

Sokhotsky, Yulian-Karl Vasilievich I

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(bWarsaw, Poland, 5 February 1842; d. Leningrad, U.S.S.R., 14 December 1927),

mathematics.

Sokhotsky was the son of Vasili Sokhotsky, a clerk, and Iozefa Levandovska. After graduating from the Gymnasium in Warsaw, he joined the department of physics and mathematics of [St. Petersburg University](#) in 1861 but returned to Poland the following year to study mathematics independently. In 1865 he passed the examinations at the mathematics department of the University of [St. Petersburg](#) and received the bachelor of mathematics degree in 1866. After defending his master's thesis in 1868. Sokhotsky began teaching university as assistant professor and in 1869–1870 delivered the first course taught there on theory of functions of a complex variable. He defended his doctoral thesis in 1873 and was elected extraordinary professor, becoming professor in 1883; from 1875 he also taught at the Institute Civil Engineers. His lectures, especially on higher algebra, the theory of numbers, and the theory definite integrals, were extremely successful. Sokhotsky; was elected vice-president of the Mathematical Society at its founding in St. Petersburg in 1890 and succeeded V. G. Imshenetsky as president 1892. He taught at the university until 1923.

Sokhotsky belonged to the school of P. L. Chebyshev; and the latter's influence, while not exceptional, is strong throughout his work. Thus, in his master thesis, which was devoted to the special functions, Sokhotsky, besides employing expansions into an infinite series and continued fractions, made wide use of the theory of residues (Chebyshev avoided the use of functions of a complex variable.) Elaborating the foundations of the theory of residues. Sokhotsky, discovered demonstrated one of the principal theorems of the theory of analytical functions. According to this theorem, a single-valued analytical function assumes in every vicinity of its essential singular point all complex values. This result was simultaneously published by Felice Casorati, but the theorem attracted attention only after its independent formulation and strict demonstration by Weierstrass in 1876. In his doctoral thesis Sokhotsky continued his studies on special functions, particularly on Jacobi polynomials and Lamé functions. One of the first to approach problems of the theory of singular integral equations, Sokhotsky in his work considered important boundary properties of the integrals of the type of Cauchy and, essentially, arrived at the so-called formulas of I. Plemel (1908).

Sokhotsky also gave a brilliant description of E. I. Zolotarev's theory of divisibility of algebraic numbers and wrote several articles on the theory of elliptic functions and theta functions.

BIBLIOGRAPHY

I. Original Works. There is no complete bibliography of Sokhotsky's writings. His principal works include *Teoria integralnykh vychetov s nekotorymi prilozheniyami* ("The Theory of Integral Residues with Some Applications": St. Petersburg, 1868), his master's thesis; *Obopredelennykh integralakh i funktsiyakh upotrebyaemykh pri razlozheniyakh v ryady* ("On Definite Integrals and functions Used for Serial Expansion": St. Petersburg, 1873), his doctoral dissertation; and *Nachalo naibolshego delitelia v primenenii k teorii delimosti algebraicheskikh chisel* ("The Application of the Principle of the Greatest Divisor to the Theory of Divisibility of Algebraic Numbers"; St. Petersburg, 1898).

II. Secondary Literature. See the following (listed chronologically): S. Dickstein, "Wspomnienie pośmiertne o prof. J. Sochoskim," in *Wiadomości matematyczne*, **30** (1927–1928), 101–108; A. I. Markushevich, "Vklad Y. V. Sokhotskogo v obshchuyu teoriyu analiticheskikh funktsiy" ("Y. V. Sokhotsky and the Development of the General Theory of Analytic Functions"), in *Istoriko-matematicheskie issledovaniya*, **3** (1950), 399–406 and *Skizzen zur Geschivhte der analytischen Funktionen* (Berlin, 1955)—see index; I. Y. Depman, "SPeterburgskoe matematicheskoe obshchestvo" ("The St. Petersburg Mathematical Society"), in *Istoriko-mate-maticheskieskie issledovaniya*, **13** (1960), 11–106. esp, 33–38 and I. Z. Shtokalo, ed., *Istoria otechestvennoy matematiki* ("A History of Native Mathematics"), **II** (Kiev, 67)—see index.

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