



**Name in English:** Paul Ching-Wu Chu

**Name in Chinese:** 朱经武 [朱經武]

**Name in Pinyin:** Zhū Jīngwǔ

**Gender:** Male

**Birth Year:** 1941

**Birth Place:** Changsha, Hunan, China

**Current location:** Hong Kong, China

### **Pioneer in Superconductivity Research**

**Profession (s):** Scientist, Research Lab Director, Professor, University President

**Education:** Bachelor of Science, Physics, Cheng-Kung University, Taiwan. 1962; Master of Science, Physics, Fordham University, 1965; Ph.D., Physics, University of California - San Diego, 1968

**Awards:** 1990, Best Researcher in the US, US News and World Report; 1988, National Medal of Science, National Science Foundation; 1988, James C. McGroddy Prize for New Materials, American Physical Society; Inducted in 1987-1988 as a Fellow of the National Academy of Sciences (US), Chinese Academy of Sciences (foreign member), Academia Sinica (Taiwan), Russian Academy of Engineering (RAE), Third World Academy of Sciences, Electromagnetic Academy, Texas Academy of Science; 1987-1988, Honorary PhD's from Northwestern University, Fordham University, Chinese University of Hong Kong, Florida International University, SUNY Farmingdale, Hong Kong Baptist University, Providence University, Whittier College

**Contributions:** While at the University of Houston, Dr. Paul Chu rocketed to superstardom in the scientific world for his breakthrough in superconductivity. He designed a material that conducted electricity without resistance and at far higher temperatures than previously imaginable, -180 degrees °C versus the previous record of -406 degrees °C. He later went on to beat this record with a temperature of -109 °C “Ordinary transmission lines lose 10% to 25% of the power they carry when resistance transforms electrical energy into heat. Superconducting wires could eliminate this waste, saving millions of dollars each year,” reported the Los Angeles Times. Although still not useable at high enough temperatures for practical applications, Dr. Chu’s discovery showed that superconductive materials could be created to operate at much higher temperatures than was thought possible before.

Following this triumph in January 1987, Dr. Chu received a job offer from the prestigious University of California - Berkeley. They offered him the opportunity to setup a new research department on his terms and with unlimited support in funding, grants, facilities, and personnel. This was definitely an offer that no scientist could refuse.

But Dr. Chu did refuse. He later explained that he felt a moral obligation and personal connections to all those whom he had recruited to work with him at the University of Houston. It would be tantamount to abandoning his scientific family, many whom had left other posts to support his research efforts and now relied upon him for their continuing research grants and livelihoods. His leaving would have upended their careers and the lives of their families. "I had to stay. That is the Oriental thinking: If you are good to me, I can't walk away from you." In the balance between personal glory and achievements versus the greater good of his community, Dr. Chu chose his community.

Dr. Paul Chu was born in Changsha in the Hunan Province of China but his family origins are in Taishan, Guangdong Province. The shifting tides of war and history moved his family across China and eventually to Taiwan where Dr. Chu earned his bachelor's degree before going to the US in 1963-64 for further studies. His career began in 1968, immediately after he earned his doctorate, performing industrial research with Bell Laboratories at Murray Hill, New Jersey. He became an Assistant Professor of Physics at Cleveland State University in 1970 and was subsequently promoted to Associate Professor and Professor of Physics in 1973 and 1975, respectively.

He became a Professor of Physics at the University of Houston in 1979. In 1987, as a further enticement for him to stay at the university after his breakthrough in superconductivity, he was appointed the Director of the newly established Texas Center for Superconductivity. He was also appointed as the T.L.L. Temple Chair of Science in the same year. Dr. Chu has served as a consultant and visiting staff member at Bell Laboratories, Los Alamos Scientific Laboratory, the Marshall Space Flight Center, Argonne National Laboratory, and DuPont Corporation. He has also received many honorary doctorates and has become a fellow at many prestigious scientific institutions around the world. In 2000, he was invited to be a contributor to the White House National Millennium Time Capsule at the National Archives.

In July 2001, he assumed the post of President of The Hong Kong University of Science and Technology. His tenure ended on September 1, 2009. Paraphrasing the famous Douglas MacArthur speech he said about his future, "Old scientists never die, only fade away."

**Publications:**

More than 530 papers in various elite scientific journals

**External Links:**

[http://articles.latimes.com/1993-07-09/news/mn-11556\\_1\\_paul-chu](http://articles.latimes.com/1993-07-09/news/mn-11556_1_paul-chu)

<http://www.news.cornell.edu/stories/April09/Chu.cover.jp.html>

[http://www.committee100.org/aboutus/member\\_bio.php?member\\_id=119](http://www.committee100.org/aboutus/member_bio.php?member_id=119)

[http://www.aps.anl.gov/News/Meetings/APS\\_Colloquium/2002/chu2002oct.pdf](http://www.aps.anl.gov/News/Meetings/APS_Colloquium/2002/chu2002oct.pdf)