

bibliography and portrait). SINGAL, M. K.: "Ganesh Prasad." *Bulletin of the Mathematical Association of India* 6 (1974), 6 8. R.C.G.

Quetelet, Lambert Adolphe Jacques (* February 22, 1796, Ghent, Belgium; † February 17, 1874, Brussels, Belgium). ADOLPHE QUETELET was a well known mathematician, astronomer, and statistician who studied mathematics at the University of Ghent and astronomy at the Observatory in Paris. He lectured at the *Athenaeum* and Military Academy in Brussels. He was also the founder of the Royal Observatory, which he headed as Director in 1828.

Secondary literature: *DSB* 11, 236 238. *May* 311. *P* II, 552; III, 1080; VI, 2101. COLLARD, AUGUSTE: "Adolphe Quetelet historien des sciences et biographe." *Ciel et Terre*. 45 (1929), 89 92, 127 145. SARTON, GEORGE: "Preface to Volume XXIII of *Isis* (Quetelet)." *Isis* 23, 6 24 (with portrait). P.B.

QIAN Baocong (* May 29, 1892, Jiaxing City, Zhejiang Province, China; † January 5, 1974, Suzhou City, Jiangsu Province, China). QIAN BAOCONG, prominent historian of Chinese mathematics and mathematics educator, was one of the pioneers who inaugurated serious study of the histories of ancient and medieval Chinese mathematics and astronomy.

Both QIAN BAOCONG and LI YAN were early leaders in studying historical achievements in terms of modern mathematical knowledge. LI YAN emphasized sorting out source materials for the history of mathematics, and was well known for his detailed and reliable materials. While QIAN BAOCONG emphasized textual research into the origin and development of ancient mathematical classics and algorithms, he was also well known for his critical views and profound analyses. JOSEPH NEEDHAM has praised both LI and QIAN as follows: "Among Chinese historians of mathematics, two have been particularly outstanding, LI YAN and QIAN BAOCONG. The work of the latter, though less in bulk than the former's, is of equally high quality" [NEEDHAM 1959, vol. 3, 2].

Thanks to a scholarship from the Chinese government, QIAN went from studying architecture at Suzhou Railway School to the University of Birmingham, England, where he also studied architecture, obtaining his degree in 1910. After Birmingham, QIAN went on to continue his studies in architecture at Manchester Polytechnic, but only for a year. In 1912 he returned to China, where he taught successively at Suzhou Industrial College, Nankai University, Central University, and Zhejiang University, where he eventually advanced to professor and director of the Mathematics Department. Over the next few decades, QIAN became a member of such important learned organizations in China as the *Zhonghua xueyi she* (Chinese Society for Academic Studies and the Arts) (1921), the Chinese Science Society (1923), the Chinese Astronomical Society (1927), and the Chinese Mathematical Society (1936).

In 1956, QIAN was made a research fellow (at the highest rank) of a special section for the History of Natural Sciences of the Chinese Academy of Sciences. He also became a member of the Research Committee for History of Natural Science,

and was named editor in chief of *Kexueshu jikan* (Collection of the History of Science).

QIAN BAOCONG published his first paper in 1921, shortly after deciding upon a research career following the May Fourth New Culture Movement in 1919. In addition to his lasting contribution to textual studies in collating the *Ten Mathematical Manuals* (1963), a series of QIAN's monographic studies covered such important subjects as the ancient Chinese determination of the ratio of the circumference of a circle to its diameter and *geyuan shu* (the method of dividing a circle to calculate the approximate value of its area); the right-angled triangles with integer-valued sides; the *zengcheng kaifang fa* (the method of extracting roots by successive additions and multiplications); QIN JI'UN and his *Shushu juzhang* (Mathematical Treatise in Nine Sections); WANG LAI and his works.

QIAN placed considerable emphasis upon interconnections between mathematics and other ancient subjects, especially astronomy and the determination of calendars. His monographic studies of the source and development of the Star Charts of GAN DE and SHI SHEN, the origin of the twenty-eight constellations, the development of the *Gaitian* School, and the achievement of the *Shoushu* calendar, laid new foundations for these subjects. QIAN also made a thorough study of ancient Chinese musical harmonics and of the mechanics to be found in the *Mojing* (Mohist Canon).

QIAN also served as editor in chief of *Zhongguo shuxueshi* (A History of Chinese Mathematics) (1964), which included the newest results of Chinese scholars at the time. He also edited *Song Yuan shuxueshi lunwenji* (Collected Papers on the History of Mathematics in the Song and Yuan Periods) (1966), which was the first portion of a dynastic research project which he hoped to pursue. Following QIAN's death in 1974, thirty-three of his more than sixty research papers on the history of science were published in a posthumous collection of his works, *Qian Baocong kexueshi lunwen suanj* (Selected Essays of Qian Baocong on the History of Science) (1983).

Main works: *Gusuan kaoyuan* (Inquiry into the Sources of Ancient Mathematics) (1930). *Zhongguo suanxue shi* (A History of Chinese Mathematics) (vol. 1, 1930). *Suanjing shushu* (Ten Mathematical Manuals) (1963).

Secondary literature: HE SHAOGENG: "The Immortal Achievements of Historian of Mathematics in Commemoration of the Centenary of the Birth of Prof. Qian Baocong" (in Chinese, with English summary). *Zhongguo keji shuliao* (Chinese Historical Materials on Science and Technology) 13 no. 4 (1992), 40-52 (with portraits on inside back cover). [LIU 1994, 4, 109-110]. L.D.

Reidemeister, Kurt Werner Friedrich (* October 13, 1893, Braunschweig, Germany; † July 8, 1971, Göttingen, Germany). KURT REIDEMEISTER was an assistant for mathematics in Hamburg (1921), extraordinary professor in Vienna (1922), and ordinary professor in Königsberg (1925), Marburg (1933), and Göttingen (1955). In mathematics he is best known for his results in group and



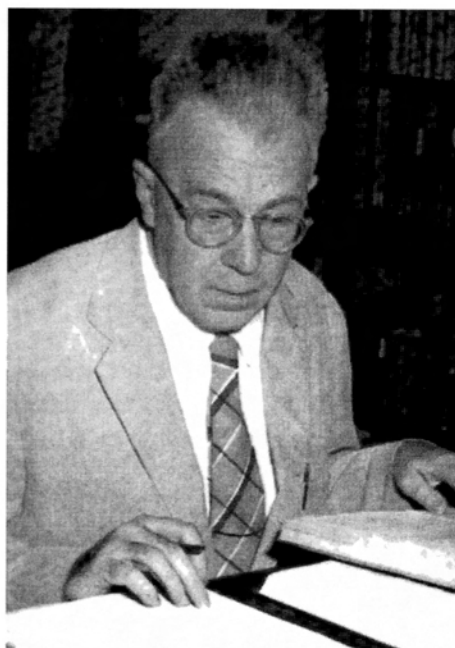
QIAN BAOCONG (1892 1974)



DIRK JAN STRUIK (1894 2000)



JOSÉ BABINI (1897 1984)



OTTO NEUGEBAUER (1899 1990)