Vessiot, Ernest | Encyclopedia.com

(*b*, Marseilles, France, 8 March 1865; *d*, La Bauche, Savoie, France, 17 October 1952), *mathematics*.

Vessiot's ancestors were farmers near Langres, in the Haute-Marne. The family rose slowly in the social hierarchy, becoming teachers and, later, school principals. Vessiot's father was a *lycée*teacher and subsequently inspector general of primary schools. Vessiot, the third of six children, became a university professor and member of the Académie des Sciences.

A good record at the *lycée* in Marseilles enabled Vessiot to attend the École Normale Supérieure, which he entered second in his class, after Jacques Hadamard. In 1887 he obtained a teaching post at the *lycée* in Lyons. After receiving the doctorate in 1892, he taught at the universities of Lille, Toulouse, Lyons, and, finally, Paris (1910), Vessiot's first assignment at Paris was to prepare students for the *licence*. Later he taught courses in the theory functions, in analytical mechanics, as in celestial mechanics. He become director of the École Normal Supérieure (serving in this post until his retirement in 1935) and was elected to the mechanics section of the Académie des Sciences in 1943.

Vessiot's research dealt with the application of the notion of continuous groups, finite of infinite, to the study of differential equations, Extending results obtained by Émile Picard, Vessiot demonstrated in his dissertation (1892) the existence of a group of linear substitutions with constant coefficients operating on a system of *n* independent solutions of differential equation . The rigor and depth of his work on groups of linear rational transformation allowed on allowed Vessiot to put into more precise form and to develop research begun by Jules Drach (1902) and to extend the results of Élie Cartan on the integration of differential systems (1907). He also completed Volterra's study of Fredholm integrals to partial differential equations led Vessiot to obtained original results concerning perturbations in celestial mechanics, the propagation wave of discontinuity and general relativity. During World War I, Vessiot was assigned to work on problems in ballistics and he corrected certain empirical formulas then in use.

A dedicated teacher, Vessiot wrote useful and well-received textbooks. As director of the École Normale Supérieure he supervised the construction of new laboratories in collaboration with his physicist colleagues Henri Abraham, Léon Bloch, and Georges Bruhat, all of whom fell victim to the Nazis during German occupation.

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1–60; **58** (1941), 1–36 and **63** (1946), 1–23, also in *Bulletin de la Société mathématique de France***75** (1947), 9–26; and *Cours de mathématiques générales*, 3 vols. (Paris, 1921–1952), written with Paul Montel.

For a discussion of Vessiot's work see Élie Cartan, "L'oeuvre scientifique de M. Ernest Vessiot," in *Bulletin de la Société mathématique de France*, **75** (1947), 1–8.

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