Pei-Chun Ho, Ph. D.

(updated on 12/10/2015)

Strongly Correlated Electron Laboratory
Department of Physics
California State University, Fresno
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Visa status: U. S. permanent resident

Education

- **Ph.D. in Physics** (Sept., 1992 - Sept., 1997)
  Department of Physics, University of California, San Diego
  Dissertation: The study of fundamental excitations in low density hcp ^{4}He crystals
  Research group of John M. Goodkind
- **M.S. in Physics** (Sept., 1991 - Sept., 1992)
  Department of Physics, University of California, San Diego
- **B.S. in Physics Major and Mathematics Minor** (Sept., 1986 - Sept., 1990)
  Department of Physics, National Tsing-Hua University, Hsin-Chu, Taiwan, R.O.C.

Academic Appointments and Experience

- **Associate Professor** (Aug. 19, 2013 – present)
- **Assistant Professor** (Aug. 20, 2007 – August 18, 2013)
  Department of Physics, California State University, Fresno
  Research in Strongly Correlated Electron Laboratory
  Strongly correlated electron phenomena in rare earth related materials:
  (1) Superconductivity, magnetism, and Interplay between the two phenomena
  (2) Magnetism in rare earth elemental nanoclusters synthesized by the inverse micelle technique
  (3) Development of Low-Temperature Facility and Measurement Instrumentation in the Strongly Correlated Electron Laboratory

  Courses:

PHYS 4A	Mechanics and Wave Motion (Spring, 2008 – Fall, 2014)
PHYS 4AL	Laboratory in Mechanics and Wave Motion (Fall, 2007 – Spring, 2012)
PHYS 102	Modern Physics (Fall, 2010 - Fall, 2014)
PHYS 175T	Techniques for Strongly Correlated Electron Physics (Spring, 2013)
PHYS 175TS	Service Learning Course – Physics Outreach (Spring, 2011) (Later approved to be a curriculum course PHYS 168S)
PHYS 2AL	General Physics Laboratory (Fall, 2009 – Fall, 2010)
PHYS 4C	Light and Modern Physics (Fall, 2007)
NSCI 1A	Integrated Science: Physics and Chemistry - Laboratory (Spring, 2008)
PHYS 190	Independent Study for Undergraduate: Research Participation in Strongly-Correlated-Electron-Physics Program (Spring, 2008 – present)
PHYS 290	Independent Study for MS-Program Student: Research Participation in the Strongly-Correlated-Electron-Physics Program (Fall, 2007 – Spring, 2012)

- **Assistant Project Scientist, Step II** (Jul. 01, 2006 – Jun. 30, 2007)
  Institute for Pure and Applied Physical Sciences, University of California, San Diego
  Research group of M. Brian Maple
  Research area: Strongly correlated electron phenomena in rare earth, actinide intermetallics, and other novel materials by electrical resistivity, specific heat, magnetic susceptibility and magnetization in high magnetic fields.

- **Physics Course Instructor** (Jul. 03 - Sept.09, 2006)
  Department of Physics, University of California, San Diego
  "Waves, Optics, and Modern Physics" for life science majors (Summer session I and II)
- **Assistant Project Scientist, Step I** (Jan. 01, 2005 - Jun. 30, 2006)
  Institute for Pure and Applied Physical Sciences, University of California, San Diego
  Research group of M. B. Maple
- **Teaching assistant** (Mar. - Jun., 2006)
  Department of Physics, University of California, San Diego
  "Senior Advanced Undergraduate Laboratory: Condensed Matter Physics - Materials Science" for physics majors (Spring quarter)
- **Physics Course Instructor** (Jun. 25 - Aug. 02, 2005)
  Department of Physics, University of California, San Diego
  "Waves, Optics, and Modern Physics" for life science majors (Summer session I)
- **Teaching assistant** (Mar. - Jun., 2005)
  Department of Physics, University of California, San Diego
  "Senior Advanced Undergraduate Laboratory: Condensed Matter Physics - Materials Science" for physics majors (Spring, 2005)
- **Postgraduate Researcher, Step III to VII** (Jan., 2001 - Dec., 2004)
  Institute for Pure and Applied Physical Sciences, University of California, San Diego
  Research group of M. Brian Maple
- **Postdoctoral Research Associate** (Sept., 1997 - Dec., 2000)
  Low Temperature Laboratory, University of Massachusetts, Amherst.
  Research group of Robert B. Hallock
  Research project: "^{3}He correlations in ^{3}He-^{4}He mixture films by specific heat measurements"
- **Lecturer** (Sept., 1997 - Aug., 1999)
  Department of Physics and Astronomy, University of Massachusetts, Amherst
  "Intro. Physics II" for life science major (Spring semester)
- **Research Assistant** (Jul., 1992 - Sept., 1997).
  Department of Physics, University of California, San Diego
  Research group of J. M. Goodkind
  Research area: "fundamental excitations in low density hcp ^{4}He crystals (supersolid)"
- **Teaching Assistant** (1991 - 1997)
  Department of Physics, University of California, San Diego
  "General Physics tutor - Self Paced" for biology and chemistry majors (Summer, 1997)
  "General Physics lab instructor - Electricity & Magnetism & Optics" for biology and chemistry majors (Spring, 1995)
  "Physics lab instructor - Mechanics & Electrostatics" for physical science and engineering majors (Spring, 1993)
  "Physics grader - Electricity & Magnetism" for biology and chemistry majors (Spring, 1992)
  "Physics grader - Mechanics" for biology and chemistry majors (Fall, 1991 and Winter, 1992)
- **Research Assistant** (Sept., 1990 - Jul., 1991)
  The National Science Council of the Republic of China, Taiwan.
  Research area: high T_c copper-oxide superconductors
- **Teaching Assistant** (1990 - 1991)
  Department of Physics, National Tsing-Hua University, Hsin-Chu, Taiwan, R.O.C.
  "Introduction to Solid State Physics" for physics majors (Fall, 1990)

