ROBERT ADRAIN (1775-1843)

Robert Adrain was born near Carrickfergus, on 30 September 1775, the eldest of five children. His father had emigrated from France; his mother was of Scottish descent. He was fifteen when both parents died so to support himself and his siblings he opened a school in Ballycarry. In the 1798 he joined the United Irishmen and was wounded but managed to avoid capture and escaped with his wife and daughter to New York, settling in New Jersey. He taught at Princeton Academy for two years, followed by a succession of positions, teaching mathematics. He was president of the York County Academy in York, Pennsylvania, from 1801 to 1805.

In 1805 he became principal of an academy in Reading, Pennsylvania, in 1909 a professor at Columbia in New York City and in 1826 he moved to the University of Pennsylvania where he remained until 1834, becoming Vice-Provost in 1828.

He is chiefly remembered for his formulation of the method of least squares, published in 1808. Adrain certainly did not know of the work of C.F. Gauss on least squares (published 1809), although it is possible that he had read A.M. Legendre's article on the topic (published 1806). Adrain, Gauss, and Legendre all motivated the method of least squares by the problem of reconciling disparate physical measurements; in the case of Gauss and Legendre, the measurements in question were astronomical, and in Adrain's case they were survey measurements.

Adrain was an editor of and contributor to the *Mathematical Correspondent*, the first mathematical journal in the United States. Later he twice attempted to found his own journal, *The Analyst, or, Mathematical Museum*, but in both the 1808 and 1814 attempts it did not attract sufficient subscribers and quickly ceased publication. He was elected a Fellow of the American Academy of Arts and Sciences in 1813. In 1825 he founded a somewhat more successful publication targeting a wider readership, *The Mathematical Diary*, which was published through 1832.

In other work Adrain published two articles on the figure of the earth in 1818 in *The Transactions of the American Philosophical Society* and from 1811 edited several American editions of C. Hutton's *Course in Mathematics.* He was elected to the American Philosophical Society in 1812 and the American Academy of Arts and Science in 1813. Adrain was considered one of the most brilliant mathematical minds of the time in America.

Robert Adrain died in New Brunswick, New Jersey on 10 August 1843.

Patrick Devlin