

The background features a large, abstract, textured shape in shades of red and orange, resembling a crumpled piece of fabric or a stylized globe. A thin, diagonal line in a similar color runs from the upper right towards the lower left, intersecting the main shape.

**COMMUNAL
WEAVING
FOR A
CARRIER BAG
PRACTICE OF
COMPUTING**

TLDR

This document contains information about the critique “Communal Weaving for a Carrier Bag Practice of Computing” presented at NordiCHI 2026 in Vaasa, Finland.

We share this cloth with the aim of shaping a more just and response-able computing discipline that weaves together diverse ways of knowing instead of following a linear path to technical mastery, drawing already on a rich history of bringing together weaving, coding and materiality (e.g. Plant, 1995).



Working differently with knowledge, a carrier bag approach draws on the image of patchwork: Combining technological and non-technological, human and more-than-human knowledges, these perspectives are not slapped on as an afterthought in computing. These different knowledges, perspectives and ideas are stitched together, mend gaps, and add texture to the bag itself. Through practices of collecting sewing, stitching and embroidering, different knowledges are tied together and intra-act within a Carrier Bag Practice of Computing.

If you do not want to read through all the information, you can use the following quick links:



click here for an overview of options to contribute your perspective to the critique



click here for prompts to engage materially with your work in computing



click here for information about a digital version of the tapestry

AN INVITATION

What does computing look and feel like to you?

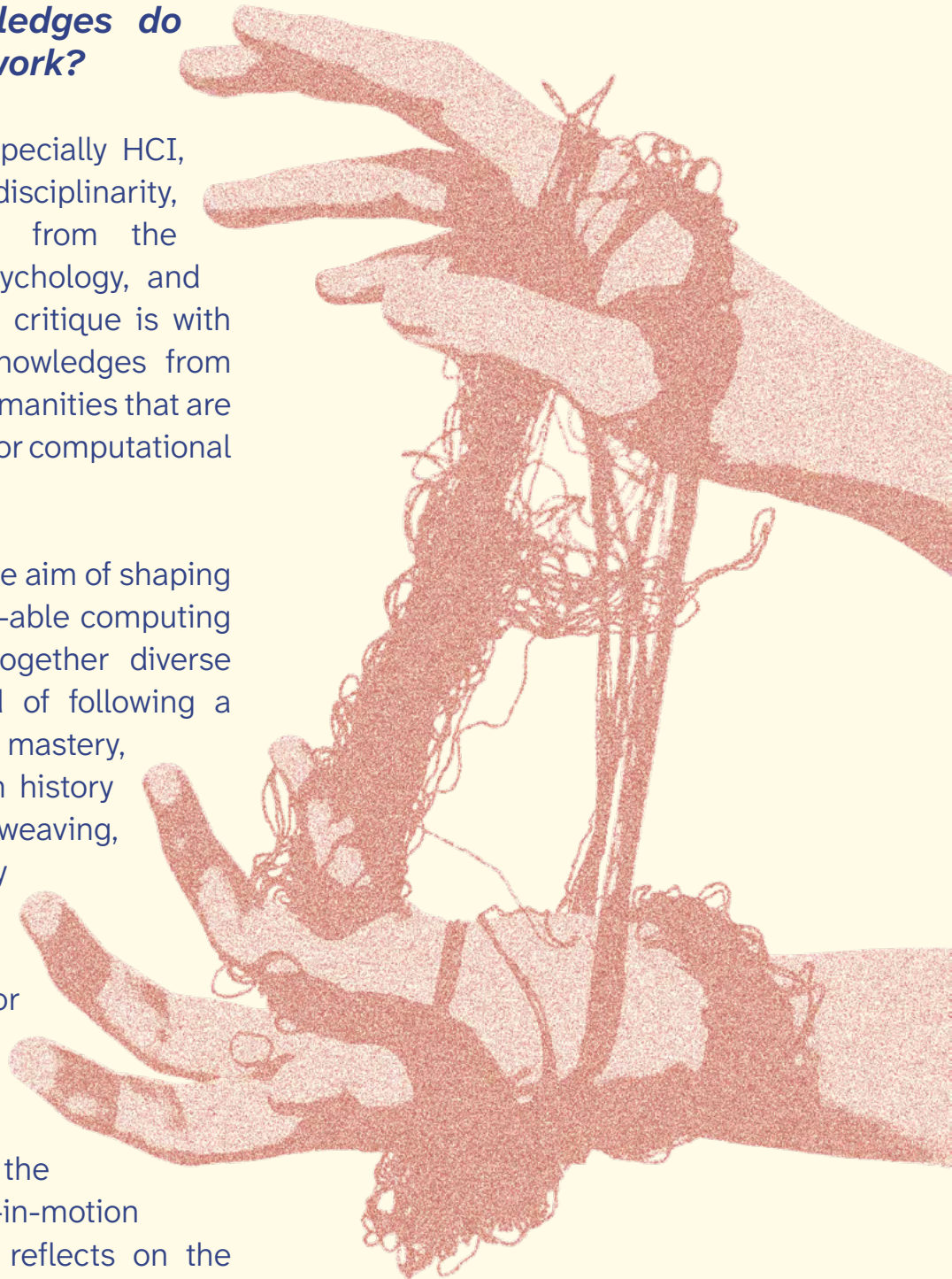
What do you want computing to look and feel like?

