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   Sommario/riassunto This volume contains the texts of the four series of lectures presented
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                      School. It is aimed at providing a comprehensive and up-to-date
                      presentation of numerical methods which are nowadays used to solve
                      nonlinear partial differential equations of hyperbolic type, developing
                      shock discontinuities. The most effective methodologies in the
                      framework of finite elements, finite differences, finite volumes spectral
                      methods and kinetic methods, are addressed, in particular high-order
                      shock capturing techniques, discontinuous Galerkin methods, adaptive
                      techniques based upon a-posteriori error analysis.