

Curriculum Vitae

Han Yu, Nanyang Technological University, Singapore



Position: Associate Professor

Address:

N4-02c-109, College of Computing and Data Science (CCDS)
Nanyang Technological University (NTU)
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Education

- **2014:** Doctor of Philosophy (PhD), School of Computer Engineering (SCE), NTU, Singapore.
- **2007:** Bachelor of Engineering (1st Class Honours), SCE, NTU, Singapore.

Research Interest

- Artificial Intelligence (AI)
 - Ethical AI
 - Federated Learning
 - Trustworthy Collaborative Intelligence

Employment History

- **2024 – present:** Associate Professor, CCDS, NTU, Singapore.
- **2024 – 2026:** Coordinator, Master of Science in Artificial Intelligence (MSAI) Project, CCDS, NTU, Singapore.
- **2024 – 2026:** Coordinator, Teaching Allocation, CCDS, NTU, Singapore.
- **2019:** Consultant, WeBank, China.
- **2018 – 2024:** Nanyang Assistant Professor (NAP), CCDS, NTU, Singapore.
- **2015 – 2018:** Lee Kuan Yew Post-Doctoral Fellow (LKY PDF), NTU, Singapore.
- **2014 – 2015:** Research Fellow, LILY Research Centre, NTU, Singapore.
- **2007 – 2008:** Embedded Software Engineer, Hewlett-Packard (HP) Pte Ltd, Singapore.

Professional Society Membership

- Distinguished Member, China Computer Federation (CCF), since 2023.
- Senior Member, Association for the Advancement of Artificial Intelligence (AAAI), since 2023.
- Senior Member, Institute of Electrical and Electronics Engineers (IEEE), since 2022.
- Professional Member, Association for Computing Machinery (ACM), since 2016.
- Professional Member, Singapore Computer Society (SCS), since 2012.

Professional Organization Services

- **2024 – present:** Vice Chair, IEEE Computational Intelligence Society (CIS) Standards Committee
- **2023 – present:** Sponsorship Officer General, International Joint Conferences on Artificial Intelligence (IJCAI) Organization

Awards & Honours

1. **2024:** Excellent Paper Award, International Journal of Crowd Science (IJCS) - "Fairness in Design: A Framework for Facilitating Ethical Artificial Intelligence Designs".

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2. **2024:** Community Leadership Award, People's Association, Singapore.
3. **2024:** Certificate of Distinction, People's Association, Singapore.
4. **2024:** World's Top 2% Scientists, Artificial Intelligence & Image Processing, Stanford University (Single Year Rank: 58,945/223,153).
5. **2024:** Certificate of Appreciation, the 33rd International Joint Conference on Artificial Intelligence (IJCAI'24).
6. **2024:** Innovative Application of AI Award, AAAI - "Transformer-empowered Multi-modal Item Embedding for Enhanced Image Search in E-Commerce".
7. **2024:** Innovative Application of AI Award, AAAI - "HiFi-Gas: Hierarchical Federated Learning Incentive Mechanism Enhanced Gas Usage Estimation".
8. **2024:** Innovative Application of AI Award, AAAI - "IBCA: An Intelligent Platform for Social Insurance Benefit Qualification Status Assessment".
9. **2023:** World's Top 2% Scientists, Artificial Intelligence & Image Processing, Stanford University (Single Year Rank: 92,431/210,198).
10. **2023:** COVID-19 Resilience Certificate - Project Belanja-a-Meal@Woodlands, Ministry of Culture, Community and Youth, Singapore.
11. **2023:** COVID-19 Resilience Certificate - Project Store@Woodlands, Ministry of Culture, Community and Youth, Singapore.
12. **2023:** Outstanding Award, Sembawang GRC, People's Association, Singapore.
13. **2023:** Certificate of Excellence, Sembawang GRC, People's Association, Singapore.
14. **2023:** Community Leadership Award, Sembawang GRC, People's Association, Singapore.
15. **2023:** Certificate of Appreciation, the 32nd International Joint Conference on Artificial Intelligence (IJCAI'23).
16. **2023:** Best Poster Award, Singapore ACM SIGKDD Symposium 2023 - "Fairness-Aware Client Selection for Federated Learning", ICME'23.
17. **2023:** Best Poster Runner-Up Award, Singapore ACM SIGKDD Symposium 2023 - "Competitive-Cooperative Multi-Agent Reinforcement Learning for Auction-based Federated Learning", IJCAI'23.
18. **2023:** "Efficient Training of Large-scale Industrial Fault Diagnostic Models through Federated Opportunistic Block Dropout," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
19. **2022:** Merit Award, Ten Outstanding Young Persons (TOYP) of Singapore (Scientific and/or Technological Development), Junior Chamber International (JCI).
20. **2022:** World's Top 2% Scientists, Artificial Intelligence & Image Processing, Stanford University (Single Year Rank: 156,635/200,409).
21. **2022:** National Service Advocate Award, Ministry of Defence and Ministry of Home Affairs, Singapore.
22. **2022:** Letter of Appreciation, Ministry of Education, Singapore.
23. **2022:** Certificate of Appreciation, People's Association, Singapore.
24. **2022:** Friend of Yuhua Award, People's Association, Singapore.
25. **2022:** PREMIA Certificate of Commendation, "Federated learning for personalized humor recognition", ACM Transactions on Intelligent Systems and Technology (TIST).
26. **2022:** Certificate of Appreciation, the 31st International Joint Conference on Artificial Intelligence (IJCAI'22).
27. **2022:** Top 5 Most Popular Video Award, College of Engineering (CoE), Nanyang Technological University (NTU), Singapore.
28. **2022:** Best Paper Award, AI for Transportation Workshop, AAAI-22.
29. **2022:** "Contribution-Aware Federated Learning for Smart Healthcare," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
30. **2022:** "Prior-Guided Transfer Learning for Enhancing Item Representation in E-commerce," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).