What type of knowledges do you draw on in your work?

While computing, and especially HCI, has its beginnings in interdisciplinarity, drawing on knowledge from the fields of engineering, psychology, and behavioural sciences, our critique is with the marginalisation of knowledges from the social sciences and humanities that are not readily operationable for computational practices.

We share this cloth with the aim of shaping a more just and response-able computing discipline that weaves together diverse ways of knowing instead of following a linear path to technical mastery, drawing already on a rich history of bringing together weaving, coding and materiality (e.g. Plant, 1995). It can be used as a magnifying glass for the minor trajectories of computing that is grounded in material concerns and the vernacular. Offering the first pieces of an always-in-motion tapestry, this installation reflects on the role of critical knowledge and theory and their integration into computing practices. We want to invite you into the folds and layers of what a response-able (Haraway,

2016; Laura Flanders and Friends, 2026) computing discipline might be. We invite you to take a moment to consider the minor trajectories of computing, the failings instead of masteries, the materialities and the vernacular.



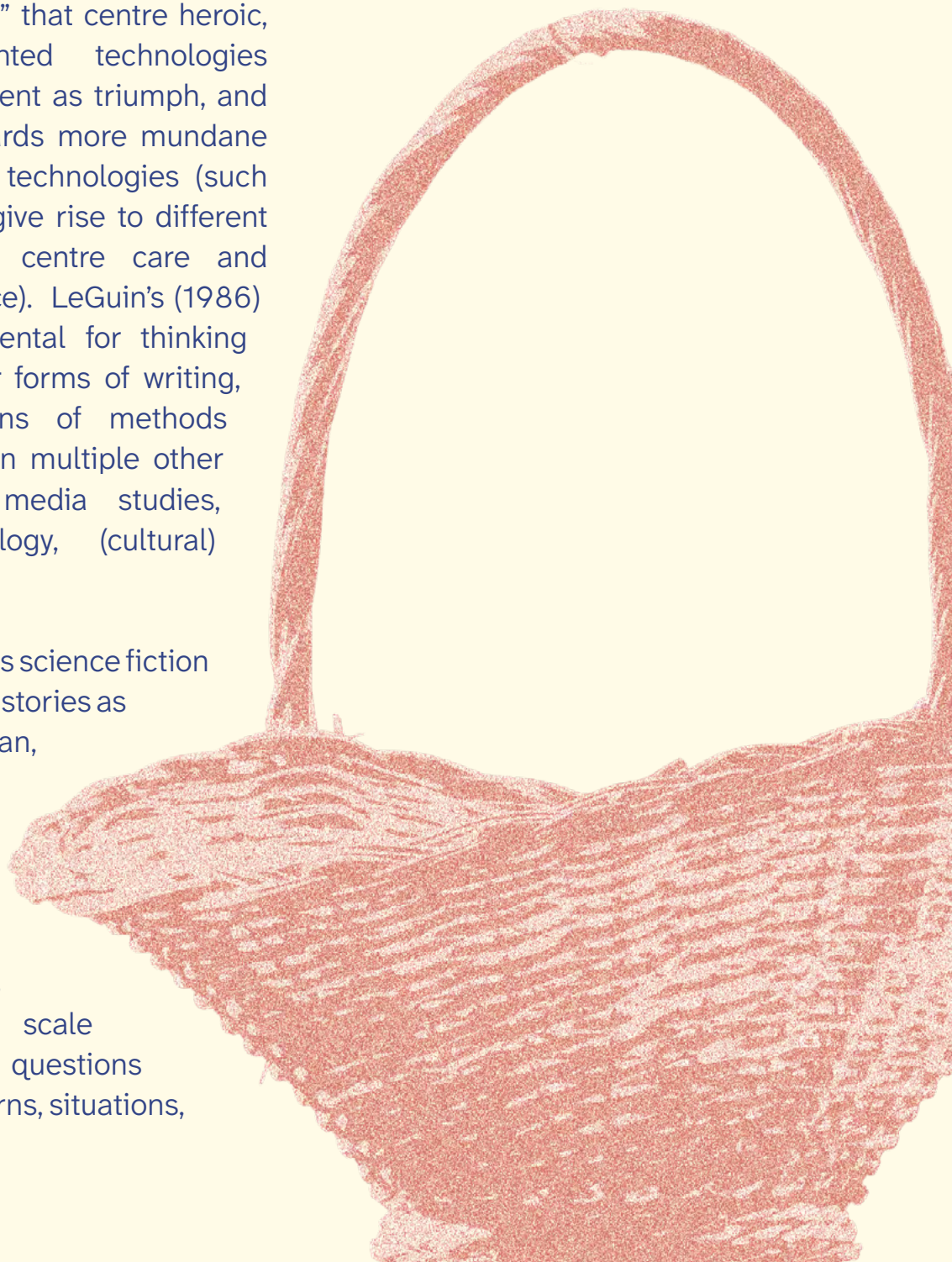
Leave a thread of knowledge, fellow weaver.

