Fu-Yin Cherng

Personal Website: https://fuyincherng.github.io/ fuyincherng@cs.ccu.edu.tw
Google Scholar: https://scholar.google.com/citations?user=RNihHkMAAAAJ fuyincherng@gmail.com

RESEARCH INTEREST

Human-Computer Interaction (HCI), Human-Centered AI (HCAI)/Human-AI Interaction (HAI), Neuroergonomics, Brain-Computer Interface (BCI), Technology-Supported Learning, Data-Driven Design

EDUCATION

Ph.D. in Computer Science 2013 – 2019
National Chiao Tung University, Advisor: Prof. Wen-Chieh Lin

B.S. in Computer Science 2009 – 2013
National Chiao Tung University

EMPLOYMENT HISTORY

National Chung Cheng University / Assistant Professor 2021 - present
Computer Science and Information Engineering Dept.
• Secured 3 NSTC grants and 1 industry-academia collaboration as PI
• Taught mandatory undergraduate EMI courses with an average student feedback score of 4.5/5.0. Received awards for outstanding courses in 2024 and 2025.
• Publish 1 SCI-indexed paper and three full papers at the top-tier conference ACM CHI 2022, 2024, and 2025.
• Independently advised undergraduate and graduate students who had a paper accepted for oral presentation and two poster papers at CHI 2024

National Taiwan University / Adjunct Assistant Professor Spring 2021
Information Management Dept.
• Co-instruct the course, Data Structures and Advanced Programming

National Taiwan University / Postdoctoral Researcher 2020 – 2021
Advisor: Prof. Bing-Yu Chen; Information Management Dept.
• Conducted exploratory study of developing and evaluating child-friendly programming environments with concretized computational concepts
• Participated in industrial-granted projects of NTU IoX center with Delta Electronics to develop a mixed-reality system for remote meeting and training

University of California, Davis / Postdoctoral Researcher 2019 – 2020
Advisor: Prof. Hao-Chuan Wang; Computer Sciences Dept.
• Conducted research projects to discover the effect of social information on customers' preferences using surveys and behavior experiments
• Participated in writing proposals with national and industrial grants with multidisciplinary teams to design research plans

École Polytechnique Fédérale de Lausanne / Doctoral Assistant 2016 – 2017
Advisor: Prof. Pierre Dillenbourg and Prof. Robert West; Computer and Communication Sciences Dept.
• Conducted research projects funded by the Swiss government to understand the evolution of the IT labor market by analyzing job titles and skills
• Conducted exploratory analysis to reveal what computational skills are important for the current and future labor market based on job ads and online forums

National Chiao Tung University / Research Assistant 2013 – 2019
Advisor: Prof. Wen-Chieh Lin; Computer Science Dept.

PUBLICATIONS

Peer-Reviewed International Journal Paper
[J01] Yu-Ting Yen, Fang-Ying Liao, Chi-Lan Yang, Ruei-Che Chang, **Fu-Yin Cherng***, Bing-Yu Chen. Strange Familiars: Exploring the Design of Avatars and Virtual Environments for Reconnecting Dormant Ties in Virtual Reality IEEE Transactions on Visualization and Computer Graphics, 2025 (SCI, Q1, IF: 6.5)

[J02] I-Chao Shen, **Fu-Yin Cherng***, Takeo Igarashi, Wen-Chieh Lin, Bing-Yu Chen. EvIcon: Designing High-Usability Icon with Human-in-the-loop Exploration and IconCLIP. Computer Graphics Forum, 2023 (SCI, Q1, IF: 2.9)

[J03] Ching-Ying Sung, Xun-Yi Huang, Yicong Shen, **Fu-Yin Cherng**, Wen-Chieh Lin, and Hao-Chuan Wang. Exploring Online Learners' Interactive Dynamics by Visually Analyzing their time-anchored comments. Computer Graphics Forum, 2017 (SCI, Q1, IF: 2.9)

[J04] Yi-Chieh Lee, Wen-Chieh Lin, **Fu-Yin Cherng**, Li-Wei Ko. A Visual Attention Monitor Based on Steady-State Visual Evoked Potential. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015 (SCI, Q1, IF: 5.2)

[J05] Sheng-Fu Liang, Chin-En Kuo, Yi-Chieh Lee, Wen-Chieh Lin, Yen-Chen Liu, Peng-Yu Chen, **Fu-Yin Cherng**, Fu-Zen Shaw. Development of an EOG-based Automatic Sleep-Monitoring Eye Mask. IEEE Transactions on Instrumentation and Measurement, 2015 (SCI, Q1, IF: 5.9)

