
Keynote 9: Technology-Facilitated Assisted Living--- Concept, Rationale, Technologies and Exemplars ---

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Abstract

There is a growing ageing population and along which there is an increasing prevalence of ageing-related physical, sensory and cognitive declines. Yet available healthcare resources are dwindling, and the gap between the need and demand is becoming wider and wider in the time to come, not only in the UK but worldwide. Will technology come to our rescue, and how? In this talk the speaker will discuss the global ageing problem and its impact on quality of life, society and economy. He will introduce the technology-driven approach, dubbed as ambient assisted living, to addressing this challenge, in the context of smart home metaphor. The speaker will describe the main methods and their corresponding underlying technologies for assisted living, followed by an introduction to a number of application prototypes developed in funded EU projects and a couple of the latest project ideas. The speaker will discuss research and development initiatives and collaboration opportunities at national and EU levels. Finally the speaker will share his visions and insights into the future research and application. In particular he will briefly introduce the recently funded EU Horizon 2020 MSCA ACROSSING project.

Introduction

Liming Chen is Professor of Computer Science, Head of the Context, Intelligence and Interaction Research Group and its associated Smart Lab. in the School of Computer Science and Informatics, De Montfort University, UK. He obtained his B.Eng. and M.Eng. from Beijing Institute of Technology, Beijing, China, and Ph.D in Artificial Intelligence from De Montfort University. His current research interests include activity modelling and recognition, computational behaviour analysis, personalisation and adaptation of human-machine systems, decision support, smart environments and their application in smart homes and ambient assisted living. He is currently the coordinator of the EU Horizon2020 ACROSSING project "Advanced Technologies and Platform for Smarter Assisted Living" with funding and 10 partners across Europe, and has serves as the principal investigator for the EU FP7 MICHELANGELO project "Patient-centric model for remote management, treatment and rehabilitation of autistic children", EU AAL PIA project "Personal Instrumental ADL Assistant", EU AAL MobileSage project "Situated Guidance for the Mobile Elderly", and many other projects funded by industry and third countries. Liming has over 160 peer-reviewed publications in internationally recognised high-profile journals and conferences. He is the general chair or program chair for IEEE UIC2017, IEEE HealthCom2017, SAI Computing 2017, IEEE UIC2016, IntelliSys2016, MoMM2015/2014/2013, SAI2015/2013, IWAAL2014, UCAMI2013, and an organising chair of many workshops such as Romart-City2016 and SAGAware2015/2012, associate editor of IEEE THMS, assistant EIC for IJPCC and guest editors for IEEE THMS, PMC and IJDSN. Liming is a member of IEEE, IEEE SMC and the ETTC Task Force on Smart World, and an expert of the EU H2020 evaluation panel and UK EPSRC Peer Review College. He has delivered over 20 keynote and seminar talks in various forums, conferences, industry and academic events. More details can be found in his homepage <http://www.tech.dmu.ac.uk/~limingchen/>.

陈立明，现任英国德蒙福特大学计算机科学及信息学院教授，情景、智能和交互研究组和智慧实验室主任。获得北京理工学院工程学士和硕士，英国德蒙福特大学计算机科学博士。主要从事行为建模、模式识别、人机系统个性化、决策支持、智能环境及辅助生活等领域的研究工作。先后承担由英国国家工程物理科学研究院、欧盟研究框架、工业合作伙伴和国际合作者资助的 10 多个研发项目。目前担任欧盟地平线(EU Horizon2020) MSCA ITN ACROSSING 项目("支持更智能辅助生活的先进技术

和平台", 10 欧洲合作伙伴) 的首席科学家。曾是欧盟第七框架(EU FP7) ICT MICHELANGELO 项目("以病人为中心的自闭症儿童远程管理、治疗和康复模型"), 欧盟环境辅助生活(EU AAL JP) PIA 项目 ("个人生活助手") 和 MobileSage 项目("对移动老年人基于情景的指导") 等大型国际合作项目的主要负责人。在国际知名期刊和会议上发表经同行评议的学术论文 160 多篇。担任国际期刊 IEEE THMS 副编、Emerald IJPCC 助理主编、Elsevier PMC、Springer PUC 等国际著名期刊客座编辑。先后担任 IEEE UIC2017、UIC2016、IntelliSys2016、SAI2015、SAI2013 国际会议执行主席; IEEE HealthCom2017、MoMM2015/2014、IWAA2014、UCAM2013 国际会议程序主席及多个国际研讨会组织主席。担任 IEEE SMC、CIS 会员、智能世界 ETTC 技术委员会委员。担任英国 EPSRC(工程物理科学研究院)和欧盟地平线研究框架项目评审专家组评委。在法国、西班牙、荷兰、德国、中国、挪威等著名高校、研究所、公司及会议做邀请报告及主题演讲近 20 次.