

Dr. Pengcheng Dai Elected AAAS Fellow

November 29, 2012



Pengcheng Dai's career has been that of the quintessential physicist: he has built a successful research program that has, in turn, launched the careers of other talented young scientists. His work has been devoted to understanding the way materials work: how they're structured; what properties they exhibit and why. He has made key contributions to the study of superconductors, particularly in investigating the role of magnetism, and for his scientific achievements he has been elected a Fellow of the American Association for the Advancement of Science.

Dai came to UT in 2001 from Oak Ridge National Laboratory, where he was a member of the Solid State Division. His research group has been prolific in publishing their work (17 papers, and counting, in 2012 alone) and their 2009 cornerstone Nature paper on iron-based superconductors ("Magnetic order close to superconductivity in the iron-based layered $\text{LaO}_{1-x}\text{F}_x\text{FeAs}$ Systems") has been cited more than 900 times. His AAAS fellowship citation acknowledges the importance of his role in helping characterize these and other materials: "For distinguished contributions to the understanding of the magnetic properties in copper and iron-based high temperature superconductors, heavy fermion metals and colossal magnetoresistance manganites."

Fellows of the AAAS are elected by their peers and recognized for meritorious efforts to advance science or its applications. It is not the first honor for Dai: in 2003, he was honored as one of three outstanding young researchers by the Overseas Chinese Physics Association. In 2008, he was named a UT Joint Institute for Advanced Materials Chair of Excellence "for his pioneering work in elucidating the origin of the novel functionality in correlated electron materials using neutron scattering."

Among Dai's chief contributions to the advancement of science is his mentoring of students and postdocs. His students, both graduate and undergraduate, have been lead or co-authors on publications in high-profile journals and many of them have claimed honors both at UT and other institutions, including the prestigious Miller Fellowship at UC-Berkeley. Since 2006 two of his students have also won the Student Dissertation Award from the Topical Group on Magnetism and Its Applications (GMAG), a sub group of the American Physical Society. Dai Group alumni are making contributions to physics as staff scientists at national facilities (including the National Institute of Standards and Technology) and as faculty members at universities in the U.S. and abroad.

With his 2012 election, Dai becomes the sixth AAAS Fellow from the UT Physics Department, joining professors Bob Compton, Elbio Dagotto, Wittek Nazarewicz, Lee Riedinger, and Soren Sorensen. He is one of seven UT professors in the 2012 class of fellows.