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- 31.**2022**: "Intelligent Online Selling Point Extraction for E-Commerce Recommendation," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
- 32.**2022**: "Automatic Product Copywriting for E-Commerce," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
- 33.**2022**: Friend of National Service Award, Singapore Armed Forces, Singapore.
- 34.**2021**: Best Paper Award, the 1st International Student Conference on Artificial Intelligence (STCAI'21).
- 35.**2021**: "Noise-resistant Deep Metric Learning with Ranking-based Instance Selection," CVPR'21, PREMIA Best Student Paper Runners Up Award.
- 36.**2021**: "Latent-Optimized Adversarial Neural Transfer for Sarcasm Detection," NAACL-HLT'21, PREMIA Best Presentation Award.
- 37.**2021**: Certificate of Appreciation, the 30th International Joint Conference on Artificial Intelligence (IJCAI'21).
- 38.**2021**: "Enhancing E-commerce Recommender System Adaptability with Online Deep Controllable Learning-To-Rank," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
- 39.**2020**: Highly Commended Entrant for the Global Undergraduate Awards 2020 for my Final Year Student Anqi Tu with project entitled "Development of an AI-powered Shareable Bike Rebalancing System".
- 40.**2020**: "FedVision: An Online Visual Object Detection Platform powered by Federated Learning," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
- 41.**2020**: "Accelerating Ranking in E-Commerce Search Engines through Contextual Factor Selection," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
- 42.**2020**: "PIDS: An Intelligent Electric Power Management Platform," Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
- 43.**2019**: Innovation Award, the 28th International Joint Conference on Artificial Intelligence (IJCAI'19).
- 44.**2019**: Most Innovative Video Award, the 28th International Joint Conference on Artificial Intelligence (IJCAI'19).
- 45.**2019**: Certificate of Appreciation, the 28th International Joint Conference on Artificial Intelligence (IJCAI'19).
- 46.**2018**: Outstanding Reviewer Award, Journal of Retailing and Consumer Services (JRCS), Elsevier.
- 47.**2018**: Top 10 Papers, the 26th ACM Multimedia Conference (ACM MM'18).
- 48.**2018**: Most Societally Beneficial Video Award, the 27th International Joint Conference on Artificial Intelligence (IJCAI'18).
- 49.**2018**: "SmarrHS: An AI Platform for Improving Government Service Provision", Innovative Application of AI Award, Association for the Advancement of Artificial Intelligence (AAAI).
- 50.**2017**: Best Student Paper Award, International Journal of Information Technology (IJIT).
- 51.**2016**: Best Paper Award, the 1st International Conference on Crowd Science and Engineering (ICCSE'16).
- 52.**2016**: Best Poster Award, the 1st International Conference on Crowd Science and Engineering (ICCSE'16).
- 53.**2016**: Best Paper Award, the 8th International Conference on Social Computing and Social Media (SCSM'16).
- 54.**2016**: Best Student Poster Award, the 30th AAAI Conference on Artificial Intelligence (AAAI-16).
- 55.**2016**: Best Video – People's Choice Award, the 30th AAAI Conference on Artificial Intelligence (AAAI-16).
- 56.**2015**: Best Demo Award, the 2015 IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'15).
- 57.**2015**: Best Application Video Award, the 24th International Joint Conference on Artificial Intelligence (IJCAI'15).
- 58.**2015**: Singapore Challenge Finalist (Top 10), the Global Young Scientists Summit (GYSS@one-north).
- 59.**2015**: Research Commercialization via Joint Venture Companies Award, NTUitive, NTU, Singapore.
- 60.**2014**: Singapore Challenge Finalist (Top 10), the Global Young Scientists Summit (GYSS@one-north).
- 61.**2011**: Best Paper Award, 13th IEEE International Conference on Communication Technology (ICCT'11).

Teaching Experience

- **2022 – present: CZ3005 – Artificial Intelligence**

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- Lecturer, Tutor, Lab Supervisor
- **2022: CET794 – Foundations of AI Ethics**
 - Course Designer, Lecturer
- **2021 – present: CET799 – Business Liability and Ethics in AI Usage**
 - Course Designer, Lecturer
- **2020 – present: AI6101 – Introduction to AI and AI Ethics**
 - Course Designer, Lecturer, Course Coordinator
- **2020: Responsible Artificial Intelligence for Social Good**
 - Course Designer, Lecturer
- **2020: CZ2003 – Computer Graphics and Visualization**
 - Lab Supervisor
- **2019 – 2023: CZ3003 – Software Systems Analysis and Design**
 - Lecturer, Tutor, Lab Supervisor
- **2019: AI in Healthcare in the Age of Industry 4.0**
 - Course Designer, Lecturer
- **2018: CZ4031 – Database System Principles**
 - Lecturer, Tutor, Lab Supervisor
- **2015 – 2018: CZ2004 – Human-Computer Interaction**
 - Guest Lecturer, Tutor, Lab Supervisor, Technology Enhanced Learning (TEL)

Professional Services

- **Editorial Services for Journals:**
 - 1) Lead Guest Editor, Special Issue on Trustworthy Federated Learning, IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2023.
 - 2) Editor, Trustworthy Federated Learning, LNAI, 2023.
 - 3) Associate Editor, IEEE Transactions on Neural Networks and Learning Systems (TNNLS).
 - 4) Distinguished Review Board Member, ACM Transactions on Intelligent Systems and Technology (TIST).
 - 5) Associate Editor, International Journal of Crowd Science (IJCS).
 - 6) Guest Editor, Special Issue on Big Data Intelligence in Healthcare Applications Based on Physiological Signals, Journal of Healthcare Engineering, 2021.
 - 7) Editor, Federated Learning: Privacy and Incentive, 2020.
 - 8) Editorial Board Member, Frontiers in Sustainable Cities.
 - 9) Guest Editor, Special Issue on Big Data Intelligence in Healthcare Applications Based on Physiological Signals, Journal of Healthcare Engineering, 2019.
 - 10) Guest Editor, Special Issue on Federated Machine Learning, IEEE Intelligent Systems Journal, 2019.
 - 11) Associate Editor, the International Journal of Information Technology (IJIT).
- **Standardization**
 - 1) IEEE P2894 Explainable AI Standard Working Group.
 - 2) IEEE P3652 Federated Machine Learning Working Group.
- **Chair/Panel Services for Conferences:**
 - 1) Sponsorship Co-Chair, ACM on Web Conference 2025 (WWW'25), Sydney, Australia, 2025.
 - 2) Senior Program Committee (SPC) Member, the 24th International Conference on Autonomous Agents and Multiagent Systems (AAMAS'25), Detroit, MI, USA, 2025.
 - 3) Senior Program Committee (SPC) Member, the 39th AAAI Conference on Artificial Intelligence (AAAI-25), Philadelphia, PA, USA, 2025.

