Record Nr. UNISA996466476003316 Autore Kajitani Kunihiko <1941-> Titolo The hyperbolic Cauchy problem / / Kunihiko Kajitani, Tatsuo Nishitani Pubbl/distr/stampa Berlin, Germany:,: Springer,, [1991] ©1991 **ISBN** 3-540-46655-X Edizione [1st ed. 1991.] 1 online resource (VIII, 172 p.) Descrizione fisica Lecture Notes in Mathematics, , 0075-8434; ; 1505 Collana Disciplina 510.8 Cauchy problem Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Sommario/riassunto The approach to the Cauchy problem taken here by the authors is based on theuse of Fourier integral operators with a complex-valued phase function, which is a time function chosen suitably according to the geometry of the multiple characteristics. The correctness of the Cauchy problem in the Gevrey classes for operators with hyperbolic principal part is shown in the first part. In the second part, the correctness of the Cauchy problem for effectively hyperbolic operators is proved with a precise estimate of the loss of derivatives. This method can be applied to other (non) hyperbolic problems. The text is based on a course of lectures given for graduate students but will be of interest to researchers interested in hyperbolic partial differential equations. In the latter part the reader is expected to be familiar with some theory of

pseudo-differential operators.