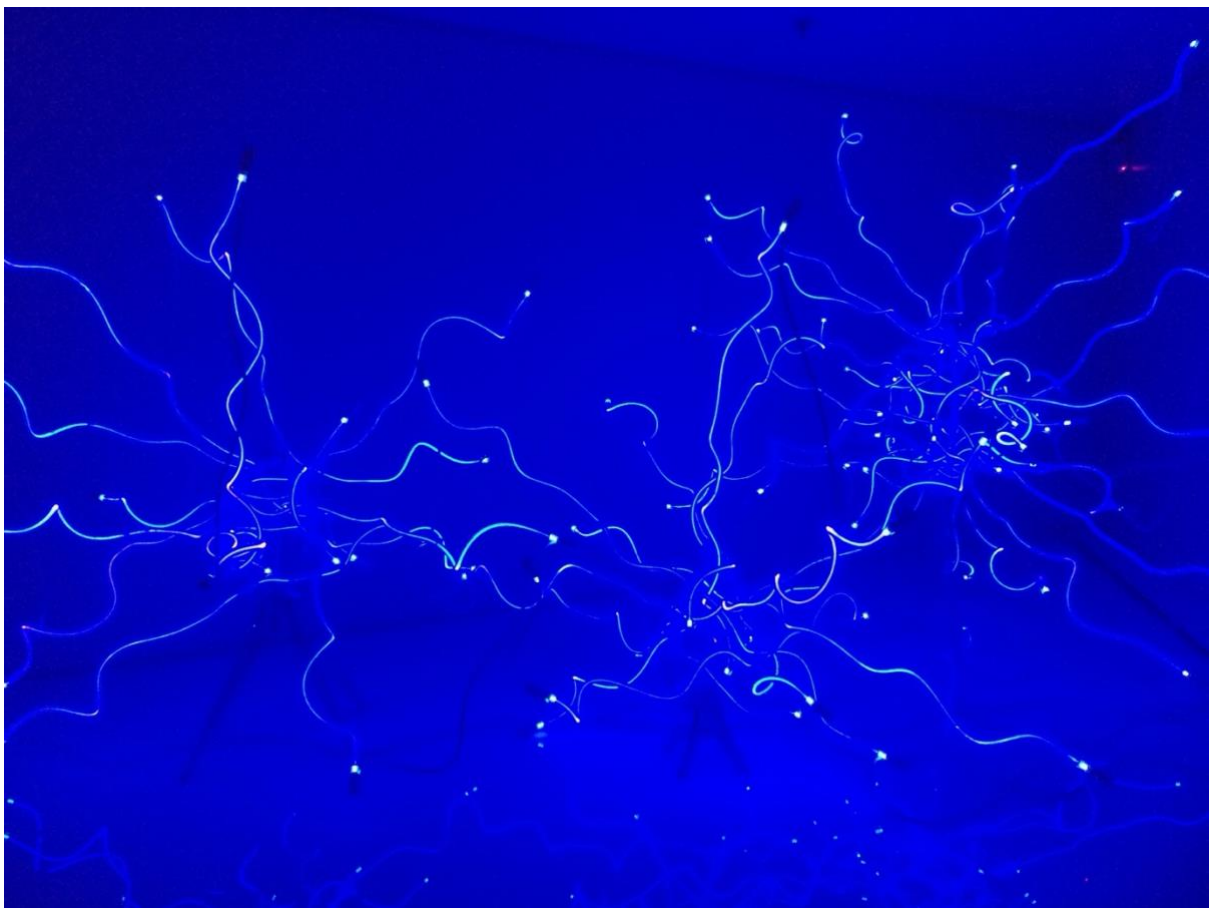


Speculative Machines and Us: Histories and Futures of AI

Co-hosted by the Centre for Science Studies, ImaginationLancaster, and the
Data Science Institute at Lancaster University

With funding from the British Academy



Event organisers:

