

Dan Guo

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Title

Professor
School of Computer Science and Information Engineering
School of Artificial Intelligence
Hefei University of Technology, China

Research Interests

My research interests include intelligent multimedia content analysis, computer vision, and machine learning. The major focus of my research is multimedia reasoning, visual question answering, audio-visual event understanding, and sign language recognition. Over the last five years, I have made significant contributions to the field of computer vision and multimedia, resulting in a remarkable publication record comprising over 60 high-impact papers in esteemed international conferences and journals

Education Background

Yangtze University	In 2004
<i>the B.E. degree in computer science and technology</i>	<i>China</i>
Huazhong University of Science and Technology	In 2010
<i>the Ph.D. degree in system analysis and integration</i>	<i>China</i>

Working Experience

Postdoctoral fellow	2010.8 – 2012.8
<i>Hefei University of Technology</i>	<i>China</i>
<i>School of Computer Science and Information Engineering</i>	
Lecturer	2012.8 – 2013.12
<i>Hefei University of Technology</i>	<i>China</i>
<i>School of Computer Science and Information Engineering</i>	
Associate Professor	2013.12 – 2019.12
<i>Hefei University of Technology</i>	<i>China</i>
<i>School of Computer Science and Information Engineering</i>	
Professor	2019.12 – now
<i>Hefei University of Technology</i>	<i>China</i>
<i>School of Computer Science and Information Engineering (School of Artificial Intelligence)</i>	

Grants

- **Outstanding Reviewer Award** of IEEE International Conference on Multimedia and Expo (IEEE ICME), 2020-07.
- **Outstanding Reviewer Award** of Computer Science journal, 2021-12.
- **Top-notch young talents for young scholars of High-end Talent Cultivation Action Program of Anhui Province, China**, 2023-09.

Publications

Peer-Reviewed Journal Papers and Conference Papers

- Jinxing Zhou, Jianyuan Wang, Jiayi Zhang, Weixuan Sun, Jing Zhang, Stan Birchfield, **Dan Guo**, Meng Wang*, and Yiran Zhong*. "Audio-Visual Segmentation", European Conference on Computer Vision (*ECCV*), 2022.
- **Dan Guo**, Hui Wang*, Hanwang Zhang, Zhengjun Zha, and Meng Wang*, "Iterative Context-Aware Graph Inference for Visual Dialog", IEEE Conference on Computer Vision and Pattern Recognition (*CVPR, oral paper*), 2020.
- **Dan Guo**, Hui Wang, and Meng Wang*. "Context-Aware Graph Inference with Knowledge Distillation for Visual Dialog", IEEE Transactions on Pattern Analysis and Machine Intelligence (*TPAMI, IF 24.314*), 2021.
- Jinxing Zhou, **Dan Guo***, and Meng Wang*. "Contrastive Positive Sample Propagation along the Audio-Visual Event Line", IEEE Transactions on Pattern Analysis and Machine Intelligence (*TPAMI, IF 24.314*), 2022.
- **Dan Guo**, Hui Wang, Shuhui Wang, and Meng Wang*, "Textual-Visual Reference-Aware Attention Network for Visual Dialog", IEEE Transactions on Image Processing (*TIP*), 2020.
- **Dan Guo**, Wengang Zhou*, Anyang Li, Houqiang Li, and Meng Wang*, "Hierarchical Recurrent Deep Fusion Using Adaptive Clip Summarization for Sign Language Translation", IEEE Transactions on Image Processing (*TIP*), 2020.
- Sheng Zhou, **Dan Guo***, Jia Li, Xun Yang*, and Meng Wang. "Exploring Sparse Spatial Relation in Graph Inference for Text-Based VQA", IEEE Transactions on Image Processing (*TIP*), 2023.
- **Dan Guo**, **Yang Wang***, Peipei Song*, and Meng Wang, "Recurrent Relational Memory Network for Unsupervised Image Captioning", International Joint Conference on Artificial Intelligence (*IJCAI*), 2020.
- **Dan Guo**, Shengeng Tang, and Meng Wang, "Connectionist Temporal Modeling of Video and Language: A Joint Model for Translation and Sign Labeling", International Joint Conference on Artificial Intelligence (*IJCAI*), 2019.
- **Dan Guo**, Shuo Wang, Qi Tian, and Meng Wang, "Dense Temporal Convolution Network for Sign Language Translation", International Joint Conference on Artificial Intelligence (*IJCAI*), 2019.
- **Dan Guo**, Hui Wang, and Meng Wang, "Dual Visual Attention Network for Visual Dialog", International Joint Conference on Artificial Intelligence (*IJCAI*), 2019.
- **Dan Guo**, Wengang Zhou, Houqiang Li, and Meng Wang, "Hierarchical LSTM for Sign Language Translation", AAAI Conference on Artificial Intelligence (*AAAI, oral paper*), 2018.
- Kun Li, **Dan Guo***, and Meng Wang*, "Proposal-Free Video Grounding with Contextual Pyramid Network", AAAI Conference on Artificial Intelligence (*AAAI*), 2021.
- **Dan Guo**, Kun Li*, and Meng Wang, "DADNet: Dilated-Attention Deformable ConvNet for Crowd Counting", ACM International Conference on Multimedia (*ACM MM, oral paper*), 2019.
- Peipei Song, **Dan Guo***, Xun Yang, Shengeng Tang, Erkun Yang, and Meng Wang*. "Emotion-Prior Awareness Network for Emotional Video Captioning", ACM International Conference on Multimedia (*ACM MM, oral paper*), 2023.
- Shengeng Tang, Richang Hong*, **Dan Guo***, and Meng Wang, "Gloss Semantic-Enhanced Network with Online Back-Translation for Sign Language Production", ACM International Conference on Multimedia (*ACM MM*), 2022.
- Hui Wang, **Dan Guo***, Xiansheng Hua, and Meng Wang*, "Pairwise VLAD Interaction Network for Video Question Answering", ACM International Conference on Multimedia (*ACM MM*), 2021.

