

Human-centered Computing: Challenges and Perspectives

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Bio

Nicu Sebe is a Professor in the University of Trento, Italy, where he is the dean of the doctoral school in ICT and is leading the research in the areas of multimedia information retrieval and human-computer interaction in computer vision applications. He was involved in the organization of the major conferences and workshops addressing the computer vision and human-centered aspects of multimedia information retrieval, among which as a General Co-Chair of the IEEE Automatic Face and Gesture Recognition Conference, FG 2008, ACM International Conference on Image and Video Retrieval (CIVR) 2007 and 2010. He was a general chair of ACM Multimedia 2013 and a program chair of ACM Multimedia 2011 and 2007. He is a program chair of ECCV 2016 and ICCV 2017 and a general chair of ICMR 2017. Currently he is the ACM SIGMM Director of Conferences. He has been a visiting professor in the Beckman Institute, University of Illinois at Urbana-Champaign and in the Electrical Engineering Department, Darmstadt University of Technology, Germany. He is a co-chair of the IEEE Computer Society Task Force on Human-centered Computing and is an associate editor of Computer Vision and Image Understanding, Machine Vision and Applications, Image and Vision Computing, International Journal of Human-computer Studies, ACM Transactions on Intelligent Systems, and Technology and of Journal of Multimedia. He is a fellow of IAPR and a senior member of ACM and IEEE.

Abstract

Human Centered Computing (HCC) is an emerging field that aims at bridging the existing gap between the various disciplines involved with the design and implementation of computing systems that support people's activities. HCC aims at tightly integrating human sciences (e.g. social and cognitive) and computer science (e.g. human-computer interaction (HCI), signal processing, machine learning, and computer vision) for the design of computing systems with a human focus from beginning to end. This presentation will address the existing challenges in HCC and will focus on real-time and robust solutions for eye detection and tracking, head pose estimation and their applications to gaze estimation, attention detection and personality.