

The EmpathiCH Workshop: Unraveling Empathy-Centric Design

LUCE DROUET, University of Luxembourg, Luxembourg

WO MEIJER, Delft University of Technology, Netherlands

AISLING ANN O’KANE, University of Bristol, United Kingdom

ANEESHA SINGH, University College London, United Kingdom

THIEMO WAMBSGANSS, EPFL, Switzerland

ANDREA MAURI, Université Claude Bernard Lyon 1, France

HIMANSHU VERMA, Delft University of Technology, Netherlands

EmpathiCH aims to bring together and blend a diverse set of expertise to develop a new research agenda in the context of “Empathy-Centric Design”. Building on the discussions that emerged in the previous edition, the main research objective is to form a comprehensive and coherent framework that utilizes empathy as a new dimension of human-factors research and practice. We aim to consolidate the existing theoretical and conceptual constructs of empathy from diverse domains to reflect on its temporality, materiality, and the risks related to its instrumentalization. With a mix of author panels, expert discussion, and interactive activities, we aim to make this workshop the ideal venue to foster collaboration, expand the community, and shape the future direction of “Empathy-Centric Design”.

CCS Concepts: • **Human-centered computing** → **HCI theory, concepts and models; HCI design and evaluation methods; Interaction paradigms.**

Additional Key Words and Phrases: empathy, empathy-centric design, assessment, ethical aspects of empathy, collaboration

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1 BACKGROUND

Designing user-centered solutions and technologies to address societal problems requires understanding people’s needs (e.g., control, safety [11]), values (e.g., inclusiveness, ethics [28]), and experiences. Design research considers *empathy* a crucial factor in better understanding people [33] and safeguarding the success of user-centered approaches [5, 43]. Empathy plays an essential role in the daily life of practitioners, e.g. client communication, leadership, agile teamwork, and also in the design process of human-centered technology (e.g., user research stage of “empathizing”). Human-Computer Interaction (HCI) and many other disciplines have investigated the importance of empathy, e.g., in patients’ medic relation [25], education [1, 41, 42], racial bias reduction [29], gaming [1, 10], design [8, 33, 44]; and with different technologies such as virtual reality [1, 25, 39], mobile [27] and wearable devices [12, 31], and artificial intelligence [34].

Empathy is often defined as “the intuitive ability to identify with other people’s thoughts and feelings – their motivations, emotional and mental models, values, priorities, preferences, and inner conflicts” [23], which means going

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beyond “knowing the user” and understanding how “it feels like” to be that person [17, 43]. Due to the interdisciplinary research interest it triggers, we acknowledge the richness and diversity of perspectives on the concept of empathy, both regarding its dimensions or underlying components (see Chang-Arana et al. [4] for a recent comprehensive review in design). Empathy in Design and HCI is mainly explained through the prism of methods. Empathic methods have been developed to get the designers/observers/researchers “into the shoes” of the people they are designing for [16, 20]: cultural probes [21], focus groups [24, 32, 40], physical journey map [19], storytelling [30, 35, 38], social imaginaries [26], and simulation of the user’s condition [2, 3, 7].

For decades, scholars have studied how developing empathic relationships between designers and users results in better products or services [43], through design methods, conceptualization [4, 37], and the development of design frameworks [13, 18, 36]. However, empathic boundaries are blurred and debatable [14, 15]. The only consensus on empathy is there is no consensus [4, 22]. Moreover, quantitative metrics of empathy in design to better explain and predict it are under-researched [4, 6, 37]. For this reason, we believe that there is a need to expand theories, novel assessment methods, and empirical studies to increase our understanding of empathy and support the human-centered design of technologies and services. In particular, we seek to *a) consolidate* the existing theoretical and conceptual constructs of empathy from diverse domains including Psychology, Social Sciences, Design, and HCI, *b) coalesce* them to form a comprehensive and coherent framework that utilizes empathy as a new dimension of human-factors research and practice, *c) scrutinize* the seams of Empathy-Centric Design, specifically, the scenarios where it may come in conflict with human dignity, societal values and ethical principles (for example, instrumentalizing Empathy-Centric Design for large scale manipulation or abasement), and *d) examine* the overarching attributes of Empathy-Centric Design including its temporality and materiality.

