

**40th AAAI Conference on Artificial Intelligence (AAAI-26), 38th Conference on Innovative Applications of Artificial Intelligence (IAAI-26), and 16th Symposium on Educational Advances in Artificial Intelligence (EAAI-26)**

Volume 21: AAAI Technical Tracks

- Humans and AI

Singapore  
20-27 January 2026

ISBN: 979-8-3313-3395-9

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2026) by Association for the Advancement of Artificial Intelligence  
All rights reserved.

Printed with permission by Curran Associates, Inc. (2026)

For permission requests, please contact Association for the Advancement of Artificial Intelligence  
at the address below.

Association for the Advancement of Artificial Intelligence  
2275 East Bayshore Road  
Suite 160  
Palo Alto, California 94303  
USA

Phone: 1-650-328-3123  
Fax: 1-650-321-4457

<https://aaai.org/Press/press.php>

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

## AAAI TECHNICAL TRACK ON HUMANS AND AI

Align When They Want, Complement When They Need! Human-Centered Ensembles for Adaptive Human-AI Collaboration.....	17337
<i>Hasan Amin, Ming Yin, Rajiv Khanna</i>	
Who is Helping Whom? Analyzing Inter-Dependencies to Evaluate Cooperation in Human-AI Teaming.....	17347
<i>Upasana Biswas, Vardhan Palod, Siddhant Bhambri, Subbarao Kambhampati</i>	
Explaining Decentralized Multi-Agent Reinforcement Learning Policies .....	17357
<i>Kayla Boggess, Sarit Kraus, Lu Feng</i>	
EPIC: Explanation of Pretrained Image Classification Networks Via Prototypes.....	17366
<i>Piotr Borycki, Magdalena Tredowicz, Szymon Janusz, Jacek Tabor, Przemyslaw Spurek, Arkadiusz Lewicki, Lukasz Struski</i>	
HuiduRep: A Robust Self-Supervised Framework for Learning Neural Representations from Extracellular Recordings .....	17374
<i>Feng Cao, Zishuo Feng, Jicong Zhang, Wei Shi</i>	
Spontaneous Yet Predictable: Shapelet-Driven, Channel-Aware Intention Decoding from Multi-Region ECoG .....	17384
<i>Keren Cao, Yuhang Tian, Kaizhong Zheng, Wei Xi, Xinjian Li, Liangjun Chen</i>	
Counterfactual eXplainable AI (XAI) Method for Deep Learning-Based Multivariate Time Series Classification.....	17393
<i>Alan Gabriel Paredes Cetina, Kaouther Benguessoum, Raoni Lourenco, Sylvain Kubler</i>	
Attribution Analysis-Based Concept Alignment: A Human-In-The-Loop Data Debugging Framework.....	17401
<i>Lei Chai, Lu Qi, Hailong Sun, Jing Zhang, Jingxuan Xu</i>	
GazeInterpreter: Parsing Eye Gaze to Generate Eye-Body-Coordinated Narrations .....	17410
<i>Qing Chang, Zhiming Hu</i>	
D-GARA: A Dynamic Benchmarking Framework for GUI Agent Robustness in Real-World Anomalies.....	17419
<i>Sen Chen, Tong Zhao, Yi Bin, Fei Ma, Wenqi Shao, Zheng Wang</i>	
EMOD: A Unified EEG Emotion Representation Framework Leveraging V-A Guided Contrastive Learning .....	17427
<i>Yuning Chen, Sha Zhao, Shijian Li, Gang Pan</i>	
Intention-Guided Cognitive Reasoning for Egocentric Long-Term Action Anticipation .....	17436
<i>Qiaohui Chu, Haoyu Zhang, Meng Liu, Yisen Feng, Haoxiang Shi, Liqiang Nie</i>	
Too Sure for Our Own Good: A User Study on AI Confidence and Human Reliance .....	17445
<i>Caterina Fregosi, Lucia Vicente, Andrea Campagner, Federico Cabitza</i>	

