

Chia-Chih Chen

CONTACT INFORMATION	The University of Texas at Austin Dept. of Electrical and Computer Engineering 1 University Station C0803, ENS 520C Austin, TX 78712, USA	<i>Voice:</i> (512) 584-1708 <i>E-mail:</i> ccchen@utexas.edu <i>Website:</i> www.chiachih.org
EDUCATION	Ph.D. in Electrical and Computer Engineering The University of Texas at Austin, USA ▷ Advisor: Prof. J. K. Aggarwal ▷ Dissertation: Recognizing Human Activities from Low-Resolution Videos ▷ GPA: 3.87/4.0	2006 - 2011
	M.S.E. in Electrical and Computer Engineering The University of Texas at Austin, USA ▷ Related Courses: Machine Learning (CS), Object Recognition (CS), Vision Systems (PSY), Wavelets (Math), Real Analysis (Math), Pattern Recognition, Computer Vision Systems, Data Mining, Digital Time Series Analysis, Optimization in Engineering Systems, Probability and Stochastic Process, Digital Signal Processing, Digital Image and Video Processing	2004 - 2006
	B.S. in Electrical Engineering National Chiao Tung University (NCTU), Taiwan ▷ Academic Achievement Awards	1998 - 2002
RESEARCH INTERESTS	Computer vision and its applications to human activity recognition, human-object interaction recognition, and object recognition.	
ACADEMIC EXPERIENCES	Research Assistant Department of ECE, University of Texas at Austin Video surveillance project. Development of algorithms for the recognition of human activities and human-vehicle interactions from surveillance video. C/C++ implementation of the algorithms.	2008 - 2011
	Mentor College of Engineering, University of Texas at Austin GLUE: Graduates Linked with Undergraduates in Engineering program. Help undergraduates learn about the research process, discuss and showcase what it is like to be in graduate school.	2010
	Teaching Assistant Department of ECE, University of Texas at Austin EE380L-7: Introduction to Pattern Recognition and EE380L-8: Computer Vision Systems. Assist Prof. Aggarwal with course slides modification and homework problem design. Give guest lectures and grade assignments, projects, and finals.	2007 - 2008
	Grader Department of ECE, University of Texas at Austin EE380N: Optimization in Engineering Systems and EE366: Engineering Economics I. Grade weekly homework of EE380N, EE366, and term projects of EE366.	2006 - 2008
WORKING EXPERIENCES	Research Intern Kitware Inc. Development and implementation of algorithms for human cast shadow removal from surveillance video.	5 - 8/2011 New York

Summer Intern

MediaTek Inc.

Methodology survey and C implementation of a panorama photo stitching algorithm targeting feature phone devices.

6 - 8/2008

Taiwan

PUBLICATIONS

Refereed Conference Papers

1. Lu Xia, [Chia-Chih Chen](#) and J. K. Aggarwal, "View Invariant Human Action Recognition Using Histograms of 3D Joints". *Workshop on Human Activity Understanding from 3D Data in conjunction with CVPR (HAU3D)*, Rhode Island, USA, Jun. 2012.
2. [Chia-Chih Chen](#) and J. K. Aggarwal, "Modeling Human Activities as Speech". *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Colorado Springs, USA, Jun. 2011.
3. Sangmin Oh, Anthony Hoogs, Amitha Perera, Naresh Cuntoor, [Chia-Chih Chen](#), Jong Taek Lee, Saurajit Mukherjee, J. K. Aggarwal, Hyungtae Lee, Larry Davis, Eran Swears, Xioyang Wang, Qiang Ji, Kishore Reddy, Mubarak Shah, Carl Vondrick, Hamed Pirsiavash, Deva Ramanan, Jenny Yuen, Antonio Torralba, Bi Song, Anesco Fong, Amit Roy-Chowdhury, and Mita Desai, "A Large-scale Benchmark Dataset for Event Recognition in Surveillance Video". *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Colorado Springs, USA, Jun. 2011.
4. Jong Taek Lee*, [Chia-Chih Chen](#)*, and J. K. Aggarwal, "Recognizing Human-Vehicle Interactions from Aerial Video without Training". *Workshop of Aerial Video Processing in conjunction with CVPR (WAVP)*, Colorado Springs, USA, Jun. 2011. *Equal contribution authorship.
5. Lu Xia, [Chia-Chih Chen](#), and J. K. Aggarwal, "Human Detection Using Depth Information by Kinect". *Workshop on Human Activity Understanding from 3D Data in conjunction with CVPR (HAU3D)*, Colorado Springs, USA, Jun. 2011.
6. [Chia-Chih Chen](#) and J. K. Aggarwal, "Human Shadow Removal with Unknown Light Source". *International Conference on Pattern Recognition (ICPR)*, Istanbul, Turkey, Aug. 2010.
7. M. S. Ryoo, [Chia-Chih Chen](#), J. K. Aggarwal, and Amit Roy-Chowdhury, "An Overview of Contest on Semantic Description of Human Activities (SDHA) 2010". *International Conference on Pattern Recognition (ICPR) Contests*, Istanbul, Turkey, Aug. 2010.
8. [Chia-Chih Chen](#) and J. K. Aggarwal, "Recognizing Human Action from a Far Field of View". *IEEE Workshop on Motion and Video Computing (WMVC)*, Utah, USA, Dec. 2009.
9. [Chia-Chih Chen](#) and J. K. Aggarwal, "Recognition of Box-like Objects by Fusing Cues of Shape and Edges". *International Conference on Pattern Recognition (ICPR)*, Florida, USA, Dec. 2008.
10. [Chia-Chih Chen](#) and J. K. Aggarwal, "An Adaptive Background Model Initialization Algorithm with Objects Moving at Different Depths". *IEEE International Conference on Image Processing (ICIP)*, San Diego, USA, Oct. 2008.
11. M. Bhargava, [Chia-Chih Chen](#), M. S. Ryoo, and J. K. Aggarwal, "Detection of Abandoned Objects in Crowded Environments". *Proceedings of IEEE International Conference on Advanced Video and Signal based Surveillance (AVSS)*, London, UK, Sep. 2007.

