Shih-Yi (James) Chien

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Dept. of Management Information Systems
National Chengchi University, Taipei, Taiwan

Research Interests

Human-Robot Interaction, Human-AI Collaboration, Explainable AI, User Experience

Professional Experience

Associate Professor, Dept. of Management Information Systems — 2023-
National Chengchi University, Taipei, Taiwan
- Director, Human-Automation Interaction Lab

Assistant Professor, Dept. of Management Information Systems — 2018-2023
National Chengchi University, Taipei, Taiwan

Assistant Professor, Dept. of Management Information — 2017-2018
National Sun Yat-sen University, Kaohsiung, Taiwan

Teaching Fellow, School of Computing and Information — 2015-2017
University of Pittsburgh, Pittsburgh, USA

Research Assistant, School of Computing and Information — 2009-2017
University of Pittsburgh, Pittsburgh, USA

Instructor, Dept. of Asian Languages — 2008-2009
University of Pittsburgh, Pittsburgh, USA

Education

Ph.D. in Information Science — 2017
M.S. in Information Science — 2009
University of Pittsburgh, Pittsburgh, USA
Dissertation: The Influence of Cultural Factors on Trust in Automation
Adviser: Prof. Michael Lewis (Information Science, Univ. of Pittsburgh)
Prof. Katia Sycara (Robotics, Carnegie Mellon University)

B.S. in Information Management — 2004
Chung Hua University, Hsinchu, Taiwan

Honors and Awards

Advisor for the Student Thesis Competition Award
Topic: AI versus Crowd-Based E-Commerce Recommendations Under Different Levels of Transparency
Honorable Mention, TSC Thesis Award, Taiwan Management Institute, Taiwan (2024)

Topic: Advancing Recommendation Systems through Human-in-the-Loop and Explainable AI
Honorable Mention, Fubon Life Management Doctor and Master Thesis Award, Chinese Management Association, Taiwan (2024)

Topic: XFlag: Explainable Fake News Detection Model on Social Media
Best Thesis, Fubon Life Management Doctor and Master Thesis Award, Chinese Management Association, Taiwan (2022)

Teaching Outstanding Award
Course: Intro to Data Analysis and Programming (2022)
National Chengchi University, Taiwan

Excellent Undergraduate English-taught Courses
Course: Introduction to Computer Science (2018), User Experience Design (2020)
National Chengchi University, Taiwan

Teaching Outstanding Award
Course: Web Programming (2017), Intelligent Robotic Systems (2017), Mobile User Experience (2018)
National Sun Yat-sen University, Taiwan

Best Paper Award
Towards the development of an Inter-Cultural Scale to Measure Trust in Automation
International Conference on Human-Computer Interaction (HCII 2014)
Best Student Paper Honorable Mention Award
Effects of Unreliable Automation in Scheduling Operator Attention for Multi-Robot Control
IEEE International Conference on Systems, Man, and Cybernetics, 2012 (IEEE SMC 2012)

Publications

Journal Articles

[J18] **Chien, S. Y.**, Wang, Y. F., Cheng, K. T., & Chen, Y. C. (2024). Comparative Study of XAI Perception between Eastern and Western Cultures. *International Journal of Human–Computer Interaction*.

[J17] Lin, S. Y., **Chien, S. Y.**, Chen, Y. Z., & Chien, Y. H. (2024). Combating Online Malicious Behavior: Integrating Machine Learning and Deep Learning Methods for Harmful News and Toxic Comments. *Information Systems Frontiers.*

[J16] Wang, Y. F., Chen, Y. C., **Chien, S. Y.**, & Wang, P. J. (2024). Citizens' trust in AI-enabled government systems. *Information Polity.*

[J15] **Chien, S. Y.,** Lin, Y. L. & Chang, B. F. (2024). The Effects of Intimacy and Proactivity on Trust in Human-Humanoid Robot Interaction. *Information Systems Frontiers.*

[J14] **Chien, S. Y.**, Chen, C. L, & Chan, Y. C. (2023). The Effects of Intimacy and Proactivity on Trust in Human-Humanoid Robot Interaction. *International Journal of Human–Computer Interaction.*