Carolyn Pedwell, Joe Deville, and Nick Dunn, Lancaster University

Speculative Machines and Us: Histories and Futures of AI

An in-person one-day symposium on Thursday 17th July 2025

Location: Imagination Lab (A36), LICA Building, Lancaster University
(see Lancaster's [campus maps and directions](#) for more information)

PROGRAMME

From 9.45 – COFFEE, TEA, AND REFRESHMENTS

10.15-10.35 – OPENING REMARKS (Organisers) and launch of 'Speculative Machines' website
(Prof. Carolyn Pedwell, Lancaster)

10.35-11.35 – KEYNOTE ADDRESS (Chair: Dr Rolien Hoyng, Lancaster)

Prof. Orit Halpern (Technische Universität Dresden): 'Planetary Design: On the Emerging Logics of Generative AI'

11.35-12.00 – TALK AND INTERACTIVE DEMO (Chair: Prof. Nick Dunn, Lancaster)

Dr Joe Lindely and Dr Roger Whitham (Lancaster): 'Learning from Shadowplay and Realtime AI Image Generators: Notes on Prompt Craft and Diffuse Authorship'

12.00-13.00 – LUNCH (vegetarian buffet for all participants; Shadowplay installation running)

13.00-14.30 – PANEL 1: PREDICTIVE LOGICS, UNCERTAINTY, AND NOVEL AGENCIES
(Chair: Prof. Joe Deville, Lancaster)

Dr M. Beatrice Fazi (Sussex): 'Paradoxes of Prediction'

Dr Rolien Hoyng (Lancaster): 'On Liminal Grounds: Smart Farming and The Politics of Uncertainty'

Dr Nathan Jones (Lancaster): 'Dialogues Under Strain: AI as a Tool for Collective Concept Work'

14.30-15.00 – COFFEE BREAK

15.00-16.30 – PANEL 2: SPECULATION, CYBERNETIC AFTERLIVES, AND CREATIVE PRACTICE
(Chair: Dr Eva Cheuk Yin Li, Lancaster)

Dr Aleena Chia (Goldsmiths): 'Speculative Dis/Assembly in Game Engine Culture'

Prof. Charlie Gere (Lancaster): 'Only waterfalls and springs left: Revisiting Lacan's materialist definition of the phenomenon of consciousness in the era of the Large Language Model'

Dr Jen Southern (Lancaster): 'Mobile conversations: AI and participatory art practice'

16.30-16.45 – FINAL REMARKS (Organisers) and **EVENT CLOSE**

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SPEAKER ABSTRACTS AND BIOS

LAUNCH OF SPECULATIVE MACHINES PROJECT AND WEBSITE

Intuition, AI and the Making of Computational Cultures

In this talk, I outline key questions animating my British Academy Mid-Career Fellowship, 'Speculative Machines and Us: Intuition, AI and the Making of Computational Cultures', as they pertain to the symposium themes, and preview the website associated with the project.

What happens when intuition becomes algorithmic? Whether understood as an embodied hunch, direct sensing, or fast-thinking without rational deliberation, intuition is vital to how we anticipate, know, and navigate our worlds. The emergence of 'artificial intuition', however, illuminates how sensing, thinking, and speculating now involve deep entanglements of humans and digital technologies. My project situates artificial intuition within wider histories of techno-social encounter in Britain and North America, spanning the first digital computers, the advent of personal computing, and the consolidation of advanced algorithmic architectures. Bringing critical social theories, affect studies, and speculative philosophies to bear on computational cultures, I am developing an 'affective genealogy' of twentieth century human-machine relations with critical insights for future engagement with automated technologies and speculative machines. This approach enables me to trace the continuing sensorial, socio-political, and ethical implications of efforts across mathematics, management, psychology, cybernetics, computer science, and AI research between the 1930s and 1980s to make intuition a quantifiable form of anticipatory knowledge – amid colonial legacies, World War II, the Cold War, neoliberalism, and shifting social inequalities. The project also pursues the potentialities of 'counterintuitive AI', which explores the sensory-social potential of that which exceeds intelligibility within normative and profit-oriented computational infrastructures.

