Wang, Yu-Shuen (王昱舜)　　　　　　　　　　　　**Curriculum Vitae**

Computer Graphics and Visualization Laboratory,
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I am an Associate professor of the Department of Computer Science at National Chiao-Tung University. I received my PhD degree from Visual System Laboratory, National Cheng Kung University, Taiwan, in 2010. My Ph.D. thesis focuses on content-aware image and video resizing techniques. After joining National Chiao Tung University, I extended my research area from computer graphics to visualization and visual media processing. Since 2010, my works have gained 926 Google citations (1003 citations in total).

Academic Positions

2015.08 – present	Associate Professor of Computer Science
	National Chiao Tung University, Taiwan
2011.02 – 2015.07	Assistant Professor of Computer Science
	National Chiao Tung University, Taiwan

Education

2004.09 – 2010.01	Ph.D. in Computer Science and Information Engineering,
	National Cheng Kung University
	Advisor: Prof. Tong-Yee Lee
2000.09 – 2004.06	B.S. in Computer Science and Information Engineering,
	National Cheng Kung University
1997.09 – 2000.06	National Tainan First Senior High School

Awards

2016.12	Young Researcher Award, CS & EE, NCTU
2016.11	Wu Da-Yu Memorial Award
2011.03	IICM Excellent Thesis Award

| 2010.08 | IPPR Best Thesis Award |
| 2010.06 | Phi Tau Phi Scholastic Honor Society |

Funding

2016.08 –2019.07	Best View Selection from Indoor Scenes
2015.08 –2018.07	Interactive Editing and GPS Navigation on Tourist Maps
2013.08 – 2016.07	Human mobility visualization
2012.08 – 2015.07	Spatial Aware Video Stabilization
2011.05 – 2012.04	Interactive Metro Maps

Patents

2013.06	Korea Patent, Patent No. 10-1494048, "한정된 디스플레이 영역에 복잡한 도시 지도를 시각적으로 표시하기 위한 방법"
2012.04	US Provisional Patent Application No. 13/422,108, "Method for visualizing a complicated metro map in a limited displaying area"
2011.12	中華民國專利, 證書號：I426236, "高複雜度運輸地圖在有限空間中之顯像方法"
2010.06	US Provisional Patent Application No. 61/334,953, "Apparatus, systems, computer-accessible medium and methods for video cropping, temporally-coherent warping and retargeting"

Research visits and collaborations

2009.10 – 2009.11	New York University, USA
	Prof. Olga Sorkine
	Motion-based Video Retargeting with Optimized Crop-and-Warp

2009.02 – 2009.06	University of California, Davis, USA
	Prof. Kwan-Liu Ma
	Feature Preserving Data Reduction and Focus+Context Visualization

2007.08 – 2008.02	Hong Kong University of Science and Technology, China
	Prof. Chiew-Lan Tai
	Optimized Scale-and-Stretch for Image Resizing

Professional Activities

Conference chairs/co-chairs

- Post co-chairs, Pacific Conference on Computer Graphics and Applications 2017
- Notes co-chairs, IEEE Pacific Visualization Symposium 2016
- Poster co-chairs, IEEE Pacific Visualization Symposium 2015
- Paper session chairs, IEEE Pacific Visualization Symposium 2015
- Paper session chairs, The International Symposium on Smart Graphics 2014
- Paper session chairs, Pacific Conference on Computer Graphics and Applications 2011

Committee members of international conferences

- EuroGraphics:: European Association for Computer Graphics 2015
- Pacific Conference on Computer Graphics and Applications 2011-2017
- IEEE Pacific Visualization Symposium 2014-2015
- IEEE International Conference on Computer Aided Design and Computer Graphics 2013, 2015
- International Conference Computer Graphics, Imaging and Visualization 2013

Paper reviewers

International journals:

ACM Transactions on Graphics, ACM Transactions on Intelligent Systems and Technology, ACM Transactions on Interactive Intelligent Systems, IEEE Transactions on Visualization and Computer Graphics, IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Image Processing, IEEE Transactions on Multimedia, IEEE Signal Processing Letters, Computer Graphics Forum, The Visual Computer