WHY THE CARRIER BAG?

In 1986, feminist sci-fi writer Ursula K. LeGuin introduced *The Carrier Bag Theory of Fiction* – a meditation on the stories we tell about science and technology, and how they could be told otherwise (1986). LeGuin, drawing on Elizabeth Fisher’s (1979) *The Carrier Bag Theory of Evolution*, invites science fiction writers to let go of “killer stories” that centre heroic, masculine, war-oriented technologies and portray development as triumph, and instead re-orient towards more mundane yet no less essential technologies (such as carrier bags) that give rise to different stories (stories that centre care and community, for instance). LeGuin’s (1986) text became fundamental for thinking about sci-fi and other forms of writing, and inspired revisions of methods and historiographies in multiple other domains, including media studies, architecture, technology, (cultural) criticism, and others.

As LeGuin (1986) invites science fiction writers to let go of killer stories as “Herculean, Promethean, conceived as triumph”, we similarly want to suggest a practice of computing that moves away from the grand inventions and applications at scale and instead seeks out questions around material concerns, situations, and places.

LeGuin’s carrier bag suggests stories of the mundane, of slow processes, of practices of sharing and bringing home (1986). We hope to inspire a similar communal practice for computing practitioners as well.



WHY ARE WE WEAVING?

Threading and weaving have long been used to imagine automation and computing. The Jacquard loom, using punched cards to control complex woven patterns, is often named as one of the direct ancestors of programmable machines (Essinger 2007). It was this same logic of punched cards that Ada Lovelace and Charles Babbage drew on when working on the Analytical Engine. Lovelace recognised:

“We may say most aptly that the Analytical Engine weaves algebraical patterns just as the Jacquard-loom weaves flowers and leaves.” (Gross 2015)

