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## Proceedings of IASDR 2023: Life-changing Design

Daniela De Sainz Molestina  
*Politecnico di Milano*, [daniela.desainz@polimi.it](mailto:daniela.desainz@polimi.it)

Laura Galluzzo  
*Politecnico di Milano*, [laura.galluzzo@polimi.it](mailto:laura.galluzzo@polimi.it)

Francesca Rizzo  
*Politecnico di Milano*, [francesca.rizzo@polimi.it](mailto:francesca.rizzo@polimi.it)

Davide Spallazzo  
*Politecnico di Milano*, [davide.spallazzo@polimi.it](mailto:davide.spallazzo@polimi.it)

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THE 2023

# IASDR Congress

Life-  
changing  
design

Milan 9<sup>th</sup>–13<sup>th</sup> October

PROCEEDINGS OF IASDR 2023

EDITORS:

Daniela De Sainz Molestina

Laura Galluzzo

Francesca Rizzo

Davide Spallazzo



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MILANO 1863

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# Life-Changing Design

Proceedings of the 10th Congress of the  
International Association of Societies of  
Design Research (IASDR 2023)

**EDITORS:**

Daniela de Sainz Molestina

Laura Galluzzo

Francesca Rizzo

Davide Spallazzo

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Editors: Daniela de Sainz Molestina, Laura Galluzzo, Francesca Rizzo, Davide Spallazzo



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# The Tenth IASDR congress. An Introductory Address from the IASDR Board

IASDR 2023 is the 10th biennial congress of IASDR, and the first to take place after the crisis of COVID-19. With this congress we re-confirm the importance of discussion and debate for the network of researchers in design, as well as the importance of developing younger researchers for the future of the Association.

The International Association for Societies of Design Research (IASDR) was established in 2005 through a collaboration of four academic societies: Chinese Institute of Design (CID), the Design Research Society (DRS), Korean Society for Design Science (KSDS) and Japanese Society for the Science of Design (JSSD).

The history of international collaboration in Design Research in the Asian region can be traced back to 1996 when JSSD organized the first Japan-China Industrial Design Symposium which was hosted by Beihang University in Beijing, 1996. This started a series of international conferences in design research known as the Asian Design Conference. Conferences took place in 1997 (Daejeon, Korea at KAIST), 1998 (Taichung, Taiwan at National Taichung University of Science and Technology), 1999 (Nagaoka, Japan at Nagaoka University of Technology), 2001 (Seoul by National Seoul University), and 2003 (Tsukuba, Japan at Tsukuba International Congress Center). At the 2003 congress – the 6th Asian Design Conference – the three Asian academic societies agreed to welcome the Design Research Society into a new association.

We thus began the International Association of Societies of Design Research for the field of design research in 2005, in Taiwan. Since that time, we have enhanced the network of researchers and fields of design research and promoted design research education. We will continue to build this incomparable network of design research as we move towards our 2025 congress, at Tapei, Taiwan.

Our deepest thanks go to Luisa Collina, and the entire Politecnico Milano team who have worked so hard, as hosts for IASDR2023, to ensure its success. Your leadership throughout the process has been excellent and we think the result will be much appreciated by the IASDR design research community.

Toshimasa Yamanaka  
President

On behalf of the IASDR Board  
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# Life-Changing Design.

## Introduction to the Tenth IASDR congress

The International Association of Societies of Design Research (IASDR) has long been at the forefront of advancing design research, providing an international platform for researchers, scholars, and practitioners to engage in robust discussions, share insights, and explore the ever-evolving landscape of design research. IASDR 2023, the association's 10th Congress, stands as a pivotal juncture in the trajectory of design research, offering a comprehensive perspective on its current state while charting its future directions.

Over the past decade, design research has witnessed a remarkable transformation. From its roots in aesthetic considerations and form-centric approaches, design research has evolved into a multifaceted discipline, extending its influence beyond traditional boundaries. Contemporary design literature now encompasses a wide array of facets, each addressing critical aspects of design's impact on diverse domains, including organisational culture, public policies, product development, and the creation of immersive spaces, services and systems. This transformation underscores the dynamic nature of design research, as it continuously adapts to our society's changing demands and challenges.

The central theme of IASDR 2023, "Life-Changing Design", resonates profoundly in the wake of global events, particularly the unprecedented disruptions caused by the COVID-19 pandemic. This theme invites us to reflect on the profound transformations that have unfolded and continue to reshape our world. The pandemic has brought to the forefront questions about the role of design in navigating these changes, challenging us to explore how design can facilitate adaptation, resilience, and innovation in a rapidly changing world.