International conferences:

ACM SIGGRAPH / SIGGRAPH Asia, IEEE Visualization Conference, Eurographics, Eurographics Conference on Visualization, Pacific Visualization, Pacific Graphics, Computer Graphics International, Graphics Interface, CAD/Graphics, Computer Animation and Social Agents

Members of academic associations

- Member of the Institute of Electrical and Electronics Engineers (IEEE)
- Member of the ACM Special Interest Group on Computer Graphics and Interactive Techniques
- 台灣電腦圖學與互動技術學會(Taipei ACM SIGGRAPH) 創始會員（2011-至今）

Invited talks, conference presentations

2017.12   Feng Chia University (invited talk)

2017.11	Academic Sinica, 台灣資料科學年會 (invited talk)
2017.10	Visualization Workshop, Pacific Graphics, Taiwan (invited talk)
2017.10	IEEE Visualization Conference, Phoenix, USA
2016.11	Chung Yuan Christian University (invited talk)
2015.10	EuroVis, Cagliari, Italy
2015.02	Academic Sinica (invited talk)
2014.11	National Tsing Hua University (invited talk)
2014.06	YuanZe University (invited talk)
2014.04	Big Data Workshop (invited talk)
2013.12	The University of Tokyo (invited talk)
2012.03	HTC Cooperation (invited talk)
2011.11	TamKang University, Taiwan (invited talk)
2011.10	IEEE Visualization Conference, Providence, USA
2011.10	Chung-Yuan Christian University, Taiwan (invited talk)
2011.08	ACM Siggraph Conference, Vancouver
2010.11	Academia Sinica, Taipei, Taiwan (invited talk)
2010.10	National Taiwan University, Taipei, Taiwan (invited talk)
2010.02	National ChengChi University, Taipei, Taiwan (invited talk)
2009.12	ACM Siggraph Asia Conference, Yokohama, Japan
2009.10	New York University, New York, USA (invited talk)
2008.12	ACM Siggraph Asia Conference, Singapore
2008.10	IEEE Visualization Conference, Columbus, USA
2008.06	Computer Graphics International Conference, Istanbul, Turkey
2006.10	Pacific Graphics Conference, Taipei, Taiwan

Publications

2022

1. Tobias Batik, Soeren Nickel, **Yu-Shuen Wang**, Martin N{\"o}ellenburg, Hsiang-Yun Wu, *"Shape Emphasized Mixed Metro Map Layout"*, Computer Graphics Forum (Pacific Graphics) 2022

2. Roshan Venkatakrishnan, Rohith Venkatakrishnan, Chih-Han Chung, Sabarish V Babu, **Yu-Shuen Wang**, *"Investigating a Combination of Input Modalities, Canvas Geometries, and Inking Triggers on On-Air Handwriting in Virtual Reality"*, ACM Transactions on Applied Perception (TAP) 2022

3. Chien-Hsun Lai, Ming-Feng Kuo, Yun-Hsuan Lien, Kuan-An Su, **Yu-Shuen Wang**, *"Parametric Dimension Reduction by Preserving Local Structure"*, IEEE VIS 2022 (short paper).

4. Yun-Hsuan Lien, Yu-Syuan Lin, **Yu-Shuen Wang,** *"Uncertainty Awareness for Predicting Noisy Stock Price Movements"*, European Conference on Machine Learning and Principles and Practice

of Knowledge Discovery in Databases (ECML PKDD) 2022

5. Yuan-Kui Li, Yun-Hsuan Lien, **Yu-Shuen Wang,** *"Style-Structure Disentangled Features and Normalizing Flows for Diverse Icon Colorization"*, IEEE/CVF Conference on Computer Vision and Pattern Recognition 2022

2021

6. Li-Hsing Zheng, Yao-Zhen Kuo, Jui Lo, Yung-Ju Chang, **Yu-Shuen Wang,** *"Making Meals Both Appealing and Healthy: A Food Presentation Simulation System"*, Creativity & Cognition 2021

