

EDUCATION	Ph.D., Computer Science , Michigan State University, USA	05/2016–present
	<ul style="list-style-type: none"> · Advisor: Xiaoming Liu · Committee: Xiaoming Liu (chair), Anil Jain, Arun Ross, Daniel Morris · Dissertation: Face Anti-Spoofing: Detection, Generalization, and Visualization 	
	M.S., Computer Science , Ohio State University, USA	09/2014–05/2016
	<ul style="list-style-type: none"> · Advisor: Aleix Martinez · Research: Global and Local Fitting of Facial Landmarks and Action Units 	
	B.E., Communication Engineering , UESTC, China	09/2010–05/2014
	<ul style="list-style-type: none"> · Advisor: Chang Shu · Thesis: Image Inpainting 	
WORKING EXPERIENCES	Research Intern , Bosch	05/2020–08/2020
	<ul style="list-style-type: none"> · Mentors: Xinyu Huang, Liu Ren · Project: Face Shadow Removal/Relighting 	
	Research Intern , Apple AI Research	05/2019–08/2019
	<ul style="list-style-type: none"> · Mentors: Barry Theobald, Nicholas Apostoloff · Project: Audio-visual Modeling 	
PUBLICATIONS	<p>I have >600 citations according to Google Scholar, and my h-index is 7. (* denotes equal contribution)</p> <p><i>Conference Papers:</i></p> <ol style="list-style-type: none"> 1. Yaojie Liu, Xinyu Huang, Ren Liu, Xiaoming Liu, “Facial Foreign Shadow Detection and Removal via Spatio-Temporal Consistency,” under review in CVPR 2021. 2. Xiaohong Liu, Yaojie Liu, Jun Chen, Xiaoming Liu, “PSSC-Net: Progressive Spatio-Channel Correlation Network for Image Manipulation Detection and Localization,” under review in CVPR 2021. 3. Yaojie Liu, Jeol Stehouwer, Xiaoming Liu, “On Disentangling Spoof Traces for Generic Face Anti-Spoofing,” Proc. European Conference of Computer Vision (ECCV), 2020. (26% Acceptance Rate) [PDF] [Code] [Short Video] [Long Video] 4. Jeol Stehouwer, Amin Jourabloo, Yaojie Liu, Xiaoming Liu, “Noise Modeling, Synthesis and Classification for Generic Object Anti-Spoofing,” IEEE Computer Vision and Pattern Recognition (CVPR), 2020. (25% Acceptance Rate) [PDF] [Code] [Database] [Short Video] 5. Yaojie Liu, Jeol Stehouwer, Amin Jourabloo, Xiaoming Liu, “Deep Tree Learning for Zero-shot Face Anti-spoofing,” IEEE Computer Vision and Pattern Recognition (CVPR), 2019. (Oral, Best Paper Finalist, 5.6% Acceptance Rate.) [PDF] [Code] [Database] [Video] [Poster] 6. Yaojie Liu*, Amin Jourabloo*, Xiaoming Liu, “Face De-Spoofing: Anti-Spoofing via Noise Modeling,” Proc. European Conference of Computer Vision (ECCV), 2018. (31.8% Acceptance Rate) [PDF] [Code] [Poster] 7. Yaojie Liu*, Amin Jourabloo*, Xiaoming Liu, “Learning Deep Models for Face Anti-Spoofing: Binary or Auxiliary Supervision,” IEEE Computer Vision and Pattern Recognition (CVPR), 2018. (30% Acceptance Rate) [PDF] [Database] [Poster] 8. Yaojie Liu, Amin Jourabloo, William Ren, Xiaoming Liu, “Dense Face Alignment,” International Conference on Computer Vision (ICCV) Workshop on Analysis and Modeling of Faces and Gestures (AMFG), 2017. [PDF] [Code] [Poster] 	

9. **Yaojie Liu***, Yousef Atoum*, Amin Jourabloo*, Xiaoming Liu, “Face Anti-Spoofing Using Patch and Depth-Based CNNs,” IEEE International Joint Conference on Biometrics (IJCB), 2017. [\[PDF\]](#) [\[Poster\]](#)
10. Ruiqi Zhao, Yan Wang, C.F. Benitez-Quiroz, **Yaojie 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), 2016. [\[PDF\]](#)
11. **Yaojie Liu**, Chang Shu, “A Comparison of Image Inpainting Techniques.” International Conference on Graphic and Image Processing (ICGIP), 2015. [\[Link\]](#)

