Fano, Gino | Encyclopedia.com

Complete Dictionary of Scientific Biography COPYRIGHT 2008 Charles Scribner's Sons
3 minutes

(*b*. Mantua, Italy, 5 January 1871; *d*. Verona, Italy, 8 November 1952)

geometry.

Fano was the son of Ugo and Angelica Fano; his father, a Garibaldian, had independent means. Gino studied from 1888 to 1892 at the University of Turin under Corrado Segre; while there, he met Guido Castelnuovo and specialized in geometry. In 1893–1894, while at Gö ttingen, he met Felix Klein, whose Erlangen program he had translated into Italian (*Annali di matematica*, 2nd ser., **17** [1889–1890], 307–343). From 1894 to 1899 Fano was assistant to Castelnuovo in Rome, was at Messina from 1899 to 1901, and in 1901 became and in 1901 became professor at the University of Turin, where he taught until the Fascist laws of 1938 deprived him of his position. During World War II he taught Italian students at an international camp near Lausanne. After 1946 Fano lectured in the United States and Italy. In 1911 he married Rosetta Cassin; two sons became professors in the United States.

Fano worked mainly in projective and algebraic geometry of *n*-space S_n. Early studies deal with line geometry and linear differential equations with algebraic coefficients; he also pioneered in finite geomentry. Later work is on algebraic and especially cubic surfaces, as well as on manifolds with a continuous group of Cremona transformations. He showed the existence of irrational involutions in three-space S_3, i.e., of "unirational" manifolds not birationally representable on S_3. He also studied birational contact transformations and non-Euclidean and non-Archimedean geometries.

BIBLIOGRAPHY

I.Original Works. Among Fano's many textbooks are *Lezioni di geometric descrittiva* (Turin, 1914; 3rd ed., 1925) and *Lezioni di geometria analitica e proiettiva* (Turin, 1930; 3rd ed., 1958), written with A. Terracini. Two of his articles appeared in *Encyclopädie der mathematischen Wissenschaften* (Leipzig, 1898–1935): "Gegensatz von synthetischer und analytischer Geometrie in seiner historischen Entwicklung im XIX. Jahrhundert," in III (Leipzig, 1907), 221–288; and "Kontinuierliche geometrische Gruppen," *ibid*, 289–388.

II. Secondary Literature. See A. Terracini, "Gino Fano," in *Bollettino dell'Unione matematica italiana*, 3rd ser., 7 (1952), 485–490; and "Gino Fano, 1871–1952, cennicommemorative,"in *Atti dell'Accademia delle scienze* (Turin), classe di scienze fisiche. **87** (1953), 350–360. A bibliography, compiled by the editorial board, is in *Rendiconti del Seminario matematico*, *Università e politecnico di Torino*, **9** (1950), on pp. 33–45 of this issue dedicated to Fano (with portrait).

Dirk J. Struik