ParetoHqD: Fast Offline Multiobjective Alignment of Large Language Models Using Pareto High-Quality Data .....	17454
<i>Haoran Gu, Handing Wang, Yi Mei, Mengjie Zhang, Yaochu Jin</i>	
Cross-Modal Prompting for Balanced Incomplete Multi-Modal Emotion Recognition.....	17463
<i>Wen-Jue He, Xiaofeng Zhu, Zheng Zhang</i>	
Can Humans Teach Machines to Code? .....	17472
<i>Celine Hocquette, Johannes Langer, Andrew Cropper, Ute Schmid</i>	
Alfa: Attentive Low-Rank Filter Adaptation for Structure-Aware Cross-Domain Personalized Gaze Estimation.....	17481
<i>He-Yen Hsieh, Wei-Te Mark Ting, H. T. Kung</i>	
Graph Neural Field with Spatial-Correlation Augmentation for HRTF Personalization .....	17490
<i>De Hu, Junsheng Hu, Cuicui Jiang</i>	
SSL-CST: Cell Segmentation for Single-Cell Spatial Transcriptome Based on Self-Supervised Learning .....	17499
<i>Weiliang Huo, Shilin Zhang, Suixue Wang, Qingchen Zhang</i>	
Whole-Field Action Sensing Via Wearable Single-Channel EMG Sensors and Resource-Efficient Motion Network .....	17508
<i>Xuanming Jiang, Dingyu Nie, Baoyi An, Yuzhe Zheng, Yichuan Mao, Jialie Shen, Xueming Qian, Zhiwen Jin, Wei Lan, Guoshuai Zhao</i>	
Mitigating Length Bias in RLHF Through a Causal Lens.....	17517
<i>Hyeonji Kim, Sujeong Oh, Sanghack Lee</i>	
ESCA: An Emotional Support Conversation Agent for Enhancing Reasonable Strategy Planning and Effective Expression.....	17526
<i>Jing Li, Yanxin Luo, Donghong Han, Yimeng Zhan, Xiaoming Fu, Baiyou Qiao, Gang Wu</i>	
ViTE: Virtual Graph Trajectory Expert Router for Pedestrian Trajectory Prediction.....	17535
<i>Ruo Chen Li, Zhanxing Zhu, Tanqiu Qiao, Hubert P. H. Shum</i>	
Belief-Driven Value Alignment for Human-Robot Collaboration.....	17544
<i>Saisai Li, Bing Shi, Yiming Xia, Xiao Su</i>	
GigaMoE: Sparsity-Guided Mixture of Experts for Efficient Gigapixel Object Detection.....	17553
<i>Xiang Li, Wenxi Li, Yuetong Wang, Chenyang Lyu, Haozhe Lin, Guiguang Ding, Yuchen Guo</i>	
Bridging Cognitive Gap: Hierarchical Description Learning for Artistic Image Aesthetics Assessment.....	17562
<i>Henglin Liu, Nisha Huang, Chang Liu, Jiangpeng Yan, Huijuan Huang, Jixuan Ying, Tong-Yee Lee, Pengfei Wan, Xiangyang Ji</i>	
Do Large Language Models Reason About Uncertainty Like Humans? a Benchmark on Hurricane Forecast Visualization Comprehension .....	17571
<i>Le Liu, Yuhao Wang, Bohan Shen, Wei Zeng, Shizhou Zhang, Di Xu, Peng Wang</i>	
Leveraging Visual Blur Perception Characteristics for EEG Decoding .....	17580
<i>Wenchao Liu, Hongwei Li, Zhouyang Xu, Lin Ma, Haifeng Li</i>	
MindCross: Fast New Subject Adaptation with Limited Data for Cross-Subject Video Reconstruction from Brain Signals.....	17589
<i>Xuan-Hao Liu, Yan-Kai Liu, Tianyi Zhou, Bao-Liang Lu, Wei-Long Zheng</i>	

