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# Planning the World's Most Inclusive PD Project

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**Aurora Constantin**
University of Edinburgh
Edinburgh, UK
aurora.constantin@ed.ac.uk
**Jessica Korte**
University of Queensland
Brisbane, Queensland, Australia
j.korte@uq.edu.au

**Cara Wilson**
Queensland University of
Technology
Brisbane, Queensland, Australia
cara.wilson@qut.edu.au
**Cristina Adriana Alexandru**
University of Edinburgh
Edinburgh, UK
cristina.alexandru@ed.ac.uk

**Judith Good**
University of Sussex
Brighton, UK
j.good@sussex.ac.uk
**Gavin Sim**
**Janet Read**
University of Central Lancashire
Preston, UK
GRSim@uclan.ac.uk
JCRead@uclan.ac.uk
**Jerry Alan Fails**
Boise State University
Boise, ID, USA
jerryfails@boisestate.edu

**Eva Eriksson**
Aarhus University
Aarhus, Denmark
evae@cc.au.dk

## Abstract

Inclusivity is central to Participatory Design (PD) practice,
but despite significant efforts in IDC and beyond, it is still
hard to achieve during PD, because of a series of barriers
(e.g. access to users, language). Such barriers increase
especially when it comes to ensuring and supporting the
participation of children with varying or complex needs,
or when prospective participants are geographically dis-
tributed. This workshop aims to create the basis of a dis-
tributed PD (DPD) protocol to provide practical advice in
overcoming the challenges of ensuring inclusivity for chil-
dren with varying or complex needs around the world. The
protocol will build on the participants' prior experience and
on a live PD design session with children and adults, and
be guided by discussions around approaches to address a
specific design problem while maximising inclusivity across
geographical boundaries and research contexts. It is in-
tended to become a springboard for the world's most inclu-
sive Distributed PD project.

## Author Keywords

Participatory design; PD; children; inclusion; special needs;
diversity; minority populations; disability; design; co-design

## CCS Concepts

•**Human-centered computing → Accessibility design
and evaluation methods; HCI design and evaluation**

methods;

## Background

Participation and inclusivity are core elements of PD practice [16, 9]. However, true inclusivity is difficult to achieve, especially when working with children, due to barriers to recruitment and participation [8]. Such barriers have a range of causes, which researchers have attempted to address through the creation of unique design approaches. Examples include disabilities [2, 3, 9, 11, 12, 15], neurodiversity [1, 6, 19], language and cultural barriers [10, 14], socioeconomic factors at domestic [17] and international [4, 5] scales, lack of access to rural and remote locations [13], and reliance on co-location of participants [7, 18].

Currently, distributed PD (DPD) [7, 18] is increasingly being adopted by PD researchers, because it enables people who are not co-located to participate to a project (physical distribution). In spite of coming with its own difficulties/barriers (e.g. communication and knowledge sharing), we strongly believe that DPD should be encouraged especially because it increases inclusivity.

*Designing for the Future*
In keeping with IDC 2020's theme "Designing for the Future", we intend to explore how the nature of PD with children may change as the world becomes increasingly connected, globalised and digitised. Recent technological leaps in e.g. artificial intelligence and the Internet of Things have changed the goalposts of PD. What will the future of PD with children look like as conversational agents, monitoring, tele-presence, autonomous travel, and augmented and virtual reality continue to move out of the prospective and into reality?

We adopt a global perspective, suggesting that PD will become a distributed [20], perhaps asynchronous practice, and taking a critical look at how this may play out in the future of our work with children. In this workshop, we intend to problematise this concept (in order to understand the challenges it comes with) but, more importantly, to speculate about how this distributed practice of PD may positively impact both our own design practices and, crucially, the digital lives of the children we design with. Beyond merely speculating, we will explore the opportunities presented by such a concept in a pragmatic sense, developing a baseline protocol which will be implemented across geographic locations and design contexts, becoming the world's largest inclusive PD project. Through this approach, this workshop will become the springboard from which we will bring the future PD practice with children to the present.

The following topics may inspire position papers and discussions:

1. considerations for global distributed PD (DPD);

2. legal and ethical requirements around the globe;

3. identification and recruitment of children for PD;

4. preparation for PD;

5. building relationships with children and communities and ensuring reciprocity;

6. ethical engagement with children;

7. understanding consent/assent/dissent and how it may be communicated;

8. supporting a range of abilities (including the need for flexible, on-the-fly adaptation);

9. drawing design data from PD sessions; and

10. ending PD relationships.

## Workshop Aims

This workshop follows from our previous IDC'19 workshop Pushing the Boundaries of Participatory Design with Children with Special Needs which was focused on identifying, synthesizing and collating PD best practices across contexts and participant groups.

