

Liang Fu won the 2013 OCPA Outstanding Young Researcher Award (Macronix Prize)

Professor Liang Fu (Department of Physics, Massachusetts Institute of Technology) is the winner of the 2013 Outstanding Young Researcher Award (Macronix Prize) given by the International Organization of Chinese Physicists and Astronomers (OCPA).

The former Outstanding Young Researcher Award (OYRA) has been renamed to the present OYRA (Macronix Prize) in 2012 in recognition of a generous donation from the Macronix Education Foundation. The OYRA (Macronix Prize) is given each year to a young, ethnic Chinese physicist/astronomer outside of Asia, in recognition of his/her outstanding achievements in physics/astronomy. The Award carries a cash prize of US \$2,000 and a certificate citing the awardee's accomplishments in research.

Professor Liang Fu received his B.Sc. degree in Physics from the University of Science and Technology of China in 2004, and his Ph.D. degree in physics from University of Pennsylvania in 2009, under the supervision of Prof. Charles L. Kane, a renowned condensed matter theorist who is one of the pioneers of the field of topological insulators and also a co-winner of several prestigious honors including the 2012 Buckley Prize, 2012 Dirac Medal and 2013 Physics Frontier Prize. From 2009 to 2012, Prof. Fu held the position of Junior Fellow at Harvard University. Since 2012, he has been on the physics faculty of MIT as an assistant professor.

Less than five years past his Ph.D., Professor Fu is already widely known in the condensed matter physics community and has won a major award (the William McMillan Award) for his role in predicting the existence of three dimensional topological insulators (TIs). The discovery of TIs is a major event in condensed matter physics, and Professor Fu has played a prominent role in this rapidly developing field. Among his major contributions to the field include: 1) The discovery of TIs in three dimensions together with his thesis advisor Charles Kane and Eugene Mele, where he extended their earlier work on two dimensional TIs to three dimensions, and the subsequent development of simple means to index TIs with inversion symmetry; 2) the proposal to realize unpaired Majorana zero-energy modes in topological insulator – superconductor proximity effect structures; 3) the prediction of a new class of TIs, known as “topological crystalline insulators”, which was subsequently verified experimentally and also launched an entirely new avenue of research into a new class of materials.

The winner of the OCPA 2013 OYRA Award was selected by following panel of distinguished physicists (in alphabetical order):

Professor Moses Chan
Professor Steve Louie
Professor Kam-Biu Luk
Professor Lu Jeu Sham
Professor Yuen-Ron Shen

Pennsylvania State University
University of California, Berkeley
University of California, Berkeley and LBL
University of California, San Diego
University of California, Berkeley

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

Shou-Cheng Zhang	(1992, Stanford University)
Terence Tai-Li Hwa	(1993, University of California, San Diego)
Zhi-Xun Shen	(1993, Stanford University)
Xiao-Gang Wen	(1994, Massachusetts Institute of Technology)
Gang Xiao	(1994, Brown University)
Wai Mo Suen	(1995, Washington University)
Hong Wen Jiang	(1996, University of California, Los Angeles)
Rui Rui Du	(1997, University of Utah)
Zi Qiang Qiu	(1997, University of California, 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)
Senke Xu	(2011, University of California, Santa Barbara)
Xuan Gao	(2012, Case Western Reserve University)
Yulin Chen	(2012, Oxford University)