[J13] Wang, Y. F., Chen, Y. C., & **Chien, S. Y.** (2023). Citizens' Intention to Follow Recommendations from a Government-Supported AI-enabled System. *Public Policy and Administration.*

[J12] Lin, Y. L., **Chien, S. Y.,** Su, W. C. & Hsiao, S. (2022). Coding Peekaboom: A Gaming Mechanism for Harvesting Programming Concepts. *Education and Information Technologies.*

[J11] **Chien, S. Y.,** Chao, S. F., Kang, Y., Hsu, C., Yu, M. H., & Ku, T. K. (2022). Understanding Predictive Factors of Dementia for Older Adults: A Machine Learning Approach for Modeling Dementia Influencers. *International Journal of Human-Computer Studies*.

[J10] **Chien, S. Y.,** Yang, C. J. & Fang, Y. (2022). XFlag: Explainable Fake News Detection Model on Social Media. *International Journal of Human–Computer Interaction*.

[J9] Jeng, W. Tang, G. M., Hu, H. M., & **Chien, S. Y.** (2021). Cultural Differences in the Allocation of Attention to Information Architecture Components. *Journal of Library and Information Studies.*

[J8] Lin, Y. L., **Chien, S. Y.,** Chen, Y. U. (2021). Posting Recommendations in Healthcare Q&A Forums. *Electronics*.

[J7] Lin, S. Y., **Chien, S. Y.,** Hsiao, C. L., Hsia, C. H., & Chao, K. M. (2020). Enhancing Computational Thinking Capability of Preschool Children by Game-based Tangible User Interface. *Electronic Commerce Research and Applications.*

[J6] **Chien, S. Y.,** Lewis, M., Sycara, K., Liu, J. S., & Kumru, A. (2019). Influence of Culture, Transparency, Trust, and Degree of Automation on Automation Use. *IEEE Transactions on Human-Machine Systems.*

[J5] **Chien, S. Y.,** Lewis, M., Sycara, K., Liu, J. S., & Kumru, A. (2018). The Effect of Culture on Trust in Automation: Reliability and Workload. *ACM Transactions on Interactive Intelligent Systems*.

[J4] **Chien, S. Y.,** Lin, Y. L., Lee, P. J., Han, S., Lewis, M., & Sycara, K. (2018). Attention Allocation for Human Multi-robot Control: Cognitive Analysis Based on Behavior Data and Hidden States. *International Journal of Human-Computer Studies*.

[J3] Lewis, M., Wang, H., **Chien, S. Y.,** Ma, Z., Velagapudi, P., Scerri, P., & Sycara, K. (2011). Process and performance in human-robot teams, *Journal of Cognitive Engineering and Decision Making*.

[J2] Scerri, P., Ma, Z., **Chien, S. Y.,** Wang, H., Lee, P., Lewis, M., & Sycara, K. (2011). An initial evaluation of approaches to building entry for large robot teams, *Journal of Intelligent and Robotic Systems*.

[J1] Lewis, M., Wang, H., **Chien, S. Y.,** Velagapudi, P., Scerri, P., & Sycara, K. (2010). Choosing autonomy modes for multirobot search, *Human Factors*.

Conference Proceedings

[C46] Chang, T. C., Chen, Y. J., Hung, S., Chang, N. H., Ku, C. H., Lin, S. Y., & **Chien, S. Y**. (2025). A Review on Shaping Chatbot Personalities via Large Language Models. *Hawaii International Conference on System Sciences (HICSS 25).*

[C45] Yu, T. C., Huang, M. X., Liu, Y. H., Wu, H. Y., Wang, B. S., Tsai, H. C., & **Chien, S. Y**. (2025). A Systematic Review of Integrating Mixed Reality and Artificial Intelligence in Museums: Enhancing Visitor Experiences and Innovating Exhibit Design. *Hawaii International Conference on System Sciences (HICSS 25).*

[C44] Chow, H. L., Hsu, C., & **Chien, S. Y**. (2024). Psychosocial Determinants of Dementia Progression: Insights from Advanced Data Analytics using the Taiwan Longitudinal Study in Aging. *International Conference on Human-Machine Systems (IEEE ICHMS 24).*

