

Yi-Ling Chen

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Short Bio

Apr. 2016 ~ Now

University of California, Davis: Post-doc,

Working on Interactive visual computing, Human-Computer Interaction related projects with [Visualization & Interface Design Innovation \(VIDI\) Lab](#) supervised by [Prof. Kwan-Liu Ma](#).

2014~ Apr. 2016

National Taiwan University: Post-doc,

Worked with [Prof. Bing-Yu Chen](#)'s group. Working on Computer Graphics, Computer Vision, Human-Computer Interaction related projects with [Computer Graphics Lab](#) and [Intel-NTU Connected Context Computing Center](#).

2011~2013,

Industrial Technology Research Institute, Taiwan:
Software Engineer

Worked with Cloud Computing Center for Mobile Application to build a cloud system for intelligent video surveillance.

2005~2010,

National Tsing Hua University: Ph.D

Computer Graphics and Vision (with emphasis on Geometric Modeling and Processing). Adviser: [Prof. Shang-Hong Lai](#)

May. 2009 ~ Apr. 2010,

The University of Tokyo: Visiting Researcher

Hosted by Prof. Tomoyuki Nishita's Lab.

Worked on surface reconstruction from unoriented point cloud.

Mar. 2007 ~ Aug. 2007,

Siemens Corporate Research: Intern

Worked on a system for memory efficient large mesh simplification.

2002 ~ 2004,

National Tsing Hua University: Master's degree

Worked with [Prof. Shang-Hong Lai](#) on progressive reconstruction of implicit surfaces.

1998 ~ 2002,

National Tsing Hua University: Bachelor's degree

Major in computer science.

Professional Experiences

- **Postdoctoral Researcher** (Apr. 2016 – Now)
Visualization & Interface Design Innovation (VIDI) Lab (Supervisor: Prof. Kwan-Liu Ma),
Department of Computer Science,
University of California, Davis
- **Postdoctoral Researcher** (Jan. 2014 – Apr. 2016)
Computer Graphics Lab & Intel-NTU Connected Context Computing Center (Supervisor: Prof. Bing-Yu Chen),
Department of Information Management,
National Taiwan University
- **Software Engineer** (Apr. 2011 – Dec. 2013)
Division of Cloud Applications,
Cloud Computing Center for Mobile Applications (CCMA),
Industrial Technology Research Institute.
- **Visiting Researcher** (May. 2009 – Apr. 2010)
Computer Graphics Lab (Supervisor: Prof. Tomoyuki Nishita),
Department of Complexity Science and Engineering,
Graduate School of Frontier Sciences,
The University of Tokyo
- **Internship** (Mar. 2007 – Aug. 2007)
Siemens Corporate Research, New Jersey, U.S.A. (Mentor: Dr. Xiang Zhang)
- **Assistantship for Master/PhD study at National Tsing Hua University**
 - “Robust 3D Object Model Reconstruction from Video” cooperated with ArcSoft, Inc.
(Sep. 2003 – Jun. 2004), Project Investigator: Prof. Shang-Hong Lai
 - “High Performance/Low Power Consumption SoC Implementation on Dual Core Platform” cooperated
with Industrial Technology Research Institute, Hsinchu, Taiwan.
(Sep. 2005 – Jun. 2006), Project Investigator: Prof. Shang-Hong Lai
 - Develop stereo matching algorithms and innovative technology for 3D cameras, cooperated with Novatek
Inc., Hsinchu, Taiwan.
(Jun. 2010 – Dec. 2010), Project Investigator: Prof. Shang-Hong Lai

Publications

Journal Papers:

