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Title: Early Detection, Prevention, and Recovery of/from Frailty Using Multisensory Information and Communications Technology

Abstract:

Toward realizing age-free society, in which elderly people feel lively, we need to support early detection, prevention, and recovery of/from frailty (i.e., vulnerable states of mental and physical functions) efficiently. It is imperative for us to solve the problem of sudden increase in demand of medical treatment and nursing care by reducing periods required for the treatment and care. We also need to work out the issue of workforce shortage owing to rapid aging and very low birthrate.

In such a situation, we are currently studying and developing systems and devices which efficiently support early detection, prevention, and recovery of/from frailty in “Knowledge Hub Aichi,” Priority Research Project IV from Aichi Prefectural Government. In this keynote speech, we introduce our research supported by the project, in which we are researching and developing seven systems/devices as follows: (1) decision system of face concentration ratio, (2) classification and tailor-made system, (3) prevention and monitoring system, (4) walking support system by metaverse, (5) remote inspection and rehabilitation system, (6) finger devices, and (7) walking support devices. This research can make contribution to longevity society.

Biography:

Yutaka Ishibashi received the B.E., M.E., and Ph.D. degrees from Nagoya Institute of Technology, Nagoya, Japan, in 1981, 1983, and 1990, respectively. In 1983, he joined the Musashino Electrical Communication Laboratory of Nippon Telegraph and Telephone Public Corporation (currently, NTT). From 1993 to 2001, he served as an Associate Professor of Department of Electrical and Computer Engineering, Faculty of Engineering, Nagoya Institute of Technology. Currently, he is a Professor of Graduate School of Engineering, Nagoya Institute of Technology. From June 2000 to March 2001, he was a visiting researcher, Department of Computer Science and Engineering, University of South Florida (USF), USA. He was the Head of Department of Computer Science, Faculty of Engineering, Nagoya Institute of Technology from 2005 to 2006, and the Head of Department of Computer Science, Graduate School of Engineering, Nagoya Institute of Technology from 2007 to 2009. He was also a College Director at Nagoya Institute of Technology from 2016 to 2020. His research interests include multisensory communications, QoS (Quality of Service) control, and remote robot control with force feedback.

He was the Chair of the IEICE Communication Quality Technical Committee from 2007 to 2009. He served as TPC Chair of IEEE CQR (Communications Quality and Reliability)

Workshop in 2011 and 2012. He also served as NetGames (Network and Systems Support for Games) Workshop Co-Chair in 2006, 2010, 2014, and 2017, Executive Committee Chair of Tokai-Section Joint Conference on Electrical, Electronics, Information, and Related Engineering in Japan, Chair of IEEE MAW 2017 (Metro Area Workshop in Nagoya, 2017), Conference Co-Chairs of ICC 2017 - 2023, Conference Chair of ICCS 2018, TPC Chair of IEEE ICCE-TW 2018, Conference Co-Chairs of ICFCC 2019, 2020, ICCET 2019, WSCE 2019 - 2023, and ICCI 2020 - 2023. He was IEEE Nagoya Section Chair in 2017 and 2018, ITE (The Institute of Image Information and Television Engineers) Vice President in 2020 through 2022, ITE Tokai Branch Chair in 2020 and 2021, and IPSJ (Information Processing Society of Japan) Tokai Branch Chair. He is a Fellow of IEICE, a Senior member of IEEE and IPSJ, and a Member of ACM, ITE, VRSJ, and IEEJ.