

Special Issue

New Concepts in Human-Computer Interaction Design and Application

Message from the Guest Editor

With the rapid advancement of large language models, generative AI, and agents, the paradigms and applications of human-computer collaborative design are undergoing profound transformations. These technologies not only extend the boundaries of creativity and intelligence but also revolutionize the design process by integrating multimodal data, including text, images, and audio. LLMs can accurately comprehend and generate high-quality content across various contexts, while AIGC, building on learning and induction, further evolves and creates by simulating human creative thinking, thus achieving a leap from perception and understanding to generation and creation. Agents, with their advanced features such as context-aware memory, multi-step planning, and strategic tool usage, further augment the capabilities of LLMs. AI is no longer merely a tool; it acts as an extension of human intent, actively engaging in design and production practices. These technological advancements are ushering in a new era in the design field, characterized by increasingly diverse and intelligent design paradigms and application trends.

Guest Editor

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