

**CRONIN, Sarah Elizabeth.** July 1, 1877–October 2, 1958.

UNIVERSITY OF IOWA (BS 1903, MS 1905), COLUMBIA UNIVERSITY (PhD 1917).

Sarah Elizabeth Cronin was the youngest of nine (living) children of Deborah (ca. 1838–ca. 1918) and Cornelius Cronin (ca. 1830–ca. 1917), a farmer in north-east Iowa. Her parents had emigrated from Ireland in the mid-nineteenth century before their marriage. She was born in Iowa, probably in Allamakee County in the northeast corner of the state. Census records indicate that her siblings were John (b. ca. 1860), June (b. ca. 1862), Timothy (b. ca. 1864), Catherine (b. ca. 1865), Johanna (b. ca. 1868), William (b. ca. 1869), Lucy (b. ca. 1884), and James (b. ca. 1885).

According to US census records, in 1900 Sarah Cronin was a school teacher and living in Cherokee County, in western Iowa, with her parents. She received her undergraduate degree in 1903 from the University of Iowa (officially the State University of Iowa) in Iowa City, and in April of that year the university awarded her a scholarship in mathematics to continue her studies. However, the following fall she was teaching mathematics in the Creston, Iowa, high school. After a year she returned to the University of Iowa as a fellow in mathematics and received her master's degree in 1905.

Cronin was instructor of mathematics at Iowa State College of Agriculture and Mechanic Arts (now Iowa State University of Science and Technology) in Ames 1905–07. She was then instructor at the University of Iowa 1907–15, although she apparently had a leave of absence 1913–15, when she was a graduate student at Columbia University. She received her PhD from Columbia in 1917 with a dissertation written under the direction of Edward Kasner. Cronin returned to the University of Iowa as assistant professor in 1915 and remained for three years.

In 1918 Cronin went to the Equitable Life Assurance Society in New York (now the AXA Equitable Life Insurance Company) as chief of the policy change division. The following year she passed the first two parts of the associate examinations of the Actuarial Society of America. Cronin passed the third and fourth parts in 1922 and 1923 and was then enrolled as an associate of the society. She kept her membership in the society through 1940.

Sarah E. Cronin lived in Forest Hills, Queens, before her retirement in 1942, when she moved to Daytona Beach, Florida. She was eighty-one when she died in Halifax Hospital in Daytona Beach in 1958.

**Thesis and dissertation:**

**1905** Mathematical theory of diffusion. MS thesis, University of Iowa.

**1917** Geometric properties completely characterizing all the curves in a plane along which the constrained motion is such that the pressure is proportional to the normal component of the acting force. PhD dissertation, Columbia University, directed by Edward Kasner. Printed by Press of the New Era Printing Co., Lancaster, PA.

**Reference to:** “Dr. Sarah E. Cronin.” (Obituary) *New York Times*, 4 Oct 1958.

**Other sources:** PhD dissertation vita 1917; Society of Actuaries Library; communications with University of Iowa Archives and Iowa State University Archives; US Census 1870, 1880, 1900 IA, 1920 NY; Florida death certificate.