Committee and Service Experience

- **Undergraduate Advisor, Department of Physics, California State University, Fresno** (December 1, 2011 - present)
- **College Research Committee, College of Science and Mathematics, California State University, Fresno** (September 1, 2012 – August 31, 2015)
- **University General Education Committee, California State University, Fresno** (November 23, 2011 – November 22, 2014)
- **Physics Outreach Committee at Department of Physics, California State University, Fresno** (April 20, 2008 - present)
- **Biomedical Physics Faculty Search Committee at Department of Physics, California State University, Fresno** (Academic Year 2013-14)
- **College Academic Policies Committee, College of Science and Mathematics, California State University, Fresno** (August 25, 2009 – August 31, 2012)
- **QFS98 Local Committee at the University of Massachusetts, Amherst** (June 9 - 14, 1998)
  QFS98 – International Symposium on Quantum Fluids and Solids, Amherst, Massachusetts, USA

Community Service

- **"Hands-On Fun with Physics," Outreach Program at Downing Planetarium and Science Museum, Fresno, California** (Fall, 2011 – present)
- **Physics Outreach Road Shows for Local K-12 Schools at Fresno, California:**
  Ahwahnee Middle School: 2/11/2011; Cesar Chavez High in Daleno: 3/11/2011; Kermit Koontz Education Complex: 4/15/2011 (Fresno-State-Vintage-Day Visit); Leavenworth Elementary: 3/18/2011; Lincoln Elementary School in Dinuba: 2/25/2011; Manchester Gate: 1/28/2011, 9/3/2010, 4/22/2010, 2/11/2010; Sierra Charter School: 4/1/2011; Tehipite Middle School: 4/8/2011; Wawona Middle School: 2/18/2-011; Wolters Elementary: 2/4/2011; Redwood High School: 5/18/2010; Red Bank Elementary: 5/26/2010;. Clark Intermediate School: 2/18/2010.
- **Judge for the 56th Annual Central California Regional Science, Engineering, and Mathematics Fair, Fresno, CA** (March 23, 2009) - the Senior Division in the Physics category

Awards and Grants

- National Science Foundation Material Research Award DMR-1506677, "Renewal of RUI: Investigation of Strongly Correlated Electron Behavior in Rare Earth Related Materials" ($307,198, September 1, 2015 - August 31, 2018)
- National Science Foundation Material Research Award DMR-1104544, "RUI: Investigation of Strongly Correlated Electron Behavior in Rare Earth Related Materials" ($255,000, June 15, 2011-May 31, 2015)
- Research Corporation Cottrell College Science Award No. 7669, "The Effect of Neodymium Substitution on the Properties of $PrOs_4Sb_{12}$ " ($45,000, July 1, 2008 - December 31, 2010)
- University (i.e., Provost) Award for Research, Scholarship, and Creative Activity – 3 WTU, California State University, Fresno (Spring of AY 2013-14, Spring of AY 2012-13, Fall of AY 2010-11, Fall of AY 2009-10)
- College Award for Scholarly and Creative Activity Release Time – California State University, Fresno (3 WTU-Equivalent Summer Stipend of AY 2013-14, 3 WTU in Fall of AY 2011-12, 2 WTU in Spring of AY 2010-11, 3 WTU in Spring of AY 2009-10, 3 WTU in Spring of AY 2008-09)
- Performance Award, California State University, Fresno (AY 2014-15, AY 2013-14, AY 2012-13, AY 2011-12, AY 2010-11, Spring/2010, AY 2008-09, AY 2007-08)

- California State University, Fresno, Service-Learning Curriculum Development Grant $5,000, "PHYS 168S Service-Learning Course - Physics Outreach" (Spring, 2011)
- Regents tuition and fee scholarship, University of California at San Diego, (academic year 1991-1992, Spring 1993, Spring 1995)
- The Academic Achievement Award, National Tsing-Hua University (Feb. 1990)
- The Academic Achievement Award, National Tsing-Hua University (Sept. 1989)
- The Japan Dai-Ichi Kangyo Bank Scholarship (Sept. 1989)
- Mrs. Ju-Pao Li Hwang Scholarship for Physics Major, National Tsing-Hua University (Feb. 1989)
- Chinese Culture and Natural Science Scholarship (Sept. 1988).
- Mr. Shang-Keng Ma Memorial Scholarship for Physics Major, National Tsing-Hua University (Feb. 1988)
- Chinese Culture and Natural Science Scholarship (Sept. 1987).
- Mrs. Ju-Pao LiHwang Scholarship for Physics Majors, National Tsing-Hua University (Feb, 1987)
- Mr. Lin, Shyong Jeng Memorial Scholarship, National Tsing-Hua University (Feb. 1987 – Jun. 1990)

Affiliation

- American Physical Society
- California Faculty Association
- Fresno State's Asian Faculty and Staff Association

Biographical Information

- Citizenship: The United States of America
  Taiwan, the Republic of China
- Gender: Female
- Marital status: Single