

Luming Ma

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Education

- 2015–present **Ph.D**, *Computer Science*, University of Houston, Houston, TX.
2006–2008 **M.S.**, *Computer Science*, University of Bridgeport, Bridgeport, CT.
2002–2006 **B.S.**, *Software Engineering*, Northeastern University, Shenyang, China.

Research Experience

- 2015–present **Computer Graphics & Interactive Media Lab**, *University of Houston*.
- Developed real-time system to capture albedo, lighting and wrinkle-level geometry of facial performance on RGB video via shape-from-shading optimization.
 - Developed automatic real-time method to photo-realistically transform facial expressions from RGB video using Cycle-GAN model.
 - Developing automatic real-time method to photo-realistically swap the face from a single source image to a target video of a different identity.

Work Experience

- 2019.5– **Software Engineer Intern**, *Facebook*, Menlo Park, CA.
2019.8 Core Tech Hands and Interaction Tracking Eng
- Developed a temporal vision based method to automatically detect hand-surface touching from monochrome video.
- 2012–2015 **Lead Software Engineer**, *BlueTorchSoft Ltd*, Shenyang, China.
- Developed 3D multi-player action game and dancing game on mobile platforms and web browsers.
- 2011–2012 **Senior Software Engineer**, *Neusoft Corporation*, Shenyang, China.
- Developed cloud health management and diagnosis system for www.xikang.com.
- 2010–2011 **Senior Software Engineer**, *HalfQuest Technology Ltd*, Beijing, China.
- Developed 2.5D business simulation flash game on Facebook.
- 2008–2010 **Software Engineer**, *TournamentOne Corp*, Stamford, CT.
- Developed several Flash desktop and online games including horse racing, poker, keno and slot games.

Skills

Coding C++, CUDA, Python, C#, Java, Actionscript

Tools OpenGL, OpenCV, DirectX, Tensorflow, Unity3D, Maya, Flash

Publications

- [1] Luming Ma and Zhigang Deng. “Real-time Hierarchical Facial Performance Capture”. In: *Proceeding of ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D)*. Montreal, QC, Canada: ACM, May 2019, 10 pages.
- [2] Luming Ma and Zhigang Deng. “Real-Time Facial Expression Transformation for Monocular RGB Video”. In: *Computer Graphics Forum* 38.1 (2019), pp. 470–481.