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- 4) Area Chair (AC), the 38th Conference on Neural Information Processing Systems (NeurIPS'24), Vancouver, BC, Canada, 2024.
- 5) Co-Organizer, International Workshop on Federated Foundation Models in Conjunction with NeurIPS 2024 (FL@FM-NeurIPS'24), Vancouver, BC, Canada, 2024.
- 6) Senior Program Committee (SPC) Member, the 33rd International Joint Conference on Artificial Intelligence (IJCAI'24), Jeju, South Korea, 2024.
- 7) Program Co-Chair, International Workshop on Federated Learning in the Age of Foundation Models in Conjunction with IJCAI 2024 (FL@FM-IJCAI'24), Jeju, South Korea, 2024.
- 8) Co-Chair, Special Session on Trustworthy Federated Learning for Multimedia, the 2024 International Conference on Multimedia and Expo (ICME'24), Niagara Falls, ON, Canada, 2024.
- 9) Program Co-Chair, International Workshop on Federated Learning and Foundation Models for Multi-Media (FL@FM-ICME'24), Niagara Falls, ON, Canada, 2024.
- 10) Co-Chair, Special Session on Trustworthy Federated Learning: In the Era of Foundation Models, the 2024 International Joint Conference on Neural Networks (IJCNN'24), Yokohama, Japan, 2024.
- 11) Program Co-Chair, International Workshop on Federated Foundation Models for the Web 2024 (FL@FM-TheWebConf'24), Singapore, 2024.
- 12) Session Chair, the 2024 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP'24), Seoul, South Korea, 2024.
- 13) Senior Program Committee (SPC) Member, the 23rd International Conference on Autonomous Agents and Multiagent Systems (AAMAS'24), Auckland, New Zealand, 2024.
- 14) Senior Program Committee (SPC) Member, the 38th AAI Conference on Artificial Intelligence (AAAI-24), Vancouver, BC, Canada, 2024.
- 15) Co-Organizer, International Workshop on Federated Learning in the Age of Foundation Models in Conjunction with NeurIPS (FL@FM-NeurIPS'23), New Orleans, LA, USA, 2023.
- 16) Co-Organizer, Workshop on Federated Learning in Australasia: When FL meets Foundation Models in Conjunction with AJCAI (FL@FM-AJCAI'23), Brisbane, Australia, 2023.
- 17) Sponsorship Co-Chair General, the 32nd International Joint Conference on Artificial Intelligence (IJCAI'23), Macau, 2023.
- 18) Industry Day Co-Chair, the 32nd International Joint Conference on Artificial Intelligence (IJCAI'23), Macau, 2023.
- 19) Senior Program Committee (SPC) Member, the 32nd International Joint Conference on Artificial Intelligence (IJCAI'23), Macau, 2023.
- 20) General Co-Chair, International Workshop on Trustworthy Federated Learning in Conjunction with IJCAI 2023 (FL-IJCAI'23), Macau, 2023.
- 21) Publicity Co-Chair, International Conference on AI for Medicine (iAIM'23), Singapore, 2023.
- 22) Senior Program Committee (SPC) Member, the 22nd International Conference on Autonomous Agents and Multiagent Systems (AAMAS'23), London, UK, 2023.
- 23) Co-Organizer, International Workshop on Federated Learning: Recent Advances and New Challenges in Conjunction with NeurIPS 2022 (FL-NeurIPS'22), New Orleans, LA, USA.
- 24) Program Co-Chair, International Workshop on Trustworthy Federated Learning in Conjunction with IJCAI 2022 (FL-IJCAI'22), Vienna, Austria, 2022.
- 25) Industry Day Co-Chair, the 31st International Joint Conference on Artificial Intelligence (IJCAI'22), Vienna, Austria, 2022.
- 26) Sponsorship Co-Chair, the 31st International Joint Conference on Artificial Intelligence (IJCAI'22), Vienna, Austria, 2022.
- 27) General Co-Chair, International Workshop on Trustable, Verifiable and Auditable Federated Learning in Conjunction with AAI 2022 (FL-AAAI-22), Vancouver, BC, Canada, 2022.

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- 28) Senior Program Committee (SPC) Member, the 36th AAAI Conference on Artificial Intelligence (AAAI-22), Vancouver, 2022.
- 29) Program Co-Chair, International Workshop on Federated and Transfer Learning for Data Sparsity and Confidentiality in Conjunction with IJCAI 2021 (FTL-IJCAI'21), Montreal, QB, Canada, 2021.
- 30) Co-Organizer, International Workshop on Federated Learning for User Privacy and Data Confidentiality in Conjunction with ICML 2021 (FL-ICML'21), Virtual, 2021.
- 31) Program Co-Chair, the 17th International Conference on Advanced Data Mining and Applications (ADMA'21), Sydney, Australia, 2021.
- 32) Industry Day Co-Chair, the 30th International Joint Conference on Artificial Intelligence (IJCAI'21), Montreal, QB, Canada, 2021.
- 33) Sponsorship Co-Chair, the 30th International Joint Conference on Artificial Intelligence (IJCAI'21), Montreal, QB, Canada, 2021.
- 34) Member, SIGAI Industry Award Committee, 2021.
- 35) Senior Program Committee (SPC) Member, the 30th International Joint Conference on Artificial Intelligence (IJCAI'21), Montreal, QB, Canada, 2021.
- 36) Program Co-Chair, the International Workshop on Federated and Transfer Learning for Data Sparsity and Confidentiality in Conjunction with IJCAI 2021 (FTL-IJCAI'20), Montreal, QB, Canada, 2021.
- 37) Organizer, Parallel Session on the Ethics of Artificial Intelligence: Methods and Applications, the 13th International Conference on Social Computing and Social Media (SCSM'21), 2021.
- 38) Program Co-Chair, AAAI 2021 Workshop: Towards Robust, Secure and Efficient Machine Learning (RSEML'21), Online, 2021.
- 39) Senior Program Committee (SPC) Member, the 35th AAAI Conference on Artificial Intelligence (AAAI-21), Vancouver, BC, Canada, 2021.
- 40) Judge, the 2nd WeBank FinTechathon, Shenzhen, China, 2020.
- 41) Proposal Reviewer, Swiss National Science Foundation, 2020.
- 42) Industry Day Co-Chair, the 29th International Joint Conference on Artificial Intelligence (IJCAI'20), Yokohama, Japan, 2020.
- 43) Sponsorship Co-Chair, the 29th International Joint Conference on Artificial Intelligence (IJCAI'20), Yokohama, Japan, 2020.
- 44) Senior Program Committee (SPC) Member (Federated Learning), the 29th International Joint Conference on Artificial Intelligence (IJCAI'20), Yokohama, Japan, 2020.
- 45) Organizing Committee Member, IBM Workshop on Federated Learning and Analytics (FL-IBM'20), New York, NY, USA, 2020.
- 46) Session Chair, the 34th AAAI Conference on Artificial Intelligence (AAAI-20), New York, NY, USA, 2020.
- 47) Senior Program Committee Member, the 34th AAAI Conference on Artificial Intelligence (AAAI-20), New York, NY, USA, 2020.
- 48) Co-Chair, the 2nd International Workshop on Federated Learning for Data Privacy and Confidentiality (FL-NeurIPS'19), Vancouver, BC, Canada, 2019.
- 49) Co-Chair, Special Track on Federated Machine Learning, the 2019 IEEE International Conference on Big Data (IEEE BigData'19), Los Angeles, CA, USA, 2019.
- 50) Program Co-Chair, the 4th International Conference on Crowd Science and Engineering (ICCSE'19), Jinan, China, 2019.
- 51) Judge, the 1st WeBank FinTechathon, Shenzhen, China, 2019.
- 52) Publicity Co-Chair, the 28th International Joint Conference on Artificial Intelligence (IJCAI'19), Macau, 2019.
- 53) Session Chair, the 28th International Joint Conference on Artificial Intelligence (IJCAI'19), Macau, 2019.