1.1 Expanding on a previous edition

In order to consolidate the diverse emerging notions within empathy-centric design and to transform them into the agenda for future research, this workshop aspires to build upon the discourses within the ACM CHI’22 workshop on **Empathy-Centric Design At Scale** [22] by unravelling the role and impact of “empathy” –either as a design lens, a desired affordance, or a mediator in interactions– in human-centered design principles and practices.

In the first edition of the Empathy-Centric Design workshop, the discussions predominantly centered around eliciting emergent themes within Empathy-Centric Design when applied at scale. Building upon participants’ experiences with empathy, the workshop focused on *a) embodying* empathy in observational practices to obtain fine-grained insights about the context or target groups, *b) evoking* empathy among diverse stakeholders, mediated through technology, to facilitate the socio-cultural or socio-technical objectives, *c) eliciting* novel ways of transferring one’s empathic state to others and its wider implications, and *d) broad* deliberation on the ways in which empathy can profoundly underpin and extend the discourses about human-centered design principles.

In the current proposal, we aim to bring together different scholars—including computer scientists, social scientists, designers, psychologists, policy-makers, and practitioners from other disciplines—to share their knowledge, experience, and ideas about working with empathy on different levels for an overall large-scale societal impact. Participants will be encouraged to venture beyond the existing constructs, conceptions, and paradigms about empathy and Empathy-Centric Design, and collectively critique their position in HCI research and practice. In this way, we are also interested in fostering multidisciplinary collaborations amongst academics and practitioners, which can further guide and shape the future research agenda on Empathy-Centric Design.

105 In the previous workshop, 25 participants contributed to day-long program full of (short) paper presentations,
106 keynote talk, panel discussion, and interactive activities – including a game to elicit observers’ empathy towards a
107 participant presenting a real-world case and perspectives. In the proposed workshop, we aim to extend the collective
108 and consorted engagement on the themes of *Empathy* and *Empathy-Centric Design*, and constructively enrich them
109 with a renewed focus and scope, specifically unraveling the themes of assessment, diversity, and tensions. This renewed
110 focus and scope could not only further scholarship at the intersection of Empathy, HCI, and Social Cognition, but
111 also pronounce the viability and relevance of leveraging Empathy-Centric Design principles in real-world contexts
112 by practitioners and researchers. Moreover, the constructive and engaging discussions amongst attendees in the last
113 workshop, and the ensuing exchanges on the workshop’s Slack channel, encourage us to invite more attendees as
114 compared to the previous edition – i.e., 40-50 participants.
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118 1.2 Themes unraveling Empathy-Centric Design 119

120 1.2.1 *Assessment of empathy.* The empathic design field has long focused on methodological contributions [4, 16] which
121 challenge designers’ empathy toward their users, conducting research into empathy assessment and measurement.
122 However, how can we know what we do not *really* measure? Assessing and measuring empathy is crucial to enable
123 deeper understanding, recognizing, and fostering empathy. Assessments of empathy can inform designers of the success
124 of their empathic methods and provide clues on the stakeholders’ empathy tendencies [6, 37] to adapt and support
125 their Empathy-Centric Design approaches. How can we assess the effectiveness of empathic designs and interventions?
126 What methods and measurement tools can we rely on to assess empathy (both qualitative and quantitative)? What are
127 the implications of measuring empathy for designers, users, and society as a whole?
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130 1.2.2 *Diversity and richness of empathy.* Empathy materializes itself at different levels and can be viewed through
131 different lenses. First, empathy is a driving force in human interactions. Designers and stakeholders alike must empathize
132 with users to deliver user-centered solutions. While improving people’s lives, these solutions also contribute to an
133 increased transparency about stakeholders’ challenges, and hence can in turn trigger users’ empathy towards people
134 designing services, technologies and policies. This duality of empathy holds true for individuals, organizations, and
135 society as a whole, e.g., in interactions between citizens and policy makers. Similarly, empathy plays a crucial role in
136 human interactions with nature and animals, as a core element of more-than-human perspectives [9]. Finally, we can
137 look at empathy in human-technology relationships (e.g., with objects, robots, or even an AI), for making technologies
138 more empathic towards humans to build sustainable human-AI collaboration. What role does empathy play at these
139 different levels? How do empathy measures apply to these different contexts? What is the specificity of the empathic
140 design methods used in these contexts? Can and should empathy be “modelled”, e.g., through artificial neural networks?
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145 1.2.3 *Empathy tensions and abuses.* While empathy raises awareness of people’s experiences, it can also cause sources
146 of tensions and abuses. This is particularly the case, where empathy is envisioned as a goal instead of a means.
147 Technologies can be made more empathic for the wrong reasons (e.g., increasing consumption). Aspiring to make
148 everyone empathic at all levels, can be exclusionary and ironically contrary to empathy (e.g., firing employees who are
149 not empathic enough). Designer-user empathy meets limitations that cannot always be overcome, such as demographic
150 and cultural background [4]. How far is it relevant to be empathetic or to trigger empathy? How can empathy be
151 mis-used, e.g., for the design of persuasive systems? How can neurominorities be represented and considered in the
152 design of empathic systems? How do we move beyond the “one-size-fits-all” conception of empathy in design and
153 amalgamate a multi-cultural and diverse conception of empathy-centric design?
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157 The EmpathiCH workshop will allow participants to think about these three previous themes with a transversal
158 reflection on the conceptualization of empathy, its definition and role in HCI and design that enable Empathy-Centric
159 Design approaches, and the methods we use to shape the empathy of all stakeholders involved in designing experiences
160 for people.
161