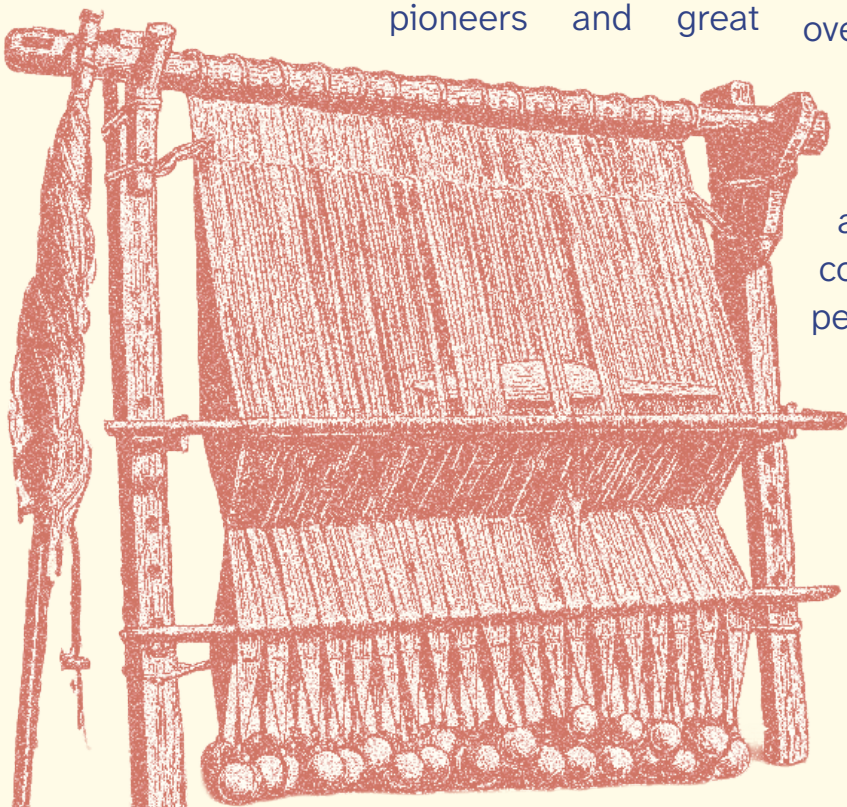
Weaving is part of computing’s own history, quietly present in code architecture.

Feminist scholarship has long pointed out that this history has usually been told in a way that focuses on individual male pioneers and great

engineers, erasing crafting practices and those who cultivate them, which were essential to computing’s development.

Sadie Plant’s *The Future Looms: Weaving Women and Cybernetics* (1995) traces how the loom, the woven pattern, and the thread anticipate the logics of digital computation, situating weaving as a foundational technology of information processing. By focusing on practices of weaving and fabric we aim to tell a story of computing that is collective, iterative, and materially grounded knowledge-making, passed on through careful hands.

More recent design scholarship has picked up this thread quite literally. Daniela Rosner’s (2018) *Critical Fabulations* argues for reworking the methods and margins of design by attending to the material, often overlooked practices that shape technology from below. Anna Keune’s (2022, 2024) research on “fiber-crafted algorithms” (Keune 2024) shows how weaving and sewing crafts make computational concepts like sequence, iteration, and performance tangible and felt, rather than only abstract and symbolic.



OUR VISION FOR A COMMUNAL CARRIER BAG PRACTICE OF COMPUTING

In its broadest strokes, we propose a carrier bag practice as a figuration, a lens, and a metaphor, with the aim of shaping a more just and response-able (Haraway, 2016) discipline, so the computing scholars of the future would be trained to be composers rather than engineers.

It could inspire a computing education that weaves together diverse ways of knowing, instead of following a linear path to technical mastery only. It can be used as a magnifying glass for the minor trajectories of computing that is grounded in material concerns and the vernacular. The aim of a carrier bag practice is to move away from the grand inventions and applications at scale so prevalent in the discipline's killer stories (LeGuin, 1986), and instead send out an invitation to ask about material concerns, situations, and places.

The carrier bag therefore offers a broader grounding for computer science that exceeds mathematical knowledge and instead is a collection of knowledges, approaches, expertise, and ideas one encounters on their (academic) path, grounded in a feminist ethics of care (Tronto & Fischer, 1990; Tronto, 1998; De La Bellacasa, 2017). In other words, the carrier bag is an invitation to start the construction of a different trajectory for computing practices, their presence, and future.