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- 54) Publicity Co-Chair, the International Workshop on Federated Machine Learning for User Privacy and Data Confidentiality (FL-IJCAI'19), Macau, 2019.
 - 55) Co-Chair, Workshop on Artificial Intelligence Safety (AISafety), IJCAI, Macau, 2019.
 - 56) Student Mentor, the 2nd AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES-19), Honolulu, HI, USA, 2019.
 - 57) Proposal Reviewer, the Israeli Ministry of Science and Technology, 2018.
 - 58) Panel Member, Workshop on Translating AI Technology into Healthcare Solutions, AI Singapore, Singapore, 2019.
 - 59) Program Co-Chair, the 3rd IEEE International Conference on Agents (ICA'18), Singapore, 2018.
 - 60) Local Organization Co-Chair, the 3rd International Conference on Crowd Science and Engineering (ICCSE'18), Singapore, 2018.
 - 61) Chair, Special Session on Innovative Social Media and Computing Technologies for Aging Societies, the 20th International Conference on Human-Computer Interaction (HCI'18), Las Vegas, NV, USA, 2018.
 - 62) Session Chair, the 32nd AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, LA, USA, 2018.
 - 63) Session Chair, the 2nd IEEE International Conference on Agents (ICA'17), Beijing, China, 2017.
 - 64) Session Chair, the 5th International Conference on Ageless Aging (ICAA'17), Beijing, China, 2017.
 - 65) Session Chair, the 2nd International Conference on Crowd Science and Engineering (ICCSE'17), Beijing, China, 2017.
 - 66) Tutorial / Workshop / Demo / Special Track / Poster Chairs, the 2nd International Conference on Crowd Science and Engineering (ICCSE'17), Beijing, China, 2017.
 - 67) Session Chair, the 1st International Conference on Crowd Science and Engineering (ICCSE'16), Vancouver, BC, Canada, 2016.
 - 68) Panel Member, Industries of the Future, the IPS-CFE Conference on the Future Economy of Singapore, Singapore, 2016.
 - 69) Co-Chair & Panel Member, Symposium on Interactive Games for Active Ageing, the 9th World Congress on Active Ageing (WCAA'16), Melbourne, VIC, Australia, 2016.
 - 70) Session Chair, the 30th AAAI Conference on Artificial Intelligence (AAAI-16), Phoenix, AZ, USA, 2016.
- **Executive Positions in Professional Organizations:**
 - 1) Founding Member, the Association for Crowd Science and Engineering (ACE).
 - **Review Services for Journals:**
 - 1) ACM Computers in Entertainment (CiE), ACM.
 - 2) ACM Computing Surveys (CSUR), ACM.
 - 3) ACM Transactions on Intelligent Systems and Technology (TIST), ACM.
 - 4) ACM Transactions on Internet Technology (TOIT), ACM.
 - 5) Ad Hoc Networks, Elsevier.
 - 6) AI Ethics Body of Knowledge, Singapore Computer Society.
 - 7) Algorithms, MDPI.
 - 8) Artificial Intelligence, Elsevier.
 - 9) Artificial Intelligence Review, Springer.
 - 10) CCF Transactions on Pervasive Computing and Interaction (TPCI), CCF.
 - 11) China Communications, IEEE.
 - 12) Communications of the ACM, ACM.
 - 13) Cognitive Computation, Springer.
 - 14) Computer, IEEE.
 - 15) Computer Communications, Elsevier.
 - 16) Decision Support Systems (DSS), Elsevier.

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- 17) Education Sciences, MDPI.
- 18) Electronic Commerce Research and Applications (ECRA), Elsevier.
- 19) Energy Reports, Elsevier.
- 20) Engineering Applications of Artificial Intelligence (EAAI), Elsevier.
- 21) Future Generation Computer Systems (FGCS), Elsevier.
- 22) Government Information Quarterly (GIQ), Elsevier.
- 23) IEEE Access, IEEE.
- 24) IEEE Computational Intelligence Magazine (CIM), IEEE.
- 25) IEEE Intelligent Systems Journal (IS), IEEE.
- 26) IEEE Internet of Things Journal (IoT), IEEE.
- 27) IEEE Journal on Selected Areas in Communications (JSAC), IEEE.
- 28) IEEE Pervasive Computing (PerCom), IEEE.
- 29) IEEE Transactions on Artificial Intelligence (TAI), IEEE.
- 30) IEEE Transactions on Big Data (TBD), IEEE.
- 31) IEEE Transactions on Cloud Computing (TCC), IEEE.
- 32) IEEE Transactions on Knowledge and Data Engineering (TKDE), IEEE.
- 33) IEEE Transactions on Mobile Computing (TMC), IEEE.
- 34) IEEE Transactions on Parallel and Distributed Systems (TPDS), IEEE.
- 35) IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), IEEE.
- 36) IEEE Transactions on Sustainable Computing (T-SUSC), IEEE.
- 37) IEEE Transactions on Vehicular Technology (TVT), IEEE.
- 38) IEEE/ACM Transactions on Networking (ToN), IEEE/ACM.
- 39) International Journal of Crowd Science (IJCS), Emerald.
- 40) International Journal of Hospitality Management (IJHM), Elsevier.
- 41) International Journal of Information Technology (IJIT), Singapore Computer Society (SCS).
- 42) International Journal of Machine Learning and Cybernetics (JMLC), Springer.
- 43) International Journal of Software Engineering and Knowledge Engineering (IJSEKE), World Scientific.
- 44) Journal of Artificial Intelligence Research (JAIR), AAAI Press.
- 45) Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS), Springer.
- 46) Journal of Business Research (JBR), Elsevier.
- 47) Journal of Retailing and Consumer Services (JRCS), Elsevier. (Outstanding Reviewer Award, 2018)
- 48) Journal of Systems Science and Systems Engineering (JSSSE), Springer.
- 49) Journal of Technology in Society (TIS), Elsevier.
- 50) Journal of Urban Management (JUM), Elsevier.
- 51) Knowledge-Based Systems (KBS), Elsevier.
- 52) Multiagent and Grid Systems (MGS), IOS Press.
- 53) Nature Communications, SpringerNature.
- 54) Nature Computational Science, SpringerNature.
- 55) Patterns, Cell Press.
- 56) PLoS ONE.
- 57) Progress in Artificial Intelligence (PRAI), SpringerNature.
- 58) Scientific Reports, SpringerNature.
- 59) Sensors, MDPI.
- 60) Social Sciences, MDPI.
- 61) Sustainability, MDPI.
- 62) Technology in Society, Elsevier.
- 63) Web Intelligence and Agent Systems (WIAS), IOS Press.

