

# Stochastic Stamps: A Philatelic Introduction to Chance

Simo Puntanen and George P. H. Styan



## The impact of probability and statistics on society as reflected in postage stamps

William L. Schaaf in his 1978 book, *Mathematics and Science: An Adventure in Postage Stamps*, found the rich and fascinating world of postage stamps to be “a mirror of civilization”; he wrote that “multitudes of stamps reflect the impact of mathematics and science on society.”

We agree, and, in this article, we look at what we will call “stochastic stamps”—postage stamps related in some way to chance (i.e., that have a connection with probability and/or statistics).

We identify 26 distinguished people related in some way to chance who have been honored with a postage stamp. Images of 25 stamps from 15 countries illustrate the article.

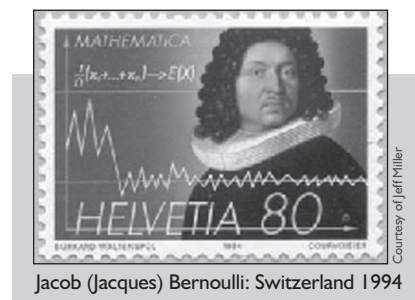
### Ten Distinguished Scholars

As a starting point, we identify 10 major suspects, considered distinguished scholars by the editors of both *Statisticians of the Centuries* and *Leading Personalities in Statistical Sciences*. Between them, these books include biographical sketches of 165 people, with an intersection of 55 people. Of these 55, we identified stamps in honor of 10, listed as follows:

- Jacob (Jacques) Bernoulli (1654–1705)
- Roger Joseph Boscovich (1711–1787)
- Pafnuty Lvovich Chebyshev (1821–1894)
- Carl Friedrich Gauss (1777–1855)

- Christiaan Huygens (1629–1695)
- Pierre-Simon, Marquis de Laplace (1749–1827)
- Prasanta Chandra Mahalanobis (1893–1972)
- Florence Nightingale (1820–1910)
- Blaise Pascal (1623–1662)
- Lambert Adolphe Jacques Quetelet (1796–1874)

We believe no stamps have been issued (at least we have not identified any) to honor the other 45.



Jacob (Jacques) Bernoulli: Switzerland 1994

The eldest of four brothers, Bernoulli lived mainly in Switzerland. He was one of eight prominent mathematicians in the Bernoulli family and is famous for his *Ars Conjectandi*, a groundbreaking work on probability theory (published posthumously in 1713), and his research concerning the law of large numbers.

Bernoulli is depicted (anonymously) with a formula and graph for the law of large numbers in the stamp, which was issued in celebration of the 1994 International Congress of Mathematicians, held in Zürich, Switzerland. This stamp seems to be the only one issued for Bernoulli.



Roger Joseph Boscovich: Croatia 1943

Shown on this stamp is a portrait of Boscovich, who was a physicist, astronomer, mathematician, philosopher, diplomat, poet, and Jesuit priest from Ragusa, then an independent state, today Dubrovnik in Croatia. “In 1760,” according to Wikipedia, “he developed a simple geometrical method of fitting a straight line to a set of observations on two variables using (constrained) least sum of absolute deviations.”