



Designerly ways of engaging with nature: exploring the methodological landscape of more-than-human design research.

Oscar Tomico
Eindhoven University of Technology
o.tomico@tue.nl

Ferran Altarriba Bertran
Universitat de Girona, Tampere
University
ferranaltarriba@gmail.com

Svenja Keune
University of Borås, Royal Danish
Academy
svenja.keune@hb.se

Oğuz Buruk
Tampere University
oguz.buruk@tuni.fi

Danielle Wilde
Umeå University, SDU Esbjerg
danielle.wilde@umu.se

Ron Wakkary
Simon Fraser University, Eindhoven
University of Technology
R.L.Wakkary@tue.nl

ABSTRACT

In this workshop, we will bring together designers and researchers working with, for, and around nature to facilitate a transversal conversation around how to engage nature as a key part of our design processes. By deliberately adopting an open and ambiguous idea of what we mean by ‘nature’, we hope to embrace diverse kinds of more-than-human entanglements, including (but not only): farming, companion species, microbiomes, body ecologies, forests and other large-scale landscapes (e.g. oceans), or cohabitation in houses. We argue for the importance of taking such an open-ended perspective, to embrace all possible relevant vectors of nature-related design: multispecies, cohabitation, posthuman sustainability, posthuman care. . . The workshop is set as a platform for shared methodological reflection through the lenses of a more-than-human approach to posthuman research. It will primarily be in-person, given our aim of bringing researchers together and co-experiencing each others’ methods and techniques.

CCS CONCEPTS

• **Human-centered computing** → Human computer interaction (HCI); HCI theory, concepts and models; Interaction design; Interaction design theory, concepts and paradigms; Interaction design; Interaction design process and methods.

KEYWORDS

multispecies design, designing-with, collaborative survival, more-than-human research, human-nature interactions, cohabitation

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1 INTRODUCTION

With ongoing advances in computation, the digital domain keeps expanding, leading to a hybridization of all of life – human and non-. We are particularly interested in a specific segment of this ongoing transformation: the design space of human-nature interactions [11, 12]. In this space, researchers explore how present and future technology can mediate our engagements with(in) nature, either by crafting tools can alter and augment our experiences of nature through manipulation of its expressions (visual, audio, olfactory) or by developing computational frameworks that aim to integrate ecosystem complexity into built environment systems. Those works build on the premise that allowing the digital to play a part in previously analog human-nature entanglements might create opportunities for rethinking and reformulating our relationships with and through others, both living (e.g. animals, plants, microbes, fungi. . .) and non- (e.g. the soil, natural phenomena. . .). We hope that such rethinking can lead to more resilient engagement with the ecosystems we cohabit [2, 16].

We are committed to supporting technology innovation practices that contribute to regenerative and caring human-nature entanglements [15]. In this workshop, we will approach this from a methodological point of view: How are researchers in and around HCI enacting their nature-related explorations? What methods do they employ? What challenges and opportunities are they encountering in their work? Given the emergent and heterogeneous character of nature-related design and research, we see an opportunity for sharing and discussing people’s diverse practices and establishing common grounds.

Our initiative is, in part, motivated by the need to understand and map new challenges arising as technological innovation extends into novel areas of life [4, 8], in this case our relationship(s) with(in) nature. We are also curious to learn about how other researchers and practitioners address them, and the new methods and tools for participatory [14] and situated [7] innovation that are developing. Such methodological advances are particularly needed in emergent design spaces where tech use is yet to become widespread [4, 8]. We position human-nature interactions as one such emergent area in need for methodological reconfiguration, in the challenging domain of more-than-human design research [19].

In this emerging methodological landscape, recent works have begun to explore how to collaboratively design with (i.e. biodesign), for (i.e. multispecies design), and together with nature. Despite their

heterogeneity, they share an aim of supporting humans to enact their design processes in the idiosyncratic space of an ecosystem in ways that are caring and situated. For example, the Open Forest project [5] facilitates more-than-human sensemaking of nature-related experiences and infrastructures through experimental forest walks; McCrickard et al. [13] explore how forest-related tech might support positive connections among people in ways that are also environmentally sensitive; Liu [11, 12] uses ethnographic methods to support posthuman design for resilient communal life; Keune et al. [9] challenge the anthropocentrism inherent in textile design methodologies through textile farming; Biggs et al. [3] enabled immersive "ecological" experiences through deep listening and field recording; Smith et al. [16] unpack the entanglements of animal-human-computer interaction in the urban landscape; Tomico et al. explore how cohabitating with plants can facilitate posthuman forms of designing-with and living-with [17]; Campo et al. [6] design for more-than-human personal care practices; Liu et al. [10] design for collaborative survival within the context of designing tools for mushroom foraging; or Altarriba Bertran et al. [1] investigate how to design from-the-wild to support joyful and caring innovations. Far from proposing fully fleshed methodologies, those works contribute to an ongoing move towards more-than-human design research that is more sensible, inclusive and attuned [2] to nature. They highlight a need for new methods and tools that make those practices actionable and respond to the idiosyncratic character of ecosystems as (messy and unpredictable) sites for co-design. Here we take up on that challenge: we propose a workshop where we will gather designers and researchers interested in nature as an area of intervention and invite them to share their practices and concerns.

