Yaojie Liu

CONTACT
INFORMATION

Department of Computer Science
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JOB INTERESTS

I'm looking for 2020 summer intern.

RESEARCH
INTERESTS

Computer Vision, Deep Learning, Face Analysis, Biometrics, Audio-Visual Modeling.

EDUCATION

Michigan State University, MI, USA

Ph.D. Student, May 2016 - February 2021 (Expected)
- Advisor: Dr. Xiaoming Liu
- GPA: 3.5/4

The Ohio State University, OH, USA

M.Sc. Student, September 2014 - April 2016
- Research Topic: "Global and Local Fitting of Facial Landmarks and Action Units (AUs)"
- Advisor: Dr. Aleix Martinez
- GPA: 3.88/4

University of Electronic Science and Technology of China, Chengdu, China

B.E. Student, September 2010 - April 2014
- Dissertation Topic: "Image Inpainting"
- Advisor: Dr. Chang Shu
- GPA: 3.92/4

PUBLICATIONS

I have >250 citations according to **Google Scholar**, and my h-index is 6.

Conference Papers:

1. J. Stehouwer, A. Jourabloo, **Y. Liu**, X. Liu, "Noise Modeling, Synthesis and Classification for Generic Object Anti-Spoofing," IEEE Computer Vision and Pattern Recognition (**CVPR′20**), 2020.

2. **Y. Liu**, J. Stehouwer, A. Jourabloo, X. Liu, "Deep Tree Learning for Zero-shot Face Anti-spoofing," IEEE Computer Vision and Pattern Recognition (**CVPR′19**), 2019. (**Oral, Best Paper Finalist, 0.9% Acceptance Rate.**) [PDF] [Database] [Source Code]

3. **Y. Liu***, A. Jourabloo*, X. Liu, "Face De-Spoofing: Anti-Spoofing via Noise Modeling," Proc. European Conference of Commputer Vision (**ECCV′18**), 2018. (* denotes equal contribution) [PDF] [Source Code]

4. **Y. Liu***, A. Jourabloo*, X. Liu, "Learning Deep Models for Face Anti-Spoofing: Binary or Auxiliary Supervision," IEEE Computer Vision and Pattern Recognition (**CVPR′18**), 2018. (* denotes equal contribution, **Database has been distributed to >300 research groups**)

[**PDF**] [**Database**]

5. **Y. Liu**, A. Jourabloo, W. Ren, X. Liu, "Dense Face Alignment," International Conference on Computer Vision (**ICCVW′17**) Workshop on Analysis and Modeling of Faces and Gestures (AMFG), 2017. [**PDF**] [**Source Code**]

6. **Y. Liu***, Y. Atoum*, A. Jourabloo*, X. Liu, "Face Anti-Spoofing Using Patch and Depth-Based CNNs," International Joint Conference on Biometrics (**IJCB′17**), 2017. (* denotes equal contribution) [**PDF**]

7. R. Zhao, Y. Wang, C.F. Benitez-Quiroz, **Y. Liu**, A.M. Martinez, "Fast and Precise Face Alignment and 3D Shape Reconstruction from a Single 2D Image." European Conference on Computer Vision Workshop (**ECCVW′16**), 2016. [**PDF**]

8. **Y. Liu**, C. Shu, "A Comparison of Image Inpainting Techniques." International Conference on Graphic and Image Processing (ICGIP), 2015. [**Link**]

Journal Papers:
9. C. Shu, **Y. Liu**, "Inpainting: Survey and Experiments" International Journal of Signal Processing, Image Processing and Pattern Recognition, Vol. 9, Issue. 10, pp. 21-36, October 2016. [**Link**]

10. **Y. Liu**, C. Shu, "Dynamic Gesture Localization and Recognition Algorithm Based on Skeletonization" Electronic Science and Technology, Vol. 3, pp. 005, 2014. [**Link**]

Book Chapters:
11. **Y. Liu**, J. Stehouwer, A. Jourabloo, X. Liu, "Presentation Attack Detection for Face in Mobile Phones" Selfie Biometrics, Ajita Rattani, Reza Derakhahani, and Arun Ross, Eds, Springer-Verlag, 2019.

DEMOS	"Real-time Face Anti-spoofing System" at CVPR′18. [**Link**] **June 2018**

WORKING EXPERIENCES

AI Research Intern   **May 2019 - August 2019**
Research topic: Audio-visual Modeling
Apple Inc., Cupertino, CA

Research Assistant   **May 2016 - Now**
Michigan State University, East Lansing, MI

PROFESSIONAL SERVICES

Co-Organizer and Lecturer, Tutorial on "Face Anti-Spoofing: Past, Present and Future" at BTAS′19

Journal Reviewer: TIP, TIFS, CVIU, Neurocomputing, TOMM, JCST, JEI, Image and Vision Computing, IET Computer Vision

Conference Reviewer: CVPR′19-20, ICCV′19, ECCV′20, AAAI′20, BTAS′18, ICB′19, ICME′20, PRCV′19

PATENTS

Y. Liu, A. Jourabloo, X. Liu, "Improved Spoof Detection for Facial Recognition," U.S. Serial No. 62/626,486, filed on Feb 05, 2018.

Talks		
	"Dense Face Alignment," Midwest vision workshop, Chicago IL.	**April 2017**
	"Deep Tree Net for Face Anti-spoofing," MSU/ND vision workshop, Notre Dame IN.	**Sep 2019**
	"Face Anti-Spoofing: Detect, Visualize, and Generalize," Sichuan University, China.	**Jan 2020**
	"Face Anti-Spoofing: Detect, Visualize, and Generalize," UESTC, China.	**Jan 2020**

Honors and Awards		
	Honorable Mention, Engineering Graduate Research Symposium, MSU	2018
	Awarded College of Engineering Distinguished Fellowship, MSU	2016
	Best Bachelor Thesis Award, UESTC	2014
	First Rank, People′s Scholarship for Excellent University Student, China	2013
	Second Rank, People′s Scholarship for Excellent University Student, China	2012
	Granted research fund from Institute of Electronic Science and Technology, UESTC	
	Granted research fund from Undergraduate Innovation Foundation, UESTC	
	First Rank, People´s Scholarship for Excellent University Student, China	2011

Skills

- Programming Language: Python, C/C++, Java, Git, Bash, HTML, SQL, R, LaTeX, Lisp
- Operating Systems: Linux, MacOS, Windows
- Signal Processing: Matlab
- Computer Vision Library: OpenCV
- Deep Learning: Tensorflow (1.x, 2.0), PyTorch, MatConvNet, Caffe.