

Guangrui Fan

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Research Interests

Focused on Human-AI Interaction, Social Computing, and Trustworthy LLM Evaluation. I study how large language models, public AI agents, and intelligent systems affect human trust, privacy, emotional expression, fairness, and collaboration in real educational, communicative, and social-service settings.

- **Human-AI Interaction:** AI-assisted learning and collaborative programming, and authorship, authenticity, trust, and privacy in AI- and agent-mediated communication.
- **Social Computing and LLM Evaluation:** LLM survey simulation and measurement fairness, public-agent effects on human conversation, mental-health community support, and fairness auditing.
- **Affective Computing:** emotional norms and appropriateness of expression in LLMs, emotional requirement elicitation, and emotional support.

Keywords: Human-AI Interaction; Social Computing; Trustworthy LLM Evaluation; AI for Software Engineering; Affective Computing.

Research Highlights

- **Research output:** As of August 2026, I have published or had accepted 21 conference and journal papers as first or corresponding author, including 10 CCF-A papers (9 CCF-A conference papers and 1 CCF-A journal paper, *ACM TOIS*) and 5 CAS Zone 1 Top journal papers. One paper received an ACM CHI 2026 Honourable Mention Award; one paper was recognized as an ESI Highly Cited Paper. In addition, one manuscript is currently under external review at *Nature Human Behaviour* (NHB, a Nature sister journal).

Education

B.S. in Digital Media Technology Sept. 2010 – June 2014

School of Software, Huazhong University of Science and Technology, Wuhan, China

M.S. in Software Engineering Sept. 2014 – Feb. 2018

School of Software, Shanghai Jiao Tong University, Shanghai, China

Recommended admission without entrance examination

Ph.D. in Computer Science Sept. 2022 – June 2026

Universiti Malaya (QS 58), Kuala Lumpur, Malaysia

Research areas: Human-AI Interaction, Social Computing, Affective Computing

Professional Experience

Lecturer June 2018 – Present

School of Computer Science and Technology, Taiyuan University of Science and Technology, Taiyuan, China

Full-time teaching and research through Sept. 2022; approved unpaid study leave, Sept. 2022 – June 2026, for doctoral study

Publications

Note: * corresponding author; # co-first author; my name is bolded.

Conference Papers

CCFA CCF-A Conferences (10 papers)

[C1] **CCFA** Fan, G. *, Liu, D., Sabri, A.Q.M., Zhang, R., & Pan, L. (2026). Feeling Rules in Language Models: Mapping Norms of Emotional Appropriateness Across Roles, Institutions, and Intensity. In *Proceedings of the 64th Annual Meeting of the Association for Computational Linguistics (ACL 2026)*. ACL. [ACL Anthology](#).

Category: CCF-A conference; top-tier venue in natural language processing.

[C2] **CCFA** Fan, G. *, Liu, D., Sabri, A.Q.M., & Pan, L. (2026). Graph-Preference Learning: Debiasing Network-Sampled Human Feedback for Target Welfare Estimation. In *Proceedings of the 43rd International Conference on Machine Learning (ICML 2026)*. PMLR.

Category: CCF-A conference; top-tier venue in machine learning.

- [C3] **CCFA** Guo, Q., Zuo, G., Jiang, B., **Fan, G.**, Cui, Z., Liang, X., & Ding, J. (2026). Incomplete Multi-View Clustering via Neighborhood-Conditioned Diffusion. *In Proceedings of the 43rd International Conference on Machine Learning (ICML 2026)*. PMLR.
Category: CCF-A conference; top-tier venue in machine learning. **Role**: Coauthor.
- [C4] **CCFA** **Fan, G.***, Liu, D., & Pan, L. (2026). Is It Still You? Attributing Authorship and Authenticity in AI-Assisted Romantic Communication. *In Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI 2026)*, ACM. DOI: [10.1145/3772318.3790762](https://doi.org/10.1145/3772318.3790762).
Category: CCF-A conference; top-tier venue in HCI.
- [C5] **CCFA** **Fan, G.***, Liu, D., Pan, L., & Zhang, R. (2026). When Help Hurts: Verification Load and Fatigue with AI Coding Assistants. *In Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI 2026)*, ACM. DOI: [10.1145/3772318.3791176](https://doi.org/10.1145/3772318.3791176).
Category: CCF-A conference; top-tier venue in HCI. **Award**: ACM CHI 2026 Honourable Mention Award.
- [C6] **CCFA** **Fan, G.***, Liu, D., & Pan, L. (2026). Co-Adaptive Eco-Nudging: A Privacy-Preserving Contextual Bandit with User-Taught Preferences in Everyday Browsing. *In Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI 2026)*, ACM. DOI: [10.1145/3772318.3791358](https://doi.org/10.1145/3772318.3791358).
Category: CCF-A conference; top-tier venue in HCI.
- [C7] **CCFA** **Fan, G.***, Liu, D., Pan, L., Zhang, R., & Guo, Q. (2026). Multi-LLM Persona Generation for Virtual Focus Groups in Software Engineering: A Controlled, Multi-Domain Study of Emotional Requirements Elicitation. *Proceedings of the ACM on Software Engineering (FSE 2026)*, ACM. DOI: [10.1145/3808098](https://doi.org/10.1145/3808098).
Category: CCF-A conference; top-tier venue in software engineering.
- [C8] **CCFA** Liu, D., Sabri, A.Q.M., Pan, L., & **Fan, G.*** (2026). Audit-of-Audits for the Web: Bayesian Meta-Evaluation that Yields Interval-Valued, Threshold-Aligned Fairness Claims. *In Proceedings of the ACM Web Conference 2026 (WWW 2026)*, ACM. DOI: [10.1145/3774904.3792974](https://doi.org/10.1145/3774904.3792974).
Category: CCF-A conference; top-tier venue in the Web.
- [C9] **CCFA** **Fan, G.***, Liu, D., & Pan, L. (2026). Mind the Gap: Predicting, Explaining and Reducing Time-to-First-Comment (Reply Gap) in Online Mental-Health Communities. *In Proceedings of the 40th AAAI Conference on Artificial Intelligence (AAAI 2026)*, AAAI Press. [Article #41184](#).
Category: CCF-A conference; top-tier venue in artificial intelligence.
- [C10] **CCFA** **Fan, G.***, Liu, D., Pan, L., & Huang, Y. (2025). Creative Momentum Transfer: How Timing and Labeling of AI Suggestions Shape Iterative Human Ideation. *In Proceedings of the 34th International Joint Conference on Artificial Intelligence (IJCAI 2025)*. [Proceedings link](#).
Category: CCF-A conference; top-tier venue in artificial intelligence.

