Briot, Charles Auguste | Encyclopedia.com

(*b*. St.-Hippolyte, France, 19 July 1817; *d*. Bourg-d'Ault, France, 20 September 1882)

mathematics, physics.

Briot's father, Auguste, a merchant at St.-Hippolyte, had a considerable reputation in the tanning trade. Charles, the eldest of a large family, became a teacher after an accident that left him with a stiff arm. He was sent to Paris and in only five years attained a remarkable level of scholarship. When he entered the École Normale Supérieure in 1838, he was ranked second. Three years later he completed the course and received his *agrégation* in mathematics with the highest rank. In March 1842 he received his doctorate of science, having presented his thesis on the movement of a solid body round a fixed point. This brilliant success lit the way for a group of young men from his native Franche-Comté: Claude Bouquet, L. E. Bertin, and Louis Pasteur.

Briot devoted himself to teaching, first as a professor at the Orléans Lycée and afterward at the University of Lyons, where he reencountered his friend Claude Bouquet. In 1851 he moved to Paris, where he taught the course in *mathématiques speciales* (preparation for the École Normale Supérieure and the École Polytechnique) at the Lycée Bonaparte and later at the Lycée Saint-Louis, as well as acting as substitute at both the École Polytechnique and the Faculté des Sciences for the courses in mechanical engineering and surveying (1850), calculus (1853), and mechanics and astronomy (1855). From 1864 on, he was a professor at the Sorbonne and at the École Normale Supérieure. In his courses he particularly stressed the relation between thermodynamics and rational mechanics.

Briot's studies on heat, light, and electricity were based on the hypothesis of the existence in the ether of imponderable molecules acting upon each other, as well as upon the ponderable molecules of matter. Particularly in his study of the crystalline medium, he linked his findings to Pasteur's experimental work on the dissymmetry of crystals. These studies, which were conducted from a mathematical point of view, led to the simplification of methods for integral calculus and the advance of the theories of elliptic and Abelian functions. To honor him for this work, the Göttingen Academy named him a corresponding member.

A large part of Briot's activity was devoted to the writing of textbooks for students, so that he and Bouquet could provide them with a library of basic books on arithmetic, algebra, calculus, geometry, analytical geometry, and mechanics. These books were published in numerous editions and for many years contributed to establishing the level of mathematics teaching in France. Briot also published, with Bouquet, an important work on elliptic functions (1875) and, alone, a treatise on Abelian functions (1879). The Académie des Sciences awarded Briot the Poncelet Prize in 1882 for his work in mathematics.

BIBLIOGRAPHY

Briot's works include "Recherches sur la théorie des fonctions," in *Journal de l'École Polytechnique* (1859), also published as an independent work (Paris, 1859); *Théorie des fonctions doublement périodiques*, written with Bouquet, 2 vols. (Paris, 1859; 2nd ed., 1875); *Essai sur la théorie mathématique de la lumière* (Paris, 1864); *Théorie mécanique de la chaleur* (Paris, 1869); *Théorie des fonctions elliptiques*, written with Bouquet (Paris, 1875); and *Théorie des fonctions abéliennes* (Paris, 1879).

Lucienne FÉlix