IASDR 2023 has been organised and host by Politecnico di Milano, where design keeps strong roots in the made in Italy tradition and where at the same time design opens up to the new territories of design research and to the new trajectories of innovation.

IASDR 2023 encompasses an array of thematic tracks, each dedicated to exploring critical dimensions of design research. These tracks serve as focal points for discussions and investigations, providing a framework for researchers to delve into specific areas of interest.

The following thematic tracks guide our exploration:

### **[Changing] Organizations and Policies**

This track examines the transformative potential of design in the realm of public sector organisations and policies. It aims to foster social justice and sustainability by challenging traditional notions of prosperity. Researchers investigate how design equips itself with tools, methods, and frameworks to support systemic transformation, thereby promoting well-being and addressing complex societal challenges.

### **[Changing] Products and Production**

This track focuses on the transformation of manufacturing processes and their impact on products and

systems. It explores the proliferation of digital fabrication and digital craft, analysing their potential to revolutionise product development, sustainability, and business models. Researchers delve into how design can envision emerging materials, artefacts, and future scenarios from a sustainable perspective.

### **Identities and [Changing] Identities**

Cultural identities and their evolution in an increasingly multicultural world take center stage in this track. Researchers delve into the roots of design's influence on identity, considering factors such as authorial identities, identity hegemony, and the implications of design on gender, class, and religion. Additionally, this track explores the role of design in translation processes, which involve revising systems, tools, and programs for communicating and preserving identity.

### **[Changing] Ecosystems**

Addressing the imperative transition toward sustainability, this track examines how design contributes to the socio-ethical and economic dimensions of sustainability. It explores design for sustainable materials, energy, business models, and transitions, focusing on fostering positive environmental and social change.

### **[Changing] Communities**

Community empowerment and sustainable behavioural change through design interventions are central to this track. Researchers investigate how design can enhance collaborative processes, co-design knowledge, and tools while addressing urgent public interest issues. The track emphasises shared decision-making, democratic participation, and the evolving roles of individuals, communities, and entities in supporting systemic transitions.

### **[Changing] Education**

This track reflects on the evolving landscape of design education, recognising the complexities and challenges inherent in this domain. Researchers explore the inspirations for change in design education, the transformations it engenders, and the existing gaps and issues. This track seeks to foster clarity, identity, and adaptability in designing educational goals while embracing diversity and differentiation.

### **[Changing] Spaces and Services**

Integrating spatial and service design to create innovative living environments and services is the central concern of this track. It explores how design interventions across various scales, from micro to macro, can drive transformative actions, enhance public participation, and guarantee inclusivity and diversity in service offerings.

### **[Changing] Interactions**

The dynamic interplay between technology, social changes, and design forms the core of this track. Researchers investigate how digital technologies, augmented reality, virtual reality, and mixed environments impact interactions, communities, processes, and professions. This track emphasises the role of Interaction Design in shaping technology-based innovations responsive to social and contextual changes.

### **[Changing] Heritage**

Preserving and reinterpreting cultural heritage in the face of global change is the central focus of this track. Researchers explore how design research can offer novel approaches to knowledge preservation and cultural experiences related to tangible and intangible heritage. This track seeks to activate participation dynamics that reintegrate relevant portions of cultural heritage excluded from current development paradigms.

IASDR 2023, with its overarching theme of “Life-Changing Design” and its diverse thematic tracks, presents an exceptional opportunity for researchers, scholars, and practitioners to engage with the dynamic landscape of design research. The conference serves as a platform for robust discussions, knowledge sharing, and the exploration of innovative solutions to society's complex challenges.

By examining these thematic tracks and their intersection with the central theme, “Life-Changing Design,” we aim to contribute to the ongoing dialogue surrounding design research and its transformative potential, fostering a deeper understanding of design’s role in shaping our world.