- Shuo Wang, **Dan Guo***, Wengang Zhou, Zhengjun Zha, and Meng Wang, "Connectionist Temporal Fusion for Sign Language Translation", International ACM International Conference on Multimedia (*ACM MM*), 2018.
- Tianyuan Xu, Xueliang Liu, Zhen Huang, **Dan Guo**, Richang Hong, and Meng Wang. "Early-learning regularized contrastive learning for cross-modal retrieval with noisy labels", ACM International Conference on Multimedia (*ACM MM*), 2022.
- Jia Li, Wei Qian, Kun Li, Qi Li, **Dan Guo***, and Meng Wang*. "Exploiting Diverse Feature for Multimodal Sentiment Analysis", *ACM MM Challenge paper*, 2023.
- Kun Li, **Dan Guo***, Guoliang Chen, Feiyang Liu and Meng Wang. "Data Augmentation for Human Behavior Analysis in Multi-Person Conversations", *ACM MM Challenge paper*, 2023.
- Peipei Song, **Dan Guo***, Jun Cheng, and Meng Wang*, "Contextual Attention Network for Emotional Video Captioning", IEEE Transactions on Multimedia (*TMM*), 2022.
- Shengeng Tang, **Dan Guo***, Richang Hong*, and Meng Wang, "Graph-Based Multimodal Sequential Embedding for Sign Language Translation", IEEE Transactions on Multimedia (*TMM*), 2021.
- Kang Liu, Feng Xue, **Dan Guo**, Peijie Sun, Shengsheng Qian, Richang Hong. "Multimodal Graph Contrastive Learning for Multimedia-Based Recommendation", IEEE Transactions on Multimedia (*TMM*), 2023.
- Zhao Xie, Jiansong Chen, Kewei Wu, **Dan Guo**, and Richang Hong. "Global Temporal Difference Network for Action Recognition", IEEE Transactions on Multimedia (*TMM*), 2022.
- Yuqi Fan, Wenlong Liu, **Dan Guo**, Weili Wu, and Dingzhu Du. "Shuffle Scheduling for MapReduce Jobs Based on Periodic Network Status", IEEE/ACM Transactions on Networking (*TON*), 2020.
- Peipei Song, **Dan Guo***, Jinxing Zhou, Mingliang Xu, and Meng Wang*, "Memorial GAN with Joint Semantic Optimization for Unpaired Image Captioning", IEEE Transactions on Cybernetics (*TCYB*), 2022.
- Kun Li, **Dan Guo***, and Meng Wang*. "ViGT: Proposal-free Video Grounding with Learnable Token in Transformer", Science China Information Sciences (*SCIS*), 2023.
- Shuaiyang Li, **Dan Guo**, Kang Liu, Richang Hong, and Feng Xue. "Multimodal Counterfactual Learning Network for Multimedia-based Recommendation", Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval (*SIGIR*), 2023.
- Kun Li, Jiaxiu Li, **Dan Guo***, Xun Yang*, and Meng Wang. "Transformer-based Visual Grounding with Cross-modality Interaction", ACM Transactions on Multimedia Computing, Communications and Applications (*ACM TOMM*), 2023.
- Shuo Wang, **Dan Guo***, Xin Xu, Li Zhuo, and Meng Wang, "Cross-Modality Retrieval by Joint Correlation Learning", ACM Transactions on Multimedia Computing Communications and Applications (*ACM TOMM*), 2019.
- **Dan Guo**, Wengang Zhou*, Houqiang Li*, and Meng Wang*, "Online Early-Late Fusion Based on Adaptive HMM for Sign Language Recognition", ACM Transactions on Multimedia Computing Communications and Applications (*ACM TOMM*), 2018.
- Kang Liu, Feng Xue, Xiangnan He, **Dan Guo**, and Richang Hong. "Joint multi-grained popularity-aware graph convolution collaborative filtering for recommendation", IEEE Transactions on Computational Social Systems (*TCSS*), 2022.
- **Dan Guo**, Wengang Zhou, Meng Wang, and Houqiang Li. "Sign language recognition based on adaptive hmms with data augmentation", IEEE International Conference on Image Processing (*ICIP*), 2016.