7. Chi-Hsuan Hsu, Chih-Han Chung, Rohith Venkatakrishnan, Roshan Venkatakrlshnan, Yu-Shuen Wang, Sabarish V. Babu, *"Comparative Evaluation of Digital Writing and Art in Real and Immersive Virtual Environments"*, IEEE Virtual Reality 2021

2020

8. Ding-Bang Chen, Chien-Hsun Lai, Yun-Hsuan Lien, Yu-Hsuan Lin, **Yu-Shuen Wang**, Kwan-Liu Ma, *"Representing Multivariate Data by Optimal Colors to Uncover Events of Interest in Time Series Data"*, IEEE Pacific Visualization 2020

2019

9. Tsai-Ho Sun, Chien-Hsun Lai, Sai-Keung Wong, **Yu-Shuen Wang**, *"Adversarial Colorization of Icons based on Contour and Color Conditions"*, ACM International Conference on Multimedia 2019

10. Hsin-Ying Hsieh, Chieh-Yu Chen, **Yu-Shuen Wang**, Jung-Hong Chuang, *"BasketballGAN: Generating Basketball Play Simulation through Sketching"*, ACM International Conference on Multimedia 2019

11. Chih-Fan Hsu, **Yu-Shuen Wang**, Chin-Laung Lei, Kuan-Ta Chen, *"Look at Me! Correcting Eye Gaze in Live Video Communication"*, ACM Transactions on Multimedia Computing Communications and Applications, to appear

12. Yi-Ting Chen, Chi-Hsuan Hsu, Chih-Han Chung, **Yu-Shuen Wang**, Sabarish V. Babu, *"iVRNote: Design, Creation and Evaluation of an Interactive Note-Taking Interface for Study and Reflection in VR Learning Environments"*, IEEE Virtual Reality 2019

2018

13. Chih-Hsiang Hsu, Chia-Lun Ku, Yung-Ju Chang, **Yu-Shuen Wang**, Uyn-Dinh Tran, Wen-Hao Cheng, Chu-Yuan Yang, Ching-Yu Hsieh Chun-Cheng Lin, *"iTour: Making Tourist Maps GPS-Enabled"*, *ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (Proceedings of UbiComp)*, 2018

14. Chieh-Yu Chen, Wenze Lai, Hsin-Ying Hsieh, Wen-Hao Zheng, **Yu-Shuen Wang**, Jung-Hong Chuang, *"Generating Defensive Plays in Basketball Games"*, ACM International Conference on

Multimedia 2018.

15. Shixia Liu, Gennady L. Andrienko, Yingcai Wu, Nan Cao, Liu Jiang, Conglei Shi, **<u>Yu-Shuen Wang</u>**, Seokhee Hong, *"Steering data quality with visual analytics: The complexity challenge"*, Visual Informatics 2(4): 191-197 (2018)

2017

16. Yen-Ting Kuan, **<u>Yu-Shuen Wang</u>**, Jung-Hong Chuang, *"Visualizing Real-Time Strategy Games: The Example of StarCraft II"*, IEEE Conference on Visual Analytics Science and Technology, 2017

17. Yin-Hsuan Lee, Yu-Kai Chang, Yu-Lun Chang, I-Chen Lin, **<u>Yu-Shuen Wang</u>**, Wen-Chieh Lin, *"Enhancing the Realism of Sketch and Painted Portraits with Adaptable Patches", Computer Graphics Forum, 2017.*

18. Sai Keung Wong, **<u>Yu-Shuen Wang</u>**, Pao-Kun Tang, Tsung-Yu Tsai. *"Optimized evacuation route based on crowd simulation", Computational Visual Media,* 2017

2016

19. **<u>Yu-Shuen Wang</u>**, Wan-Yu Peng, "*Interactive Metro Map Editing*", *IEEE Transactions on Visualization and Computer Graphics*, Vol 22, pp. 1115-1126, 2016