Luisa Collina  
Alessandro Deserti  
Francesco Zurlo

**What is the Effect of a Slant Shape in the Design of a UGV Delivery Robot? - UGV Robots and the Effect of Shape on the Perceived Safety**

Vithor Hugo Costa da Silva, University of Tsukuba, Japan  
Shinichi Koyama, Institute of Art and Design, University of Tsukuba, Japan  
Toshimasa Yamanaka, Institute of Art and Design, University of Tsukuba  
Soh Masuko, Rakuten Institute of Technology, Rakuten Inc.  
Kelvin Cheng, Rakuten Institute of Technology, Rakuten Inc.  
<https://doi.org/10.21606/iasdr.2023.287>

**Doctoral and Postgraduate Consortium Abstracts****Front Matter**

Paola Bertola, Politecnico di Milano, Italy  
Elena Elgani, Politecnico di Milano, Italy  
Clorinda Sissi Galasso, Politecnico di Milano, Italy  
Peter Gall Krogh, Aarhus University, Denmark  
Anna Meroni, Politecnico di Milano, Italy  
Lucia Rampino, Politecnico di Milano, Italy  
<https://doi.org/10.21606/iasdr.2023.897>

**A time-based approach for the social spatialization strategies in retail design**

Yuemei Ma, Department of Design, Politecnico di Milano, Italy  
<https://doi.org/10.21606/iasdr.2023.682>

**Changing People's behaviour toward Littering in the Egyptian Community**

Nahed Esam Elsayed, Manchester Metropolitan University, UK  
Kristina Niedderer, Manchester Metropolitan University, UK  
Angela Connelly, Manchester Metropolitan University, UK  
<https://doi.org/10.21606/iasdr.2023.647>

**Co-Creating Narratives of Usefulness**

Elisa Cardamone, University of Edinburgh, UK  
<https://doi.org/10.21606/iasdr.2023.816>

**Co-Designing with Immigrant Women to imagine an Equitable Mental Health Service Ecosystem**

Luz Paczka Giorgi, Ontario College of Art and Design University, Canada  
<https://doi.org/10.21606/iasdr.2023.796>

**Design mediating printing technology and food culture: a small paper box linking "eating" and "mobility"**

Aoi Katakura, Graduate School of Tokyo Metropolitan University, Japan  
<https://doi.org/10.21606/iasdr.2023.632>

**Designing Healing from Eating Disorders: Systemic and imaginative approaches**

Silvia Neretti, The Design School, Arizona State University, USA  
<https://doi.org/10.21606/iasdr.2023.803>

**Digital patient experience: understanding, improvement, and evaluation from a human-centered design perspective**

Tingting Wang, Delft University of Technology, The Netherlands  
<https://doi.org/10.21606/iasdr.2023.623>

**Digitally fabricated Design Interventions for ALS/MND**

Yash Bohre, IITB-Monash Research Academy, India  
Rowan Page, MADA, Monash University, Australia  
Purba Joshi, IDC School of Design, IIT Bombay, India  
<https://doi.org/10.21606/iasdr.2023.831>

**From E-waste to Jewellery: creating emotionally durable jewellery with the metal recovered from electronic waste**

Kunning Ding, The University of Dundee, UK  
<https://doi.org/10.21606/iasdr.2023.634>

**Immersive Reading in VR**

Nikola Kunzova, Masaryk University, Czech Republic  
<https://doi.org/10.21606/iasdr.2023.765>

**Investigating strategies for delivering change through the practice of co-design with communities in the Northern Ireland context**

Katrina Newell, Ulster University, UK  
<https://doi.org/10.21606/iasdr.2023.666>

**Investigating the adoption of autonomous processes in the context of organizations**

Garoa Gomez Beldarrain, Delft University of Technology, The Netherlands  
Euiyoung Kim, Delft University of Technology, The Netherlands  
Himanshu Verma, Delft University of Technology, The Netherlands  
Alessandro Bozzon, Delft University of Technology, The Netherlands  
<https://doi.org/10.21606/iasdr.2023.812>

**Longing for: Exploring intimacy and sexual expression in long-term care through Participatory Design approaches**

Yoni Maartje Lefèvre, KU Leuven, Belgium  
<https://doi.org/10.21606/iasdr.2023.673>

**Mindfulness for designers. An integration of mindfulness, design education and reflective practices**

Alberto Iberbuden, Anhalt University of Applied Sciences, Germany  
<https://doi.org/10.21606/iasdr.2023.865>

**Participatory design for craft sustainability in rural areas: a multi-sited approach**

Peining Sheng, The University of Edinburgh, UK  
<https://doi.org/10.21606/iasdr.2023.643>

**Personhood: defined, collected, and integrated**

Amber De Coen, LUCA School of Arts, Belgium  
<https://doi.org/10.21606/iasdr.2023.733>

**Queer cities. Designing inclusive public spaces through participative and social innovative actions and practices**

Valentina Ferreri, Politecnico di Milano, Italy  
<https://doi.org/10.21606/iasdr.2023.815>