IN DIALOGUE WITH

Abdilla et al., 2020; Awori et al., 2016; Bardzell, 2010; Bardzell & Bardzell, 2011; Bath, 2014; Bellini et al., 2018; Bratteteig & Verne, 1997; Chakravartty & Mills, 2018; Costanza-Chock, 2020; Erete et al., 2018; Fox et al., 2017; Frauenberger, 2019; Givens & Morris, 2020; Hampton, 2021; Irani et al., 2010; Klumbyté et al., 2022; Klumbyte et al., 2023; Kumar & Karusala, 2019; Lawrence et al., 2019; Maaß et al., 2012; Mohamed et al., 2020; Ovalle et al., 2023; Philip et al., 2012; Rambukkana, 2021; Rankin & Thomas, 2019; Rode, 2011; Rosner, 2018; Say Chan, 2018; Wellner & Rothman, 2020; Whittaker et al., 2019; Winschiers-Theophilus and Bidwell, 2013; Williams et al., 2023

... AND MORE

JOIN THE TAPESTRY

With this contribution, we do not want to present a finished and formalised approach, but rather a starting point to discussion. We invite you to add to the patchwork, weave new connections or strengthen existing ones to learn from each other. We have tried to account for different access needs for engaging with this work. If you would like to see or add any other accommodations, please let us know and we will make adjustments possible to the best of our ability.

Here you can find some ways to both experience and contribute to the cloth, pick what fits you:

WAYS TO EXPERIENCE THE CLOTH

- The cloth itself, tactile and in place.
- A zine (print + digital) describing each contribution, including a short “feel through me” note (material + gesture) per piece.
 - This includes a printed map of the cloth of all contributions added prior to the conference, not continuously updated.
- A digital version of the cloth, documented at fixed points (daily after the conference) rather than live:
[Digital Cloth for a Communal Weaving of a Carrier Bag Practice of Computing](#)

WAYS TO CONTRIBUTE TO THE CLOTH

- **At the cloth directly;** materials and reach available at multiple heights.

- By envelope, to add later or send in from elsewhere.
- On a tablet (using ProCreate) as a lower-effort surface.
- In writing; added by the team to the cloth, or directly onto the digital version.
- Digital submission via QR code, a written-out short link or with a facilitator laptop: [Contribution Submission Form](#)
- Ask any facilitator about a quieter time to engage, if the crowd/noise around the installation is a barrier.

GUIDE FOR ENGAGEMENT

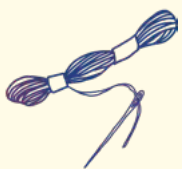
We want to offer this cloth as a space for reflection on diverse knowledges in HCI. To make this possible and to be welcoming for all, we would like to ask you to consider the following things:

- You are welcome to stop, cover, modify or remove your contribution until the end of the conference.
- Ask permission before taking a photograph when people are crafting.
- If you have questions about ways to contribute, feel free to ask the facilitators on site.
- Do you have thoughts, ideas or feedback? Leave us a note in our feedback box!

Photographs might be taken by the team of the process, with your permission. We will make sure to blurr or otherwise remove identifying markers such as faces and any visible tattoos. We will photograph and otherwise document all the contributions to this cloth at the end of the conference. Please note that these images might be used for further publication and publicity purposes.

If you do not wish your contribution to be part of this documentation, please let us know by the end of the conference in person or by sending an email to pit-carrierbag@uni-kassel.de

MATERIALS _____



You can use needle and string as a starting point for many threads: Embroider directly onto the fabric, stitch patches onto the cloth or stitch pieces together.



These strings can invite different practices. Knitting, crocheting, braiding, and weaving all offer different ways to make new connections between materials.

Are you tying knots or undoing them? Do you add to existing strings or open up new threads?



Fabric can also function as a canvas for paint.

How does the brushstroke feel on cloth and how does paint change its texture?



As two different ways to facilitate attachment, you can also reach for buttons and glue.

You can consider if you are looking for the lasting connection that glue affords you. Or are you looking to preserve ability to hide and reveal?

GETTING IN CONTACT WITH THE MATERIAL

PROMPTS #1

Take three types of materials and close your eyes or look away from the materials, if you feel comfortable doing that. The aim is to focus on haptic experience of the material rather than just the visual experience:

Hold the different materials and pay attention to their different qualities.

Reflect on those qualities in relation to your work. Ask yourself:

Which one resonates most closely with things you enjoy in research?

Which one resonates with what you don't enjoy?

How can the materials express what otherwise couldn't be expressed?

**Which one wants to hold something?
Which one wants to connect two things?
Which one resists being pinned down?**



WORKING WITH COMPUTING, AFFECT, AND EMOTION

PROMPTS #2

PAST, PRESENT, FUTURE

What texture resembles most closely how computing feels like to you?

