

Guest Editorial Preface

Special Issue of Embracing Diversity with Help of Technology and Participatory Design

Barbara Rita Barricelli, Department of Computer Science, Università degli Studi di Milano, Milan, Italy
Ines Di Loreto, Tech-CICO, Université de Technologie de Troyes, Troyes, France

Designing for usability, accessibility and inclusion not only means focusing on user interfaces and ergonomic aspects but also consider factors such as acceptability and appropriation. Bodily, cognitive, and emotional appropriation should be regarded as fundamental to the success of a design process that is truly open to the diversity of users. To identify the right stakeholders is of primary importance for correctly informing the design process and to support the culture of participation in everyday life. However, this can be quite hard especially in cases where multiple individuals and organizations are involved. In many cases the end users, their family members, homecare caregivers, healthcare professionals, nursing homes, and organizations have to collaborate towards a common goal. In such perspective, a participatory approach to design may be of great help to implement usable, accessible, and inclusive technological solutions that put the end users and their needs at the center. Still it is complicated to decide under which circumstances a design process can be considered participative and/or has participatory results (for example when users participate in the design but don't recognize in the results their contribution). Moreover, new technologies, recent evolution of virtual and augmented reality, and Internet of Things allow to design more flexible and advanced interaction tools and systems while at the same time may raise new challenges related to the difficulties of use that impairments can imply.

Researchers and practitioners working in this context were invited to contribute to this special double issue on Embracing Diversity with Help of Technology and Participatory Design for the International Journal of Sociotechnology and Knowledge Development. The aim of this publication is to present a selection of high-quality papers that advance the quality and knowledge of technology and participatory design in the inclusion processes. Authors were asked to submit discussions and reviews about how to identify the right stakeholders, when is the right time/place for involving people with disability and/or neurodiversity in participatory design projects, how to foster motivation for participation, what are the most suitable technologies to be used (e.g. mobile devices, Internet of Things, virtual reality, augmented reality), the role of professionals in the design and how to exploit Human Work Interaction Design methods in participatory projects and how to implement End-User Development methods and techniques for empowerment of people with disability and/or neurodiversity.

Six papers were accepted for publication, four of these are presented in this issue, and other two will appear in 10(1).

The paper by María Inés Laitano, entitled “Developing a Participatory Approach to Accessible Design”, discusses a participatory approach to accessible as an alternative to design guided only by standards.

The next paper “Applications to Improve Quality of Life” by Arminda Guerra Lopes, presents a project developed in a polytechnic institution where students were involved in creating a technology aimed at improving people quality of life.

In “From Human-Centered design to Organization-Centered design in case of assistive interactive systems: Basic principles and case studies”, the authors Marine Guffroy, Vigouroux Nadine, Christophe Kolski, Frédéric Vella, and Philippe Teutsch, revisit and adapt Norman’s theory of action focusing on the design of interactive systems for disabled people and two cases of study are discussed to this aim.

The fourth paper, written by Karine Lan HingTing and Ines Di Loreto, entitled “A Participatory Design Approach with Visually Impaired People for the Design of an Art Exhibition” describes the participatory design approach adopted in the involvement of visually impaired people in the design of an art exhibition adapted to their special needs.

Stefano Valtolina and Serena Di Gaetano, in their paper “ICT-based Methodology for Fostering ADHD Students Inclusion in Classrooms”, discuss a teaching methodology able to promote teaching strategies for involving ADHD students in classrooms by providing students with ICT-based didactic modules able to offer more cooperative and inclusive educational activities.

In the last paper, “Sharing Memories: Co-Designing Assistive Technology with Aphasic Adults and Support Staff” Kasper Rodil, Emil Byskov Nielsen, and Jonathan Bernstorff Nielsen present and discuss an assistive technology which uses photos and audio recordings to present memories to people suffering from aphasia.

We would like to thank the journal editors in-chief Constance Kampf and José Abdelnour-Nocera for inviting us as guest editors for the double issue and we also want to thank the reviewers.

Barbara Rita Barricelli

Ines Di Loreto

Guest Editors

IJSKD