

**Cenke Xu won the 2011 OCPA Outstanding Young Researcher Award**

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Professor Cenke Xu (Department of Physics, University of California at Santa Barbara) is the winner of the 2011 Outstanding Young Researcher Award of the Overseas Chinese Physics Association (OCPA).

The OYRA is given each year to a young ethnic Chinese physicist outside of Asia in recognition of their outstanding achievements in physics. The Award carries a total cash prize of US \$1,500 and a certificate citing the awardee's accomplishments in research.

Professor Xu received his B.S. degree in physics in 2003 from Tsinghua University, Beijing. He received his Ph.D. in 2007 from University of California at Berkeley, under the supervision of Professor Joel E. Moore. After receiving his Ph.D., Professor Xu joined the Society of Fellows of Harvard University as a Junior Fellow postdoctoral researcher. In 2009 Professor Xu was hired as an assistant professor in the department of physics, University of California at Santa Barbara.

Professor Xu's research has been focused on unconventional phases and phase transitions in strongly correlated quantum many-body systems. Professor Xu and his collaborators developed a unified field theory for many frustrated magnet materials with a triangular lattice structure, and various different phases observed experimentally were obtained within this one single formalism, including the spin-liquid phases observed in organic material  $\kappa$ -(ET)<sub>2</sub>Cu<sub>2</sub>(CN)<sub>3</sub> and EtMe<sub>3</sub>Sb[Pd(dmit)<sub>2</sub>]<sub>2</sub>. Recently he applied a similar theory to the Hubbard model and Kane-Mele-Hubbard model on the honeycomb lattice. Professor Xu also developed a theory for the interplay between lattice distortion, nematic order and spin density wave order in the Iron-pnictides superconductors. This theory explains the different behaviors between two families of iron-pnictides materials, especially the nature of their phase transitions at finite temperature. Professor Xu also proposed a lattice quantum boson model, whose ground state is a novel stable algebraic Bose liquid phase, and its low energy excitations have the same gauge symmetry and dispersion as the linearized Horava's nonrelativistic quantum gravity theory.

The winner of OCPA's 2010 OYRA Award was selected by following panel of distinguished physicists (in alphabetical order):

Professor Moses Chan	Pennsylvania State University
Professor Kam-Biu Luk	University of California, Berkeley
Professor Lu Jeu Sham	University of California, San Diego
Professor Yuen-Ron Shen	University of California, Berkeley
Professor Xiao-gang Wen	Massachusetts Institute of Technology

The OCPA award activity is a continuing program and represents a long tradition of OCPA to recognize outstanding achievements of the members of the ethnic Chinese physics community. Previous OYRA winners include:

Shou-Cheng Zhang	(1992, Stanford University)
Terence Tai-Li Hwa	(1993, UC San Diego)
Zhi-Xun Shen	(1993, Stanford University)
Xiao-Gang Wen	(1994, MIT)
Gang Xiao	(1994, Brown University)
Wai Mo Suen	(1995, Washington University)
Hong Wen Jiang	(1996, UCLA)
Rui Rui Du	(1997, University of Utah)
Zi Qiang Qiu	(1997, UC Berkeley)
Nai-Chang Yeh	(1998, California Institute of Technology)
Wayne Hu	(1999, University of Chicago)
Chung-Pei Ma	(2000, University of Pennsylvania)
Zhen Yao	(2001, University of Texas)
Pengcheng Dai	(2002, University of Tennessee)
Hoi-Kwong Lo	(2002, University of Toronto)
Kun Yang	(2002, Florida State University)
Hui Cao	(2003, Northwestern University)
Jonathan Feng	(2003, University of California at Irvine)
Luming Duan	(2005, University of Michigan)
Cheng Chin	(2006, University of Chicago )
W. Vincent Liu	(2007, University of Pittsburgh)
Ho Bun Chan	(2008, University of Florida)
Feng Wang	(2008, University of California, Berkeley)
Congjun Wu	(2008, University of California, San Diego)
Chong-Yu Ruan	(2009, Michigan State University)
Dongping Zhong	(2009, Ohio State University)
Xiaoliang Qi	(2010, Stanford University)