

## **Some remarks on the recent history of the partial differential equations**

---

LUIGI RODINO  
*Department of Mathematics*  
*University of Torino, Torino, Italy*  
luigi.rodino@unito.it

We may fix as starting point of the recent history of the Partial Differential Equations the book of Courant and Hilbert "Methods of Mathematical Physics", Vol.II, representing an encyclopedia on known facts about PDE's up to 1940, with emphasis on equations of Mathematical Physics. Following the critique of Hadamard to the Cauchy-Kovalevskaya theorem, the need of a precise functional setting then emerges. This leads to the definition of Sobolev spaces and Schwartz distributions (1950-60). We survey some subsequent results on the general theory of PDE's (1970-80-90), as in the Hormander's work, and on the recent return (2000-2010) to other equations of Mathematical Physics, as Schrodinger and Boltzmann equations.