[C43] Sung, Y. H., **Chien, S. Y**., & Yu, F. (2024). Preliminary Validation of Explainable AI Interfaces across Heuristics and Information Transparency. *International Conference on Human-Machine Systems (IEEE ICHMS 24).*

[C42] Lu, W. I, **Chien, S. Y.**, & Chan, Y. C. (2024). An Exploration of Multimodal Communication for Developing Extrovert, Ambivert, and Introvert Robot. *Companion of the 2024 ACM/IEEE International Conference on Human-Robot Interaction (HRI 24).*

[C41] Chang, Y. W., **Chien, S. Y**., Chan, Y. C., & Tsao, C. C. (2024). Human-Robot Interaction in E-Commerce: The Role of Personality Traits and Chatbot Mechanisms-A Neuromarketing Research. *Companion of the 2024 ACM/IEEE International Conference on Human-Robot Interaction (HRI 24).*

[C40] Sun, Q., **Chien, S. Y.**, & Hsiao, I. H. (2023). Theory of Planned Behavior Modeled Educational Technology for Waste Management Learning, *IEEE International Conference on Advanced Learning Technologies. (IEEE ICALT 23)*

[C39] Sun, Q., Hsiao, I. H., & **Chien, S. Y.** (2023). Immersive Educational Technology for Waste Management Learning: A Study of Waste Detection and Feedback Delivery in Augmented Reality, *HCI International (HCII 23).*

[C38] Lu, W. I., Chen, Y. W., Shen, C. C., Tsai, P. H., Chu, Y. T., Hung, Y. H., **Chien, S. Y.**, Lee, J., & Chao, S. F. (2023). Social Robots for Older Adults in Medical Contexts, *HCI International (HCII 23).*

[C37] Lin, S.Y., Lai, Y. P., Chiang, H. C., Cheng, Y., & **Chien, S. Y.** (2023). Interactive Robot-Aided Diagnosis System for Children with Autism Spectrum Disorder. *HCI International (HCII 23).*

[C36] Sun, Q., Hsiao, I. H., & **Chien, S. Y.** (2023). Immersive Educational Recycling Assistant (ERA): Learning Waste Sorting in Augmented Reality, *International Conference of the Immersive Learning Research Network (iLRN 23).*

[C35] Tsao, C. C., Tang, C. Y., Chang, Y. W., Sung, Y. H., **Chien, S. Y.**, & Lin, S. Y. (2023). The Influence of a Robot Recommender System on Impulse Buying Tendency. *Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction (HRI 23).*

[C34] Tsao, C. C., Chuang, H. H., Tsao, T. H., Tang, C. Y., Chang, Y. W., Chu, C. L., Sung, C. C. Hsieh, C. L., Lin, Y. P. & **Chien, S. Y.** (2023). Assessing the Decision-Making Process in Human-Robot Collaboration Using a Lego-like EEG Headset. *Hawaii International Conference on System Sciences (HICSS 23).*

[C33] Weng, Y. L., **Chien, S. Y.**, & Lin, S. Y. (2022). Fake reviews detection with hybrid features using time-sequential deep learning model. *International Conference on Human-Machine Systems (IEEE ICHMS 22).*

[C32] **Chien, S. Y.**, Chen, C. L, & Chan, Y. C. (2022). The Influence of Personality Traits in Human-Humanoid Robot Interaction. *Association for Information Science & Technology (ASIS&T).*

[C31] Hsu, C., Tsao, C. C., Weng, Y. L., Tang, C. Y., Chang, Y. W., Kang, Y., & **Chien, S. Y.** (2022). A Machine Learning Approach to Model HRI Research Trends in 2010~2021. *Companion of the 2022 ACM/IEEE International Conference on Human-Robot Interaction (HRI 22).*

[C30] Chang, B. F., **Chien, S. Y.**, & Lin, Y. L. (2021). The Effect of Communication Approaches on Intimacy in Human-Humanoid Robot Interaction. *International Conference on Human-Machine Systems (IEEE ICHMS 21)*.

