

Personal details and date of CV

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Degrees

- 29 December 2021, **Ph.D. in Computer Science and Technology**, *School of Computer Science and Engineering*, South China University of Technology, Guangzhou, China.
 - Oct 2020 - Oct 2021, **Co-trained Doctoral Researcher**, *Center for Machine Vision and Signal Analysis*, University of Oulu, Oulu, Finland. Advisor: Academy Prof. Guoying Zhao.
 - Dissertation: Graph-based Facial Expression Recognition. Advisor: Prof. Xingming Zhang.
 - Examination committee: Prof. Yong Tang (chair), Prof. Guoqiang Han, Prof. Xingming Zhang, Prof. Yong Xu, Prof. Si Wu.
- 23 June 2017, **M.E. in Information Security and E-Commerce**, *School of Computer, Electronics and Information*, Guangxi University, Nanning, China.
 - Dissertation: Object Tracking via Sparse Representation in Complex Scenes. Advisor: Assoc. Prof. Feng Yang.
 - Examination committee: Prof. Youchu Chen (chair), Prof. Zhengyou Liang, Prof. Xin Yu, Assoc. Prof. Mengxiao Yin, Assoc. Prof. Xiaoping Zhang.
- 1 July 2014, **B.E. in Computer Science and Technology**, *School of Computer and Electronic Information*, Nanjing Normal University, Nanjing, China.
 - Dissertation: Research on Efficient Phrase Extraction. Advisor: Prof. Yanhui Gu.

Current employment

- Dec 2024 - present, **Senior Postdoctoral Scholar**, *Department of Psychiatry and Behavioral Sciences*, Stanford University, CA, United States. Advisor: Prof. Feng Vankee Lin, Assist. Prof. Ehsan Adeli.

Previous work experience

- Jan 2022 - Dec 2024, **Postdoctoral Research Fellow**, *Center for Machine Vision and Signal Analysis*, University of Oulu, Oulu, Finland. Advisor: Academy Prof. Guoying Zhao (Member of Academia Europaea, Member of the Finnish Academy of Sciences and Letters, IEEE Fellow, IAPR Fellow, and ELLIS Fellow).
- Jun 2024 - Dec 2024, **Visiting Scholar**, *Department of Computer Science and Technology*, University of Cambridge, Cambridge, UK. Host advisor: Prof. Hatice Gunes (EPSRC Fellow).
- Oct 2023 - Dec 2023, **Visiting Researcher**, *Department of Computer Science*, Hong Kong Baptist University, Hong Kong, China. Host advisor: Prof. Pong Chi Yuen (IAPR Fellow and Former Vice President of the IEEE Biometrics Council).
- Jan 2023 - Jun 2023, **Researcher** (50% Part-time), Haaga-Helia University of Applied Sciences, Helsinki, Finland.
 - Research on the *Ministry of Education and Culture of Finland's* project of "AI Forum: Artificial Intelligence Digital Revolution".

Research funding and grants

- Jul 2024 - Jun 2025, Post-doc Grant, *Instrumentarium Science Foundation*, EUR 45,000, **Grantee** (overall success rate: 9.5%), Topic: "Bridging Large Affective Intelligence and

Personalized Pain Detection".

- Jan 2024 - Dec 2024, North Ostrobothnia Regional Fund, *Finnish Cultural Foundation*, EUR 32,000, **Grantee** (overall success rate: 6.5%), Topic: "Towards Crowdsensing Facial Affect Encoder for Trustworthy Mental Wellbeing: A study of Workplace Pain Detection".
- Oct 2020 - Oct 2021, National Postgraduate Program Project, *China Scholarship Council*, EUR 16,200, **Grantee**, Topic: "Graph-based Facial Expression Recognition under Interdisciplinary Guidance".