162 2 ORGANIZERS

164 Below is a list of the organizers' short biographies. Their expertise and interests are diverse but in line with the workshop
165 topic, reflecting our goal to have interdisciplinary perspectives and discussions. They come from different academic
166 fields and industries, and bringing to the table both a richer set of perspectives and a diverse and complementary
167 network of connections that may be interested in the workshop.

169 **Luce Drouet** is a User Experience Researcher and Ph.D. candidate at the University of Luxembourg in the HCI research
170 group. Her work focuses on empathy in service design, in the wider context of user-centered maturity in companies.
171 She experiments with empathic design methods to facilitate sharing customers' voices with service employees and
172 to reduce silos in organizations. Luce works in partnership with the Luxembourgish Railway Service. (**Website:**
173 <https://hci.uni.lu/luce-drouet/>)
174

176 **Wo Meijer** (*main contact*) is an industrial designer and Ph.D. candidate at the Delft University of Technology (TU
177 Delft, Netherlands). He has a background in Multi-Modal interactions in Virtual Reality with a focus on increasing
178 presence, engagement, and empathy between and among people. His current research is focused on enhancing video
179 as a user research method in order to help designers develop empathy for their users quickly and deeply. (**Website:**
180 <http://womeijer.com>)
181

182 **Aisling Ann O'Kane** is an Associate Professor in Human-Computer Interaction for Health at the University of Bristol
183 and was the Deputy Director of the EPSRC CDT in Digital Health and Care. She has over ten years of experience
184 studying the real world use of health and care technologies outside of clinical settings. (**Website:** [https://research-](https://research-information.bris.ac.uk/en/persons/aisling-a-okane)
185 [information.bris.ac.uk/en/persons/aisling-a-okane](https://research-information.bris.ac.uk/en/persons/aisling-a-okane))
186

187 **Aneesha Singh** is an Associate Professor in Human-Computer Interaction at the UCL Interaction Centre. She is
188 interested in the design, adoption and use of personal health and wellbeing technologies in everyday contexts, focusing
189 on sensitive and stigmatized conditions. Her research areas include digital health, ubiquitous computing, multi-sensory
190 feedback and wearable technology. She has previously worked in industry in various roles as a software consultant,
191 and as a technical journalist. (**Website:** <https://uclic.ucl.ac.uk/people/aneesha-singh>)
192

193 **Thiemo Wambsgans** is a Postdoc. at the Machine Learning for Education Laboratory at the Swiss Federal Institute of
194 Technology in Lausanne (EPFL). His work aims to leverage methods from Natural Language Processing and Machine
195 Learning to provide users, in particular students, with intelligent writing feedback anytime and anywhere they want.
196 In this vein, he studies how to model empathy in human texts and how to provide students with adaptive empathy
197 feedback in peer review scenarios. (**Website:** <https://thiemowa.github.io/>)
198

