

國立清華大學第 29 屆新進人員研究獎得獎人簡介



學習科學與科技研究所 陳政煥副教授

陳政煥博士現為國立清華大學學習科學與科技研究所副教授，主持「學習與沉浸科技研究室」（Learning and Immersive Technology Lab, LIT Lab）。其研究以科技增進學習與電腦支援協作學習為核心，近年聚焦沉浸式虛擬實境（VR）、元宇宙、人工智慧（AI）與學習分析，探討新興科技如何支持有效且具意義的協作學習。

陳博士從真實教學情境與學習需求出發，整合理論建構、學習設計、實徵驗證、學習分析與後設分析，形成清楚的研究主線：探討沉浸式 VR 合作學習是否有效、如何設計有效的協作與共創活動，以及哪些因素使元宇宙中的協作學習真正發生。於清華的相關成果陸續發表於 *Computers & Education*、*Interactive Learning Environments*、*Educational Research Review*、*Education and Information Technologies* 等教育科技與學習科學領域重要 SSCI Q1 國際期刊。近兩年來，陳副教授進一步拓展 AI 支持學習的研究，發展 AI 賦能元宇宙合作學習、多模態 AI 鷹架與學習歷程分析，探討 AI 如何支持個人與團體的思考、互動與協作，並透過真實教室研究、團隊培育與國際合作，持續深化沉浸式科技與智慧協作學習研究。

陳副教授近年榮獲國科會 2030 跨世代年輕學者方案之「新秀學者」、本校「清華 - 清鏡傑出年輕學者」，並獲英國教育研究協會（BERA）研討會 SIG Best Presentation Award、台灣數位學習發展研討會最佳論文獎、及亞太電腦教育學會（APSCE）AI-MetaACES 國際研討會的 Best Full Paper Award 等肯定。未來將持續整合沉浸式科技、AI 與學習分析，深化對學習與協作歷程及 AI 支持機制的理解，亦感謝家人、合作夥伴、與研究室成員的支持與投入；此次獲獎將成為其持續探索教育科技創新與深化研究的重要動力。

Dr. Cheng-Huan Chen is an Associate Professor in the Institute of Learning Sciences and Technologies at National Tsing Hua University (NTHU), Taiwan, where he leads the Learning and Immersive Technology (LIT) Lab. His research centers on technology-enhanced learning and computer-supported collaborative learning, with recent work focusing on immersive virtual reality, the metaverse, artificial intelligence (AI), and learning analytics. His research explores how emerging technologies can support effective and meaningful collaborative learning.

Dr. Chen's research is grounded in authentic educational contexts and learning needs, integrating theoretical development, learning design, empirical investigation, learning analytics, and meta-analysis. His work follows a coherent research trajectory that examines whether immersive VR-based collaborative learning is effective, how collaborative and co-creation activities can be designed more effectively, and what factors enable meaningful collaboration to emerge in metaverse learning environments. Related studies have been published in leading SSCI Q1 journals in educational technology and the learning sciences, including *Computers & Education*, *Interactive Learning Environments*, *Educational Research Review*, and *Education and Information Technologies*. Over the past two years, Dr. Chen has further expanded his research into AI-supported learning, including AI-empowered metaverse collaborative learning, multimodal AI scaffolding, and analyses of learning processes. Rather than treating AI merely as a tool for generating answers, his research examines how AI can function as an intelligent scaffold that supports individual and group thinking, interaction, knowledge construction, and collaboration. Through authentic classroom studies, research team development, and international collaborations with partners including the UCL Knowledge Lab and The Chinese University of Hong Kong, he continues to advance research on immersive technologies and intelligent collaborative learning.

Dr. Chen was selected as an Emerging Young Scholar under the National Science and Technology Council's 2030 Cross-Generation Young Scholars Program and as an NTHU–Ching Jing Distinguished Young Scholar. He has also received the British Educational Research Association (BERA) SIG Best Presentation Award, the Taiwan E-Learning Forum (TWELF) Best Paper Award, and the Asia-Pacific Society for Computers in Education (APSCE) AI-MetaACES Best Full Paper Award. Looking ahead, he will continue to integrate immersive technologies, AI, and learning analytics to deepen our understanding of learning and collaborative processes as well as the mechanisms through which AI can support them. Dr. Chen is also grateful for the continued support and contributions of his family, collaborators, and LIT Lab members. Receiving the NTHU New Faculty Research Award will provide further motivation for him to continue advancing innovation and research in educational technology.