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- **Review/Program Committee Services for Conferences:**

- 1) The 41st International Conference on Machine Learning (ICML'24), Vienna, Austria, 2024.
- 2) The 2024 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR'24), Seattle, USA.
- 3) The 12th International Conference on Learning Representations (ICLR'24), Vienna, Austria, 2024.
- 4) The 23rd International Conference on Autonomous Agents and Multi-agent Systems (AAMAS'24), Auckland, New Zealand, 2024.
- 5) The 37th Conference on Neural Information Processing Systems (NeurIPS'23), New Orleans, LA, USA, 2023.
- 6) The 32nd ACM International Conference on Information and Knowledge Management (CIKM'23), Birmingham, UK, 2023.
- 7) The ACM Web Conference 2023 (WWW'23), Austin, TX, USA, 2023.
- 8) The 28th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'22), Washington DC, USA, 2022.
- 9) The 31st International Joint Conference on Artificial Intelligence (IJCAI'22), Vienna, Austria, 2022.
- 10) The 36th AAAI Conference on Artificial Intelligence (AAAI-22), Vancouver, Canada, 2022.
- 11) The 31st IEEE Visualization Conference (VIS'21), 2021.
- 12) The 2021 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR'21), 2021.
- 13) 30th The Web Conference (WWW'21), Ljubljana, Slovenia, 2021.
- 14) The 30th International Joint Conference on Artificial Intelligence (IJCAI'21), Virtual, 2021.
- 15) The 35th AAAI Conference on Artificial Intelligence (AAAI-21), Virtual, 2021.
- 16) The 17th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC'20), 2020.
- 17) ICML Workshop on Incentives in Machine Learning (IML'20), Vienna, Austria, 2020.
- 18) The 40th IEEE International Conference on Distributed Computing Systems (ICDCS'20), Singapore, 2020.
- 19) The 29th International Joint Conference on Artificial Intelligence (IJCAI'20), Yokohama, Japan, 2020.
- 20) The 34th AAAI Conference on Artificial Intelligence (AAAI-20), New York, NY, USA, 2020.
- 21) The 23rd International Symposium on Wearable Computers (ISWC'19), London, UK, 2019.
- 22) The 28th International Joint Conference on Artificial Intelligence (IJCAI'19), Macau, 2019.
- 23) The 16th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC'19), Leicester, UK, 2019.
- 24) The 33rd AAAI Conference on Artificial Intelligence (AAAI-19), Honolulu, HI, USA, 2019.
- 25) The 2nd International Conference on Computer Science and Application Engineering (CSAE'18), Hohhot, China, 2018.
- 26) The 2018 IEEE/WIC/ACM International Conference on Web Intelligence (WI'18), Santiago, Chile, 2018.
- 27) The 15th Pacific Rim International Conference on Artificial Intelligence (PRICAI'18), Nanjing, China, 2018.
- 28) The 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (IJCAI-ECAI-18), Stockholm, Sweden, 2018.
- 29) The 20th International Conference on Human-Computer Interaction (HCI'18), Las Vegas, NV, USA, 2018.
- 30) The 17th International Conference on Autonomous Agents and Multi-agent Systems (AAMAS'18), Stockholm, Sweden, 2018.
- 31) The 32nd AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, LA, USA, 2018.
- 32) The 2nd IEEE International Conference on Agents (ICA'17), Beijing, China, 2017.
- 33) The 5th International Conference on Ageless Aging (ICAA'17), Beijing, China, 2017.
- 34) The 2nd International Conference on Crowd Science and Engineering (ICCSE'17), Beijing, China, 2017.
- 35) The 2017 IEEE/WIC/ACM International Conference on Web Intelligence (WI'17), Leipzig, Germany, 2017.
- 36) The 26th International Joint Conference on Artificial Intelligence (IJCAI'17), Melbourne, VIC, Australia, 2017.

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- 37) The AAMAS Workshop on Crowdsourcing and Multiagent Systems (CMAS), Sao Paulo, Brazil, 2017.
- 38) The 31st AAAI Conference on Artificial Intelligence (AAAI-17), San Francisco, CA, USA, 2017.
- 39) The 1st International Conference on Crowd Science and Engineering (ICCSE'16), Vancouver, BC, Canada, 2016.
- 40) The 1st International Conference on Agents (ICA'16), Kunibiki Messe, Matsue, Japan, 2016.
- 41) The 2016 IEEE/WIC/ACM International Conference on Web Intelligence (WI'16), Omaha, NE, USA, 2016.
- 42) The 25th International Joint Conference on Artificial Intelligence (IJCAI'16), New York, NY, USA, 2016.
- 43) The 30th AAAI Conference on Artificial Intelligence (AAAI-16), Phoenix, AZ, USA, 2016.
- 44) The 2015 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT'15), Singapore, 2015.
- 45) The 33rd Annual ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'15), Seoul, South Korea, 2015.
- 46) The 14th International Conference on Autonomous Agents and Multi-agent Systems (AAMAS'15), Istanbul, Turkey, 2015.
- 47) The 2013 International Conference on Ageless Aging (ICAA'13), Vancouver, BC, Canada, 2013.