199 **Andrea Mauri** is a Junior Professor at Université Claude Bernard Lyon 1, affiliated with the Liris Research Lab. His
200 research lies at the intersection of HCI and Data Management. He investigates how to integrate human factors –such as
201 the concept of empathy– in computational methods to design, develop and deploy data-intensive applications to make
202 them aware of people features, needs, and values. (**Website:** <https://andreamauri.me>)
203

204 **Himanshu Verma** is a Tenure-Track Assistant Professor at the Faculty of Industrial Design and Engineering at Delft
205 University of Technology (TU Delft, Netherlands). He has a background in HCI, UbiComp and Social Cognition. He is
206 interested in examining the internal mechanisms (comprised of latent, non-verbal and transient social signals) which
207

209 enable or inhibit interpersonal collaborations, and his current research focuses on modeling reliable proxies of empathy
210 and their broader implications for empathy-centric design. (**Website**: <https://vermahimanshu.com/>)
211

212 3 WEBSITE

213
214 The workshop website will be hosted on the GitHub Pages¹, and will be accessible at the same URL as the previous
215 EmpathiCH workshop, <https://www.empathich.io/>. The website will contain the essential information about the
216 workshop, including *a*) background and motivation, *b*) call for participation, *c*) important dates and deadlines, *d*) profiles
217 of organizers' and TPC (Technical Program Committee), *e*) (provisional) workshop program, and *f*) accepted contributions.
218 In addition, we will archive the content of the previous workshop and provide a link for future attendees to access it.
219 Before the workshop, we will upload the accepted papers and the recordings of author's presentations (4-8 minutes)
220 to the website. After the conclusion of the workshop, we will also update the website with the workshop's summary,
221 output, and results.
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224 4 PRE-WORKSHOP PLANS

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226 Our goal is to hold an interdisciplinary workshop, including industry and academic researchers from the areas of
227 ACM SIGCHI (e.g., CHI, IUI, DIS, CSCW, UbiComp), web science (e.g., WWW), social science, psychology, artificial
228 intelligence, health, and more. The organizers are active in these research areas and plan to encourage potential
229 attendees (e.g., colleagues, students in their networks) to participate in this workshop.
230

231 We will distribute the call for papers information through the ACM SIGCHI mailing list, the website mentioned in
232 Section 3, the organizers' professional networks, such as institution mailing lists and social media (e.g., Twitter and
233 Facebook), and the Slack community² that emerged from the previous EmpathiCH workshop. We plan to host around
234 40 to 50 participants in the workshop, which we believe is a suitable size for building a community, networking with
235 each other, and engaging discussion.
236

237 For paper selection and reviewing, the workshop organizers will reach out to additional researchers to form a
238 program committee. We aim to have a good balance of diverse perspectives and topics that are related to the workshop
239 themes. Each paper submission will receive at least two reviews from the program committee to assess the novelty,
240 provocativeness, quality, and relevance. Those with well-presented and insightful contributions will be selected.
241

242 Before the workshop, we will make the accepted papers and workshop schedule publicly available on our website.
243 For the accepted papers, we will request slides as well as a 4 to 8-minute video from the authors covering the content
244 and implications of their work, and we will upload these materials to our website before the workshop. One week
245 before the workshop, we will ask the participants to familiarize themselves with the papers and the videos. Additionally,
246 we will invite all authors to join a special Slack³ channel in order to facility informal communication.
247

248 5 REMOTE AND ONSITE PLANS

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250 In order to engage a diverse and broad set of participants (both in terms of background as well as forming connections
251 between academia and industry) we will conduct the workshop in a hybrid, synchronized format. Prior to the workshop,
252 all participants will receive links to the Zoom meeting used for the hybrid set up as well as links to the Miro board and
253 the community Slack. In the physical workshop room, we will set up a 360 degree camera that captures the entire room
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257 ¹GitHub Pages: <https://pages.github.com>

258 ²EmpathiCH Slack community can be joined via: https://join.slack.com/t/empathich/shared_invite/zt-1hqfc9ugx-RyIf2ixEVmdkGkTI3JGYOQ

259 ³Slack: <https://slack.com/>

261 and join the Zoom call with the camera. We will also set up a microphone for the remote participants to ask questions
262 to the paper presenter directly. In addition, remote participants can choose to type the questions in the chat, and one
263 workshop organizer will be assigned to monitor the chat and read the questions to the presenters.
264