[C29] Luo, J. T., Lin, Y. L. & **Chien, S. Y.** (2020). Exploring the role of media richness to information disclosure. *IEEE International Conference on Human-Machine Systems (IEEE ICHMS 20).*

[C28] Sun, C. F., Chan, Y. C., **Chien, S. Y.**, Lin, Y. L., & Hsiao, I. H. (2020). Preschool Safety Education with Digital Media-based Learning Application– Kinder. *Proceedings of the 2020 HCI International (HCII 20).*

[C27] Tang, G. M., Hu, H. M., **Chien, S. Y.**, & Jeng, W. (2020). A Cross-cultural Study on Information Architecture: Culture Differences on Attention Allocation to Web Components. (*iConference 20).*

[C26] Semnani-Azad, Z., **Chien, S. Y.**, Forster, Y., Schuckers, S. & Gan, H. (2019). Impact of Cultural Factors in Trusting Biometric Technology. *52th Hawaii International Conference on System Sciences (HICSS 2019).*

[C25] **Chien, S. Y.**, Hsiao, I. H. & Kang, Y. (2018). The Effect of Applying Visual Programming Language for Developing Robotic Systems. *22th Pacific Asia Conference on Information Systems: Poster Session (PACIS 18)*.

[C24] **Chien, S. Y.** & Lin, P. H. (2018). Interaction Quality of Human-Robot Collaboration– A Case Study of Da Vinci Surgical System: Extended Abstract. *2018 INFORMS International Conference (INFORMS 18)*.

[C23] Semnani-Azad, Z., **Chien, S. Y.,** & Schuckers, S. (2018). Impact of Cultural Factors in Trusting Biometric Technology. *51th Hawaii International Conference on System Sciences Symposium: Credibility Assessment and Screening Technologies (HICSS 2018)*.

[C22] **Chien, S. Y.,** Lewis, M., Sycara, K., Liu, J. S., & Kumru, A. (2016). Influence of Cultural Factors in Dynamic Trust in Automation. *Proceedings of the 2016 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 16).*

[C21] **Chien, S. Y.,** Lewis, M., Sycara, K., Liu, J. S., & Kumru, A. (2016). Relation between Trust Attitudes Toward Automation, Hofstede's Cultural Dimensions, and Big Five Personality Traits. *Proceedings of the 60th Annual Meeting of the Human Factors and Ergonomics Society (HFES 16).*

[C20] **Chien, S. Y.,** Lewis, M., Hergeth, S., Semnani-Azad, Z., & Sycara, K. (2015). Cross-Country Validation of a Cultural Scale in Measuring Trust in Automation. *Proceedings of the 59th Annual Meeting of the Human Factors and Ergonomics Society (HFES 15).*

[C19] Nagavalli, S., **Chien, S. Y.,** Lewis, M., Chakraborty, N., & Sycara, K. (2015). Bounds of Neglect Benevolence in Input Timing for Human Interaction with Robotic Swarms. *Proceedings of the 10th ACM/IEEE International Conference on Human-Robot Interaction (HRI 15).*

[C18] **Chien, S. Y.,** Semnani-Azad, Z., Lewis, M., & Sycara, K. (2014). An Empirical Model of Cultural Factors on Trust in Automation. *Proceedings of the 58th Annual Meeting of the Human Factors and Ergonomics Society (HFES 14).*

[C17] **Chien, S. Y.,** Semnani-Azad, Z., Lewis, M., & Sycara, K. (2014). Towards the development of an Inter-Cultural Scale to Measure Trust in Automation. *Proceedings of the 2014 HCI International (HCII 14)* **[*Best Paper Award*].**

[C16] Lewis, M., **Chien, S. Y.,** Mehrotra, S., Chakraborty, N., & Sycara, K. (2014). Task Switching and Single vs. Multiple Alarms for Supervisory Control of Multiple Robots. *Proceedings of the 2014 HCI International (HCII 14).*

[C15] Lewis, M., **Chien, S. Y.,** Mehrotra, S., Chakraborty, N., & Sycara, K. (2014). Task Switching and Cognitively Compatible guidance for Control of Multiple Robots. *Proceedings of the 2014 IEEE International Conference on Robotics and Biomimetics (IEEE ROBIO 14).*

[C14] **Chien, S. Y.,** Mehrotra, S., Lewis, M., & Sycara, K. (2013). Imperfect Automation in Scheduling Operator Attention on Control of Multi-Robots. *Proceedings of the 57th Annual Meeting of the Human Factors and Ergonomics Society (HFES 13).*

[C13] **Chien, S. Y.,** Mehrotra, S., Lewis, M., & Sycara, K. (2012). Effects of Unreliable Automation in Scheduling Operator Attention for Multi-Robot Control. *Proceedings of the 2012 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 12)* **[*Best Student Paper Award Nomination*]**.