Carolyn Pedwell is Professor in Digital Media in the Sociology Department at Lancaster University (UK) and the author of three monographs, including most recently, *Revolutionary Routines: The Habits of Social Transformation* (McGill-Queens UP, 2021). She is also the co-editor (with Gregory J. Seigworth) of *The Affect Theory Reader 2: Worldings, Tensions, Futures* (Duke UP, 2023). Carolyn's current research is focused on socio-political, cultural, and affective histories of AI and digital computing. Her British Academy Mid-Career Fellowship (2024-2025), 'Speculative Machines and Us: Intuition, AI and the Making of Computational Cultures', is developing a post-war genealogy of human-machine relations in Britain and North America oriented around shifting conceptualisations of intuition, with reference to 'artificial intuition'

KEYNOTE ADDRESS

Planetary Design: On the Emerging Logics of Generative AI

We arguably live in a new age of planetary design. From the training of large language models on billions of users to the rise of synthetic biology and bio-materials, life is becoming a medium for experimenting with technology at every scale. This talk traces a history of planetary design and investigates how the new logics of AI governance both extend and challenge earlier histories of globalization, colonialism, and modernity in design.

Contemporary planetary design imagines the planet in a state of crisis, to which AI is the answer. I will trace four loci to track the emergence of this new ethos of generativity: 1) *transforming practices* (from creativity to generativity and prompting, and from ideals of risk management to resilience), 2) *new forms of computational territory* (the zone and the spaceship), 3) *emerging forms of rationality and perception* (situational awareness rather than distraction or attention) and 4) *new ideas of materiality and economy* that transform separations between organic and inorganic at multiple scales (such as biomaterials, nanotech, and synthetic biologies, and the emergence of new economic models such as smart infrastructure as service). In tracing these four loci, this talk will outline the rise of a new logic of design, discuss the political and ethical implications of this

episteme, and imagine possible alternatives to the contemporary catastrophic ideals and survivalist ethos of generative AI.

Orit Halpern is the Lighthouse Professor and the Chair of Digital Cultures at Technische Universität Dresden. Her research is on histories of cybernetics, design, and artificial intelligence. She is currently working on two projects. The first is a history of automating decision making and freedom and the second examines the history of experimentation at planetary scales in design, science, and engineering.

Her first book *Beautiful Data: A History of Vision and Reason since 1945* (Duke 2015) is a history of our contemporary forms of interactivity and attention. Her most recent book with Robert Mitchell (MIT Press December 2023) is titled *the Smartness Mandate*. It examines how we have come to believe that digital computing is essential to human survival, and how “smart” technologies and ideologies are remaking planetary futures. She is also the director of the *Digital Cultures Research Group* and co-director of *The Schauffler Lab*; two groups bridging the arts, environmental sciences, media, and the social sciences in the interest of re-imagining technological futures.

www.againstcatastrophe.net

<https://tu-dresden.de/gsw/slk/germanistik/digitalcultures>

TALK AND INTERACTIVE DEMO

Learning from Shadowplay and Realtime AI Image Generators: Notes on Prompt Craft and Diffuse Authorship

We will discuss [Shadowplay](#), an installation that harnesses Realtime AI Image Generation. To create Shadowplay we had to design custom control software. In this talk we will demonstrate that software which is called [Prompt Tank](#). Emerging from this work, which leverages an approach called Research through Design, we will discuss several emerging research agendas including the notions of [Prompt Craft](#) and [Diffuse Authorship](#). These touch upon the unusual 'material' properties of generative AI and the idea that authorship and ownership become 'diffused' when AI and creativity intersect.

Roger Whitham is a designer, researcher and educator based at ImaginationLancaster, Lancaster University. His research centres on collaborative interactions that span distinct contexts, technologies, sectors and scales; explored through co-design, tools and visualisation.

