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(b. Breslau, Germany [now Wrocław, Poland], 24 July 1851; d. Berlin, Germany, 12 August 1935)

## Mathematics.

After attending the Humanistisches Gymnasium St. Magdalenen in Breslau, Schottky studied mathematics and physics at Breslau University from 1870 to 1874 and continued his studies at Berlin with Weierstrass and Helmholtz. He received the Ph. D. in 1875, was admitted as a *Privatdozent* at Berlin in 1878, and in 1882 was appointed a professor at Zurich—at the university, according to one source, and at the Eidgenössische Technische Hochschule, according to another. In 1892 Schottky was appointed to a chair at Marburg University and in 1902 to one at Berlin, where he remained until 1922. In 1902 he was elected a fellow of the Preussische Akademie der Wissenschaften and, in 1911, a corresponding member of the Akademie der Wissenschaften in Göttingen.

Schottky's thesis [1,3] was an important contribution to the conformal mapping of multiply connected plane domains and was the origin of the famous mapping of a domain bounded by three disjoint circles, which, continued by mirror images, provides an example of an automorphic function with a Cantor set boundary. The dissertation also dealt with the conformal mapping of domains bounded by circular and conic arcs.

A contribution to the realm of Picard's theorem, known as Schottky's theorem [5], is an absolute estimation  $C(f(0), |z|)$  for functions  $f(z)$  defined in  $|z| < 1$  and omitting the values 0, 1. Schottky also initiated the study of the oscillation, at the boundary, of regular functions defined in the unit circle [4].

The greater part of Schottky's work concerned elliptic, Abelian, and theta functions, a subject on which he wrote a book [2]. He published some fifty-five papers, most of them in *Journal für die reine und angewandte Mathematik*, *Mathematische Annalen*, and *Sitzungsberichte der Preussischen Akademie der Wissenschaften zu Berlin*. His work is difficult to read. Although he was a student of Weierstrass, his approach to function theory was Riemannian in spirit, combined with Weierstrassian rigor.

## BIBLIOGRAPHY

I. Original Works. Schottky's writings include [1] "Ueber die conforme Abbildung mehrfach zusammenhängender ebener Flächen," in *Journal für die reine und angewandte Mathematik*, **83** (1877), 300–351, his dissertation; [2] *Abriss einer Theorie der Abel'schen Functionen von drei Variablen* (Leipzig, 1880); [3] "Ueber eine specielle Function, welche bei einer bestimmten linearen Transformation ihres Arguments unverändert bleibt," in *Journal für die reine und angewandte Mathematik*, **101** (1887), 227–272; [4] "Ueber die Werteschwankungen der harmonischen Functionen," *ibid.*, **117** (1897), 225–253; [5] "Ueber den Picardschen Satz und die Borelschen Ungleichungen," in *Sitzungsberichte der Preussischen Akademie der Wissenschaften zu Berlin* (1904), 1244–1262; and "Bemerkungen zu meiner Mitteilung..." *ibid.* (1906), 32–36.

II. Secondary Literature. See [6] L. Bieberbach, "Friedrich Schottky zum 80. Geburtstage," in *Forschungen und Fortschritte*, **7** (1931), 300; and [7] "Gedächtnisrede auf Friedrich Schottky," in *Sitzungsberichte der Preussischen Akademie der Wissenschaften zu Berlin*, Math-phys. K1. (1936), cv-cvii; and the [8] obituary in *Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen* (1935–1936), 6–7.

Portraits of Schottky are in *Acta mathematica 1882–1913, Table générale des tomes 1–35* (Uppsala, 1913), 168; and *Journal für die reine und angewandte Mathematik* **165** (1931), frontispiece.

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