

WORKSHOP

Data Matters

Residual Ecologies of Digital Innovationism

23–24 NOVEMBER 2026

Sky Lounge, Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria

DAY 1 Monday, 23 November 2026

9:00 – 9:45	WELCOME & INTRODUCTION Why “Data Matters”? Thinking Digital Innovation through its Residues Ulrike Felt, University of Vienna, Austria
9:45 – 10:45	KEYNOTE What Can Be Undone? Irreversibility and the Physics of Information Nanna Bonde Thylstrup, University of Copenhagen, Denmark
10:45 – 11:15	<i>Coffee/Tea Break</i>
11:15 – 12:45	EMPLACING DATA CENTERS Between Environment, Economy and National Digital Ambitions. Contrasting Problematizations of Data Centers in Ireland and France Carsten Horn, University of Vienna, Austria Hyperscaling Scotland: Residual Data Ecologies and the Late Industrial Pastoral Jamie Cross, University of Glasgow, United Kingdom Alex Nading, Cornell University, United States After Promise: Timing, Scaling and Residual Thinking around a Hyperscale Data Center in Rural Upper Austria Gernot Rieder, University of Vienna, Austria
12:45 – 13:45	<i>Lunch Break</i>
13:45 – 15:15	SECTORAL DATA PRACTICES & INFRASTRUCTURES Assembling AgriStack: Agrarian Hinterlands and the Making of Digital Public Infrastructure in India Ali Malik, University of Oregon, United States Tracing Phantom Networks: Residual Ecologies in Digital Healthcare Marcello Aspria, Erasmus University Rotterdam, The Netherlands Making Meaning Matter: Residual Imaginaries in Humanities Research Infrastructures Fabian Pittroff, Ruhr-University Bochum, Germany
15:15 – 15:45	<i>Coffee/Tea Break</i>
15:45 – 17:15	DATA, INFRASTRUCTURES & EXTRACTIVISM Thirsty Promises: Water as Contested Ground in a Hyperscale Data Center Announcement in Spain Pablo Valenzuela Astudillo, University of Vienna, Austria Reduce, Reuse, Recycle: Bridging the Residual Data Waste Divide Dylan Murphy, University College Dublin, Ireland

„Green extractivism“: Digital Futures, Deep Sea Mining and the Construction of Necessity in Norway

Jule Andresen, University of Vienna, Austria

Ulrike Felt, University of Vienna, Austria

17:30 – 18:30

KEYNOTE

AI Before the Ruins: Industry and Inquiry Before and After the Bubble

Anne Pasek, Trent University, Canada

18:30

Reception

DAY 2 Tuesday, 24 November 2026

9:30 – 9:40

Welcome & Introduction

9:40 – 11:40

ENVIRONMENTAL DATA, ECOLOGY & ECO-MATERIALITY

When “Sustainability Becomes a Data Issue” ...

Anna Maria Rath, Vienna University of Economics and Business, Austria

Data Becoming Forests: Entanglements between Ecological Restoration and Big Tech in the Brazilian Amazon

Felipe Mammoli, IT University Copenhagen, Denmark

Mattering Remote Data on Arctic Frontiers

Hannah Bradley, University of Virginia, United States

Residues Matter: A Thematic Literature Review of the Hidden Material Costs of Digital Innovation

Martina Skrubbeltrang Mahnke, Roskilde University, Denmark

11:40 – 12:00

Coffee/Tea Break

12:00 – 13:00

KEYNOTE

Beyond Hubris: AI and Peasant Ecologies in Colombia

Sebastián Lehuedé, King's College London, United Kingdom

13:00 – 14:00

Lunch Break

14:00 – 15:30

ALTERNATIVE VISIONS OF THINKING & DOING AI

Acting On, Within, and Outside Extractive AI Systems: Epistemic Framings and Practices of Sustainable Generative AI

Anastasia Glawatzki, University of Münster, Germany

Sigrid Kannengießer, University of Münster, Germany

Anne Mollen, University of Münster, Germany

Small Big Data Centers: Data Center Landscapes at the Fringes

Vanessa Graf, University of Art and Design Linz, Austria

Making Institutional Space for Sustainable Computing? Friction-ful Encounters of (Inter)disciplinarity, Green Growth, and Computing Otherwise

Anastasia Nesbitt, University of Vienna, Austria

15:45 – 17:00

Collective Wrap-up and Closing

Call for Papers

"Data Matters: Residual Ecologies of Digital Innovationism"

Contemporary innovation societies are increasingly organised around digital technologies and infrastructures. With an insatiable appetite for the next new (Valaskivi, 2020), innovationist ideologies present data and artificial intelligence (AI) as solutions to a wide range of pressing societal problems—from healthcare for aging societies to climate crisis mitigation.