Joseph Lindley is a Senior Research Fellow at ImaginationLancaster. He leads Design Research Works, a project that captures and communicates the value of design-led approaches to understanding the impact of emerging technologies such as Artificial Intelligence. designresearch.works

PANEL 1: PREDICTIVE LOGICS, UNCERTAINTY, AND NOVEL AGENCIES

Paradoxes of Prediction

The contemporary technological moment presents a paradox: the very “speculative machines” driving society towards critical endpoints also promise mastery over the uncertainty they generate. This creates a condition where fears of the future persist alongside beliefs that the technologies fuelling these anxieties can foretell (and perhaps even manage) what lies ahead. This talk will reflect on this contradiction by considering how contemporary artificial intelligence (AI) exists in a complex relationship with earlier visions of calculative prediction that were central to cybernetics. Contemporary AI both inherits and transforms cybernetic legacies. Undoubtedly, there is continuity in the commitment to the predictive paradigm that remains central to both frameworks. However, where cybernetics explicitly positioned itself as “the science of control,” contemporary AI generates behaviours that cannot be easily mapped onto traditional control theory, exceeding cybernetics’ original investment in engineering equilibrium and dealing instead

with probabilistic domains that cybernetics did not fully anticipate. This transformation, the talk will argue, reconfigures how society understands computation and its relation to ideas of agency and futurity.

M. Beatrice Fazi is a philosopher working on the philosophies of computation, technology and media. Her research focuses on the ontologies and epistemologies produced by contemporary technoscience. She has published extensively on the limits and potentialities of the computational method, on digital aesthetics and on the automation of thought. She is Associate Professor at the University of Sussex and the author of *Contingent Computation: Abstraction, Experience, and Indeterminacy in Computational Aesthetics* (2018).

On Liminal Grounds: Smart Farming and The Politics of Uncertainty

The “zillion-dollar question” (a million dollar would be an underestimation) for agriculture lies exactly at the intersection of the climate and the situated: How will the impacts of climate change manifest in a particular location, where the enormous complexity of the climate intersects with the specific complexities of situated ecosystems and local geographies that matter to farming? Data- and AI-driven smart farming inserts itself in this liminal space between dominant disciplines (physics and biology), scales (the planetary scale of climate change and the local scale of ecosystems), and models (climate models and weather models). I focus on how the attempted smart make-over of agriculture enacts a technological politics residing in the translation of uncertainty into calculated figures of risk/opportunity, along with liminal excess that is uncalculated. Exploring distributions of risk, opportunity, and precarity allows me to conceive climate injustice through the lens of liminality. Against such unjust distributions, I draw on Hayles (2025) and Stengers (2023) to imagine climate justice as organization of sense and cybersymbiosis in farm ecologies.

Rolien Hoyng is a Senior Lecturer in the Department of Sociology at Lancaster University, UK, with interests in critical data and algorithm studies, ecomedia studies and STS as well as environmental humanities and cultural studies. Currently, she is working on a book project exploring the role of digital models that mediate the climate crisis through a politics of uncertainty. Prior research addresses the cultural and political implications of digital infrastructures and data-driven technologies in particular contexts of practice, including smart cities, waste, and ecology.

Dialogues Under Strain: AI as a Tool for Collective Concept Work

This paper explores some ways we might use AI to induce research conditions that are equal to the complexity and uncertainty of the present moment. I am interested in the capacity of AI-driven creative practice to unsettle, and therefore provide the conditions for destabilised post-disciplinary dialogue. And I demonstrate how AI can be deployed to re-process and re-allocate those dialogues towards new problems. Drawing from a workshop process I have trialled at Unsecurities Lab, I examine how the visual and narrative presence of AI (in works by Joey Holder and LUMI by Gil-Fournier and Parikka) produces perceptual uncertainty that is uniquely generative for interdisciplinary thought. The Lab’s transcripts—gathered from conversations held in states of confusion, awe, and affective overload—are later processed through large language models as a way of re-deploying that collective difficulty. This method reflects a wider interest in how AI can be shaped by precisely what it is not: language under strain. Drawing on my literary research into glitch poetics and GPT baselines, I consider how breakdowns, hesitations, and interpretive friction from literature and human dialogue contain knowledge about the worlds they emerge from—and how AI can support us to draw that knowledge out. Together, these approaches position the unsettling presence of AI in our creative ecosystem as provocation towards generating new concepts, shared language, and cross-disciplinary methods.