This workshop has 2 aims:

1. Run an example PD session with a small group of children involved in the workshop, following a PD protocol developed by the organisers;

2. Based on observations from the PD session, evaluate and modify the protocol for use in a globally distributed PD project, with consideration for children with special needs (based on the experience and expertise of the organisers and attendees in this domain).

Based on this protocol and through the lens of a design question which will be defined within the proposed workshop, we aim to build a global project, spanning across design contexts, which focuses on inclusivity and DPD.

## Organizers

**Aurora Constantin** is a University Teacher and postdoctoral researcher at the University of Edinburgh School of Informatics, UK. Her research focuses on designing technology for individuals with Autism Spectrum Disorder (ASD), PD, User-Centred Design (UCD), and Action Research (AR) with various stakeholders. Currently she is working on designing a technology-based tool to support children with ASD to express their creativity during PD. She leads the CISA HCI group.

**Jessica Korte** is a Postdoctoral Academic at The University of Queensland's Co-Innovation Group in Queensland, Australia. She is passionate about PD's potential to empower children. She developed a PD approach for designing with young Deaf children. She hopes to work with Deaf communities and Autistic adults to design language resources, language robots, and learning activities.

**Cara Wilson** is a PhD student in HCI at Queensland University of Technology, Brisbane, with an academic background in Psychology and industry background in Autism and Mental Health. She co-designs digital and tangible technologies with minimally-verbal children on the autism spectrum, with particular focus on supporting self-expression, 'voice', and agency in participatory design.

**Cristina Adriana Alexandru** is a Research Associate and University Teacher at the University of Edinburgh School of Informatics, UK. She specialises in UCD, development, and usability evaluation of healthcare systems and tools to cater for the needs of different healthcare practitioners. She has special interests in PD and consideration of the viewpoints of very different user groups. She is also interested in automating usability evaluation of user interfaces in healthcare.

**Judith Good** is Professor of Interaction Design and Inclusion in the Department of Informatics, University of Sussex, UK. Her research interests focus on the co-design of new technologies for children, with and without disabilities. She is also interested in developing new participatory methodologies for typically marginalised populations to have greater involvement in both the design and evaluation of new technologies.

**Gavin Sim** is a Reader in Human Computer Interaction, he has worked at UCLan since 2002. His research interests

are in the area of HCI and educational technology in particular usability / user experience evaluation methods. He is an active researcher within the ChiCI group, where his focus has been on evaluating user experience and usability within games and educational technology. He has written method papers for IDC, and has worked with the BBC.

**Janet C. Read** is a Professor in Child Computer Interaction and is the Director of the Child Computer Interaction (ChiCI) research group at UCLan. Internationally known for her work on designing and evaluating technologies for children as well as for her work on text input with digital ink, Prof. Read manages research grants and research students, teaches research methods and advanced HCI and contributes to SET activities in local schools. As a primary author of the textbook, 'Evaluating Interactive Products with Children', Prof. Read has worked with industries including Vision Objects, France, SAPO, Portugal and the BBC, UK in the design and evaluation of products for children. The Fun Toolkit introduced by Read is known to be used by industry.

**Jerry Alan Fails** is an Associate Professor in the Computer Science Department at Boise State University in Idaho, USA. He has designed technologies with and for children using PD methods for 15 years. His primary area of research is HCI, with a focus on technologies that engage children with one another, get them active, and encourage them to explore the world around them.

**Eva Eriksson** is an Associate Professor at the Department of Information Studies at Aarhus University, Denmark. She was one of the founders of Gothenburg working group for Interaction Design And Children (IDAC) in Sweden, and is now part of the Center for computational thinking and design in Denmark. Her research focus is interaction design in public knowledge institutions and designing children's technology specializing in PD with developmentally diverse children.

## Pre-Workshop Plans
Multiple recruitment approaches will be used to attract participants who have experience or interest in PD with children, especially children with special needs. First, the organizers will use professional networks to contact researchers who may be interested in participating in this workshop (including the participants to their previous IDC'19 workshop). As we have experience with PD and running workshops, we are confident we will be able to attract potential participants via word-of-mouth.

Second, several organizers have access to research and professional email lists (including University of Edinburgh's CISA HCI group, PDworld and NordiCHI, CHI, CHI-Kids, Center for Participatory IT (PIT)) which will be used to advertise the workshop and recruit participants. Third, we will also use social media channels (e.g. Twitter, Academic Facebook groups) to announce the workshop. Finally, we will create a website that will be used to attract researchers' and PD participants' attention to our workshop.

We aim to attract two types of workshop attendees: active participants, who have experience in PD, PD with children, and/or PD with children with special needs; and observers, who are interested in learning about these PD domains. Active participants are invited to submit a position paper explaining their experiences. All attendees will be asked to fill in an online form to identify their interests (allowing groups and roles within the workshop to be pre-assigned) and their standing in relation to their country's requirements for working with children (e.g. do British attendees hold an enhanced DBS certificate?). All attendees are asked to bring between two and four postcards: one or two describing their research, and one or two from their home or in-

stitution's location. The postcards will be used to stimulate group discussions.