Gracefully Air-Written: Enhancing the Legibility and Style Consistency of In-Air Handwriting.....	17598
<i>Yu Liu, Cunrui Wang, Lin Feng, Jianxin Zhang, Bo Lu</i>	
UI-R1: Enhancing Efficient Action Prediction of GUI Agents by Reinforcement Learning.....	17608
<i>Zhengxi Lu, Yuxiang Chai, Yaxuan Guo, Xi Yin, Liang Liu, Hao Wang, Han Xiao, Shuai Ren, Pengxiang Zhao, Guangyi Liu, Guanjing Xiong, Hongsheng Li</i>	
BrainHGT: A Hierarchical Graph Transformer for Interpretable Brain Network Analysis .....	17617
<i>Jiajun Ma, Yongchao Zhang, Chao Zhang, Zhao Lv, Shengbing Pei</i>	
TRIPLE: Theory-Driven Integration of Planned and Habitual Behaviors for LLM-Based Personalization .....	17626
<i>Taehyung Noh, Seungwan Jin, Haein Yeo, Kyungsik Han</i>	
FGD-Align: Pluralistic Alignment for Large Language Models Via Fuzzy Group Decision-Making .....	17635
<i>Weihang Pan, Zhengxu Yu, Yong Wu, Xun Liang, Zhongming Jin, Qiang Fu, Penghui Shang, Binbin Lin, Xiaofei He, Jieping Ye</i>	
BiO-HMC: Dynamic Human-Machine Collaboration for Consensus Decision-Making Via Bilevel Optimization.....	17644
<i>Yinghui Pan, Shuaijie Zhao, Shenbao Yu, Zongyang Liu, Yifeng Zeng, Han Liu, Mingwei Lin</i>	
Human Cognitive Biases in Explanation-Based Interaction: The Case of Within and Between Session Order Effect.....	17652
<i>Dario Pesenti, Alessandro Bogani, Katya Tentori, Stefano Teso</i>	
Inferring Heterogeneous Private Valuations from Offline Market Data Via Entropic Risk-Sensitive Utility Maximization .....	17661
<i>Xingyu Qian, Haoran Yu</i>	
Towards Reinforcement Learning from Neural Feedback: Mapping fNIRS Signals to Agent Performance.....	17670
<i>Julia Santaniello, Matthew Russell, Benson Jiang, Donatello Sassaroli, Robert Jacob, Jivko Sinapov</i>	
TuningIQA: Fine-Grained Blind Image Quality Assessment for Livestreaming Camera Tuning.....	17679
<i>Xiangfei Sheng, Zhichao Duan, Xiaofeng Pan, Yipo Huang, Zhichao Yang, Pengfei Chen, Leida Li</i>	
Simulating Human-Like Counseling: A Path- And Scenario-Guided Framework for Psychological Support Dialogue.....	17688
<i>Yuanchen Shi, Longyin Zhang, Maodong Li, Yibin Zheng, Xiuhong Wang, Fang Kong</i>	
Treatment Stitching with Schrödinger Bridge for Enhancing Offline Reinforcement Learning in Adaptive Treatment Strategies.....	17697
<i>Dong-Hee Shin, Deok-Joong Lee, Young-Han Son, Tae-Eui Kam</i>	
PINet: Improving the Stability of Prototype Networks Via Phantasia-Inspired Uncertain Representations .....	17706
<i>Ho Kyung Shin, Soeun Bae, Sang Min Kim, Byoung Chul Ko, Woo-Jeoung Nam</i>	
Reducing Goal State Divergence with Environment Design.....	17715
<i>Kelsey Sikes, Sarah Keren, Sarath Sreedharan</i>	
Human-Centric Open-Future Task Discovery: Formulation, Benchmark, and Scalable Tree-Based Search.....	17724
<i>Zijian Song, Xiaoxin Lin, Tao Pu, Zhenlong Yuan, Guangrun Wang, Liang Lin</i>	