Journal Publication

1. M. Bhargava, [Chia-Chih Chen](#), M. S. Ryoo, and J. K. Aggarwal, "Detection of Object Abandonment Using Temporal Logic". *Journal of Machine Vision and Applications (MVA)*, Springer-Verlag, Jan. 2008.

Dataset

1. Sangmin Oh, Anthony Hoogs, Amitha Perera, Naresh Cuntoor, [Chia-Chih Chen](#), Jong Taek Lee, Saurajit Mukherjee, J. K. Aggarwal, Hyungtae Lee, Larry Davis, Eran Swears, Xioyang Wang, Qiang Ji, Kishore Reddy, Mubarak Shah, Carl Vondrick, Hamed Pirsiavash, Deva Ramanan, Jenny Yuen, Antonio Torralba, Bi Song, Anesco Fong, Amit Roy-Chowdhury, and Mita Desai, "VIRAT Video Dataset". *CVPR*, Colorado Springs, USA, Jun. 2011.

2. Chia-Chih Chen, M. S. Ryoo, and J. K. Aggarwal, "UT-Tower Dataset". *ICPR contest on Semantic Description of Human Activities (SDHA)*, Istanbul, Turkey, Aug. 2010.

- INVITED TALKS
- **Dept. of Computer Science, National Tsing Hua University, Taiwan** 8/2011
Recognizing Human Activities from Low-Resolution Videos
 - **Institute of Information Science, Academia Sinica, Taiwan** 7/2011
Recognizing Human Activities from Low-Resolution Videos

- SERVICES
- Conference Reviewer**
- Conference on Computer Vision and Pattern Recognition (CVPR) 2008 - 2012
 - International Conference on Computer Vision (ICCV) 2011
 - International Conference on Automatic Face and Gesture Recognition (FG) 2011
 - Workshop on Motion and Video Computing (WMVC) 2009, 2011
 - Conference on Advanced Video and Signal based Surveillance (AVSS) 2007, 2011
 - Workshop on Applications of Computer Vision (WACV) 2009
- Journal Reviewer**
- International Journal of Computer Vision (IJCV) 2012
 - EURASIP Journal on Advances in Signal Processing 2011
 - Journal of Machine Vision and Applications (MVA) 2008

- HONORS
- Sung-Chen Fellowship, awarded to the 1st ranked student each dept., NCTU 2002
 - Academic Achievement Award, awarded to top 5% students each semester, NCTU 2002
 - Academic Achievement Award, awarded to top 5% students each semester, NCTU 2001

- PROGRAMMING SKILLS
- Assembly languages: Elan EM78447, Intel 89C51
 - High-level languages: C/C++, Java
 - Algorithm development environments: MATLAB
 - Electronic design automation tools: PSPICE, HSPICE, SIMULINK, CADENCE, Verilog
 - Typesetting languages: L^AT_EX, HTML

REFERENCES References available upon request.

CITIZENSHIP Taiwan citizen, U.S. permanent resident.