Patents

- [1] Y. Liu, **H. Yu**, T. Chen & Q. Yang, "Method and Device for Determining Participants in Federal Learning Alliance," Patent No. **CN112308720B**, 03/05/2024.
- [2] X. Wei, **H. Yu**, M. Li, Z. Jin, S. Wei, M. Zheng, Q. Li, X. Cao, Y. Liu & T. Chen, "Calculation Method, Device and Equipment of Performance Value and Readable Storage Medium," Patent No. **CN111291991B**, 27/02/2024.
- [3] Y. Liu, **H. Yu**, T. Chen & Q. Yang, "Method and Device for Determining Labor Plan," Patent No. **CN111310105B**, 21/04/2023.
- [4] Y. Liu, **H. Yu**, T. Chen & Q. Yang, "Task Allocation Method, Device, Terminal and Storage Medium," Patent No. **CN110414864B**, 12/04/2022.
- [5] Y. Liu, **H. Yu**, T. Chen & Q. Yang, "Method and Device for Determining Contribution Degree of Participant," Patent No. **CN110717671B**, 31/08/2021.
- [6] Y. Liu, **H. Yu**, T. Chen & Q. Yang, "Attack Coping Method and Federal Learning Device," Patent No. **CN111445031B**, 27/07/2021.
- [7] Y. Liu, **H. Yu**, T. Chen & Q. Yang, "User Indexing Method in Federated Learning and Federated Learning Device," Patent No. **CN111428885B**, 04/06/2021.
- [8] **H. Yu**, C. Miao, Z. Shen & C. Leung, "Method and Apparatus for Algorithmic Control of the Acceptance of Orders by an E-Commerce Enterprise," Patent No. **10,970,772**, 06/04/2021.
- [9] **H. Yu**, C. Miao, Z. Shen & C. Leung, "Method and Apparatus for Algorithmic Control of the Acceptance of Orders by an E-Commerce Enterprise," Patent No. **CN106133779B**, 02/03/2021.

Research Grants

- [1] **2024–2027**: Principal Investigator, "Toolkit for Improving Security and Privacy - Privacy Preservation Through Efficient Federated Learning", Alibaba-NTU Global e-Sustainability CorpLab (ANGEL), S\$1,135,000.
- [2] **2022–2025**: Co-Principal Investigator, "Towards Real-time, Seamless, and Ubiquitous Edge Intelligence-empowered Metaverse", Future Communications Research & Development Programme (FCP) Grant (No. FCP-NTU-RG-2021-014), S\$499,999.50.
- [3] **2021–2025**: Co-Principal Investigator, "TrustFUL: Trustworthy Federated Ubiquitous Learning", AI Singapore Research Programme Grant (No. AISG2-RP-2020-019), S\$6,883,200.
- [4] **2020–2022**: Principal Investigator, "Towards an Ecosystem for Federated Learning Incentive", The NTU-WeBank Joint Research Centre on FinTech Grant (No. NWJ-2020-008), S\$200,000.
- [5] **2020–2022**: Co-Principal Investigator, "User Experience and Trust in Mobile Banking", The NTU-WeBank Joint Research Centre on FinTech Grant (No. NWJ-2020-009), S\$200,000.

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- [6] **2020–2024:** Co-Principal Investigator, "Next-Generation Brain-Computer-Brain Platform – A Holistic Solution for the Restoration & Enhancement of Brain Functions (NOURISH)", A*STAR AME Programmatic Fund (No. A20G8b0102), S\$9,950,280.
- [7] **2019–2020:** Principal Investigator, "Incentive Mechanism Design for Federated Machine Learning", The NTU-WeBank Joint Research Centre on FinTech Grant (No. NWJ-2019-007), S\$100,000.
- [8] **2019–2020:** Co-Principal Investigator, "User Experience Study for Online Banking Products", The NTU-WeBank Joint Research Centre on FinTech Grant, S\$100,000.
- [9] **2019–2021:** Co-Principal Investigator, "An End-to-end Adaptive AI-Assisted 3H Care (A3C) System", AI Singapore Grand Challenge Grant, S\$4,600,000.
- [10] **2018–2022:** Principal Investigator, "AI-Powered Crowd-computing (AIPC)", Nanyang Assistant Professorship (NAP) Grant, Nanyang Technological University (NTU), Singapore, S\$1,000,000.
- [11] **2017–2020:** Investigator, "ADL+: A Digital Toolkit for Cognitive Assessment and Intervention", Ministry of Health (MOH), Singapore, S\$2,114,000.
- [12] **2017–2019:** Investigator, "An AI-Powered Big Data Platform for Analytics and Intervention in Pain Management", Ministry of Education (MOE) Tier 1 Grant, S\$100,000.
- [13] **2015–2018:** Principal Investigator, "Intelligent Personalized Crowdsourcing for Productive Aging", Lee Kuan Yew Endowment Fund, Singapore, S\$180,000.

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Books

- [1] Goebel, R., **Yu, H.**, Faltings, B., Fan, L. & Xiong, Z. (Eds.). (2023). *Trustworthy Federated Learning*. Lecture Notes in Artificial Intelligence, vol. 13448, p. 158. Springer, Cham.
- [2] Yang, Q., Fan, L. & **Yu, H.** (Eds.). (2020). *Federated Learning: Privacy and Incentive*. Lecture Notes in Computer Science, vol. 12500, p. 282. Springer, Cham.
- [3] 杨强、刘洋、程勇、康炎、陈天健、于涵 《联邦学习》 电子工业出版社, p. 208, 2020.
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- [5] **Yu, H.** & Tang, X. (2024). *Mitigating Collusive Behaviours in Open Data Exchange Systems*. In: Chellam, R. (Ed.). Artificial Intelligence Ethics & Governance Body of Knowledge, vol. 2, SCS.
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- [12] Cong, M., **Yu, H.**, Weng, X. & Yiu, S.-M. (2020). *A Game-Theoretic Framework for Incentive Mechanism Design in Federated Learning*. In: Yang, Q., Fan, L. & Yu, H. (Eds.). Federated Learning: Privacy and Incentive, pp. 200–217. Springer, Cham.
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- [14] **Yu, H.**, Miao, C., An, B., Shen, Z. & Leung, C. (2018). *Making Efficient Reputation-aware Decisions in Multi-agent Systems*. In: Hao, J. & Leung, H.-F. (Eds.). Interactions in Multiagent Systems, pp. 43–64. World Scientific, Singapore.

