

Davidov, August Yulevich | Encyclopedia.com

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(*b.* Libav, Russia, 15 December 1823; *d.* Moscow, Russia, 22 December 1885)

mechanics, mathematics.

Davidov, the son of a physician, enrolled in 1841 at Moscow University. He graduated in 1845, and was retained at the university in order to prepare for a teaching career. In 1848 he defended his dissertation, *The Theory of Equilibrium of Bodies Immersed in a Liquid*, and received the master of mathematical sciences degree. Davidov's dissertation was devoted to the exceptionally pressing problem of the equilibrium of floating bodies.

Although Euler, Poisson, and Dupin had worked extensively on the problem they had far from exhausted it, and new, major results were obtained by Davidov. He was the first to give a general analytic method for determining the position of equilibrium of a floating body, applied his method to the determination of positions of equilibrium of bodies, explained the analytical theory by geometric constructions, and investigated the stability of equilibrium of floating bodies.

In 1850 Davidov began teaching at Moscow University, and in 1851 he successfully defended his doctoral dissertation, *The Theory of Capillary Phenomena*. Shortly thereafter he was appointed a professor at Moscow University, where he worked until the end of his life. Both of his dissertations were awarded the Demidovskoy prize by the Petersburg Academy of Sciences.

Of the other valuable mathematics studies done by Davidov mention should be made of those on equations with partial derivatives, elliptical functions, and the application of the theory of probability to statistics. He also compiled a number of excellent texts for secondary schools. Of these, the geometry and algebra textbooks enjoyed special success and were republished many times. Through the next half century the geometry text underwent thirty-nine editions and the algebra text twenty-four.

Davidov conducted much scientific organizational work. For twelve years he was head of the physics and mathematics faculty; for thirty-five years he taught various courses in mathematics and mechanics at the university and prepared two generations of scientific workers and teachers. Along with N. D. Brashman, Davidov was a founder of the Moscow Mathematical Society and was its first president (1866–1885).

BIBLIOGRAPHY

Davidov's works, all in Russian, are *The Theory of Equilibrium of Bodies Immersed in a Liquid* (Moscow, 1848); *The Theory of Capillary Phenomena* (Moscow, 1848); *Elementary Geometry* (Moscow, 1864); *Beginning Algebra* (Moscow, 1866); *Geometry for District Schools* (Moscow, 1873).

See also "Reminiscences of A. Y. Davidov," in *News of the Society of Lovers of Natural Science, Anthropology, and Ethnography*, **51** (1887); and *Reminiscences of A. Y. Davidov. A Speech and Account, Read at the Meeting of Moscow University on 12 January 1886* (Moscow, 1886).

A. T. Grigorian