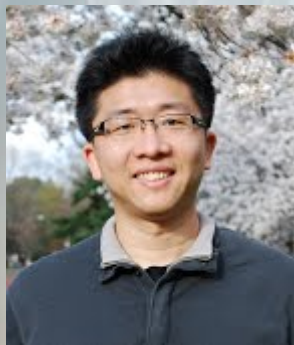

孫民 教授



Min Sun is an assistant professor in EE department at NTHU. Before joining NTHU, he was a postdoctoral researcher in the Computer Science and Engineering department at the University of Washington (UW) working with Steve Seitz and Ali Farhadi. He graduated from the University of Michigan at Ann Arbor with a Ph.D. degree and Stanford University with a M.Sc. degree. His research interests include object recognition, human pose estimation, and scene understanding in both 2D and 3D. Most recently, he focuses on developing scalable methods for object categorization and video analysis in the age of big data. He has won the best paper award in 3DRR and was also a recipient of W. Michael Blumenthal Family Fund Fellowship.

賴尚宏 教授



Shang-Hong Lai received the Ph.D. degree from University of Florida in 1995. Then, he joined Siemens Corporate Research in Princeton, New Jersey, as a member of technical staff. Since 1999, he became a faculty member in the Department of Computer Science, National Tsing Hua University, Taiwan. He is currently a professor in the same department and the director of the Computer and Communication Center in the university. Dr. Lai's research interests include computer vision, visual computing, pattern recognition, medical imaging, and multimedia signal processing. He has authored more than 200 papers published in the related international journals and conferences. Dr. Lai has served as an area chair or a program committee member for a number of international conferences, including CVPR, ICCV, ECCV, ACCV, ICPR, PSIVT and ICME. He is also a program co-chair for ACCV'16 and several international workshops. Moreover, he has served as an associate editor for Journal of Signal Processing Systems.

Title: Intelligent mobile and egocentric vision

Subtitle: Big visual data for intelligent vehicle and 3D life-logging.

(第一部分) Speaker: Prof. Min Sun

After decades of research and development, modern cameras are becoming cheaper, more power efficient, and more reliable on capturing high quality videos. These abilities have opened doors for many critical applications. In this talk, I will focus on two topics: (1) how to use these videos/cameras to develop the brain of future intelligent vehicle? And (2) how to extract human-level knowledge by capturing human behaviors in 3D through cameras so that machines can utilize these knowledge to facilitate us in our daily life? For the first topic, Taiwan has a unique advantage since the number of videos captured by dash-cam in Taiwan is significantly larger than most other countries. It is critical to develop methods to analyze these data and bootstrap the development of the brain of future intelligent vehicle for the whole world. For the second topic, Taiwan has the best hardware integration team to develop wearable 3D life logging system. We aim to collect and analyze these data for building personalize human-level knowledge. During my talk, I will also identify core-technologies for enabling these applications, which includes 3D localization and mapping, object recognition, event recognition/prediction, etc.

Title: Intelligent mobile and egocentric vision

**Subtitle: Machine Learning Approaches to Human Detection
and Action Recognition**

(第二部分) Speaker: Prof. Shang-Hong Lai

Detecting humans from images and understanding human actions from video have attracted considerable amounts of attention from researchers in computer vision, majorly due to the vast amount of potential applications. In this task, I will review some of the recent progress in these human-centered computer research works. In addition, I will present our recent research results on these topics by using machine learning techniques. I will first present an accurate human detector based on a hybrid deep learning architecture. Then, I will present our recent work on action recognition based on a sparse coding framework.