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ABSTRACT

In this special interest group (SIG) we invite researchers, practitioners, and educators to share their perspectives and experiences on the expansion of human-centred perspective to more-than-human design orientation in human-computer interaction (HCI). This design for and with more-than-human perspectives and values cover a range of fields and topics, and comes with unique design opportunities and challenges. In this SIG, we propose a forum for exchange of concrete experiences and a range of perspectives, and to facilitate reflective discussions and the identification of possible future paths.

CCS CONCEPTS

• **Human-centered computing → HCI theory, concepts and models**.

KEYWORDS

HCI, more-than-human, values

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1 INTRODUCTION

In the field of Human-Computer Interaction (HCI), we have a long tradition of human-centered design addressing human needs, values, and perspectives [12, 22]. But in the midst of climate crisis and eco-social challenges [9], there is a pressing need to incorporate more-than-human perspectives and values to strengthen sustainability in design [4, 5, 21]. Moreover, as the use of smart products, connected appliances, and artificial intelligence becomes more widespread, designers are confronted with the increased level of complexity, that we must learn to deal with multiplicity of *things* entangled in our design space [6, 10, 14, 20, 24].

This special interest group (SIG) aims to challenge the dominating paradigm of technology design practices, which primarily

focuses on people and profit, by putting forward the importance of systemic perspectives and planetary values. With the advancement of the third wave HCI as suggested by Bødker [3], or with the shift toward the fourth paradigm as suggested by Frauenberger [10], we are experiencing the limitations of modernist, human-centered design approaches. In turn, there is a growing need for finding more sustainable alternatives. In recent years, we have seen a growing body of work in theories, methodologies and practices to study, design for, and design with other-than-human stakeholders, such as living forms (e.g., animals, plants, fungi, algae), intelligent systems (e.g., conversational agents, internet of things), and natural cultural heritage (e.g., rivers, mountains, buildings, monuments) [7, 13]. Such work calls for an innovative departure in perspective from seeing other *things* as mute, a passive backdrop to human intentionality or valuable only as resources [23] towards embracing them as actors or companions with which we are intimately entangled and share the world [16].

This SIG contributes to an ongoing discourse on how our entanglement with digital technologies is challenging the foundations of current HCI research and practice, moving beyond human-centered design e.g. [10, 26]. There is an increasing interest in this topic at CHI, e.g. [2, 7, 17, 18, 27] as well as other SIGCHI venues e.g. [8, 11, 19]. In particular, building on the panel discussion at CHI 2022 on "More-than-Human Concepts, Methodologies, and Practices in HCI" [7], we are here inviting the community to share experiences from research, practice, and teaching about more-than-human perspectives in HCI.

2 AIMS OF THE SIG

This SIG will focus on gathering many perspectives on more-than-human theories, methodologies, and practices from members of the CHI community. We aim to foster open and critical dialogues with the wider HCI community. We have the following four goals:

(1) Bring together a diverse group of researchers, practitioners, and educators interested in more-than-human perspectives on HCI.
(2) Collect current efforts, practices, and discourses on more-than-human topics in HCI.
(3) Develop a map that visualise the current territory and positioning of more-than-human research, practice, and education in HCI.
(4) Envision long term goals for advancing more-than-human research, practice, and education in HCI.

3 TOPICS OF DISCUSSION

We will focus on four main areas of more-than-human design posing interesting challenges for the HCI research community, which will serve as a starting point for discussion at the SIG meeting:

1. *More-than-Human Species.* In the LIMITS conference series [1], critical discussions about the impacts of new technologies and the unrealistic uses of resources that new technologies cause are heavily debated. A more-than-human approach to development of HCI will shift the attention away from what is possible to what is responsible for the planetary well-being. More-than-human approaches to HCI can foster accountability towards life forms that goes beyond human flourishing. How can we learn to listen to the voices and values of more-than-human species? How can we support the well-being of the entire planet without necessarily prioritizing one species over the others?

2. *More-than-Human Things.* The term more-than-human also includes *things* beyond living species, and in particular, for the interest of the CHI community are computational things such as robots, AI agents, smart products, digital platforms and applications. These *things* challenge the notion of products being "industrial artefacts" to "fluid assemblages", which are networked, dynamic and with constantly evolving forms and functions depending upon context [24]. How can we understand the nature of these things, take account for such multi-faceted, fluid and rapidly developing forms and functions and the challenges these new forms of nonhumans imply?

3. *More-than-Human Designers.* We need to conceptually equip our design theory, concepts, and methodologies for new alignments, move past the blind spots of human-centered design, and address the expanding universe of algorithms, forms of intelligence, and forms of life that are entering design practice, casting them as partners in a more-than-human design practice [14]. What happens when technologies are not just materials but participants in design? To what extent nonhuman actors can exercise agency in the design process?

4. *More-than-Human Design Education.* Ultimately, as design embraces multiplicity and diversity by including more-than-human perspectives and values, due to our deep entanglements with the world [25], not only leads questions on future research paths, but also how this changes the HCI curriculum and what to teach the designers of tomorrow [15]. How can we educate responsible designers with regards to more-than-human values and ethics in HCI?

Although we suggest the above topics for initiating the discussion, this SIG aims to provide an open forum for the attendees to identify and discuss relevant topics of more-than-human design, so that we can lay out future paths for more-than-human design community at CHI.

4 SCHEDULE

- 10 mins - Introductions of organisers and attendees
- 15 mins - Solicitation of perspectives and experiences from attendees
- 25 mins - Small group mapping and discussions
- 25 mins - Group reflection, sharing & concluding remarks

5 ASSUMED PARTICIPANTS

Just like the organizers, who represents ten organizations in seven countries, and spanning wide in terms of interests within more-than-human perspectives in HCI, such as on autonomous technologies, environmental concerns, value sensitive design, human-building interaction, entanglement HCI, and design education, we invite participants from all areas of human-computer interaction. We expect to have both people who are already part of the community, as well as those who are starting to conduct research or

practice in more-than-human design. There are several communities who may be interested in this SIG, such as the participatory design community, the design ethics/values community, the AI and emergent technologies community, and HCI for sustainability community, just to mention a few. All would be able to engage with the topic of this SIG.

6 OUTCOMES AND NEXT STEPS

Our primary aim in this SIG is to stimulate reflective discussions and practice-sharing among HCI researchers, practitioners, and educators on more-than-human topics in HCI. A further aim is to envision ways forward.

The organisers of the SIG propose to create a report based on the SIG outcomes, identifying key topics, design opportunities and challenges of more-than-human design in HCI. We hope that this report will form the basis of a future CHI Workshop.

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