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(*b*. Boston, Massachusetts, 11 August 1912; *d*. Boston, 10 October 1975)

mathematics.

Levinson entered the Massachusetts Institute of Technology in 1929, having graduated from Revere High School earlier that year. In June 1934 he received the B.S. and M.S. degrees in electrical engineering. At that time he had completed practically every graduate course offered by the department of mathematics and had obtained results that H. B. Phillips, head of the department, described as "sufficient for a doctor's thesis of unusual excellence." Among these courses was Fourier series and integrals, given in the fall of 1933–1934 by Norbert Wiener. Wiener had given Levinson a copy of the unpublished manuscript "Fourier Transforms in the Complex Domain," by R. E. A. C. Paley and Wiener, for revision. When Levinson found a gap in a proof and was able to prove a lemma that corrected it, Wiener typed the proof, affixed Levinson's name to the paper, and submitted it to a journal for him.

This incident began a friendship that lasted the rest of their lives. Wiener and Phillips arranged an MIT Redfield traveling fellowship for Levinson for the year 1934–1935, which Levinson spent at Cambridge University, where he studied under the distinguished mathematical analyst G. H. Hardy. In June 1935 he received the doctorate in mathematics from MIT. Levinson was then awarded a National Research Council fellowship for the years 1935– 1937, which he spent at the Institute for Advanced Study and Princeton University under the supervision of John von Neumann. Upon being offered an instructorship in mathematics at MIT, Levinson was released from his fellowship, went to MIT in February 1937, and remained there for the rest of his life, except for periods on leave. In February 1938 he married Zipporah Wallman.

Levinson's early work centers on results related to the Paley-Wiener book (published in 1934). Levinson sharpened many results and obtained significant new ones. In 1940 the American Mathematical Society published his work in this area as *Gap and Density Theorems*. After its appearance Levinson decided to shift his field to nonlinear differential equations. He soon obtained substantial mathematical results, and his outstanding contributions to differential equations were recognized by the American Mathematical Society in 1954 when it awarded him the Bôcher Prize. In addition, Levinson's work touched many areas of mathematical analysis and its applications. In the period 1946– 1947 he wrote two papers that simplified and explained Wiener's work on stationary time series, which had a significant impact on random signal theory in general and on geophysical signal processing in particular. His work contributed to some of the improved petroleum prospecting methods that made possible the discovery of virtually all the offshore oil fields found since 1960, as well as most of the onshore discoveries.

Levinson did work in probability, quantum mechanics, complex programming, and analytic number theory. In 1967 he became the fourtieth mathematician to be elected to the National Academy of Sciences, and in 1971 he was appointed Institute professor at MIT. Also in 1971 he was awarded the Chauvenet Prize of the Mathematical Association of America. The paper for which he received this prize was in analytical number theory and served as a precursor to the papers he wrote on the Riemann hypothesis. Levinson greatly advanced this theory and was on the threshold of perhaps his greatest achievement in mathematics at the time of his death.

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Enders A. Robinson