- Chun-Kai Huang, **Yi-Ling Chen**, I-Chao Shen, and Bing-Yu Chen, "Retargeting 3D Objects and Scenes with a General Framework", *Computer Graphics Forum (Proceedings of Pacific Graphics 2016)*, vol. 35, no. 7, pp. 33-42, 2016. (Impact Factor: 1.542) [Acceptance rate: 26%]
- Shao-Chi Chen, Hsin-Yi Chen, **Yi-Ling Chen**, Hsin-Mu Tsai and Bing-Yu Chen, "Making in-Front-of Cars Transparent: Sharing First-Person-Views via Dashcam", *Computer Graphics Forum (Proceedings of Pacific Graphics 2014)*, vol. 33, no. 7, pp. 289-297, 2014. (Impact Factor: 1.595) [Acceptance rate: 20.22%; Nominated as Best Paper Award candidate]
- **Yi-Ling Chen**, Tung-Ying Lee, Bing-Yu Chen and Shang-Hong Lai, "Bipartite Polar Classification for Surface Reconstruction", *Computer Graphics Forum (Proceedings of Pacific Graphics 2011)*, vol. 30, no. 7, pp. 2003-2010, 2011. (Impact Factor: 1.636) [Acceptance rate: 16%]
- **Yi-Ling Chen**, Bing-Yu Chen, Shang-Hong Lai and Tomoyuki Nishita, "Binary Orientation Trees for Volume and Surface Reconstruction from Unoriented Point Clouds", *Computer Graphics Forum (Proceedings of Pacific Graphics 2010)*, vol.29, no. 7, pp.2011-2019, Sep. 2010. (Impact factor: 1.681) [Acceptance rate: 17%]
- **Yi-Ling Chen** and Shang-Hong Lai, "An Orientation Inference Framework for Surface Reconstruction from Unorganized Point Clouds", *IEEE Transactions on Image Processing*, vol. 20, issue 3, pp. 762-775, Sep. 2010. (Impact factor: 2.848)
- Chen-Kuo Chiang, Shu-Fan Wang, **Yi-Ling Chen** and Shang-Hong Lai, "Fast JND-Based Video Carving with GPU Acceleration for Real-Time Video Retargeting", *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 19, no. 11, pp 1588-1597, Nov. 2009. (Impact factor: 2.548)
- **Yi-Ling Chen** and Shang-Hong Lai, "Creating MPU Implicit Surfaces from Unoriented Point Sets with Orientation Inference", *The Visual Computer (Proceedings of Computer Graphics International 2009)*, vol. 25, no. 5, pp 391-399, May 2009. (Impact factor: 0.786)

Conference Papers:

- **Yi-Ling Chen**, Jan Klopp, Min Sun, Shao-Yi Chien and Kwan-Liu Ma, "Learning to Compose with Professional Photographs on the Web", to appear in *ACM Multimedia 2017*.
- **Yi-Ling Chen**, Tzu-Wei Huang, Kai-Han Chang, Yu-Chen Tsai, Hwann-Tzong Chen and Bing-Yu Chen, "Quantitative Analysis of Automatic Image Cropping Algorithms: A Dataset and Comparative Study", in *Proc. of IEEE WACV 2017*.
- Yi-Chi Liao, **Yi-Ling Chen**, Ju-Yu Lo, Rong-Hao Liang, Liwei Chan and Bing-Yu Chen, "EdgeVib: Effective Alphanumeric Character Output Using a Wrist-Worn Tactile Display", in *Proc. of ACM UIST 2016*. (Acceptance rate: 20.6%)
- Hui-Hung Wang, **Yi-Ling Chen**, and Chen-Kuo Chiang, "Discriminative Paired Dictionary Learning for Visual Recognition", in *Proc. of ACM Multimedia 2016*.
- **Yi-Ling Chen**, Wei-Tse Lee, Liwei Chan, Rong-Hao Liang, and Bing-Yu Chen, "Direct View Manipulation for Drone Photography", in *Proc. of ACM SIGGRAPH Asia 2015* (Poster).