EEG-DLite: Dataset Distillation for Efficient Large EEG Model Training.....	17733
<i>Yuting Tang, Weibang Jiang, Shanglin Li, Yong Li, Chenyu Liu, Xinliang Zhou, Yi Ding, Cuntai Guan</i>	
AutoGameUI: Constructing High-Fidelity GameUI Via Multimodal Correspondence Matching .....	17742
<i>Zhongliang Tang, Qingrong Cheng, Mengchen Tan, Yongxiang Zhang, Fei Xia</i>	
Consensus-Driven Multi-Agent Cognitive Reasoning for Enhancing the Emotional Intelligence of Large Language Models .....	17751
<i>Geng Tu, Dingming Li, Jun Huang, Ruifeng Xu</i>	
Inferring Implicit Goals Across Differing Task Models .....	17760
<i>Silvia Tulli, Stylianos Loukas Vasileiou, Mohamed Chetouani, Sarath Sreedharan</i>	
Emotion-Conditioned Motion Sub-Spaces with Flow Matching for Real-Time Audio-Driven Talking Heads.....	17769
<i>Haoyu Wang, Xiaozhe Xin, Xiaoyu Qin, Meiguang Jin, Junfeng Ma, Dan Xu, Jia Jia</i>	
Perceive More with Less: LiDAR Point Cloud Compression at Just Recognizable Distortion for 3D Scene Understanding .....	17778
<i>Miaohui Wang, Runnan Huang, Taojun Liu, Shuyuan Lin, Ye Liu, Yun Song</i>	
New Synthetic Goldmine: Hand Joint Angle-Driven EMG Data Generation Framework for Micro-Gesture Recognition.....	17787
<i>Nana Wang, Suli Wang, Gen Li, Pengfei Ren, Hao Su</i>	
A Brain-Inspired Saliency Prediction Framework for Human-AI Cognitive Consistency in AIGC Content Via Multi-Region Liquid Neurons .....	17796
<i>Shibo Wang, Yan Zhao, Shigang Wang, Jian Wei, Shuo Li</i>	
BraSTORM: A Dual-Branch Self-Supervised Framework for EEG Representation Learning Via Input-Level Spatio-Temporal Decomposition .....	17805
<i>Yifan Wang, Der-Horng Lee, Bruce X. B. Yu</i>	
Reasoning Shapes Alignment: Investigating Cultural Alignment in Large Reasoning Models with Cultural Norms .....	17814
<i>Yuhang Wang, Yanxu Zhu, Jitao Sang</i>	
QueryCraft: Transformer-Guided Query Initialization for Enhanced Human-Object Interaction Detection .....	17823
<i>Yuxiao Wang, Wolin Liang, Yu Lei, Weiyang Xue, Nan Zhuang, Qi Liu</i>	
What-Meets-Where: Unified Learning of Action and Contact Localization in Images.....	17832
<i>Yuxiao Wang, Yu Lei, Wolin Liang, Weiyang Xue, Zhenao Wei, Nan Zhuang, Qi Liu</i>	
F.A.C.U.L.: Language-Based Interaction with AI Companions in Gaming .....	17841
<i>Wenya Wei, Sipeng Yang, Qixian Zhou, Ruochen Liu, Xuelei Zhang, Yifu Yuan, Yan Jiang, Yongle Luo, Hailong Wang, Tianzhou Wang, Peipei Jin, Wangtong Liu, Zhou Zhao, Xiaogang Jin, Elvis S. Liu</i>	
State Mamba: Spatiotemporal EEG State-Space Model with Dynamic Brain Alignment for Cross-Subject Representation .....	17850
<i>Weining Weng, Yang Gu, Yuan Ma, Yuchen Liu, Yingwei Zhang, Yiqiang Chen</i>	
Shrinking the Teacher: An Adaptive Teaching Paradigm for Asymmetric EEG-Vision Alignment .....	17859
<i>Lukun Wu, Jie Li, Ziqi Ren, Kaifan Zhang, Xinbo Gao</i>	

