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Partial differential equations, by E. T. Copson, Cambridge University Press, Cambridge (England), London, New York, Melbourne, 1975, vii + 280 pp.

Many basic laws of nature can be formulated as systems of differential equations, ordinary or partial. Predictions of physical phenomena then present themselves as boundary problems for such systems. Many of them are formidable mathematical challenges not yet mastered. Those which have been solved have required the entire arsenal of analysis, power series, separation of variables, successive approximations, Fourier analysis, functional analysis and distributions. On the other hand, most of these tools were created to solve problems in physics. The classical linear partial differential equations are Laplace's equation of potential theory, the wave equation of the theory of wave propagation, and the heat equation of the theory of heat conduction. The diversity of the physics involved explains the fact that the corresponding boundary problems are quite different and also the methods for their solution.

Riemann's lectures, *Partial differential equations and their applications*, published by Hallendorff in 1882, was the first systematic book in the field. Twenty years later came an expanded version by Weber, which after another twenty years branched out into the encyclopedic *Differential equations of physics* by Frank and von Mises. At about the same time, *Methods of mathematical physics* by Courant and Hilbert, and Webster's *Partial differential equations of mathematical physics* made their appearance. The aim was twofold: to give old and new mathematical tools to physicists and to introduce