@inproceedings{Jerome2016FunctionalAM, title={Functional Analytic Methods for Evolution Systems : Local Smooth Theory Stable Under Singular Limits}, author={J. Jerome}, year={2016} }. J. Jerome. Published 2016. By using two prototypical applications, the hydrodynamic-Maxwell system and the Navier-Stokes/charge transport system, we discuss the current relevance of local smooth theories for the Cauchy problem based on semigroup methods, and inspired by the Friedrichs and Kato inequalities. There appear to be three major advantages to the use of this theory: stability under the vanishing of diffu of Parabolic Nonautonomous Evolution Equations...Pages 401-472. Description: This book consist of five introductory contributions by leading mathematicians on the functional analytic treatment of evolutions equations. In particular the contributions deal with Markov semigroups, maximal L^p-regularity, optimal control problems for boundary and point control systems, parabolic moving boundary problems and parabolic nonautonomous evolution equations. The book is addressed to PhD students, young researchers and mathematicians doing research in one of the above topics. Search in WorldCat | Search For the complex analytic class of functions, see Holomorphic function. Not to be confused with Complexity theory. This article includes a list of references, related reading or external links, but its sources remain unclear because it lacks inline citations.Â Furthermore, all holomorphic functions satisfy the stronger condition of analyticity, meaning that the function is, at every point in its domain, locally given by a convergent power series.