CCF-B Conferences (3 papers)

- [C11] **Fan, G.**, Liu, D., Guo, Q., Niu, X., & Pan, L. (2026). FairSynth: Instrument-Relative Evaluation and Calibration of LLM Survey Simulations for Measurement Fairness. *Findings of the Association for Computational Linguistics: EMNLP 2026*.
Status: Accepted (Findings of EMNLP 2026). **Category**: CCF-B conference. **Role**: First author.
- [C12] **Fan, G.***, Pan, L., Zhang, M., & Zhao, M. (2026). LePER: Label-Free Edge Polarity Reweighting for Heterophily. *In Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2026)*, IEEE.
Category: CCF-B conference; flagship venue in signal processing. **Oral Presentation**.
- [C13] **Fan, G.***, Liu, D., Pan, L., Zhang, R., & Sabri, A.Q.M. (2026). Consent Boundaries by Play: A CI-Grounded Micro-Game for Eliciting Stable Preferences and Diagnosing Opt-Out Friction in Web Consent. *In Proceedings of the European Conference on Computer-Supported Cooperative Work (ECSCW 2026)*.
Category: CCF-B conference; representative venue in CSCW.

Journal Papers

CCFA CCF-A Journals (1 paper)

- [J1] **CCFA** **Fan, G.***, Liu, D., & Pan, L. (2026). Conformal@K: Distribution-Free Top-K Miss-Risk Control for Recommendation with Overlapping-Group and Two-Stage Guarantees. *ACM Transactions on Information Systems (TOIS)*.
Status: Accepted (2026). **Category**: CCF-A journal; CAS Zone 2; JCR Q1; **IF** ≈ 9.1 ; top-tier information retrieval journal.

CAS Zone 1 Top CAS Zone 1 Top Journals (5 papers)

- [J2] **CAS Zone 1 Top** Liu, D., & **Fan, G.*** (2026). Fairness Labels in Feeds: Process Disclosures, Provenance, and User Choice Among Short-Video Creators in Mainland China. *Social Media + Society*.
Status: Accepted (2026). **Category**: SSCI; CAS Zone 1 Top journal. **Role**: Corresponding author.
- [J3] **CAS Zone 1 Top** **Fan, G.***, Liu, D., Zhang, R., & Pan, L. (2025). The impact of AI-assisted pair programming on student motivation, programming anxiety, collaborative learning, and programming performance: a comparative study with traditional pair programming and individual approaches. *International Journal of STEM Education*, **12**(1), 16. DOI: [10.1186/s40594-025-00537-3](https://doi.org/10.1186/s40594-025-00537-3).
Category: CAS Zone 1 Top journal in education; JCR Q1; **IF** ≈ 8.0 ; top-tier STEM education journal. **Recognition**: ESI Highly Cited Paper with 103 citations.

