FOR IMMEDIATE RELEASE

Jan. 23, 2012

CONTACT:
James Leonard, University Communications
Office: 209-228-4406 | Cell: 209-681-1061 | Email: jleonard3@ucmerced.edu

Computer Scientist Earns Prestigious Early-Career Research Award

UC Merced engineering Professor Ming-Hsuan Yang receives National Science Foundation's CAREER Award to improve visual tracking abilities in machines

MERCED, Calif. — Engineering Professor Ming-Hsuan Yang of the University of California, Merced, has been named a recipient of the National Science Foundation's Faculty Early Career Development (CAREER) Award to further his work on improving visual tracking abilities in machines.

The award will provide Yang, a computer scientist, with research funding of $473,797 over five years. Yang's research will focus on developing computer algorithms that can efficiently and effectively empower machines with object tracking, detection and recognition capabilities similar to human cognition, all with the use of only a single camera.

Quick Facts

- UC Merced engineering Professor Ming-Hsuan Yang has received the National Science Foundation's Faculty Early Career Development (CAREER) Award to further his work on improving visual tracking abilities in machines.
- The award will fund Yang's research into improving visual tracking of objects by computerized machines.
- The research could have broad applications, including assistive technology for the visually impaired and improved navigation and surveillance capabilities in robots.

"Professor Yang's innovative and groundbreaking research into visual tracking is certainly deserving of this honor from the National Science Foundation," said Dan Hirleman, Dean of Engineering at UC Merced. "The award represents a clear recognition and validation of the importance of this work."

While humans can effortlessly locate moving objects in different environments, visual tracking remains one of the most important and challenging problems in computer vision. Yang's algorithms would help machines handle scenarios in which the objects they are designed to track drift, disappear and reappear, or are obscured by other objects.

Yang said this research could have broad applications, including assistive technology for the visually impaired, medical purposes like cell tracking and telesurgery, tracking insect and animal motion, traffic modeling for smart buildings, and improved navigation and surveillance capabilities in robots.

"I am grateful for this NSF award which will boost our research efforts in computer vision for the next five years," Yang said.

In addition to the research itself, Yang's project would include developing a code library of tracking algorithms and a large benchmark data set, all of which would be made available to the public. Yang also plans to complement the research with a strong educational component involving both undergraduate and graduate students, with the goal being to encourage students from underrepresented minority groups in the Central Valley to pursue studies in computer sciences and related fields.

It's not the first significant award for Yang, who came to UC Merced in 2008. He also received the Google Faculty Award in 2009, the UC Merced Academic Senate's Distinguished Early Career Research Award in 2011, the Nvidia Professor Partnership Award in 2011, and a research grant from the NSF Information and Intelligent Systems' Robust Intelligence program earlier this year.

###

UC Merced opened Sept. 5, 2005, as the 10th campus in the University of California system and the first American research university of the 21st century. The campus significantly expands access to the UC system for students throughout the state, with a special mission to increase college-going rates among students in the San Joaquin Valley. It also serves as a major base of advanced research and as a stimulus to economic growth and diversification throughout the

region. Situated near Yosemite National Park, the university is expected to grow rapidly, topping out at about 25,000 students within 30 years.