



Name in English: Yau Shing-tung
Name in Chinese: 丘成桐
Name in Pinyin: Qiū Chéngtóng
Gender: Male
Birth Year: 1949
Birth Place: Shantou, Guangdong province, China

Profession (s): Mathematician, Harvard University

Education: BA, 1969, Chinese University of Hong Kong; PhD, 1971, University of California, Berkeley

Awards: Fields Medal (the mathematics equivalent of a Nobel Prize), 1982; the U.S. National Medal of Science, 1997

Contribution (s): Professor Yau has made profound contributions to mathematics, which have influenced a wide range of scientific disciplines, including astronomy and theoretical physics. His revolutionary use of the methods of partial differential equations in the area of differential geometry has had a lasting impact on fields as diverse as topology, algebraic geometry, general relativity, and string theory. One of Yau's fundamental contributions was his proof of the Calabi conjecture, on a class of manifolds now named Calabi-Yau manifolds, which has now become the geometric foundation for string theory. With his former doctoral student Richard Schoen, Yau solved a longstanding question in Albert Einstein's theory of relativity by proving that the sum of the energy in the universe is positive; their proof has provided an important tool for understanding how black holes form. He received the Fields Medal, for his fundamental contributions to partial differential equations, to the proof of Calabi conjecture in algebraic geometry, to the proof of the positive mass conjecture of general relativity theory. His work insightfully combines two different mathematical approaches and has resulted in the solution of several longstanding and important problems in mathematics. Many mathematicians consider Yau to be the creator of modern geometric analysis.

Publications: His text book with Schoen, "Lectures on Differential Geometry", is a Bible for students of differential geometry and geometric analysis..

External Links:

http://en.wikipedia.org/wiki/Shing-Tung_Yau

<http://clinton4.nara.gov/Initiatives/Millennium/capsule/yau.html>

<http://www.math.cuhk.edu.hk/~yau/Yau-CV.html>

<http://www.doctoryau.com/>