Research output

- Totally 30 publications. Ten selected papers (* = Senior authorship, † = Equal contribution):
 - **Yang Liu**, Xingming Zhang, Janne Kauttonen, Guoying Zhao. Uncertain Facial Expression Recognition via Multi-task Assisted Correction. *IEEE Transactions on Multimedia*, 2024.
 - **Yang Liu**, Janne Kauttonen, Bowen Zhao, Xiaobai Li, Wei Peng. Towards Emotion AI to Next Generation Healthcare and Education. *Frontiers in Psychology*, 2024.
 - Tutuianu Gianmarco Ipinze, **Yang Liu***, Ari Alamäki, Janne Kauttonen. Benchmarking Deep Facial Expression Recognition: An Extensive Protocol with Balanced Dataset in the Wild. *Engineering Applications of Artificial Intelligence*, 2024.
 - Yunzhu Chen, **Yang Liu**, Manti Lu, Liyao Fu, Feng Yang. Multi-consistency for semi-supervised medical image segmentation via diffusion models. *Pattern Recognition*, 2025.
 - Xinyu Hu, **Yang Liu**, Feng Yang. PFCFuse: A Poolformer and CNN fusion network for Infrared-Visible Image Fusion. *IEEE Transactions on Instrumentation and Measurement*, 2024.
 - **Yang Liu**, Xingming Zhang, Yante Li, Jinzhao Zhou, Xin Li, Guoying Zhao. Graph-based Facial Affect Analysis: A Review. *IEEE Transactions on Affective Computing*, 2023.
 - Yante Li, Jinsheng Wei, **Yang Liu**, Janne Kauttonen, Guoying Zhao. Deep Learning for Micro-expression Recognition: A Survey. *IEEE Transactions on Affective Computing*, 2022. (IEEE TAFFC Popular Articles)
 - **Yang Liu**, Xingming Zhang, Janne Kauttonen, Guoying Zhao. Uncertain Label Correction via Auxiliary Action Unit Graphs for Facial Expression Recognition. *International Conference on Pattern Recognition*, 2022.
 - **Yang Liu**, Xingming Zhang, Jinzhao Zhou, Lunkai Fu. SG-DSN: A Semantic Graph-based Dual-Stream Network for facial expression recognition. *Neurocomputing*, 2021.
 - **Yang Liu**, Xingming Zhang, Yubei Lin, and Haoxiang Wang. Facial Expression Recognition via Deep Action Units Graph Network Based on Psychological Mechanism. *IEEE Transactions on Cognitive and Developmental Systems*, 2020.

Research supervision and leadership experience

- Research supervision:
 - **Co-supervisor** of THREE Master students and THREE Undergraduate students with University of Cambridge and ONE Master graduate with Haaga-Helia University of Applied Sciences.
 - **Follow-up group member** with ONE Doctoral researcher, University of Oulu.
- Leadership experience:
 - **Project manager** (Jan 2023 - Dec 2024), *Academy of Finland's* ICT 2023 "TrustFace" project, Duties: hosting regular meetings, instructing doctoral researchers, and promoting research progress.

Teaching merits

- Oct 2024 - Dec 2024, Affective Artificial Intelligence (L344), University of Cambridge, **Mini-project Mentor**, in-charging "*Multimodal/Multitask Emotion Recognition*" and "*Graph-based Pain Expression Detection*".
- Sep 2023 - Oct 2023, Affective Computing (521285S-3004), University of Oulu, **Assistant Lecturer**, in-charging "*Emotion recognition from facial expressions*" and "*Synthesis of emotional behaviors*".

Other key academic merits, such as

- Memberships and positions of trust in scientific communities:
 - Member of Finnish Center for Artificial Intelligence (FCAI).
 - Member of Chinese Association for Artificial Intelligence (CAAI).
 - Evaluator of European Laboratory for Learning and Intelligent Systems (ELLIS).
- Memberships in editorial committees for scientific and professional publication series and journals or position as editor or editor-in-chief:
 - **Guest Associate Editor** of *Frontiers in Psychology & Frontiers in Human Neuroscience*, Research Topic: "Towards Emotion AI to Next Generation Healthcare and Education".
- Organizing scientific conferences:
 - May 26-30, 2025, **Workshop Organizer** of *FG 2025*, Clearwater, USA, Topic: "Towards Trustworthy Facial Affect Analysis: Advancing Insights of Fairness, Explainability, and Safety (TrustFAA)".
 - Jun 10-14, 2024, **Tutorial Organizer** of *HAI 2024: Hybrid Human AI Systems for the Social Good*, Malmö, Sweden, Topic: "Human-AI mutual promotion for emotion and cognition understanding".
- Referee for scientific publications:
 - Journals: IEEE Trans. on Affective Computing, IEEE Trans. on Multimedia, IEEE Trans. on Circuits and Systems for Video Technology, IEEE Trans. on Information Forensics and Security, IEEE Trans. on Services Computing, IEEE Internet of Things Journal, Pattern Recognition, Image Vision Computing, The Vision Computing, LET Communications, Neurocomputing
 - Conferences: ECCV, IJCAI, ICASSP, ICIP, ICPR, IEEE FG, ISLS
- Significant invited international lectures:
 - 26 July 2024, invited talk "Emotional Behavior Analysis via Affective Computing and Transfer Learning", *CogT Lab*, Zoom, Stanford University, Palo Alto, CA.
 - 3 August 2023, invited talk "Trustworthy multi-task emotion analysis", *Guangzhou Institute*, Xidian University, Guangzhou, China.
 - 9 February 2023, invited talk "What affective computing can bring to healthcare?", *LEF Day event of the Finnish Society for Medical Physics and Medical Engineering*, Saalastinsali, University of Oulu, Oulu, Finland.
 - 9 May 2022, invited talk "Graph-based Facial Affect Analysis: Trends and Applications", *Second webinar of Finnish Center for Artificial Intelligence Special Interest Group*, Zoom, Helsinki, Finland.