In such debates, data and AI are often treated as “bald objects” (Latour 1999), stripped of their entanglements with practices, infrastructures, institutions, environments, social orders, and labour. Data, AI and ‘the digital’ more generally are thought of as immaterial, existing on an ontological plane distinct from material reality—illustrated by various metaphors such as ‘the cloud’ or ‘virtual reality’.

These assumptions are increasingly being unsettled by critical scholarship. Critical Data Studies has demonstrated that data are assembled through situated practices of production, curation, and mobilization. Critical AI research has traced how epistemological commitments become built into models and with what distributive consequences. Meanwhile, Critical Data Centre Studies has highlighted the material and infrastructural conditions of possibility of the digital—its dependence on energy, water, and extractive resource regimes.

With this workshop, we seek to create a space of sustained conversation across these strands of scholarship. While Critical Data Studies, Critical AI research, and Critical Data Centre Studies share important concerns, they often operate in parallel, developing distinct vocabularies and empirical focal points. We invite participants to collectively explore how these perspectives might be brought into closer dialogue to address epistemological, ontological, and normative questions around both data and AI in an integrated way.

We propose **mattering** (e.g., Butler, 1993) as a conceptual hinge for this exchange. To ask how data and AI *matter* is to foreground both their materiality and their significance. On the one hand, “data matters” directs attention to the infrastructures, resources, and labour that sustain digital systems—the data centres in which data are stored and AI models are trained, the energy and water regimes that cool and power them, and the extractive economies that supply their hardware. On the other hand, mattering points to the discourses, imaginaries, and institutional arrangements that render data and AI meaningful, valuable, and actionable within contemporary innovationist ideologies. It invites us to examine how data and AI come to count, for whom, and at what cost.

This dual focus allows us to bring into view what we term the **residual ecologies of digital innovationism**. Residues come in at least three forms (Felt, 2025):

Material residues: the by-products and left-behinds of digital systems, including idle data, waste heat, mining debris, e-waste, wastewater, and environmental burdens displaced to peripheral regions.

Infrastructural residues: the often-invisible architectures that make datafication and AI possible—databases, cables, server farms, grids, cooling systems, and logistical chains.

Epistemic residues: the imaginaries, paradigms, and styles of thought sedimented through and in data and AI, including dataism, digital solutionism, and (digital) innovationism, alongside marginalized alternatives such as sustainable computing, digital sobriety, and infrastructural restraint.

By centring mattering, we seek to reconnect data and AI to their “hinterlands” (Law, 2004)—the extended networks of practices, materials, and relations that are typically obscured in policy debates and innovation narratives. This move challenges the persistent separation of labour between fields that treat data as epistemic artifact, AI as technical model, or data centres as infrastructure. Instead, it encourages us to examine how these dimensions co-constitute one another. Dataveillance, for example, is not only a question of governance or algorithmic bias; it is also a question of water consumption, energy extraction, and territorial politics. Conversely, data centres cannot be understood solely as infrastructural sites; they are also shaped by the epistemic, spatio-temporal and economic logics of datafication and AI development.

Framing our discussion around mattering thus unsettles the assumption that data and AI are immaterial, frictionless, or inevitable. It foregrounds their embeddedness in social, environmental, and political worlds and opens up space for critical and transformative engagements. Rather than accepting contemporary digital innovationism at face value, we invite participants to interrogate its onto-epistemological claims, its normative commitments, and its material consequences.

This workshop aims to create a common ground for diverse critical perspectives and to foster dialogue across empirical sites and theoretical traditions. We welcome contributions that engage with questions such as:

- How do data and AI come to matter materially, politically, and epistemically?
- What forms of labour, extraction, infrastructural maintenance and residues are obscured in dominant narratives of digital innovation?
- How might we rethink care, responsibility, and sustainability in relation to the residual ecologies of digital innovationism?
- And what alternative imaginaries and practices might emerge if we re-attach data and AI to the networks, relations, and residues from which they are too often abstracted?