Multigranular Evaluation for Brain Visual Decoding.....	17868
<i>Weihao Xia, Cengiz Oztireli</i>	
Automated Human Strategic Behavior Modeling Via Large Language Models .....	17877
<i>Xiaohan Xie, Haoran Yu, Biying Shou, Jianwei Huang</i>	
Point Cloud Quality Assessment Via Multi-View Structure-Aware Feature Fusion.....	17886
<i>Jian Xiong, Lingxia Jiang, Xianzhong Long, Miaohui Wang, Hao Gao</i>	
CyC3D: Fine-Grained Controllable 3D Generation Via Cycle Consistency Regularization.....	17895
<i>Hongbin Xu, Chaohui Yu, Feng Xiao, Jiazheng Xing, Hai Ci, Weitao Chen, Fan Wang, Ming Li</i>	
AR-Nav Benchmark: Augmented Reality Navigation with Vision and Language.....	17904
<i>Liqi Yan, Yihao Wu, Chenyi Xu, Chao Yang, Jianhui Zhang, Pan Li</i>	
On Coresets for End-To-End Learning from Crowds.....	17913
<i>Hang Yang, Zhiwu Li, Witold Pedrycz</i>	
Plug-And-Play Clarifier: A Zero-Shot Multimodal Framework for Egocentric Intent Disambiguation .....	17921
<i>Sicheng Yang, Yukai Huang, Weitong Cai, Shitong Sun, You He, Jiankang Deng, Hang Zhang, Jifei Song, Zhensong Zhang</i>	
SUGAR: Learning Skeleton Representation with Visual-Motion Knowledge for Action Recognition .....	17930
<i>Qilang Ye, Yu Zhou, Lian He, Jie Zhang, Xuanming Guo, Jiayu Zhang, Mingkui Tan, Weicheng Xie, Yue Sun, Tao Tan, Xiaochen Yuan, Ghada Khoriba, Zitong Yu</i>	
Reconstruction Attack-Resistant Inference Paradigm for LLM Cloud Services .....	17939
<i>Zipeng Ye, Wenjian Luo, Qi Zhou, Yubo Tang</i>	
TiCAL:Typicality-Based Consistency-Aware Learning for Multimodal Emotion Recognition.....	17948
<i>Wen Yin, Siyu Zhan, Cencen Liu, Xin Hu, Guiduo Duan, Xiurui Xie, Yuan-Fang Li, Tao He</i>	
2D-CrossScan Mamba: Enhancing State Space Models with Spatially Consistent Multi-Path 2D Information Propagation.....	17957
<i>Longlong Yu, Wenxi Li, Yaoqi Sun, Hang Xu, Chenggang Yan, Yuchen Guo</i>	
MF-Speech: Achieving Fine-Grained and Compositional Control in Speech Generation Via Factor Disentanglement.....	17966
<i>Xinyue Yu, Youqing Fang, Pingyu Wu, Guoyang Ye, Wenbo Zhou, Weiming Zhang, Song Xiao</i>	
ELSPR: Evaluator LLM Training Data Self-Purification on Non-Transitive Preferences Via Tournament Graph Reconstruction.....	17975
<i>Yan Yu, Yilun Liu, Minggui He, Shimin Tao, Weibin Meng, Xinhua Yang, Li Zhang, Hongxia Ma, Dengye Li, Daimeng Wei, Boxing Chen, Fuliang Li</i>	
PressTrack-HMR: Pressure-Based Top-Down Multi-Person Global Human Mesh Recovery .....	17984
<i>Jiayue Yuan, Fangting Xie, Guangwen Ouyang, Changhai Ma, Ziyu Wu, Heyu Ding, Quan Wan, Yi Ke, Yuchen Wu, Xiaohui Cai</i>	
SmartAgent: Chain-Of-User-Thought for Embodied Personalized Agent in Cyber World.....	17993
<i>Jiaqi Zhang, Chen Gao, Liyuan Zhang, Quoc Viet Hung Nguyen, Hongzhi Yin</i>	
SEBSFormer: A Spectral-Enhanced Bi-Stream Transformer for Robust EEG Decoding .....	18002
<i>Lin Zhang, Shikui Tu, Lei Xu</i>	