265 **5.1 Remote Interactive Activities**

267 During the interactive activities, we will assign participants into groups that are composed of both remote and in-person
268 participants. Each group will be placed in a breakout room on Zoom, where the onsite participants will join to have
269 conversations with those joining remotely. Additionally, all work will be done using Miro boards. This is done to avoid
270 a situation where the remote participants are isolated from the onsite ones.
271

272 **5.2 Asynchronous Plans**

273 To promote communication between participants who cannot physically attend the workshop and live in different
274 time-zones, we plan to support some asynchronous interactions. For example, we will make the videos of the accepted
275 works available online before the workshop. Additionally all authors and participants will be invited to join the dedicated
276 Slack community. We will also invite people to engage independently with the authors and attendees by tweeting
277 the workshop content on Twitter with a specific hashtag to track online conversations. Also, to include them in the
278 interactive session (e.g., the warm-up), we will ask them to provide some inputs before the workshop so that we can
279 use them to kick-start the discussion. Finally, we will publish the content generated during the ideation and mapping
280 session on our website and Twitter so the participants can add their own insights by replying to the tweets and engage
281 in further discussion both on Twitter and on Slack.
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287 **6 WORKSHOP STRUCTURE**

288 We propose a full-day workshop with submissions that includes position papers, work-in-progress, provocations, demos,
289 or posters (4-6 pages, excluding references). Additionally, we ask that authors create a 4-8 minute video summarizing
290 their work so that more time can be spent on author panels, discussing the work rather than presenting it. We are
291 interested in a wide range of novel concepts and perspectives. The workshop will be held in hybrid form, both in-person
292 and on Zoom⁴. Details of the hybrid setup is mentioned later in Section 5. We will use Miro⁵ as a way to allow
293 collaborative activities with remote and in-person participants. The entire event is estimated to be around 8 hours with
294 different activities: an introduction, two author sessions, interactive activities, social events, breaks, and discussions as
295 shown in Table 1.
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299 We plan to make the workshop highly interactive by engaging participants with author panels, interactive activities,
300 and a final group reflective activity. All interactions (e.g., Q&A sessions, panel) will be recorded using Zoom and
301 later collaboratively analyzed to understand the role of empathy in such context. The analysis may result in potential
302 publications co-authored by all the organizers and new cross-disciplinary collaborations for future projects. The follow-
303 up studies will deepen the understanding of empathy and build the foundation of new guidelines for empathy-centric
304 design. In addition to the papers and videos submitted by the authors, we expect the outcome to include list of actionable
305 points or research questions that guide future research of applying empathy in the design process of projects or tools.
306 These outcome will be placed on our workshop website for public access.
307
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310 ⁴Zoom: <https://zoom.us/>

311 ⁵Miro: <https://miro.com/>

Table 1. Proposed workshop schedule.

Duration	Activity
10 minutes	Set Up: Welcome in-person participants, set the hybrid Zoom call (for remote participants only) and general introduction.
15 minutes	Intro game: Introduce organizers, workshop objectives and schedule with an interactive game.
60 minutes	Author Panel: The first set of authors spend 3 minutes each presenting their work. organizers moderate an engaging and dynamic discussion.
10 minutes	Short break
30 minutes	Interactive Session: Participants will go through a set of activities on a Miro board centered around a real life case of empathy in design. Through provocations and ideation, teams will uncover benefits, drawbacks, and ethical implications of empathy in design.
15 minutes	Short break
60 minutes	Author Panel: The second set of authors spend 3 minutes each presenting their work. organizers moderate an engaging and dynamic discussion.
10 minutes	Short break
30 minutes	Interactive Session: Teams from the previous session will expand on their work by reflecting on the discussion as well as a fresh set of provocations.
60 minutes	Lunch break and social gathering
60 minutes	Keynote: A 45-minute keynote presentation followed by 15 minutes Q&A. The talk will be held onsite or remotely depending on the speakers' availability. However, the preference will be given to an in-person keynote.
30 minutes	Expert Panel Discussion: Organizers will then moderate a brief expert panel, encouraging experts and participants to reflect on how the previous sessions influenced their understanding of the keynote.
15 minutes	Short break
15 minutes	Rewarm-up: Starting with a small energy boosting exercise, the organizers will give instructions on the final group session.
30 minutes	Group Session: Groups will go through a set of interactive activities on their Miro boards pushing them to recall, reflect, and ideate on the work done in the morning and how their cases and thoughts change in light of the discussion.
15 minutes	Short break
45 minutes	Group Presentations: Each group presents and discusses the results of ideation and mapping session to all other participants.
20 minutes	Wrap Up: Summarize the workshop, actions on follow-up activities, and take group photos (both onsite and remote). Closing of the data collection process.
-	Dinner and Social Events

