

# Recent Mathematical Stamps: 2003–2004

## The Great Trigonometrical Survey

This survey, extending from the southernmost tip of India to the foot of the Himalayas, was a major undertaking throughout much of the nineteenth century. Of great scientific value, it produced accurate measurements of the size of the Earth, the curvature of the Earth's surface, and the height of Mount Everest.

## Jantar Mantar

Jantar Mantar ('calculation instrument') is an observatory in Jaipur, built around 1730 by the Maharajah Jai Singh II. Consisting of 14 massive geometrical instruments for measuring astronomical data, it includes the 90-foot Samrat Yantra, the world's largest sundial. There are also Jantar Mantars in Delhi and other Indian cities.

## Jorge Juan (1713–1773)

Juan, mathematician and astronomer, received his scientific training at the Spanish military school for naval officers. In the 1730s, he joined La Condamine's geodesic mission to Peru to take scientific measurements that showed the Earth

to be flattened at the poles (as Newton predicted), rather than elongated (as claimed by Descartes).

## Mersenne Primes

A Mersenne prime is a prime number of the form  $2^p - 1$ . Only 47 of them are known, the largest being  $2^{43,112,609} - 1$ , which has 12,978,189 digits. The one featured here, discovered in 2001, had about 4 million digits. They are named after the Minimite friar Marin Mersenne (1588–1648), who found nine of them.

## János András Segner (1704–1777)

Segner was born in Pressburg/Pozsony in Hungary (now Bratislava in Slovakia) and trained in medicine, physics and mathematics. He proved Descartes's rule of signs, invented hydraulic turbines, introduced the axes of inertia of a solid body, and was the first professor of mathematics at Göttingen University. A lunar crater is named after him.

## John von Neumann (1903–1957)

Born in Budapest, von Neumann spent most of his career at the Princeton Institute for Advanced Study. His enormous range of interests included set theory, Hilbert spaces, rings of operators, the theory of games, mathematical physics and automata theory. Often called 'the father of modern computing', he introduced stored programs to the subject. He was a consultant on the construction of the atomic bomb in Los Alamos.



Great Trigonometrical Survey



Jantar Mantar



Jorge Juan



Mersenne primes



János Segner



John von Neumann

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