- [J4] **CAS Zone 1 Top** Liu, D., **Fan, G.***, & Pan, L. (2026). Tool, Tutor, or Crutch?: A Grounded Theory of Cognitive Scaffolding and Offloading in AI-Assisted Programming Education. *International Journal of STEM Education*, **13**, 10. DOI: [10.1186/s40594-025-00592-w](https://doi.org/10.1186/s40594-025-00592-w).
Category: CAS Zone 1 Top journal in education; JCR Q1; IF ≈ 8.0 ; top-tier STEM education journal.
- [J5] **CAS Zone 1 Top** **Fan, G.**, Sabri, A.Q.M.*, Rahman, S.S.A., & Pan, L. (2025). DynaKey-GNN: An efficient dynamic key-node multi-graph neural network for spatio-temporal traffic flow forecasting. *Engineering Applications of Artificial Intelligence*, **159**, 111757. DOI: [10.1016/j.engappai.2025.111757](https://doi.org/10.1016/j.engappai.2025.111757).
Category: CAS Zone 1 Top journal in computer science/engineering; JCR Q1; IF ≈ 9.0 ; representative AI applications journal.
- [J6] **CAS Zone 1 Top** **Fan, G.**, Sabri, A.Q.M.*, Rahman, S.S.A., Pan, L., & Rahardja, S. (2025). Emerging Trends in Graph Neural Networks for Traffic Flow Prediction: A Survey. *Archives of Computational Methods in Engineering*, 1–45. DOI: [10.1007/s11831-025-10286-9](https://doi.org/10.1007/s11831-025-10286-9).
Category: CAS Zone 1 Top journal in engineering; JCR Q1; IF ≈ 12.9 ; top-tier computational engineering review journal.

CCF-B / Other International Journals (3 papers)

- [J7] Liu, D., Pan, L., Sabri, A.Q.M., & **Fan, G.*** (2026). From Solo Post to Shared Space: How a Public LLM Agent Reshapes Human-to-Human Conversation Structure on a Social Platform. *ACM Transactions on Social Computing*.
Status: Accepted (2026). Role: Corresponding author.
- [J8] **Fan, G.***, Liu, D., & Huang, Y. (2025). Skim or Swim? Investigating AI-Generated Summaries, Trust, and Comprehension in Chinese Mobile Reading. *International Journal of Human-Computer Interaction*, 1–22. DOI: [10.1080/10447318.2025.2574513](https://doi.org/10.1080/10447318.2025.2574513).
Category: CCF-B journal; CAS Zone 2; JCR Q1; IF ≈ 6.0 ; representative HCI journal.
- [J9] Liu, D., **Fan, G.***, Guo, Q., Zhang, R., & Pan, L. (2026). Textless, Tiny, and Private: Hashed n-grams with LLM-Teacher Distillation and Local Differential Privacy for Mental-Health Screening on Social Media. *IEEE Transactions on Computational Social Systems*.
Category: CCF-C journal; CAS Zone 3; JCR Q2; IF ≈ 4.6 ; representative social computing journal.

Manuscripts Under Review

- [U1] **Under Review** **Fan, G.*** (2026). *The Social Cost of Disclosing AI Use*. Manuscript under external review at *Nature Human Behaviour*.
Status: Under external review (2026). Category: *Nature Human Behaviour* is a Nature sister journal (“Nature big sub-journal”); CAS Zone 1 (Top); JCR Q1; IF ≈ 17.5 ; a top-tier venue for behavioural and social science.

Honors and Awards

- **Teaching Award** First Prize, University Teaching Innovation Competition, Taiyuan University of Science and Technology.
- **Teaching Award** Third Prize, Shanxi Provincial University Teaching Innovation Competition.
- **ACM CHI 2026 Honourable Mention Award** – *When Help Hurts: Verification Load and Fatigue with AI Coding Assistants*.
- **ESI Highly Cited Paper** (2025) – published in *International Journal of STEM Education*.
- **First Prize Paper and Best Presentation Award** (July 2025) – 9th China Computer Practice Education Academic Conference (CPEC 2025).

Research Projects

- **Participant, Shanxi Provincial Department of Science and Technology Laboratory Self-Initiated Project:** Key technologies for intelligent decision support based on multimodal big data in highway transportation. **Grant No.:** 202502ZZ0910029. **Period:** 2026-01 to 2027-12. **Budget:** RMB 950,000. **Status:** ongoing.
- **Participant, Shanxi Provincial Basic Research Program (General Program):** Meso-scale based massively parallel multi-agent simulation models for large-scale complex systems. **Grant No.:** 202203021221145.
- **Participant, Shanxi Higher Education Teaching Reform and Innovation Project:** Deepening undergraduate teaching evaluation reform: AI-enabled classroom quality evaluation and practice. **Grant No.:** J20250145.

Academic Service

Program Committee

- **The Web Conference (WWW) 2026** – Web4Good Special Track (CCF A)

Reviewer

- **CHI 2026** – ACM Conference on Human Factors in Computing Systems (CCF A)
- **ICML 2026** – International Conference on Machine Learning (CCF A)
- **Engineering Applications of Artificial Intelligence** (EAAI, CAS Zone 1 Top)
- **International Journal of STEM Education** (CAS Zone 1 Top)
- **Information, Communication & Society** (SSCI Q1 Top)