Yu-Ting Wu

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https://kevincosner.github.io/

Research Interests

- Computer graphics, computational photography, computer vision, augmented/virtual reality, machine learning

Education

- **National Taiwan University**   **Taipei, Taiwan**
  Ph.D. in Computer Science   *Sep. 2009 - June 2014*
  Advisor: Yung-Yu Chuang
  Dissertation: Sampling and Reconstruction Techniques for Efficient Monte Carlo Rendering
- **National Chiao Tung University**   **Hsinchu, Taiwan**
  Master in Computer Science   *Sep. 2007 - June 2009*
  Advisor: Zen-Chung Shih
  Thesis: Visibility-Guided Importance Sampling
- **National Chiao Tung University**   **Taipei, Taiwan**
  Bachelor in Computer Science   *Sep. 2003 - June 2007*
  Rank 1st in class, 7 times Academic Excellence Award (top 5%)
  Member of Phi-Tau-Phi Scholastic Honor Society in 2007

Experiences

- **Postdoctoral researcher - National Taiwan University**, Taipei, Taiwan   *Feb. 2020 - Present*
  Host: Yung-Yu Chuang
- **Senior Algorithm Developer - Toppano Inc. (startup)**, Taipei, Taiwan   *May 2018 - Jan. 2020*
- **Principal Engineer - HTC Inc.**, New Taipei City, Taiwan   *Sep. 2014 - Apr. 2018*
- **Summer Intern - Digimax Inc.**, Taipei, Taiwan   *July 2011 - Sep. 2011*

Publications

- **ClipFlip: Multi-view Clipart Design**
  I-Chao Shen, Kuan-Hung Liu, Li-Wen Su, Yu-Ting Wu, Bing-Yu Chen
  In Computer Graphics Forum, volume 40, number 1, page 327-340, February 2021
  SCI, JCR 2021 IF: to appear
- **Dual-Matrix Sampling for Scalable Translucent Material Rendering**
  Yu-Ting Wu, Tzu-Mao Li, Yu-Hsun Lin, Yung-Yu Chuang
  In IEEE Transactions on Visualization and Computer Graphics (TVCG), volume 21, number 3, page 363-374,
  March 2015
  SCI, JCR 2015 IF: 1.400, Computer Science, Software Engineering, Rank 25 of 106, Q1
- **VisibilityCluster: Average Directional Visibility for Many-Light Rendering**
  Yu-Ting Wu, Yung-Yu Chuang
  In IEEE Transactions on Visualization and Computer Graphics (TVCG), volume 19, number 9, page
  1566-1578, September 2013.
  SCI, JCR 2013 IF: 1.919, Computer Science, Software Engineering, Rank 13 of 105, Q1
- **SURE-based Optimization for Adaptive Sampling and Reconstruction**
  Tzu-Mao Li, Yu-Ting Wu, Yung-Yu Chuang
  In ACM Transactions on Graphics (Proceedings of ACM SIGGRAPH Asia 2012), volume 31, number 6,
  article 194, Singapore, November 2012. *(selected as a highlight paper by the chair)*
  SCI, JCR 2012 IF: 3.361, Computer Science, Software Engineering, Rank 1 of 105, Q1

Workshop Papers, Short Papers, Posters

- **VisibilityChunk: Average Directional Visibility for Importance Sampling**
  Yu-Ting Wu, Yung-Yu Chuang
  In ACM SIGGRAPH Asia 2012 Poster, article 44, Singapore, November 2012 *(selected as a highlight poster by the chair)*
- **Improved Reflective Shadow Maps with Visibility Approximation**
  Mifan Bang, Yu-Ting Wu, Yung-Yu Chuang
  In Computer Graphics Workshop (CGW), Taipei Taiwan, July 2011
- **Horizon Occlusion Culling for 3D Navigation**
  Yun-Feng Chou, Yu-Ting Wu, Shiang-Chun Chang, Mu-Heng Li, I-Chen Lin, Zen-Chung Shih, Rung-Ren Lin
  In International Workshop on Advanced Image Technology (IWAIT) 2008 Poster, Hsinchu, Taiwan

Teaching Experiences

- **Teaching Assistant**
  - Digital Image Synthesis, *National Taiwan University* — *Sep. 2013 - Jan. 2014*
  - Digital Image Synthesis, *National Taiwan University* — *Sep. 2012 - Jan. 2013*
  - Digital Image Synthesis, *National Taiwan University* — *Sep. 2011 - Jan. 2012*
  - Digital Image Synthesis, *National Taiwan University* — *Sep. 2010 - Jan. 2011*
  - Digital Image Synthesis, *National Taiwan University* — *Sep. 2009 - Jan. 2010*
  - Computer Graphics, *National Chiao Tung University* — *Sep. 2008 - Jan. 2009*

Selected Projects

- **3D Face Reconstruction from a Single Image**, *National Taiwan University* — *Mar. 2021 - Present*
- **Rendering with Reinforcement Learning**, *National Taiwan University* — *Mar. 2020 - Present*
- **Learning to Enhance Document Images**, *National Taiwan University* — *Mar. 2020 - Feb. 2021*
- **Inception - Virtual Studio System**, *Toppano Inc.* — *May 2018 - Jan. 2020*
  - A powerful virtual studio system with several features: RGB-D video enhancement, real-time matting, virtual lighting augmentation, and mixed reality preview
  - Support Unity and Unreal Engine
- **LightProbeGen - AR/MR Lighting Tool**, *HTC Inc.* — *Oct. 2017 - Mar. 2018*
  - An intuitive tool for generating realistic, real-world lighting for AR/MR applications using HTC VIVE
- **TrueColor - VR Game**, *HTC Inc.*, [Link] — *Apr. 2017 - Mar. 2018*
  - An interesting VR game for spray painting and pen drawing
- **Arcade Saga - VR Game**, *HTC Inc.*, [Link] — *Apr. 2016 - Mar. 2017*
  - The first exclusive VR game for HTC VIVE

Professional Services

- **Reviewer for International Conference and Workshop:**
  - IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
  - European Conference on Computer Vision (ECCV)
  - International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)
  - Asia-Pacific Workshop on Mixed and Augmented Reality (APMAR)

- **Reviewer for International Journals:**
  - The Visual Computer (TVC)
  - Journal of Information Science and Engineering (JISE)
- **Invited Talks:**
  - Virtual Reality: Technology and Content Development, National Cheng Kung University, Tainan, Taiwan, May 2016
  - Virtual Reality: Technology and Content Development, Yuan Ze University, Taoyuan, Taiwan, May 2016
  - Introduction to Physically-Based Ray Tracing, Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan, Dec. 2013