classical solutions
    - introduction to conservation laws

References