[C12] **Chien, S. Y.,** Mehrotra, S., Brooks, N., Lewis, M., & Sycara, K. (2012). Scheduling Operator Attention for Multi-Robot Control. *Proceedings of the 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems (IEEE IROS 12).*

[C11] **Chien, S. Y.,** Wang, H., & Lewis, M. (2011). Effects of Spatial Ability on Multi-robot Control Tasks. *Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society.*

[C10] **Chien, S. Y.,** Mehrotra, S., Wang, H., Lewis, M., & Sycara, K. (2011). Effects of Alarms on Control of Robot Teams. *Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society (HFES 11).*

[C9] Brooks, N., Wang, H., Kolling, A., Abedin, S., Lee, P., **Chien, S. Y.,** Lewis, M., Owens, S., Scerri, P., & Sycara, K. (2011). Asynchronous Control With ATR for Large Robot Teams. *Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society (HFES 11).*

[C8] Wang, H., Kolling, A., Abedin, S., Lee, P., **Chien, S. Y.,** Lewis, M., Brooks, N., Owens, S., Scerri, P., & Sycara, K. (2011). Scalable target detection for large robot teams, *Proceedings of the 6th ACM/IEEE International Conference on Human-Robot Interaction (IEEE HRI 11).*

[C7] **Chien, S. Y.,** Wang, H., & Lewis, M. (2010). Human vs. algorithmic path planning for search and rescue by robot teams, *Proceedings of the 54th Annual Meeting of the Human Factors and Ergonomics Society (HFES 10).*

[C6] Scerri, P., Velagapudi, P., Sycara, K., Wang, H., **Chien, S. Y.,** & Lewis, M. (2010). Towards an understanding of the impact of autonomous path planning on victim search in USAR, *Proceedings of the 2010 IEEE/RSJ International Conference on Intelligent Robots and Systems (IEEE IROS 10).*

[C5] Wang, H., Lewis, M., **Chien, S. Y.,** Scerri, P., Velagapudi, P., Sycara, K., & Kane, B. (2010). Teams organization and performance in multi-human/multi-robot teams, *Proceedings of the 2010 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 10).*

[C4] Wang, H., Lewis, M., & **Chien, S.** (2010). Teams organization and performance analysis in autonomous human-robot teams. *Proceedings of the 10th Performance Metrics for Intelligent Systems Workshop. ACM.*

[C3] Lee, P., Wang, H., **Chien, S. Y.,** Lewis, M., Scerri, P., Velagapudi, P., Sycara, K., & Kane, B. (2010). Teams for Teams: Performance in Multi-Human/Multi-Robot Teams.

Proceedings of the 54th Annual Meeting Human Factors and Ergonomics Society (HFES 10).

[C2] Wang, H., **Chien, S. Y.,** Lewis, M., Velagapudi, P., Scerri, P., & Sycara, K. (2009). Human teams for large scale multirobot control, *Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics (SMC 09).*

[C1] Wang, H., Lewis, M., **Chien, S. Y.,** & Velagapudi, P. (2009). Scaling effects for synchronous vs. asynchronous video in multi-robot search, *Proceedings of the Human Factors and Ergonomics Society 53rd Annual Meeting (HFES 09).*

Grants

PI, National Science and Technology Council, Taiwan ($2,700,000 NTD) 2022-2025
Topic: *The Use of Social Humanoid Robot for Supporting Older Adults with Mild Cognitive Impairment: A Combination of Usability Evaluations and Machine Learning Approaches on Assistive Technology*

Co-PI, Cathay Life Insurance Company, Taiwan ($1,600,000 NTD) 2022-2025
Topic: *Investigations of User-Centric Insurance Digital Experience and Customized Information Collection System*