20. Pei-Chih Wen, Wei-Chih Cheng, **<u>Yu-Shuen Wang</u>**, Hung-Kuo Chu, Nick C. Tang, Hong-Yuan Mark Liao, "*Court reconstruction for camera calibration in broadcast basketball videos*", *IEEE Transactions on Visualization and Computer Graphics*, Vol 22, pp. 1517-1526, 2016

2015

21. Ching-Hang Chen, Tyng-Luh Liu, **<u>Yu-Shuen Wang</u>**, Hung-Kuo Chu, Nick Tang, Hong-Yuan Mark Liao, *"Spatio-Temporal Learning of Basketball Offensive Strategies", ACM Multimedia Conference 2015*

22. Cheng-You Hsieh, **<u>Yu-Shuen Wang</u>**, "*Traffic Situation Visualization based on Video Composition*", *Computers and Graphics (Proceedings of CAD/Graphics)*, Vol 54, pp. 1-7, 2015

23. Yi-Cheng Chen, **<u>Yu-Shuen Wang</u>**, Wen-Chieh Lin, Wei-Xiang Huang, I-Chen Lin. *"Interactive Visual Analysis for Vehicle Detector Data", Computer Graphics Forum (Proceedings of EuroVis),* Vol. 34, Issue 3, pp. 171–180, 2015.

2014

24. Yu-Cheng Chiu, **<u>Yu-Shuen Wang</u>**. *"Content Aware Texture Compression", Journal of Information Science and Engineering,* Vol. 31 No. 6, pp. 2075-2088, 2015*.*

25. Wei-Li Lu, **<u>Yu-Shuen Wang</u>**, Wen-Chieh Lin. *"Chess Evolution Visualization." IEEE Transactions on Visualization and Computer Graphics,* Vol.20, No.5, May, 2014

26. Sai-Keung Wong, Wen-Chieh Lin, Yu-Shuen Wang, Chun-Hung Hung, Yi-Jheng Huang. *"Dynamic Radial View Based Culling for Continuous Self-Collision Detection", ACM Siggraph Symposium on*

Interactive 3D Graphics and Games (i3D 2014).

2013

27. **<u>Yu-Shuen Wang</u>**, Feng Liu, Pu-Sheng Hsu, and Tong-Yee Lee. 2013. *"Spatially and Temporally Optimized Video Stabilization." IEEE Transactions on Visualization and Computer Graphics,* Vol. 19, No. 8, Aug, 2013 (16 citations)

2011

28. **<u>Yu-Shuen Wang</u>**, Ming-Te Chi, *"Focus+Context Metro Maps." IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis 2011),* Vol. 17, No.12, Oct. 2011 (34 citations)

29. **<u>Yu-Shuen Wang</u>**, Jen-Hung Hsiao, Olga Sorkine, Tong-Yee Lee, *"Scalable and Coherent Video Resizing with Per-frame Optimization." ACM Transactions on Graphics (Proceedings of SIGGRAPH 2011)*, Vol. 30, No.4, Aug. 2011 (27 citations)

30. **<u>Yu-Shuen Wang</u>**, Chaoli Wang, Tong-Yee Lee, Kwan-Liu Ma, *"Feature Preserving Volume Data Reduction and Focus+Context Visualization." IEEE Transactions on Visualization and Computer Graphics*, vol. 99 , Feb. 2011 (36 citations)

2010

31. Huisi Wu, **<u>Yu-Shuen Wang</u>**, Kun-Chuan Feng, Tien-Tsin Wong, Tong-Yee Lee, Pheng-Ann Heng, *"Resizing by Symmetry-Summarization." ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2010)*, Vol. 29, No.5, Dec. 2010 (43 citations)

32. **<u>Yu-Shuen Wang</u>**, Hui-Chih Lin, Olga Sorkine, Tong-Yee Lee, *"Motion-based Video Retargeting with Optimized Crop-and-Warp." ACM Transactions on Graphics (Proceedings of SIGGRAPH 2010)*, Vol. 29, No.5, July 2010 (65 citations)