**Queering Futures with Data-Driven Speculation: the design of an expanded mixed methods research framework integrating qualitative, quantitative, and practice-based modes**

Jess Westbrook, DePaul University, USA  
<https://doi.org/10.21606/iasdr.2023.725>

**Service Design to promote a systemic and dynamic perspective of well-being in dementia care**

Xiaolin Shen, Politecnico di Milano, Italy  
<https://doi.org/10.21606/iasdr.2023.808>

**Snapping (identities) through design forward**

Sara Iebole, Università degli Studi di Genova, Italy  
<https://doi.org/10.21606/iasdr.2023.779>

**Responsible tourism experiences: Designing solutions to improve communities-based tourism services from global to local scale**

Valentina Facchetti, Department of Design, Politecnico di Milano, Italy

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**Technological mediation analysis on Constructive Design Research: A case study of trust**

Daniela Delgado Ramos, University of Illinois, Urbana-Champaign, USA

<https://doi.org/10.21606/iasdr.2023.742>

**The body gets the notion: performative design practice for human computer integration to encourage innovation in the domains of health and well-being**

Anne Marleen Olthof, University of Amsterdam, The Netherlands

Jouke Verlinden, University of Antwerp, Belgium

Somaya Ben Allouch, University of Amsterdam, The Netherlands

<https://doi.org/10.21606/iasdr.2023.667>

**Tools for opening the lonely black box and changing young adults' perspectives of their loneliness**

Mads Bärenholdt, University of Southern Denmark, Denmark

<https://doi.org/10.21606/iasdr.2023.664>

**Utilizing patent data for enhanced design creativity and reduced fixation in product design**

Ranzhi Wei, Delft University of Technology, The Netherlands

Eric Heng Gu, Delft University of Technology, The Netherlands

Cehao Yu, AECOM

<https://doi.org/10.21606/iasdr.2023.604>

# Responsible Tourism Experiences. Designing solutions to improve community-based tourism services for local sustainable development

Facoetti, Valentina

Department of Design, Politecnico di Milano, Milano, Italy

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## 1 Abstract

The tourism sector has undergone multiple evolutions in recent decades due to its dynamic and complex nature. While globalised mass tourism characterised the demand for tourism in the 20th century, in the new millennium, this demand is significantly more substantial and diversified (Gainsforth, 2020). Despite the positive impact on economic development, increased tourism consumption has led to the exploitation of natural and local resources causing damage to the environment and host communities (Fragidis et al., 2022). Interest and discussions around sustainable tourism have been going on for three decades. Still, tourism authorities continue to promote the growth of tourism through unsustainable models despite the ecological and social constraints we are currently experiencing (Higgins-Desbiolles, 2018).

The Organization for Economic Co-operation and Development (OECD) argues that the prevailing tourism strategies for the future address two main issues: digital transformation and the sustainable development of tourism destinations (Zhu et al., 2020). Sustainable tourism development poses great challenges to tourism organisations and local stakeholders in making local communities the core of future tourism (UNWTO, 2022). In this scenario, policies and impact measurements are fundamental to understanding the degree of sustainability to be achieved in order to develop awareness and acceptance of sustainable tourism principles and objectives and, above all, adopt responsible tourism practices. For this reason, the author's thesis focuses on responsible tourism as a form of tourism that applies through responsible practices and actions, principles and theories of sustainability (Mihalic, 2016). Despite several decades of academic and practical debate on tourism sustainability, its application in practice remains problematic. Wheeler, in 1993, argued that the "intellectually appealing" concept of sustainable tourism has little practical application because it has turned into a public relations tool for addressing the criticism of the impact of tourism while allowing essentially the same behaviour as before, this is still true today. The dominant tourism discourse on sustainability



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and responsibility calls for a solid understanding of how a responsible destination implements a sustainability agenda and how the local community and stakeholders are involved in the design of tourism services. From this perspective, the research aims at defining a new model of implementation of responsible tourism services in destinations, shifting the focus from the perceived sustainability of consumers to the actual sustainability implied in place-based communities (Mihalic, 2016) through sustainable social impact assessment. The current academic research focuses on an outside-in perspective, which means a focus on the customer experience (Fesenmaier and Xiang, 2017). Adopting an inside-out perspective, through the application of a design approach, it is possible to address tourist experiences and co-design tourism services from host communities favouring sustainable social impact.

In this scenario, the research investigates how Service Design and Design for Social Innovation can foster the participation of place-based communities in the design of a new service paradigm for responsible tourism based on social sustainability impact assessment parameters.

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