

# **Human–Computer Interaction Series**

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Sergio Sayago  
Editor

Perspectives  
on Human-Computer  
Interaction Research  
with Older People

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*Editor*  
Sergio Sayago  
Departament de Matemàtiques i Informàtica  
Universitat de Barcelona  
Barcelona, Spain

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# Foreword

When I taught an undergraduate Human–Computer Interaction class at Dundee University, a key part of the curriculum focused on human diversity, including a section on ageing and how it impacts interaction design. I’d start the section by showing the class what might appear to have been a randomly selected picture of a neatly dressed older man, expecting they would assume it was someone with low digital literacy. I’d ask if they knew who it was, and I don’t recall anyone ever giving the right answer. I’d then tell them that the person in the photo—Doug Engelbart—was responsible for the computer mouse and hypertext, two of their most familiar day-to-day technologies.

As part of their group project on user-centred design, students were encouraged to work with older adults as participants in exploratory research and evaluation. In this activity, they might also have the opportunity to meet Bill, who was a navigator with the British Royal Air Force during World War II. Using the analogue technology of the 1940s, he safely guided his crew to and from Japan in terrifying wartime conditions. But when it came to using software to create a slide presentation to share his passion for aviation, technology defeated him.

These are two examples of the many stories that illustrate the nuanced relationships we have with technology and the expectations we might have of older people’s ability to use it. They are stories to remind us that successful use of technology by older people is a complex mix of design, psychological and physiological factors that are highly dynamic in nature. Lazy stereotypes and questionable assumptions of what older people can and can’t do, what they want and what they should be given, can threaten a future where technology has the potential to enhance quality of later life.

In my work first in academia and latterly as a digital accessibility consultant, my experience is that awareness and interest in designing for diverse populations has never been higher. Yet, this is also a time where technology, inclusion and diversity have become politically charged topics at an unprecedented level of intensity. The gains we thought we’d made in recent years to establish the rights of diverse groups not to encounter discrimination are being threatened by movements capitalising on disenfranchisement—political and ideological shifts in and beyond the tech

industry. The consequences of technology-mediated events such as the 2016 United States presidential elections, Brexit, the emergence of the alt-right, and stories questioning the ethics of Silicon Valley companies, create concerns of declining respect for people and diversity. We also have the seemingly constant economic pressure to create and ship technology that does more, and in new ways, making it harder to focus on providing a quality user experience for new and existing users.

These events put the progress we've made in universal design at risk. But we have an opportunity to embed knowledge of human diversity in a way that reduces ingrained bias in design decisions. When designing for diversity "just happens" because designers do it as a core professional skill, the argument—driven by expectations of expensive remediation and constrained functionality—that inclusive design is an unjustifiable economic burden is substantially weakened. Normalising diversity as far as possible helps ensure that digital content creators, policymakers, tool builders and the many other stakeholders who influence how technology shapes our lives do so in a way that is as innately inclusive as possible. And a design team that focuses on people with disabilities, people from ethnic minorities, people in stressful situations and older people is a team that is likely to find insights and innovations that benefit a wide audience.

That's why this collection of knowledge on ageing and technology is so welcome, not only to inform and encourage researchers working in this fascinating and important field to continue discovering and sharing, but to support technology design decisions that are informed and influenced by the characteristics and circumstances of a significant but under-represented demographic. I warmly applaud Sergio Sayago's dedication and commitment to assembling these perspectives on understanding and designing for the needs of older technology users in different situations. I hope this book can challenge assumptions, provide valuable evidence to guide design strategy and ultimately shine a light on opportunities to use technology to enhance the lives of older adults. And, I hope that we can look forward to a future where design teams are not surprised by Doug's technological expertise, and where Bill can share his passion and expertise through presentation software that works for him.

Fife, Scotland

David Sloan, Ph.D.  
User Experience Research Lead with The Paciello Group

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This book would have been impossible to develop and complete without all the contributors. I am also enormously indebted to Josep Blat and Paula Forbes. Both played a key role in this book. I am also deeply grateful to Associació de Participants ÀGORA de l'Escola de Persones Adultes de La Verneda, Dundee User Centre and EspacioCaixa Madrid participants, who helped me to learn with and from them about the relationship between motivated older people and digital technologies, and who allowed me to share their experiences with the rest of the world. I thank my editor in Springer, Helen Desmond, for her support all along the way. My thanks also go to Ageing + Communication + Technologies (ACT), a research project (<http://actproject.ca/>) funded by the Social Sciences and Humanities Research Council of Canada, from providing me with research opportunities and stimulating, interdisciplinary conversations about ageing and digital technologies.

# Contents

## Part I Introduction

<b>1 Editorial Introduction—Perspectives on HCI Research with Older People</b> . . . . .	3
Sergio Sayago	

## Part II Design

<b>2 Creating Technologies with People Who have Dementia</b> . . . . .	21
Arlene J. Astell	
<b>3 The Role of Designers in the Development and Communication of New Technology</b> . . . . .	37
Yvonne Eriksson and Marie Sjölander	

## Part III Technologies

<b>4 Smartphone Usage Diversity among Older People</b> . . . . .	51
Andrea Rosales and Mireia Fernández-Ardèvol	
<b>5 Seniors and Self-tracking Technology</b> . . . . .	67
Clara Caldeira and Yunan Chen	
<b>6 Designing Mid-Air Gesture Interaction with Mobile Devices for Older Adults</b> . . . . .	81
Michela Ferron, Nadia Mana and Ornella Mich	
<b>7 The Social Interaction Experiences of Older People in a 3D Virtual Environment</b> . . . . .	101
Panote Siriaraya and Chee Siang Ang	
<b>8 Web-Based Embodied Conversational Agents and Older People</b> . . . . .	119
Gerard Llorach, Javi Agenjo, Josep Blat and Sergio Sayago	