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- [17] [IEEE TNNLS] Tang, X. & **Yu, H.** A cost-aware utility-maximizing bidding strategy for auction-based federated learning. *IEEE Transactions on Neural Networks and Learning Systems*, IEEE (2024). [IF: 10.2]
- [18] [IEEE TMC] Li, A., Wang, G., Hu, M., Sun, J., Zhang, L., Tuan, L. A. & **Yu, H.** Joint client-and-sample selection for federated learning via bi-level optimization. *IEEE Transactions on Mobile Computing*, IEEE (2024). [IF: 7.7]
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- [260] **H. Yu**, "Algorithmic Crowdsourcing for Productive Aging," in *Proceedings of the 9th World Congress on Active Ageing (WCAA'16)*, pp. 11–12, 2016.
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- [280] [AAMAS'15] **H. Yu**, H. Lin, S. F. Lim, J. Lin, Z. Shen & C. Miao, "Empirical Analysis of Reputation-aware Task Delegation by Humans from a Multi-Agent Game," in *Proceedings of the 14th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'15)*, pp. 1687–1688, 2015.
- [281] [AAAI-15] C. Miao, C. Leung, **H. Yu**, D. W. Ng, H. Zhang, Q. Wu, F. Xiao, Y. Qiu, J. Leung & Z. Shen, "AI for Aging in-Place," *the 30th AAAI Conference on Artificial Intelligence (AAAI-15)*, 2015. ([Best Video – People's Choice Award Nomination](#))
- [282] [AAAI-15] **H. Yu**, C. Miao, Z. Shen, C. Leung, Y. Chen & Q. Yang, "Efficient Task Sub-delegation for Crowdsourcing," in *Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI-15)*, pp. 1305–1311, 2015.
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- [288] [AAMAS'14] Y. Cai, Z. Shen, S. Liu, **H. Yu**, J. Ji, M. McKeown, C. Leung & C. Miao, "An Agent-based Game for the Predictive Diagnosis of Parkinson's Disease," in *Proceedings of the 13th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'14)*, pp. 1663–1664, 2014.
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- [292] H. Yu, Z. Shen & C. Leung, "From Internet of Things to Internet of Agents," in *Proceedings of the 2013 IEEE International Conference on Internet of Things (iThings'13)*, pp.1054–1057, 2013.
- [293] [IJCAI'13] H. Yu, C. Miao, B. An, C. Leung & V. R. Lesser, "A Reputation Management Approach for Resource Constrained Trustee Agents," in *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI'13)*, pp. 418–424, 2013.
- [294] [AAMAS'13] S. Liu, H. Yu, C. Miao & A. C. Kot, "A Fuzzy Logic based Reputation Model against Unfair Ratings," in *Proceedings of the 12th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'13)*, pp. 821–828, 2013.
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- [302] [AAMAS'11] H. Yu, Z. Shen, C. Miao & A.-H. Tan, "A Simple Curious Agent to Help People be Curious," in *Proceedings of the 10th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'11)*, pp. 1159–1160, 2011.
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- [305] [IUI'10] H. Yu, Y. Cai, Z. Shen, X. Tao & C. Miao, "Agents as Intelligent User Interfaces for the Net Generation," in *Proceedings of the 15th International Conference on Intelligent User Interfaces (IUI'10)*, pp. 429–430, 2010.
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- [307] L. Pan, X. Meng, Z. Shen & H. Yu, "A Reputation Pattern for Service Oriented Computing," in *Proceedings of the 7th International Conference on Information, Communications and Signal Processing (ICICS'09)*, doi:10.1109/ICICS.2009.5397618, 2009.

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- [308] **H. Yu**, C. Miao, X. Tao, Z. Shen, Y. Cai, B. Li & Y. Miao, "Teachable Agents in Virtual Learning Environments: a Case Study," in *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare and Higher Education (E-LEARN'09)*, pp. 1088–1096, 2009.
- [309] [**AAMAS'09**] B. Li, **H. Yu**, Z. Shen & C. Miao, "Evolutionary Organizational Search," in *Proceedings of the 8th Joint International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'09)*, pp. 1329–1330, 2009.
- [310] [**ICALT'08**] **H. Yu**, Z. Shen, C.P. Low & C. Miao, "Transforming Learning through Agent Augmented Virtual World," in *Proceedings of the 8th IEEE International Conference on Advanced Learning Technologies (ICALT'08)*, pp. 933–937, 2008.
- [311] [**WI-IAT'07**] **H. Yu**, Z. Shen & C. Miao, "Intelligent Software Agent Design Tool Using Goal Net Methodology," in *Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'07)*, pp. 43–46, 2007.
- [312] **H. Yu**, Z. Shen & C. Miao, "A Service Based Multi-Agent System Design Tool for Modeling Integrated Manufacturing and Service Systems," in *Proceedings of the 12th IEEE Conference on Emerging Technologies and Factory Automation (ETFA'07)*, pp. 149–154, 2007.
- [313] [**JCDL'07**] Y. L. Theng, K. L. Tan, E. P. Lim, J. Zhang, D. H. L. Goh, K. Chatterjea, H. C. Chew, A. X. Sun, **H. Yu**, N. Dang, Y. Li & M. C. Vo, "Mobile G-Portal Supporting Collaborative Sharing and Learning in Geography Fieldwork: An Empirical Study," in *Proceedings of the 7th ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL'07)*, pp. 462–471, 2007.
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- [315] **H. Yu**, "Developing Mobile 3D Game Using MIDP 2.0 Game API and JSR-184 M3G API," in *Proceedings of the SIGRAD 2005 Conference*, pp. 69–73, 2005.

Keynote Talks

- [316] "Building Multi-Foundation Agent Systems through Trustworthy Auction-based Federated Learning", International Workshop on Federated Learning and Foundation Models for Multi-Media (FL@FM-ICME'24), Niagara Falls, ON, Canada, 2024.
- [317] "Towards Trustworthy Federated Learning", keynote talk at the 6th International Conference on Crowd Science and Engineering (ICCSE'23), Singapore, 2023.

Invited Talks

- [318] "Challenges and Opportunities for Federated Learning in the Age of Foundation Models", invited talk at the 8th Asia-Pacific Age-Friendly & Handicap-Assistive Technology Forum, China National Computer Congress (CNCC'24), Hengdian, China, 2024.
- [319] "Towards Trustworthy Federated Learning", The 1st Workshop on Decentralised Search and Recommendation (DeSeRe'24), the 2024 Web Conference (TheWebConf'24), Singapore, 2024.
- [320] "Building Ethics into AI", IEEE Education Week, 2024.
- [321] "Towards Personalized Federated Learning", TrustML Workshop, The University of British Columbia, Vancouver, BC, Canada, 2024.
- [322] "Towards Auction-based Federated Learning", invited talk at the 2nd MBZUAI Workshop on Collaborative Learning: Empowering Sustainable Futures, Abu Dhabi, UAE, 2023.
- [323] "Towards Auction-based Federated Learning", invited talk at the Winter School on Trustworthy Federated Learning, Hangzhou, China, 2023.
- [324] "Towards Trustworthy Federated Learning", invited talk at the Workshop on Social Trust in AI in East Asian Countries and in the UK, Singapore, 2023.
- [325] "Towards Trustworthy Federated Learning", invited talk at the World Customs Organization (WCO) Technology Conference and Exhibition, Hanoi, Vietnam, 2023.
- [326] "Towards Trustworthy Federated Learning", invited talk at the Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China, 2023.
- [327] "Towards Trustworthy Federated Learning", invited talk at Beihang University, Beijing, China, 2023.
- [328] "Towards Trustworthy Federated Learning", invited talk at University of Technology Sydney, Australia, 2023.