In the workshop, we will collectively work towards a shared understanding of what it means to engage nature in design through the lenses of a more-than-human approach to posthumanism [18] and begin to create a landscape of best practices and methodological strands in nature-related design and research.

2 WORKSHOP THEME AND AIMS

The workshop will bring together designers and researchers working with, for, and around nature to facilitate a transversal conversation around how to engage nature as a key part of our design processes. By deliberately adopting an open and ambiguous idea of what we mean by 'nature', we hope to embrace diverse kinds of more-than-human entanglements, including (but not only): farming, companion species, microbiomes, body ecologies, forests and other large-scale landscapes (e.g. oceans), or cohabitation in houses.

By embracing such a broad idea of what human-nature interactions might be, we hope to enable a discussion that is truly heterogeneous. We argue for the importance of taking such an open-ended perspective, to embrace all possible relevant vectors of nature-related design: multispecies, cohabitation, posthuman sustainability, posthuman care. . . We are positive that acknowledging such richness in human-nature interaction possibilities makes for an exciting emerging methodological space – one that is also challenging and extremely heterogeneous. Despite that heterogeneity, we see a shared aim that cuts across all those different human-nature entanglements: the need to expand design practices in ways

that respond to the idiosyncratic character of nature-related research, with all its messiness and unpredictability. We see a need for transversal conversations towards making sense of this emergent methodological space, to begin to provide some structure and to devise useful channels for community sharing and discussion. We will look through the lenses of a more-than-human approach to posthuman research at the situated, material, interconnected, processual, and affirmative knowledges [18] generated in our practices.

Although we invite anyone to join the workshop (regardless of their background, skill, or record of prior work), we highly encourage the participation of designers and researchers who are or have been working with nature as a key component of their work. We are excited to hear about their perspectives on topics such as (but not only):

- How to grapple with the highly messy character of co-design engagements situated within or around nature.
- How to embrace more-than-human perspectives when designing for or researching nature-related phenomena.
- How to include non-humans as participants in design processes.
- How to support experiences that are both thriving for humans and caring towards other things, living and non.

3 WORKSHOP STRUCTURE

The workshop will primarily be in-person, given our aim of bringing researchers together and co-experiencing each others' methods and techniques as a platform for shared methodological reflection. However, we will enable non-physically present individuals to also play a part through an asynchronous pre-workshop activity.

Two weeks before the workshop, we will prompt participants to submit a representation (textual, graphic, audiovisual. . .) of one of their methods, tools, strategies for engaging nature in their design/research work. We will invite them to briefly describe their approach and show how they used it in their own practice. People who may not be able to join the in-person workshop activities will be invited to make their contribution in this part of the workshop, by sharing their practices in a way that in-person participants can experience and reflect on them.

The in-person workshop will take place in Tampere. We are planning for an all-day, 8 hour long workshop where participants will engage nature-related methods and techniques at different rhythms and with different modes of thinking. The in-person phase of the workshop will consist of three parts:

- Sharing is caring (9 - 11h): Participants will be invited to give a brief overview of their work and interests, and to present the tool, technique, or method they chose to share with other participants.
- Methodological picnic (11 - 15h): Following the round of methodological sharing, we will go out to a local forest (probably the woods in Kauppi) and take our time to experiment with each other's methods, tools, and strategies for engaging nature in designerly ways. We will provide participants with tools and guidance for documenting their lived experiences with those techniques through the lenses of posthuman research so we can later use them to guide our discussion.

Lunch will be had along the way, as a pic-nic, intertwined with the co-experiencing activity.

- Landscaping nature-related design/research (15 - 17h): Back in the conference center, we will build on our lived experiences with each other's techniques to begin to devise a landscape of methodological strands, challenges, and opportunities in human-nature interaction design through the lenses of a more-than-human approach to posthuman research. We will map our practices based on how they support the generation of situated, material, interconnected, processual, and affirmative knowledges (informed by [18]).

Given our aim of gathering (and finding common grounds between) designers and researchers interested in nature-related interventions, we intend to use the workshop as a starting point for an active community around nature-related methodologies. One of the first efforts we envision this community to make is capitalizing on the workshop's conversations to put together a growing, community-curated toolkit of methods and tools for co-designing within nature. We believe that such a contribution could fit a follow-up joint publication, e.g. in the form of a conference or journal article. Depending on the quality and depth of the workshop discussions, as well as on participants' availability, we will also consider spearheading a Special Issue on "designly ways of engaging with nature". Overall, we intend to use the workshop as a starting point for a larger, possibly ongoing conversation around the rich landscape of methodological strands in human-nature interaction design.

