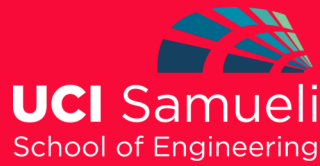


Presented By:

Renkun Chen, Ph.D.
Associate Professor
Department of Mechanical &
Aerospace Engineering
UC San Diego



Department of
Civil and Environmental
Engineering

Civil Engineering Seminar Series

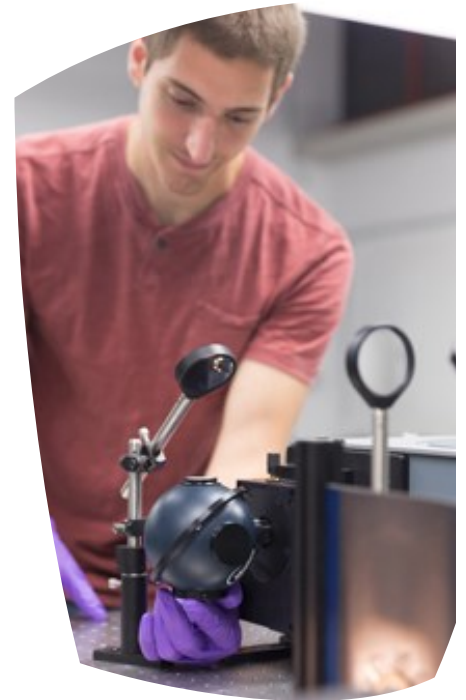
Thursday, January 26th, 2017

MDEA

2:00PM - 3:00PM

Thermal Energy Transport & Conversion: Fundamentals & Applications

Heat transfer plays an important role in a variety of technologies such as energy conversion and storage, building energy efficiency, microelectronics, and data storage. The fundamental length scales associated with the basic heat carriers, such as phonons, electrons, and photons, generally fall in the range of nanometer to microns. Therefore, exploring and exploiting basic nanoscale thermal transport and conversion phenomena hold the key for developing high performance devices and systems for thermal processes. There has been extensive research and progress in this area, which leads to both a deeper understanding of thermal transport phenomena as well as technological impacts. In this talk, I will present the work conducted in my research group on both the fundamental and application aspects of thermal energy transport and conversion, including nanoscale phonon transport, solar thermal energy conversion, materials and devices for improving energy efficiency and electronic cooling.



Renkun Chen is Associate Professor at the University of California, San Diego. He received his Ph.D. degree in Mechanical Engineering from the University of California, Berkeley in 2008 and B.S. degree in Engineering Thermo-physics from Tsinghua University in 2004. Following a one-year stint as a postdoctoral fellow at Lawrence Berkeley National Laboratory, he joined the faculty of UC San Diego in the Department of Mechanical and Aerospace Engineering in 2009. His group at UCSD is interested in fundamental and practical problems in heat transfer.