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- [329] "Contribution and Fairness-Aware Federated Learning", invited talk at FLSys@MLSys, Miami, FL, USA, 2023.
- [330] "Towards Trustworthy Federated Learning", invited talk at Xidian University, Xi'an, China, 2023.
- [331] "Towards Trustworthy Federated Learning", invited talk at the 1st Summer School on Artificial Intelligence, Singapore, 2022.
- [332] "Contribution and Fairness-Aware Federated Learning", invited talk at IJCAI, Shenzhen, China, 2022.
- [333] "Towards Trustworthy Federated Learning", invited talk at the MBZUAI Workshop on Collaborative Learning: From Theory to Practice, Abu Dhabi, UAE, 2022.
- [334] "Towards Trustworthy Federated Learning", invited talk at the AIxImpact Conference, Singapore, 2022.
- [335] "Towards a Trustworthy Federated Learning Ecosystem", invited talk at the KDD'21 Trust Day, Singapore, 2021.
- [336] "Ethics of AI: Policy Guidance", invited talk at the Asian Productivity Organization (APO), Tokyo, Japan, 2021.
- [337] "Towards a Federated Learning Ecosystem", invited talk at the Industry-University Research Alliance for Knowledge Federation (AFK) Workshop, Beijing, China, 2021.
- [338] "Trustworthy Federated Learning", invited talk at Temasek Foundation, Singapore, 2020.
- [339] "Towards a Federated Learning Ecosystem", invited talk at Southern University of Science and Technology, Shenzhen, Guangdong, China, 2020.
- [340] "Towards a Federated Learning Ecosystem", invited talk at the Forum of Federated Learning, ENN Group, Beijing, China, 2020.
- [341] "Collaborative Research Effort to Combat COVID-19 with AI", invited talk at the EU ASEAN Webinar - High Performance Computing (HPC)-COVID-19, Jakarta, Indonesia, 2020.
- [342] "Introduction to AI and Federated Learning", invited talk at Xidian University, Xi'an, China, 2020.
- [343] "Federated Learning Incentive Research", invited talk at Northeastern University, Shenyang, China, 2020.
- [344] "AI Applications: Fighting COVID-19," EnVision e-Talk Series, 2020.
- [345] "Federated Learning Incentive Ecosystem Design," invited talk at CCF YOCSEF Forum on Federated Learning – the Last Mile of AI, Shezhen, China, 2020.
- [346] "Towards Human-Agent Collectives," invited talk at Beihang University, Beijing, China, 2019.
- [347] "Towards Human-Agent Collectives," invited talk at WeBank, Shenzhen, China, 2019.
- [348] "Incentive Mechanism Design for Federated Learning," invited talk at the Google Workshop on Federated Learning and Analytics, Seattle, USA.
- [349] "Optimization and Incentive Design for Large-scale Operation of Federated Machine Learning," invited talk at the NTU-Inspur Workshop on AI/Cloud Computing/Smart City, Singapore.
- [350] "Game Theoretic Research in Federated Machine Learning," invited talk at the 14th CCF Technology Frontier on Federated Machine Learning, Shenzhen, China, 2019.
- [351] "Complex Decision Support in the Sharing Economy," invited talk at WeBank, Shenzhen, China, 2018.
- [352] "Opportunistic Work-Rest Scheduling - Ethically Aligned AI for Productive Aging," public lecture at the ASPIRE Student Workshop, Singapore, 2018.
- [353] "Building Ethics into Artificial Intelligence," invited talk at the Workshop towards Human Level General AI, A*STAR, Singapore, 2018.
- [354] "AI-empowered Ageless Aging," invited talk at the NTU-USYD Launch Workshop, Nanyang Technological University (NTU), Singapore, 2018.
- [355] "Stochastic Optimization for Human Resource Management," invited talk at the Joint NTU-Alibaba Workshop on Emerging Topics of AI, Nanyang Technological University (NTU), Singapore, 2018.
- [356] "Towards City AI: Data-driven Algorithmic Management," invited talk at the Joint Alibaba-NTU Workshop on Emerging AI, Alibaba, Hangzhou, China 2018.
- [357] "Stochastic Optimization for Data-driven Algorithmic Management," invited talk at the NTU-Ant Financial Joint Workshop, Nanyang Technological University (NTU), Singapore, 2017.
- [358] "Algorithmic Management in Crowdsourcing," invited talk at the School of Computer Science and Technology, Shandong University, Jinan, China, 2017.
- [359] "Algorithmic Management and its Applications in e-Government Service Provision," invited talk at Dareway Software Co. Ltd, Jinan, China, 2017.
- [360] "Intelligently Managing the Collective Effort of Community Teaching Assistants in MOOCs through Smart Decision Support," invited talk at the 2nd PKU-NTU Workshop on AI+, Guangzhou, China, 2017.

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- [361] "AI-Powered Nursing Care for Senior Citizens," invited talk at the inaugural Innovating Care Conference, Singapore, 2017.
- [362] "AI-Powered Crowd-computing (AIPC)," invited talk at the Joint Research Institute (JRI), Sino-Singapore Guangzhou Knowledge City (SSGKC), Guangzhou, China, 2017.
- [363] "AI-Powered Crowd-computing (AIPC)," invited talk at the School of Computer Science and Engineering (SCSE), Nanyang Technological University (NTU), Singapore, 2017.
- [364] "Crowd Computing for Productive Aging," invited talk at the IPS-CFE Conference on the Future Economy of Singapore, Lee Kuan Yew School of Public Policy, Singapore, 2016.
- [365] "Open Participatory Education in MOOCs," invited talk at the NTU-PKU Joint Research Institute Workshop on Learning @ Scale, Singapore, 2016.
- [366] "Open Participatory Education in MOOCs," invited talk at the University of Melbourne, Melbourne, Australia, 2016.
- [367] "An Introduction to Gerontechnology Research," invited talk at the College of Computer Science and Technology, Jilin University, Changchun, China 2015.
- [368] "An Introduction to Crowd Science Innovations," invited talk at the Joint Tsinghua-NTU Workshop on Crowd Science Innovations, Tsinghua University, Beijing, China, 2015.