[J06] Hsin-Yang Ho, I-Cheng Yeh, Yu-Chi Lai, Wen-Chieh Lin, **Fu-Yin Cherng**. Evaluating 2D Flow Visualization Using Eye Tracking. Computer Graphics Forum, 2015 (SCI, Q1, IF: 2.9)

Top-Tier Conference Full Paper
Unlike many disciplines that prioritize journal publications as the main measure of success, Human-Computer Interaction (HCI) emphasizes premier conferences for disseminating high-impact research. Top-tier conferences like ACM CHI, ACM UIST, and ACM CSCW have rigorous peer-reviewed processes, often with acceptance rates below 30%, positioning them as key venues for groundbreaking work. ACM CHI, ranked A* in the CORE conference system and No.1 publication venue in HCI according to Google Scholar. Hence, publishing a full paper at ACM CHI is a significant career milestone in HCI, as it is equivalent to publishing in a top-ranked journal in other fields.

[C01] Jingxian Liao, **Fu-Yin Cherng**, Mrinalini Singh, Hao-Chuan Wang. 2025. Signals Beyond Text: Understanding How Accessing Peer Concept Mapping and Commenting Augments Reflective Mind for High-Stake Videos. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'25 (acceptance rate: 24.9%)

[C02] Yu-Jung Chung, Chen-Wei Hsu, Meng-Hsun Chan, and **Fu-Yin Cherng***. Enhancing ESL Learners Experience and Performance through Gradual Adjustment of Video Speed during Extensive Viewing. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'24 (acceptance rate: 26.4%)

[C03] **Fu-Yin Cherng***, Jingchao Fang, Jiang, Yinhao Jiang, Xin Chen, Taejun Choi, Hao-Chuan Wang. Understanding Social Influence in Collective Product Ratings Using Behavioral and Cognitive Metrics. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'22 (acceptance rate: 25%)

[C04] **Fu-Yin Cherng***, Yi-Chen Lee, Jung-Tai King, Wen-Chieh Lin. Measuring the Influences of Musical Parameters on Cognitive and Behavioral Responses to Audio Notifications Using EEG and Large-scale Online Studies. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'19 (acceptance rate: 23.8%)

[C05] Yi-Chen Lee, **Fu-Yin Cherng***, Jung-Tai King, Wen-Chieh Lin. To Repeat or Not to Repeat?: Redesigning Repeating Auditory Alarms Based on EEG Analysis. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'19 (acceptance rate: 23.8%)

[C06] **Fu-Yin Cherng**, Wen-Chieh Lin, Jung-Tai King, Yi-Chen Lee. An EEG-based

Approach for Evaluating Graphic Icons from the Perspective of Semantic Distance. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'16 **(acceptance rate: 23%; Best Paper Honorable Mention Award, 4 % of over 2,000 submitted papers)**

[C07] Yi-Chieh Lee, Wen-Chieh Lin, **Fu-Yin Cherng**, Hao-Chuan Wang, Ching-Ying Sung, Jung-Tai King. Using Time-Anchored Peer Commenting to Enhance Social Interaction in Online Educational Videos. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'15 (acceptance rate: 25%)

[C08] Yi-Chieh Lee, Wen-Chieh Lin, Jung-Tai King, Li-Wei Ko, Yu-Ting Huang, **Fu-Yin Cherng**. An EEG-based Approach for Evaluating Audio Notifications under Ambient Sounds. Proceedings of ACM Conference on Human Factors in Computing Systems, CHI'14 **(acceptance rate: 26.7%; Best Paper Honorable Mention Award, 5 % of over 2,000 submitted papers)**

International Refereed Conference & Poster Paper

[C01] Yun-Rou Lin, **Fu-Yin Cherng**, Yi-Chieh Lee, Zhu-Ying Tian, Wen-Chieh Lin. Navigating Color Constraints in Multi-View Visualizations with MVcolor. IEEE PacificVis 2025 (Conference Papers Track)

[C02] Ping (Hank) Lee, Wei-Lun Kao, Hung-Jui Wang, Ruei-Che Chang, Yi-Hao Peng, **Fu-Yin Cherng**, Shang-Tse Chen. AdvCAPTCHA: Creating Usable and Secure Audio CAPTCHA with Adversarial Machine Learning. Symposium on Usable Security and Privacy (USEC) 2024

[C03] Xun-Yi Huang, **Fu-Yin Cherng***, Jung-Tai King, Wen-Chieh Lin. EEG-based Measures of Auditory Saliency in a Complex Context. Proceedings of the 21st International Conference on Human-Computer Interaction with Mobile Devices and Services, MobileHCI'19, ACM

[P01] Yu-Jung Chung, Bei-Hong Lin, Hao-Yuan Cheng, Yu-Ting Yen, Ching-Chuan Li, **Fu-Yin Cherng***. Understanding the Effects of Short-Form Videos on Sustained Attention. In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, CHI'24, ACM.

