

Princeton University

Honors Faculty Members
Receiving Emeritus Status



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The biographical sketches were written by
colleagues in the departments of those honored.

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Contents



Faculty Members Receiving Emeritus Status

Jeanne Altmann	1
David Perkins Billington	5
Patricia Fortini Brown	9
William A. P. Childs	11
Perry Raymond Cook	13
Slobodan Ćurčić	15
Arcadio Díaz-Quñones	17
Gerard Charles Dismukes	20
Avinash Kamalakar Dixit	22
Emmet William Gowin	25
Ze'eva Cohen (Ludwig)	27
Janet Marion Martin	29
Anne Marie Treisman	31
Daniel Chee Tsui	35
James Wei	37
Froma I. Zeitlin	39

Daniel Chee Tsui



Nobel laureate and the Arthur Legrand Doty Professor of Electrical Engineering, Daniel C. Tsui is retiring after 28 years at Princeton. Dan came to Princeton in 1982 after 14 years at Bell Labs where he was an innovator in the study of two-dimensional electron systems. At Princeton, Dan continued to be an innovator and garnered an international reputation for his scientific discoveries in experimental condensed matter physics.

Dan was born on February 28, 1939, in Henan Province, China. At the age of 12 he moved to Hong Kong to live with his two older sisters and attend Pui Ching Middle School. He graduated in 1957 and enrolled in Special Classes Centre to prepare for the entrance examination of the University of Hong Kong. Apprehensive about their ability to pass the physics portion of the entrance examination, Dan and two classmates obtained a copy of *College Physics* and met regularly to study. While preparing to take the entrance examination, Dan learned that he had received a full scholarship to Augustana College, in Rock Island, Illinois. He accepted the scholarship and in 1958 arrived on campus. He knew almost immediately that he would go on to study physics in graduate school at the University of Chicago. He had been greatly influenced in the years leading to his move to Augustana College by two men, C. N. Yang and T. D. Lee, who had won the Nobel Prize for Physics in 1957. Both men were graduates of the University of Chicago and both were role models during Dan's high school years.

Dan graduated Phi Beta Kappa from Augustana College in 1961, three years after entering. He continued his studies as planned and in 1967 obtained his Ph.D. in physics from the University of Chicago. He remained at the University of Chicago for a year of postdoctoral study before joining Bell Labs in 1968 to do research in solid state physics. By his own account, Dan says, "I never got into the main stream in

semiconductor physics . . . I wandered into a new frontier . . . dubbed the physics of two-dimensional electrons.”¹

In 1982, Dan joined the Department of Electrical Engineering and Computer Science at Princeton. His appointment was supported by two Noble laureates. In just a few short years, he received the E. Buckley Condensed Matter Prize from the American Physical Society in honor of his groundbreaking work in condensed matter physics. In 1988, he won the Benjamin Franklin Medal in Physics, the highest honor in physical science in the United States. Shortly before joining Princeton in 1982, Dan and his colleague at Bell Labs, Horst Störmer, discovered a phenomenon that they called the fractional quantum Hall effect. In 1998, along with Störmer and Robert Laughlin, Dan received the Nobel Prize in Physics for discovering a new form of quantum fluid with fractionally charged excitations (the fractional quantum Hall effect).

Dan is a member of the U.S. National Academy of Sciences; the National Academy of Engineering; a fellow of the American Association for Advancement of Sciences; a fellow of the American Physical Society; an Academician of Academia Sinica, Taipei; and a foreign member of the Chinese Academy of Sciences, Beijing. He has also served on the nomination committee for the National Academy of Sciences.

Dan’s honor, sincerity, and kindness, as well as his academic performance, were commemorated by his teachers at Augustana College in numerous articles written for *The Joy of the Search of Knowledge*, a book published as a tribute to him on the occasion of his being named a Nobel laureate.

Dan is a committed teacher, adviser, and mentor. We expect he will continue his quest for knowledge after retirement. An active and inquisitive mind does not simply stop asking why and how.

¹ *Lex Prix Nobel*. The Nobel Prizes 1998, Editor Tore Frängsmyr, [Nobel Foundation], Stockholm, 1999