Workshop attendees who are parents and carers are invited to bring their school-aged children along to the workshop. They will be actively involved in the first part of the workshop.

*Website*
We will use the workshop website to publish the call for participation, submission instructions, and news: https://sites.google.com/site/worldsmostinclusivepdproject/

## Workshop Structure

We propose a full-day workshop consisting of two main parts: 1) a live PD session followed by a discussion to evaluate the PD results; 2) based on the preamble from part 1, hands-on activities focused on developing the globally distributed PD protocol. The proposed schedule for the workshop is:

**8:30-9:00**  Registration

**9:00-9:15**  Welcome and icebreaker

**9:15-11:00**  A live PD session with a small group of children, following a PD protocol developed by the organisers. Some attendees will act as designers with the children; others will be observers and note-takers.

**11:00-11:30**  Morning tea break

**11:30-12:30**  Small group reflective discussions and evaluation of the PD session undertaken - session 1

**12:30-13:00**  Discussion Summary - session 1

**13:00-14:00**  Lunch break

**14:00-15:00**  Small group discussions on key topics - session 2

**15:00-15:30**  Discussion Summary - session 2

**15:30-16:00**  Afternoon tea break

**16:00-16:30**  Developing the globally distributed PD protocol based on discussions

**16:30-17:00**  Conclusion: reflection and future actions

**17:00**  Optional reception at local restaurant.

The key topics for small group discussions include the topics proposed for the position papers (see the Background section above). We propose that understanding different techniques and approaches to these big questions will both inform the globally distributed PD project, and also be beneficial to the IDC community at large.

*Resources*
This workshop will need room to accommodate up to 30 people (expected maximums: 12 participants, 6 observers, 5 children, 5 organizers and 2 student volunteers). We will need at least 5-6 movable tables to allow small group activities. Flip charts, sticky notes and coloured markers will be used for group activities. Facilities for projecting presentations (i.e. computer, projector) are required.

## Post-Workshop Plans

Workshop attendees will be invited to expand their position papers for inclusion in a special issue of the International Journal of Child-Computer Interaction (IJCCI).

All workshop attendees will be encouraged to return with the final globally distributed PD protocol to their home institution, to apply for required ethical clearance, and to undertake PD activities according to the protocol with one or

more of their local communities. All workshop attendees who conduct ethically-approved PD using the protocol and report back with design data and/or adaptation data will be invited to co-author a paper written by the organisers.

## Call for Participation

This full-day workshop will bring together researchers with experience in Participatory Design (PD), children, parents and carers who will have the chance to work in a live PD session and to contribute to the creation of a protocol for maximising inclusivity in a Distributed Participatory Design (DPD) world-wide project. If you are interested in PD, we invite you to join our workshop which aims to lead to the world's most inclusive PD project. PD experience is not required, but is a bonus.

Attendees will participate in/observe a live PD session with children; evaluate the PD session; discuss key topics; and create a new protocol for a globally distributed PD session. You will then have the opportunity to take the protocol back home, apply for ethics approval, and run PD session/s within your local community. We'll ask you to report back with any design data generated, and any reflections on adaptations to the protocol to address the needs of the children you work with. Everyone who provides data will be invited to co-author a paper on the World's Most Inclusive PD Project.

We accept two types of participants: 1) active participants (who have experience in PD); 2) observers (who are interested in learning more about PD with children with special needs).

To attend, please:

1. (for all attendees) Fill in the online form at our website (https://sites.google.com/site/worldsmostinclusivepdproject/), explaining your greatest interests and concerns from the workshop topics;

2. (for active participants) If you have experience running PD, PD with children, or PD with children with special needs (including disability, neurodiversity, cultural/language barriers, etc), you are invited to submit a 2-page position paper via our website, explaining your expertise and the most important thing you learned from your PD experience;

3. (for active participants) Bring postcards describing your research (not more than two);

4. (for all attendees) Bring postcards from home and/or your institution (not more than two);

5. (optional) If you have school-aged children travelling to IDC with you, bring them along! They'll be welcome to participate in the live PD session.

Position papers will be evaluated based on their relevance to the workshop theme and topics, quality of presentation and potential to encourage debate. Authors of accepted position papers will be invited to extend their position papers to submit to a special issue of the International Journal of Child-Computer Interaction (IJCCI). Observers will be invited based on synergy with participants attending the workshop. At least one author of each accepted position paper must attend the workshop. All participants and observers must register for both the workshop and the main conference. Application submission and more information can be found online on our website (https://sites.google.com/site/worldsmostinclusivepdproject/).

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