[P02] Ching-Ying Sung, **Fu-Yin Cherng***, Yi-Lun Chiu, Peng-Hsi Chen, Bing-Yu Chen. 3CPEs: Concrete Computational Concepts Programming Environments for Elementary Computer Science Education. In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, CHI'24, ACM.

[P03] Meng-Yun Liao, Ching-Ying Sung, Hao-Chuan Wang, Wen-Chieh Lin, **Fu-Yin Cherng**. Embodying Historical Learners' Messages as Learning Companions in a VR Classroom. In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, CHI'19. ACM.

[P04] Ching-Ying Sung, Xun-Yi Huang, Yicong Shen, **Fu-Yin Cherng**, Wen-Chieh Lin, and Hao-Chuan Wang. Topin: A visual analysis tool for time-anchored comments in online educational videos. In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, CHI'16. ACM.

HONORS & AWARDS

- Recipient of Outstanding English-as-a-Medium-of-Instruction (EMI) Course Award, CCU, 2025
- Recipient of Faculty Evaluation Excellent Award, CCU, 2025
- Awarded for Outstanding Course Based on Student Evaluations, CCU, 2024, 2025
- Recipient of the Outstanding New Researcher Award Salary Incentive, CCU, 2024
- Special Recognitions for Outstanding Reviews, ACM CSCW'20, DIS'22, CHI'24, CHI'26

• Honorary Member of Phi Tau Phi, National Chiao Tung University, 2020
• ACM CHI Best Paper Honorable Mention Award, 2014, 2016

GRANTS

Principal Investigator

• **2025 - 2027** Enhancing Emotion Regulation and Affective Grounding in Instant Messaging and Group Chat through AI-Mediated Communication, NSTC114-2222-E-194-002-MY2

• **2025** Application of Human-Computer Interaction Design in Retrieval-Augmented Generation for Question Answering, Industry-academia Collaboration with Industrial Technology Research Institute

• **2024 - 2025** Understanding the Short-term and Long-term Relationship between Short-form Video Consumption and Sustained Attention, NSTC113-2221-E-194-030-

• **2022 - 2024** Neuroprint: Neuroprint: Promoting Credible Collective Reviews through Developing Neural-based Multimodal Metrics of Social Influence and Intention, MOST111-2222-E-194-008-MY2

Co-Principal Investigator

• **2025 - 2028** Developing a Highly Accurate and Trustworthy Community Fraud Prevention Mechanism for Public and Private Messages, NSTC114-2628-E-194-005-MY3

• **2021 - 2022** Nurturing STEM and Female Talent in Higher EducationCross-Disciplinary Maker Talent Development Program for AI Industry, Ministry of Education

TEACHING EXPERIENCE

Programming Design I & II, 2021 - 2025, CCU
• Mandatory undergraduate EMI crouse
• Average Feedback Score: 4.5 out of 5

Programming Lab for Program Design I & II, 2021 - 2025, CCU
• Mandatory undergraduate EMI crouse
• Average Feedback Score: 4.6 out of 5

HCI and Method of User Research & II, 2022 - 2024, CCU
• Optional graduate course
• Average Feedback Score: 4.8 out of 5

Data Structures and Advanced Program Design, 2022 - 2024, NTU
• Mandatory undergraduate crouse
• Co-Lectured with Prof. Bing-Yu Chen

I am willing and capable of teaching most of the introductory courses in the CSIE department.

SERVICE

Member of Academic Organization
• Taiwanese Association of Com. Human Interaction, Board Member, 2024 - 2026
• Taiwanese Association of Com. Human Interaction, Secretary General, 2022 - 2024
• Taipei ACM SIGCHI Chapter, Treasurer, 2022 - 2024

Program Committee Member
• ACM SIGCHI Best Practice Working Group, 2023
• Late-Breaking Work (LBW) Program Committee, ACM CHI 2023 - 2024

Conference Organization
• Paper Chair, TAICHI, 2024
• Poster Chair, TAICHI, 2021, 2022, 2023
• Chair of Student Volunteer, ACM MobileHCI, 2019

Reviewing
• ACM CHI, CSCW, UIST, DIS, MobileHCI, SIGGRAPH Asia
• IJHCS, International Journal of Human-Computer Studies
• IEEE VR, Access