33. **<u>Yu-Shuen Wang</u>**, Min-Wen Chao, Chin-Chueng Yi, Chao-Hung Lin, *"Cubist Style Rendering for 3D Polygonal Models." Journal of Information Science and Engineering*, Vol. 27, No. 5, Sep. 2010

2009

34. **<u>Yu-Shuen Wang</u>**, Hongbo Fu, Olga Sorkine, Tong-Yee Lee, and Hans-Peter Seidel, *"Motion-Aware Temporal Coherence for Video Resizing." ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2009)*, Vol. 28, No.5, Dec. 2009 (83 citations)

2008

35. **<u>Yu-Shuen Wang</u>**, Chiew-Lan Tai, Olga Sorkine, Tong-Yee Lee, *"Optimized Scale-and-Stretch for Image Resizing." ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2008)* Vol. 27, No.5, Dec. 2008 (370 citations)

36. **<u>Yu-ShuenWang</u>**, Tong-Yee Lee, Chiew-Lan Tai, *"Focus+Context Visualization with Distortion Minimization." IEEE Transactions on Visualization and Computer Graphics (Proceedings of IEEE*

Visualization 2008), Volume 14, Number 6, Oct. 2008 (37 citations)

37. **<u>Yu-Shuen Wang</u>**, Tong-Yee Lee, *"Curve Skeleton Extraction Using Iterative Least Squares Optimization." IEEE Transactions on Visualization and Computer Graphics, July/Aug.,* Vol. 14, No. 4. 2008, pp. 926-936 (65 citations)

38. Tong-Yee Lee, Chao-Hung Lin, **<u>Yu-ShuenWang</u>**, Tai-Guang Chen, *"Animation Key-frame Extraction and Simplification Using Deformation Analysis." IEEE Transactions on Circuits and Systems for Video Technology*, April, Vol. 18, No. 4, 2008, pp. 478-486 (22 citations)

39. **<u>Yu-Shuen Wang</u>**, Tong-Yee Lee, *"Example-driven Animation Synthesis."The Journal of Visual Computer (Proceedings of Graphics International 2008),* July, Vol. 24, No. 7, 2008, pp.756-773

40. **<u>Yu-Shuen Wang</u>**, Chao-Hung Lin, Tong-Yee Lee, *"Interactive Model Decomposition Using Protrusive Graph." International Journal of Innovative Computing, Information and Control (IJICIC)*, Vol.4, No.8, Aug. 2008, pp. 1887-1896.

2007

41. Tong-Yee Lee, Chao-Hung Lin, Hung-Kuo Chu, **<u>Yu-Shuen Wang</u>**, Shao-Wei Yen, Chang-Rung Tsai, *"Mesh Pose-Editing Using Examples." Computer Animation and Virtual Worlds Journal*, Volume 18, Issue 4-5 (Sep. - Dec. 2007), pp. 235-245.

42. **<u>Yu-Shuen Wang</u>**, Tong-Yee Lee, *"WYSIWYG: Mesh Decomposition for Static Models." Proceedings of Intelligent Information Hiding and Multimedia Signal Processing (Special Session on Computer Graphics)*, Nov. 26-28, 2007.

43. **<u>Yu-Shuen Wang</u>**, Tong-Yee Lee, Chao-Hung Lin, *"Interactive Model Decomposition." Proceeding of Computer-Aided Design and Computer Graphics (CAD/Graphics 2007 sponsored by IEEE and ACM SIGGRAPH)*, Oct. 2007.

2006

44. Tong-Yee Lee, **<u>Yu-Shuen Wang</u>**, Tai-Guang Chen, *"Segmenting a Deforming Mesh into Near-Rigid Components." The Journal of Visual Computer (Proceedings of Pacific Graphics 2006)* Vol. 22, No. 9-11, Sep. 2006, pp. 729-739 (49 citations)

Thesis

45. **<u>Yu-Shuen Wang,</u>** *"Content Aware Image and Video Resizing." Ph.D. Thesis. National Cheng Kung University*, Jan. 2010.