7 ACCESSIBILITY

To ensure a broader access to the workshop's proceedings and content, we will take concrete steps as illustrated below:

Pre-Workshop: We will ask the authors to adhere to the SIGCHI's Accessible Submission Guide⁶ while preparing their articles for both the review and final versions. In addition, we will ask the authors to video record their presentations with closed captions prior to their upload on the website. The co-organizers will audit the content to ensure that it adheres to the accessibility requirements. Finally, in the weeks prior to the workshop, we will conduct a survey to identify the accessibility needs of the attendees for the in-person and remote participation. The results of this survey will enable the co-organizers to prepare for the day of the workshop.

During Workshop: The co-organizers will work with the CHI Accessibility Chairs to find appropriate solutions to the special needs of participants, whether attending the workshop in person or remotely.

Post-Workshop: The content generated during the workshop (talks, panel discussions, outcomes of interactive activities, etc.) will be collectively reviewed by the co-organizers, and it will be supplemented with additional information (subtitles, alt-text, etc.) to ensure a broader accessibility to the workshop proceedings.

8 POST-WORKSHOP PLAN

We will arrange a networking event immediately after the workshop to continue the discussion informally. During and following the workshop, accepted papers, videos, slides, discussion results, and outcomes (i.e., Miro board) will be published on the workshop website. Following the workshop, we will propose a journal special issue or a book in the Springer Series on Human-Computer Interaction that draws on the workshop submissions and discussions. We will also consolidate and disseminate the result of the workshop in a conference, journal, or magazine article (such as the ACM Interactions), co-authored by all the attendees. In this way, we create a professional network and encourage participants to collaborate on future ideas, projects, or publications around the research agendas developed in the workshop. Furthermore, we will set up a repository to share and upload acquired research data amongst the attendees, and another one to facilitate collective analysis of this multi-modal data. Finally in order to actively engage the community built during the workshop, we will invite authors to reflect on their work on a bi-weekly follow up podcast/webcast/blog, where the organizers and authors engage in an ongoing discussion and reflection of the workshop. The interest shown in the previous iteration of the workshop as well as engagement with the community show the potential to form a SIG on Empathy-Centric Design in order to expand the community further.

9 CALL FOR PARTICIPATION

While HCI and design research acknowledged the importance of empathy to the design of user-centered technologies and services, there remain open questions about: assessing empathy, its diversity, and related tensions. In this one-day interactive workshop, we will consolidate existing theories and conceptualization of empathy, coalesce them to form a comprehensive and coherent framework, scrutinize the seams, and examine the overarching attributes of Empathy-Centric Design. This will lead to the formulation of its research agenda. We invite 4-6 page submissions that include position, work-in-progress, provocation, demo, or poster papers in the SIGCHI Full paper format addressing questions such as (but not limited to):

- What *methods* and *measurement* tools can we rely on to assess empathy and their implications?
- How empathy could and should be modeled at different *levels*, e.g., through artificial neural networks?
- How can empathy be *mis-used*, e.g., the design of persuasive systems?

⁶Guide To An Accessible Submission: <https://sigchi.org/conferences/author-resources/accessibility-guide/>.

We aim to assemble a multidisciplinary professional network that includes those in HCI, AI, social science, design, psychology, and health from universities, companies, non-profit organizations, and government sectors.

Submissions are done through Easychair⁷ and will be selected based on novelty, provocativeness, quality, and relevance to the workshop. Please direct queries to Wo Mejer (W.I.M.T.Meijer@tudelft.nl). Further information is available on the workshop website⁸. After acceptance, we will ask the authors to create a 4-8 minute video summarizing their work. At least one author of each accepted paper must attend the workshop, and all participants must register for the workshop for at least one day of the conference.

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