## **Part IV Technology Use**

- 9 Online Leisure and Wellbeing in Later Life** . . . . . 139  
Vera Gallistl and Galit Nimrod
- 10 Designing for the Informatics Lifecourse and Ageing  
in Place** . . . . . 155  
Noah Lenstra
- 11 Older Adults as Internet Content Producers: Motivations  
for Blogging in Later Life** . . . . . 169  
Montserrat Celdrán, Rodrigo Serrat and Feliciano Villar
- 12 Older People Positive, Active and Creative ICT Use:  
A Study in Three Countries** . . . . . 183  
Susan M. Ferreira, Sergio Sayago and Josep Blat
- 13 Designing Computer-Supported Technology to Mediate  
Intergenerational Social Interaction: A Cultural  
Perspective** . . . . . 199  
Francisco J. Gutierrez, Sergio F. Ochoa, Raymundo Cornejo  
and Julita Vassileva

## **Part V Research Methods and Programming Acceptance**

- 14 Why and How Think-Alouds with Older Adults Fail:  
Recommendations from a Study and Expert Interviews** . . . . . 217  
Rachel L. Franz, Barbara Barbosa Neves, Carrie Demmans Epp,  
Ronald Baecker and Jacob O. Wobbrock
- 15 Working Towards Fostering Programming Acceptance in the  
Everyday Lives of Older and Adult People with Low Levels  
of Formal Education: A Qualitative Case Study** . . . . . 237  
Sergio Sayago, Angel Bergantiños and Paula Forbes

## **Part VI Conclusion and Future Perspectives**

- 16 Editorial Conclusion—Where Do We Go from Here?** . . . . . 255  
Sergio Sayago

# Editor and Contributors

## About the Editor

**Sergio Sayago** (Ph.D., Human-Computer Interaction/Computer Science, Universitat Pompeu Fabra, Barcelona) has been conducting HCI research with older people since 2004. He has conducted long-term ethnographic, participant observation and co-design studies of real-life web accessibility (WCAG) and technology use, mostly communication and digital games, in different cultural settings. His current research focuses on long-term empowerment and democratisation, addressing making, programming and (embodied) conversational interfaces, with older and adult people with low levels of formal education.

## Contributors

**Javi Agenjo** Universitat Pompeu Fabra, Barcelona, Spain

**Chee Siang Ang** University of Kent, Canterbury, UK

**Arlene J. Astell** Department of Occupational Sciences and Occupational Therapy, University of Toronto, Toronto, Canada;

Department of Psychiatry, University of Toronto, Toronto, Canada;

School of Psychology and Clinical Language Sciences, University of Reading, Reading, UK

**Ronald Baecker** University of Toronto, Toronto, ON, Canada

**Angel Bergantiños** Universitat de Barcelona, Barcelona, Spain

**Josep Blat** Universitat Pompeu Fabra, Barcelona, Spain

**Clara Caldeira** University of California, Irvine, CA, USA

**Montserrat Celdrán** Faculty of Psychology, University of Barcelona, Barcelona, Spain

**Yunan Chen** University of California, Irvine, CA, USA

**Raymundo Cornejo** Faculty of Engineering, Autonomous University of Chihuahua, Chihuahua, Mexico

**Carrie Demmans Epp** University of Alberta, Edmonton, AB, Canada

**Yvonne Eriksson** Mälardalen University, Eskilstuna/Västerås, Sweden

**Mireia Fernández-Ardèvol** IN3—Universitat Oberta de Catalunya, Barcelona, Spain

**Susan M. Ferreira** Télé-Université Du Québec, Québec, Canada

**Michela Ferron** Fondazione Bruno Kessler, Trento, Italy

**Paula Forbes** Abertay University, Scotland, UK

**Rachel L. Franz** University of Washington, Seattle, WA, USA

**Vera Gallistl** University of Vienna, Vienna, Austria

**Francisco J. Gutierrez** Department of Computer Science, University of Chile, Santiago, Chile

**Noah Lenstra** University of North Carolina at Greensboro, Greensboro, NC, USA

**Gerard Llorach** Hörzentrum Oldenburg GmbH & Medizinische Physik and Cluster of Excellence ‘Hearing4all’, Universität Oldenburg, Oldenburg, Germany

**Nadia Mana** Fondazione Bruno Kessler, Trento, Italy

**Ornella Mich** Fondazione Bruno Kessler, Trento, Italy

**Barbara Barbosa Neves** University of Melbourne, Melbourne, Australia

**Galit Nimrod** Ben-Gurion University of the Negev, Beer-Sheva, Israel

**Sergio F. Ochoa** Department of Computer Science, University of Chile, Santiago, Chile

**Andrea Rosales** IN3—Universitat Oberta de Catalunya, Barcelona, Spain

**Sergio Sayago** Universitat de Barcelona, Barcelona, Spain

**Rodrigo Serrat** Faculty of Psychology, University of Barcelona, Barcelona, Spain

**Panote Siriaraya** Kyoto Sangyo University, Kyoto, Japan

**Marie Sjölander** RISE SICS, Kista, Sweden

**Julita Vassileva** Department of Computer Science, University of Saskatchewan, Saskatoon, SK, Canada

**Feliciano Villar** Faculty of Psychology, University of Barcelona, Barcelona, Spain

**Jacob O. Wobbrock** University of Washington, Seattle, WA, USA