- Hsin-Yi Chen, **Yi-Ling Chen**, Wei-Tse Lee, Fan Wang, and Bing-Yu Chen, "Integrating Dashcam Views through Inter-Video Mapping", *ICCV 2015*.
- Liwei Chan, **Yi-Ling Chen**, Chi-Hao Hsieh, Rong-Hao Liang, and Bing-Yu Chen, "CyclopsRing: Enabling Whole-Hand and Context-Aware Interactions Through a Fisheye Ring", *ACM UIST 2015*.
- Chun-Kai Huang, **Yi-Ling Chen**, I-Chao Shen, and Bing-Yu Chen, "Retargeting 3D Objects and Scenes", in *Proceedings of ACM SIGGRAPH 2015* (Poster).
- Liwei Chan, Chi-Hao Hsieh, **Yi-Ling Chen**, Shuo Yang, Da-Yuan Huang, Rong-Hao Liang, and Bing-Yu Chen, "Cyclops: Wearable and Single-Piece Full-Body Gesture Input Devices," in *Proceedings of ACM CHI 2015*, p.3001 - p.3010, (also in *ACM CHI 2015 Extended Abstracts* (Video Showcase), p.159), Seoul, Korea, 2015.
- **Yi-Ling Chen**, Tse-Shih Chen, Liang-Chun Yin, Tsiao-Wen Huang, Shiou-Yaw Wang, and Tzi-cker Chiueh , "City Eyes: An Unified Computational Framework for Intelligent Video Surveillance in Cloud Environment," *In Proceedings of IEEE International Conference on Internet of Things (iThings 2014)*, 2014.
- **Yi-Ling Chen**, Tse-Shih Chen, Tsiao-Wen Huang, Liang-Chun Yin, Shiou-Yaw Wang, and Tzi-cker Chiueh , "Intelligent Urban Video Surveillance System for Automatic Vehicle Detection and Tracking in Clouds, " *In Proceedings of IEEE Advanced Information Network and Applications (AINA 2013)*, 2013.
- Tse-Shih Chen, Tsiao-Wen Huang, Liang-Chun Yin, **Yi-Ling Chen** and Yi-Fu Ciou, Platform-as-a-Service Architecture for Parallel Video Analysis in Clouds, *In Proceedings of International Computer Symposium (ICS 2012)*, 2012.
- Te-Feng Su, **Yi-Ling Chen**, and Shang-Hong Lai, "Over-Segmentation Based Background Modeling and Foreground Detection with Shadow Removal Using Hierarchical MRFs", accepted to be presented in *Asian Conference on Computer Vision (ACCV'10)*. (Acceptance rate 29.5%)
- Shu-Fan Wang, **Yi-Ling Chen**, Chen-Kuo Chiang, Bing-Yu Chen, Shang-Hong Lai and Tomoyuki Nishita, "Content-Aware Geometry Image Resizing", *In Proceedings of Computer Graphics International 2010 (CGI'10)*, June 2010.
- **Yi-Ling Chen**, Shang-Hong Lai, and Tomoyuki Nishita, "Robust Surface Reconstruction from Defective Point Clouds by Using Orientation Inference and Volumetric Regularization", *In Proceedings of Siggraph Asia 2009* (Sketch).
- Shu-Fan Wang, **Yi-Ling Chen**, Chen-Kuo Chiang, and Shang-Hong Lai, "Surface Simplification by Image Retargeting", *In Proceedings of Siggraph Asia 2009* (Sketch).
- **Yi-Ling Chen** and Xiang Zhang, "A Memory Effective Two-phase Approach for Large Scanned Surface Mesh Simplification," *In Proceedings of Shape Modeling International 2008 (SMI'08)*, New York, June 2008.
- **Yi-Ling Chen**, Shang-Hong Lai and Tung-Ying Lee, "Generalized MPU Implicits by Using Belief Propagation," *In Proceedings of 3D Digital Imaging and Modeling (3DIM'07)*, Montréal, Canada, August 2007.
- **Yi-Ling Chen** and Shang-Hong Lai, "A Partition-of-Unity Based Algorithm for Implicit Surface Reconstruction Using Belief Propagation," *In Proceedings of Shape Modeling International 2007 (SMI'07)*, Lyon, France, June 2007.

- Po-Hao Huang, **Yi-Ling Chen**, Chia-Ming Cheng, Yu-An Lu, and Shang-Hong Lai, "Robust 3D object model reconstruction from video," In *Proceedings of SPIE Conference on Three-Dimensional Image Capture and Applications VI*, San Jose, California, USA, Jan. 2004.
- Shang-Hong Lai and **Yi-Ling Chen**, "Learning a statistical 3D geometric head model," In *Proceedings of SPIE Conference on Videometrics VII*, Santa Clara, California, USA, Jan. 2003.

Services

- **Domestic**
 - Program Co-Chair, TAICHI 2015
 - Program Committee, TAICHI 2016, 2017
- **International**
 - Tutorial/Workshop Co-Chairs, Pacific Graphics 2017
 - Program Committee, NICOGRAPH International 2018
- **Conference Reviewer**
 - ACM UIST 2017
 - AH 2016, 2017
 - ICME 2017
 - TEI 2017,
 - SIGGRAPH Asia 2015, 2017
 - Pacific Graphics 2014, 2016, 2017
 - APSIPA ASC 2015
 - ACCV 2014,
 - CASA 2014,
 - Smart Graphics 2014
- **Journal Reviewer**
 - IEEE TCSVT

Professional Societies and Associations

- Association for Computing Machinery (ACM)
 - SIGCHI Taiwan Chapter, Founding Member
- Institute of Electrical and Electronics Engineers (IEEE)