What represents your familiarity or alienation with the field of computing?

Reflect on your experiences and consider for example the following:



Create a pouch / bag / holding that gathers discarded pieces (failed proposals, rejected submissions, abandoned studies or designs). What belongs there?



Stitch a net that catches / holds care instead of catching users, research findings, etc. ... Who gets tangled here and how?



Draw or stitch the shape of a current event, experience or else. Is it sharp or soft? Heavy or light?



Identify a seam where your work splits from your life (or your values). Can you translate it to fabric? Does it become wider or do you want to close it? If so, by what means?



What does imposter syndrome feel like? What does breakthrough or set-back in your work feel like? Try to translate this into fabric.



Construct a vessel large enough for grief and joy. What makes it strong enough?



Which colour, texture or shape represents fatigue, exhaustion or frustration?

ACKNOWLEDGING AND SHARING KNOWLEDGES

Whose theory got you here? Whose got left behind or weren't named?

Reflect on your experiences and consider for example the following:



How do you represent knowledge in the tapestry? Writing down names, tracing lineage, connecting through threads?



How can you include what your community taught you that couldn't be published? How can you honour it?



Stitch a line of knowledge someone taught you without naming it. Where did you learn it?



What knowledge lives elsewhere in your body, in your hands, in your skin - but not in your publications? Can you braid it in?



Thread through what academia measures and what it ignores or doesn't value.

TELLING AND SHIFTING STORIES OF COMPUTING

What would you like to challenge about the current dominant way how stories about and in computing are told?

How would a design practice look that focuses on the material and mundane aspects of your computing system?

What formats and narrative styles match a carrier bag approach?

Reflect on your experiences and consider for example the following:



How would you present your work differently following a carrier bag approach?



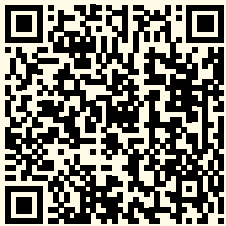
What are missing voices you could include? How could you address their absence and weave them into the cloth?



How can you translate the mundane and material aspects of computing into fabric material?

THE DIGITAL TAPESTRY _____

As much as this tapestry exists materially here in Vaasa right now, you can also visit it digitally, materialised through computing infrastructure. You can follow this link to click and move through the cloth on your own time as well.

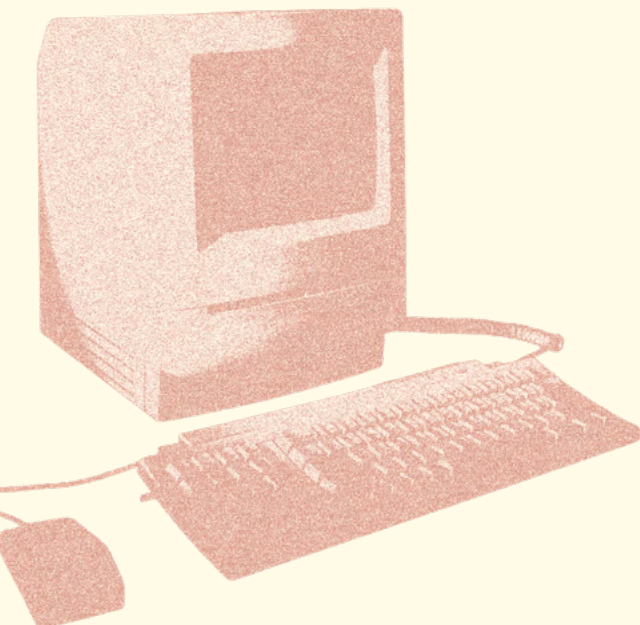


[Digital Cloth for a Communal Weaving of a Carrier Bag Practice of Computing](#)

Do you want to add your contribution to the patchwork? Follow the instructions in the form and let us know about your weaving and threading.



[Let us know about your threads and weavings here](#)



TAKE AN ENVELOPE _____

Would you like to share a piece of this cloth with your collaborators or take the time to work on something yourself? You can take an envelope from the basket with crafting materials and send us a piece of carrier bag practice to add to the patchwork even after the conference.

CONTACT _____

We want to explore what a carrier bag practice of computing could look and feel like. If you want to join this exploration, feel free to get in contact:

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