Journal Papers:

12. **Yaojie Liu**, Xiaoming Liu, “Physics-Guided Spoof Trace Disentanglement for Generic Face Anti-Spoofing” under review in IEEE Transaction on Pattern Analysis and Machine Intelligence (PAMI), 2020. [\[PDF\]](#)
13. Chang Shu, **Yaojie Liu**, “Inpainting: Survey and Experiments” International Journal of Signal Processing, Image Processing and Pattern Recognition, 2016. [\[Link\]](#)
14. **Yaojie Liu**, Chang Shu, Zhizhong Fu “Dynamic Gesture Localization and Recognition Algorithm Based on Skeletonization” Electronic Science and Technology, 2014. (in Chinese) [\[Link\]](#)

Book Chapters:

15. **Yaojie Liu**, Jeol Stehouwer, Amin Jourabloo, Xiaoming Liu, “Presentation Attack Detection for Face in Mobile Phones” Selfie Biometrics, Ajita Rattani, Reza Derakhahani, and Arun Ross, Eds, Springer-Verlag, 2019. [\[PDF\]](#)

PATENTS

Yaojie Liu, Amin Jourabloo, Xiaoming Liu, “Improved Spoof Detection for Facial Recognition,” U.S. Serial No. 62/626,486, filed on Feb 05, 2018.

HONORS AND
AWARDS

- Fitch Beach Award nominee (one winner in entire CSE department), MSU 2021
- Outstanding Graduate Student Award, CSE Department at MSU 2021
- ECCV 2020 Outstanding Reviewer Award (215 selected from 2,830 reviewers) 2020
- College of Engineering Dissertation Completion Fellowship, MSU 2020
- CVPR 2019 Best Paper Finalist (45 selected from 1,294 accepted papers) 2019
- Honorable Mention, Engineering Graduate Research Symposium, MSU 2018
- College of Engineering Distinguished Fellowship, MSU 2016
- Best Bachelor Thesis Award, UESTC 2014
- People’s Scholarship for Excellent University Student, UESTC 2011-2013

PROFESSIONAL
SERVICES

Co-Organizer/Lecturer:

- “Detecting Face Spoofing and Face Manipulation”, Half-day Tutorial at IJCB’20 [\[1, 2, 3\]](#)
- “Face Anti-Spoofing: Past, Present and Future”, Half-day Tutorial at BTAS’19 [\[1, 2, 3\]](#)
- “Real-time Face Anti-spoofing System”, Full-day Demo at CVPR’18. [\[Link\]](#)

Conference Reviewer: CVPR’19-’21, ICCV’19, ECCV’20, NeurIPS’20, AAAI’20-’21, ICML’21, WACV’21, ACCV’20, BTAS’18, ICB’19, ICME’20-’21, PRCV’19-’20

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

Mentoring: Xiaohong Liu (2020 Summer, Fall), Xiaohan Zhang (2017), William Ren (2016 Summer, 2017 Summer)

INVITED TALKS	• “Face Anti-Spoofing: Detect, Visualize, and Generalize”, Sichuan University.	1/2020
	• “Face Anti-Spoofing: Detect, Visualize, and Generalize”, UESTC.	1/2020
	• “Deep Tree Learning for Zero-shot Face Anti-spoofing”, MSU/ND vision workshop.	9/2019
	• “Deep Tree Learning for Zero-shot Face Anti-spoofing”, Oral Presentation, CVPR.	6/2019
	• “Dense Face Alignment”, Midwest vision workshop.	4/2017
SKILLS	• <i>Programming</i> : Python, C/C++, Java, Matlab, Bash, HTML, R	
	• <i>Systems</i> : Linux, MacOS, Windows	
	• <i>Tools</i> : Tensorflow, PyTorch, MatConvNet, Caffe, OpenCV, L ^A T _E X, Git.	