4 ORGANIZERS

Oscar Tomico is associate professor at the Department of Industrial Design at Eindhoven University of Technology on Design Research Methodologies for Posthuman Sustainability. His research revolves around 1st Person Perspectives to Research through Design at different scales (bodies, communities and socio-technical systems). Ranging from developing embodied ideation techniques for close or on the body applications (e.g. soft wearables), contextualized design interventions to situate design practice in everyday life, exploring the impact of future local, distributed, open and regenerative ecologies of production, or experimenting with cohabitation as a posthuman approach to multi-species design.

Ferran Altarriba Bertran is an interaction designer and researcher. He is an associate professor at Escola Universitària ERAM (Universitat de Girona, Catalonia) and a research fellow at the Gamification Group (Tampere University, Finland). His research investigates how to design playful technologies and experiences that enrich the socio-emotional texture of people's day-to-day. He is currently focused on a project centered on exploring how to co-design forest-related technology that responds to values of joy and care. Ferran has co-organized 30+ co-design workshops both in academia (in conferences such as CHI, DIS, IDC, or CHI Play) and beyond (partnering with both public and private institutions).

Svenja Keune is a postdoctoral researcher at the Swedish School of Textiles, University of Borås, in Sweden and at the Centre for Information Technology and Architecture (CITA) at the Royal Danish Academy in Copenhagen. During her phd project "On Textile Farming" within the MSCA ArcInTexETN she turned towards seeds

as a potential biological alternative, and as a dynamic material for textile design. In order to explore alternative ways of living that the textile plant hybrids might propose, Svenja built and moved into a Tiny House on Wheels to live together with the research experiments. Svenja is currently finishing up 'Designing and Living with Organisms (DLO)', a 3 year project funded by an international postdoc grant from the Swedish Research Council.

Oğuz 'Oz' Buruk is Assistant Professor of Gameful Experience at Tampere University and affiliated with Gamification Group. He got his PhD at Koç University - Arçelik Research Center for Creative Industries (KUARI) in Design, Technology and Society Program, Interaction Design Track. His work focuses on playful bodily technologies and designing games & play for a posthuman era. Both transhuman/cyborg experiences (convergence of humans and machines) and more-than-human perspectives (sharing the centre stage with other beings) are in his scope and he aims to understand how games will be shaped by posthuman technologies such as brain-machine interfaces, robotic companions, bodily implants or space habitation technologies and how they will facilitate transspecies interactions. In this context, he looks into how designing the games of the future can inform us about future societies and societal structures. His research topics vary among topics such as playful fashion design, social extended reality and human-machine-nature interaction.

Danielle Wilde is a Professor of Design for Sustainability at Umeå Institute of Design, Umeå University, Northern Sweden. She also holds a position in the Department of Sociology, Environmental and Business Economics at SDU Esbjerg, in the MERE research group, where she undertakes food system transformation research. In her research, she seeks to understand how critical, collaborative, embodied engagement with the challenges of sustainability transition might assist us in finding new ways of living that are intimately situated, as well as personally, locally, regionally and globally sustainable and sustaining. She works with sustainability transitions, from the foundation of design research, collaborating with diverse societal stakeholders including municipalities, industry actors, policy-makers and citizens (understood in the sense of planetary citizenship). From a research perspective, she collaborates with STS researchers, human geographers, health systems researchers, molecular biologists, and environmental and business economists.

Ron Wakkary is a Professor in the School of Interactive Arts and Technology, Simon Fraser University in Canada where he founded the Everyday Design Studio (eds.siat.sfu.ca). In addition, he is a Professor and Chair of Design for More Than Human-Centred Worlds in the Future Everyday Cluster in Industrial Design, Eindhoven University of Technology in the Netherlands. Wakkary is the author of the book *Things We Could Design for More Than Human-Centered Worlds* (MIT Press, 2021). His research investigates the changing nature of design in response to new understandings of human-technology relations, multispecies worlds, and posthumanism. He aims to reflectively create new design exemplars, theory, and emergent practices to contribute generously and expansively to understanding ways of designing that are more accountable, cohabitable, and equitable.

5 CALL FOR PARTICIPATION

In this workshop, we invite designers and researchers working with, for, and around nature to come together and discuss how to engage nature as a key part of our work. By deliberately adopting an open and ambiguous idea of what we mean by ‘nature’, we hope to embrace diverse kinds of more-than-human entanglements, including (but not only): farming, companion species, microbiomes, body ecologies, forests and other large-scale landscapes (e.g. oceans), or cohabitation in houses.

The workshop will take place in October the 3rd in Tampere (Finland), as part of the Academic Mindtrek 2023 conference program. Over the course of 8 hours, participants will share methods and tools they use in their nature-related work, co-experience each other’s practices in a real forest, and discuss how such a diverse pool of techniques and approaches can be brought together to conceptualize a landscape of methodologies for nature-related design/research. The workshop is open to any designer or researcher interested in nature as an area of exploration. To participate, we invite any interested person to submit a (1-2 pages) short position paper in a pictorial format including:

- A short bio.
- A brief account of the prospective participant’s interests within the workshop themes.
- If any, the description of a method/technique/tool the participant would like to explore during the workshop.

Position papers should be submitted at no later than September 10, 2023. Invitations to accepted participants will be sent on September 15.

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