The resurgence of applied mathematics 1850-1950: national and international, academic, industrial and military contexts

International Commission on the History of Mathematics

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Abstract:
The symposium will contribute to an analysis of global and local changes in the relationship between pure and applied mathematics during the period 1850-1950. Among the contributing factors were the rise of new industries, including new modes of production (electrical and telecommunication industries, insurance, aircraft), developments in mathematical physics, astronomy, and meteorology (statistics, optimization, numerical analysis), not least exigencies from two World Wars (ballistics, aerodynamics). The period saw the rise of the first mathematical laboratories in an industrial context on an international scale and the foundation of the first journals specializing in applied mathematics. There were changes in the relation between public and private funding of mathematics, which partly differed, partly coincided in various countries. The symposium aims at studying these developments in an international, comparative perspective. The main countries to be discussed are Germany, France, Austria, England, Canada, U.S., Czechoslovakia, Norway, and various countries in Latin America.

Among the talks so far proposed for the symposium are those on nomography, on mathematical model building in the U.K., the U.S. Coast Survey, Czechoslovak actuarial mathematics, Canadian Government Support of Mathematics, Norwegian traditions in geomagnetism, statistics, meteorology, and astronomy, early aerodynamical research in Britain, mathematics at the Zeiss Optical Company around 1900, Felix Klein’s initiatives for transforming applications of mathematics into specialized disciplines in Germany.

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Keywords: pure and applied mathematics – mathematical laboratories in industry – new disciplines in applied mathematics – influence of wars on mathematics – private and public funding in mathematics.

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