

Conference: BioHabana 2024 / “Ciencia para una Vida Saludable”	
Title: Validating and Implementing digital technologies for healthy aging	
Keynote Speaker. Dr. Antonio Miguel Cruz	
	Biography Antonio Miguel Cruz is a distinguished academic with a wealth of experience and expertise in the field of digital technologies for healthy ageing. As an Associate Professor in the Department of Occupational Therapy within the Faculty of Rehabilitation Medicine at the University of Alberta, he plays a pivotal role in shaping the future of healthcare and rehabilitation. Additionally, Dr. Miguel Cruz serves as an affiliate researcher at the Glenrose Rehabilitation Research, Innovation & Technology, where he actively contributes to groundbreaking research initiatives. His commitment to advancing the field extends further as an Adjunct Associate Professor in the Faculty of Health at the University of Waterloo. Dr. Miguel Cruz's impressive academic journey commenced with the completion of a BSc degree in Nuclear Engineering at the Nuclear Science Institute in Habana, Cuba. He further pursued his passion for research and obtained both MSc and Ph.D. degrees in Bioengineering from the Technological University, Habana, Cuba. His early career began at the Technological University, Faculty of Electrical Engineering in Habana, Cuba, where he served as the chair of the Bioengineering Centre. Having amassed a wealth of knowledge and experience, Dr. Miguel Cruz later assumed the roles of Full Professor and Chair of the Biomedical Engineering Program at the Universidad del Rosario, School of Medicine and Health Sciences in Bogotá, Colombia. This multifaceted academic background has shaped his unique perspective on the intersection of technology and healthcare. Dr. Miguel Cruz's research primarily focuses on exploring the impact of technologies used in community and healthcare settings on healthy aging, with a particular emphasis on the well-being of older adults and their caregivers. As the director of the PEAR Lab and a network investigator of AGE-WELL NCE, Canada's technology and aging network, he actively collaborates with researchers and industry professionals to drive innovation and improve the lives of individuals within the aging population. Dr. Miguel Cruz's contributions to the field have been widely recognized, and he continues to make significant strides in advancing knowledge and promoting healthy aging practices.
	Abstract The Fourth Industrial Revolution is built on the Digital Technology Revolution. Digital technologies are advance technologies that include Information and Communication Technologies (ICTs), Zero-Effort Technologies (ZETs), Robots, the Internet of Things (IoT), Artificial Intelligence (AI), Smart Homes, Smart Devices (e.g., wearable devices), Autonomous Vehicles, Extended Reality, and Personal Voice Assistants. The lack of use of evidence-based digital technologies are the main barriers to accessing and successfully using these technologies for the benefit of its users. Ideally, for a digital technology to achieve high levels of implementation, it should follow a path that goes from gaining high levels of technology readiness, to clinical evidence of its effectiveness and, finally, to commercialization. However, this is not always the case. In this presentation I propose a framework to guide implementation and adoption research, in particular, ways to decide what type of studies should be conducted on digital technologies to

	reduce implementation times and increase the acceptability of these digital technologies by a variety of populations including older adults. In the presentations specific examples will be provided.
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