Peer-Reviewed Journal Papers and Conference Papers

- Xinge Peng, Kun Li*, Jiaxiu Li, Guoliang Chen, and **Dan Guo***. "Multi-modality Fusion for Emotion Recognition in Videos", *IJCAI Challenge paper*, 2023.
- Kun Li, **Dan Guo***, Guoliang Chen, Xinge Peng, and Meng Wang. "Joint Skeletal and Semantic Embedding Loss for Micro-gesture Classification", *IJCAI Challenge paper*, 2023.

ArXiv Preprints

- Wei Qian, **Dan Guo***, Kun Li, Xilan Tian, and Meng Wang. "Dual-path tokenlearner for remote photoplethysmography-based physiological measurement with facial videos", arXiv preprint arXiv:2308.07771.
- Jinxing Zhou, **Dan Guo***, Yiran Zhong, and Meng Wang. "Improving audio-visual video parsing with pseudo visual labels", arXiv preprint arXiv:2303.02344.
- Jiaxiu Li, Kun Li, Jia Li, Guoliang Chen, **Dan Guo***, and Meng Wang. "Dual-Path Temporal Map Optimization for Make-up Temporal Video Grounding", arXiv preprint arXiv:2309.06176

Academic Experience

Academic Member

- Member of IEEE
- Member of ACM
- Senior member of CCF (China Computer Federation).

Senior Program Committee (SPC) Member

- International Joint Conference on Artificial Intelligence (IJCAI).

Journal Reviewer

- International Journal of Computer Vision (IJCV).
- IEEE Transactions on Image Processing (TIP).
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- IEEE Transactions on Multimedia (TMM).
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT).
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS).
- IEEE Transactions on Affective Computing (TAC).
- IEEE Transactions on Cybernetics (TCYB).
- IEEE Transactions on Systems, Man, and Cybernetics (TSMC).
- ACM Transactions on Information Systems (TOIS).
- ACM Transactions on Multimedia Computing Communications and Applications (TOMM).
- IEEE Transactions on Computational Social Systems (TCSS)

Conference Reviewer/PC Member

- ACM International Conference on Multimedia (ACM MM).
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR).
- International Conference on Computer Vision (ICCV).

- AAI Conference on Artificial Intelligence (AAI).
- European Conference on Computer Vision (ECCV).

Other Reviewer

- Served as a reviewer in the National Natural Science Foundation of China.
- CIKM, ICASSP, MMI, MMAAsia, ACCV, ICDM, BMVC, PRCV, ECAI, FG, ICPR, CVIU, MTA, PR, KBS, ESWA, JBH.

Guest Editor

- In 2023, proposed and served as the guest editor for a special issue of "Deep Learning for Robust Human Body Language Understanding" on the ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM) journal.
- In 2023, proposed and served as the guest editor for a special issue of "Trustworthy Cross-Modal Reasoning for Video-Language Understanding" on the Computer Vision and Image Understanding (CVIU) journal.

Talk

- In Honor of Outstanding Academic Performance in Artificial Intelligence, I had been invited as a speaker of 2021 International Joint Conference on Artificial Intelligence (IJCAI)-SAA Young Elite Symposium.

Competitions

- **ACM International Conference on Multimedia (ACM MM) Grand Challenge** - Multi-modal Group Behaviour Analysis for Artificial Mediation, **1st Place** in Bodily Behaviour Recognition Track, 2023.07.
- **ACM International Conference on Multimedia (ACM MM) Grand Challenge** - Multi-modal Group Behaviour Analysis for Artificial Mediation, **1st Place** in Eye Contact Detection Track, 2023.07.
- **ACM International Conference on Multimedia (ACM MM) Grand Challenge** - Multi-modal Group Behaviour Analysis for Artificial Mediation, **3rd Place** in Next Speaker Prediction Track, 2023.07.
- **ACM International Conference on Multimedia (ACM MM) Multi-modal Sentiment Analysis Challenge**, **3rd Place** in MuSe-Personalisation Track, 2023.07.
- **International Joint Conference on Artificial Intelligence (IJCAI) Challenge**- Micro-gesture Analysis for Hidden Emotion Understanding, **1st Place** in Micro-gesture Classification Track, 2023.05.
- **International Joint Conference on Artificial Intelligence (IJCAI) Challenge** - Micro-gesture Analysis for Hidden Emotion Understanding, **2nd Place** in Micro-gesture Online Recognition Track, 2023.05.

Projects

- National Natural Science Foundation of China - General Program, No. 62272144, Principal Investigator, 2023-2026.
- National Key Research and Development Program of China, No.2022YFB4500601, Sub-Project Principal Investigator, 2022-2025.
- National Natural Science Foundation of China - Key Program, No. U20A20183, Sub-Project Principal Investigator, 2021-2024.
- National Key Research and Development Program of China, No. 2018YFC0830103, Sub-Project Principal Investigator, 2018-2021.
- National Natural Science Foundation of China - General Program, No. 61876058, Principal Investigator, 2018-2022.
- National Natural Science Foundation of China - General Program, No. 61305062, Principal Investigator, 2013-2016.