

From Interfaces to Intelligent Partners: Rethinking Human-Computer Interaction in the Age of AI

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KEYNOTE

For decades, Human-Computer Interaction has been largely based on a simple paradigm: users express their intentions through an interface, and computer systems respond. Artificial Intelligence is fundamentally changing this relationship. Modern systems can understand natural language, combine multiple modalities, generate content, learn from interaction, recommend actions, and increasingly act autonomously on behalf of their users. As a result, we are moving from interfaces that users operate toward intelligent systems with which users collaborate. Drawing on research spanning natural language processing, question answering, multimodal interaction, augmented and virtual reality, intelligent decision support, and AI applications in healthcare and education, this keynote explores how this transformation is reshaping the relationship between humans and computer systems. As AI becomes increasingly proactive and autonomous, interaction is no longer limited to users issuing commands and systems producing responses. Initiative can belong to both sides, while decision-making and action may increasingly emerge from a continuous collaboration between humans and intelligent systems. This evolution creates significant opportunities, but also introduces new challenges for Human-Computer Interaction. Intelligent interfaces need to preserve meaningful human control and responsibility while taking advantage of AI capabilities. They need to communicate uncertainty, provide appropriate explanations, adapt to different users and contexts, and support trust without encouraging overreliance. From conversational agents and immersive environments to healthcare and educational applications, the next challenge for HCI is

therefore not simply to make systems more intelligent, but to design better, trustworthy, and responsible partnerships between humans and artificial intelligence.

BIOGRAPHY

Adrian Iftene is a Professor of Computer Science at Alexandru Ioan Cuza University of Iași, Romania, where he currently serves as Vice-Rector and previously served as Dean of the Faculty of Computer Science from 2012 to 2024. He holds a PhD in Computer Science, with a thesis on Textual Entailment, and has more than two decades of research and teaching experience spanning natural language processing, question answering, Human-Computer Interaction, software engineering, augmented and virtual reality, and Artificial Intelligence. His research has progressively explored how intelligent technologies can understand human intentions and support increasingly natural and effective forms of interaction, with recent work focusing particularly on AI applications in healthcare, education, multimodal environments, and intelligent decision-support systems. He has participated in numerous national and European research projects, including REVERT, MetaNet4U, ALEAR, MUCKE, IRSmart, MEDIMAG-AI, and Digital Innovation Zone, and currently coordinates or contributes to projects involving Artificial Intelligence, smart health, and autonomous systems. He is also MedTech Coordinator of the Imago-Mol Cluster and has been actively involved in interdisciplinary collaborations connecting computer science with medicine, education, law, industry, and society. His work combines a long-standing interest in intelligent systems with a human-centered perspective on how emerging technologies can move from research prototypes to useful, trustworthy, and responsible real-world solutions.