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(*b*. Gray, Haute-Saône, France, 19 May 1832; *d*. Paris, France, 9 March 1886)

mathematics, analytical mechanics, celestial mechanics.

Bour, the son of Joseph Bour and Gabrielle Jeunet, came from a rather modest provincial family. After receiving his secondary education in Gray and Dijon, he was admitted in 1850 to the École Polytechnique, from which he graduated first in his class in 1852; he then continued his studies at the École des Mines in Paris. At this time he worked on the paper "Sur l'intégration des équations différentielles de la mécanique analytique," which he read before the Académie des Sciences of Paris on 5 March 1855. He also wrote two theses in celestial mechanics, one on the three-body problem and the other on the theory of attraction, which he set forth brilliantly before the Faculté des Sciences in Paris on 3 December 1855.

In July 1855 Bour became both a mining engineer and professor of mechanics and mimnig at the École des Mines of Saint-Étienne, but he returned to Paris at the end of 1859 as lecturer in descriptive geometry at the École Polytechnique. The following year he was appointed professor at the École des Mines, and professor of mechanics at the École Polytechnique in 1861. Also in 1861 he received the grand prize in mathematics awarded by the Académie des Sciences for his paper "Théorie de la déformation des surfaces." In April 1862 Bour was a candidate for membership in the Académie in des Sciences but was defeated by Ossian Bonnet. Disappointed by this failure, he concentrated entirely on his course in mechanics at the École Polytechnique.

Although Bour died of an incurable disease at the age of thirty-four, he left valuable works in mathematical analysis, algebra, infinitesimal geometry, theoretical and applied mechanics, and celestial mechanics. In mechanics his essential contributions dealt with differential equations in dynamics, the theme of his first memoir and of another published in 1862; the analytical study of the composition of movements (1865); and the reduction of the threebody problem to the plane case. In infinitesimal geometry his memoir on the deformation of surfaces, in line with the analogous studies of Bonnet and Codazzi, contained several theorems on ruled surfaces and minimal surfaces; but in its printed version this work does not include the test for the integration of the problem's equations in the case of surfaces of revolution, which had enabled Bour to surpass the other competitors for the Academy's grand prize.

BIBLIOGRAPHY

I. Original Works. A nearly complete list of Bour's published works is given in Poggendorff and the *Catalogue of Scientific Papers* (see below). Among his works are "Sur l'intégration des équations différentielles de la mécanique analytique," in *Journal de mathématiques pures et appliquées*, **20** (1855), 185–202; his theses for the *docteur-és-sciences* were published separately (Paris, 1855) as *Thèses présentées à la Faculté des Sciences à Paris pour obtenir le grade de docteur-ès-sciences…* and reproduced in *Journal de l'École polytechnique*, **21** , cahier 36 (1856), 35–84; "Théorie de la déformation des surfaces," *ibid*., **22** , cahier 39 (1862), 1'148; *Cours de mathématiques et machines*, 3 vols. (Paris, 1865–1874); and *Lettres choisies*, Joseph Bertin and Charles Godard, eds. (Gray, 1905).

II. Secondary Literature. Works on Bour are M. Chasles, *Rapport sur les progrés de la géométrie* (Paris, 1870), pp. 211, 295, 325–327; M. D'Ocagne, *histoire abrégée des sciences mathématiques* (Paris, 1955), p. 300; A. Franceschini, in *Dictionnaire de biographie française*, VI (1954), col. 1383; A. de Lapparent, in *École Polytechnique, Livre du centenaire*, I (Paris, 1895), 143–145; "Notice biographique sur Edmond Bour," in *Nouvelles annales de mthématiques*, 2nd ser., **6** (1867), 145–157; Poggendorff, III, 172–173; and Royal Society of London, *Catalogue of Scientific Papers, 1800–1863*, I (1867), 532.

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