PI, Tokio Marine Newa Insurance Company, Taiwan ($200,000 NTD) 2024
Topic: *Investigations of User Experience in Online Travel Insurance Purchases*

PI, Land Administration Department, New Taipei City Government ($149,600 NTD) 2023
Topic: *New Taipei City's Real Estate Services: Digital Transformation and Value Reconstruction Project*

PI, National Chengchi University, Taiwan ($325,000 NTD) 2022
Topic: *Mixed Reality in Medical Care System*

PI, Higher Education SPROUT Project, Ministry of Education, Taiwan ($519,208 NTD) 2022
Topic: *Opportunities and Development of User Experience in Post-COVID-19 Era*

PI, Higher Education SPROUT Project, Ministry of Education, Taiwan ($523,857 NTD) 2022
Topic: *User Experience in Medical Care and Long-term Care*

PI, National Chengchi University, Taiwan ($300,720 NTD) 2021
Topic: *Mixed Reality in User Experience*

PI, Higher Education SPROUT Project, Ministry of Education, Taiwan ($449,308 NTD) 2021
Topic: *The Influence of Cultural Factors on Emerging Information and Communications Technology in the MIS Field*

PI, Higher Education SPROUT Project, Ministry of Education, Taiwan ($445,730 NTD) 2021
Topic: *A Multi-faceted Examination of User Experience Designs in the MIS-related Applications*

PI, National Science and Technology Council, Taiwan ($1,340,000 NTD) 2020-2022
Topic: *Human-Humanoid Robot Interaction in Healthcare*

PI, Higher Education SPROUT Project, Ministry of Education, Taiwan ($429,378 NTD) 2020
Topic: *The Adoption of Emerging Information Technology Across Cultures*

PI, National Science and Technology Council, Taiwan ($1,125,000 NTD) 2018-2020
Topic: *The Impact of Cultural Dynamics on Human-Humanoid Robot Collaboration*

Teaching Experience

National Chengchi University, Taipei, Taiwan
Undergraduate: Intro to AI in Business (Online Course, FL21)
Intro to Data Analysis and Programming (SP22)
Intro to Computer Science (FL18-FL24)

Graduate: User Experience Design (SP18-SP24)
Intelligent Robotic Systems: Design and Applications (SP18, SP19)

National Sun Yat-sen University, Kaohsiung, Taiwan
Undergraduate: Web Programming (FL17)
Database Management (SP18)

Graduate: Intelligent Robotic Systems (FL17)
Mobile User Experience (SP18)

University of Pittsburgh, Pittsburgh, USA
Graduate: Human Factors in Systems (SM15, SM16)

Professional Services

Editorial Board
International Journal of Human Computer Interaction, 2022-
Expert Systems, 2024-

Board Member
International Conference on Human-Computer Interaction, 2020-

Associate Editor
IEEE International Conference on Systems, Man, and Cybernetics, 2021, 2022

Program Chair
Conference of Taiwanese Association of Computer-Human Interaction (TAICHI), 2021, 2022

Program Committee Member
Pacific Asia Conference on Information Systems (PACIS), 2020
IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC), 2018, 2019

Reviewer
ACM Interactive, Mobile, Wearable and Ubiquitous Technologies
ACM Transactions on Interactive Intelligent Systems
Autonomous Robots
Computers in Human Behavior
Electronic Commerce Research and Application
Hawaii International Conference on System Sciences
iConference
IEEE Access
IEEE International Conference on Robotics and Automation
IEEE International Conference on Systems, Man, and Cybernetics
IEEE International Conference on Information Reuse and Integration for Data Science
IEEE Transactions on Human-Machine Systems
IEEE Transactions on Automation Science and Engineering
Information & Management
International Conference on Information Systems
International Journal of Human-Computer Interaction
International Journal of Industrial Ergonomics
Journal of Cognitive Engineering and Decision Making
Journal of e-Business
Journal of Human-Robot Interaction
Journal of Intelligent and Robotic Systems
Journal of Library and Information Studies
Journal of Management and Systems
Scientific Reports
Web Intelligence

References

Available upon request.