GATCL: An Adaptive Contrastive Learning Framework Based on MHGAT for Spatial Domain Identification in Spatial Transcriptomics.....	18011
<i>Shilin Zhang, Weiliang Huo, Qingchen Zhang, Xiulong Liu</i>	
SAMGTD: Spatial-Aware Masked Graph Transformer-Diffusion Model for Enhanced Cell Type Deconvolution in Spatial Transcriptomics.....	18020
<i>Shilin Zhang, Suixue Wang, Qingchen Zhang, Xiulong Liu</i>	
NeuroBridge: Bio-Inspired Self-Supervised EEG-To-Image Decoding Via Cognitive Priors and Bidirectional Semantic Alignment.....	18028
<i>Wenjiang Zhang, Sifeng Wang, Yuwei Su, Xinyu Li, Chen Zhang, Suyu Zhong</i>	
Single-Stage fMRI-To-3D Reconstruction Via Viewpoint-Aware Embedding and Hierarchical Guidance.....	18037
<i>Xun Zhang, Weihao Xia, Yulong Liu, Bo Yang, Alessandro Bozzon, Pan Wang</i>	
SPARD: Single-Step Inference with Adaptive Sampling in Residual Diffusion for Human Motion Prediction .....	18046
<i>Yiming Zhang, Baojia Han, Ximing Li, Wei Pang, Fausto Giunchiglia, Xiaoyue Feng, Renchu Guan</i>	
Coverage-Constrained Human-AI Cooperation with Multiple Experts .....	18055
<i>Zheng Zhang, Cuong C. Nguyen, Kevin Wells, Thanh-Toan Do, David Rosewarne, Gustavo Carneiro</i>	
EEG Agent: A Unified Framework for Automated EEG Analysis Using Large Language Models .....	18063
<i>Sha Zhao, Mingyi Peng, Haiteng Jiang, Tao Li, Shijian Li</i>	
TrajEvo: Trajectory Prediction Heuristics Design Via LLM-Driven Evolution.....	18072
<i>Zhikai Zhao, Chuanbo Hua, Federico Berto, Kanghoon Lee, Zihan Ma, Jiachen Li, Jinkyoo Park</i>	
S <sup>3</sup> : Spiking Neurons as an Isolating Segmenter for Brain Signal Decoding.....	18081
<i>Qian Zheng, Ming Chen, Sha Zhao, Shi Gu, Peng Lin, De Ma, Huajin Tang, Gang Pan</i>	
CAT-Net: A Cross-Attention Tone Network for Cross-Subject EEG-EMG Fusion Tone Decoding .....	18090
<i>Yifan Zhuang, Calvin Huang, Zepeng Yu, Yongjie Zou, Jiawei Ju</i>	
MindSight: A Bio-Inspired Neural Architecture for Visual Restoration Via Cortical Electrical Stimulation .....	18099
<i>Yongjie Zou, Haonan Niu, Bin Zhao, Guoliang Yi, Mengchuanzhi Yang, Jiawei Ju, Jiapeng Yin, Chengyu T. Li</i>	
Enhancing the Knowledge Tracing Via a Plug-In Guided Diffusion Model .....	18108
<i>Shuaishuai Zu, Jihao Zhao, Biao Qin</i>	

## Author Index