Nathan Jones is Lecturer in Fine Art (Digital Media) at Lancaster University, where he leads Unsecurities Lab—an experimental workshop series that uses immersive art and AI to provoke interdisciplinary responses to ecological and security challenges. His research explores language under pressure, glitch poetics, and the role of machine systems in shaping concepts and institutions. He is co-director of Torque Editions, and editor of *Artists Rethinking the Blockchain and Bibliotech: The Post-Digital Library*. Nathan is currently developing methods for deploying art as an engine of conceptual innovation in the context of the 5th Industrial Revolution.

PANEL 2: SPECULATION, CYBERNETIC AFTERLIVES, AND CREATIVE PRACTICE

Speculative Dis/Assembly in Game Engine Culture

The 2021 ‘Metaverse moment’ cast the game engine as a speculative technology, operating as imaginary and infrastructure. As infrastructure, engines like Unreal amass photogrammetric asset libraries for flexible assembly into real-time environments. More than its marketplace, what makes an engine a platform is its stable base for moving parts—finite elements enabling the illusion of scalable abundance—providing stable architectures for multimodal applications of generative AI for professional worldbuilding. This frames infrastructure assets (libraries, rigs, rendering) at the core of engine technology as perfectly formed in their latent state, serving as an immutable base for physics-based potentiation. When the value of culture is locked in its potentiation rather than its actual production, developing an asset becomes framed as inefficient and redundant, as a degradation of the asset’s latent perfection as infrastructure. This talk contextualises this potentiation as part of capitalist logics of assembly, volumetric aesthetics, and derivative creativity.

Aleena Chia is a lecturer in Media, Communications and Cultural Studies at Goldsmiths, University of London. She researches videogame making cultures and digital wellness practices to understand how media technologies automate work and optimise life – shaping inequalities in cultural industries. She is coauthor of *Technopharmacology* (Meson/University of Minnesota Press, 2022) and co-editor of *Reckoning with Social Media* (Rowman & Littlefield, 2022). Her co-edited special issues are published in *Convergence* and *MAST: Journal of Media Art Study and Theory*.

Only waterfalls and springs left: Revisiting Lacan’s materialist definition of the phenomenon of consciousness in the era of the Large Language Model.

In this paper I revisit Jacques Lacan’s engagement with Cybernetics in the 1950s as a means of thinking through current developments in Artificial Intelligence. As recent commentators such as John Johnston and Lydia Liu have pointed out, Cybernetics is a comparatively neglected aspect of Lacan’s work in that period. Indeed Liu goes so far as to suggest that what he is delineating in this kind of work is the ‘cybernetic unconscious of the postwar Euro-American world order’. This gives us a different view of Lacan’s thought to the standard one of a linguistic structuralist rereading Freud through Saussure and Jakobson, one that offers a ‘paradoxically *nonlinguistic* view of language, the symbolic order, and the unconscious’. The fourth session of Lacan’s Seminar II: The Ego in Freud’s Theory and the Technique of Psychoanalysis 1954 – 5 is entitled ‘A materialist definition of the phenomenon of consciousness’. In it Lacan invokes a lake reflecting mountains and waterfalls as a model of consciousness which he compares to a camera. Arthur Bradley suggests that this passage shows that Lacan is not interested in whether machines can be conscious, an issue to which he is ‘supremely diffident’, but rather that, for him, “‘Human’ consciousness is *itself* a kind of machine’. Because of the existence of cameras, ‘Lacan implies, we must learn to recognize ourselves anew: we human beings never actually disappeared from the world at all, but only because we were never really there in the first place, because human consciousness is itself a species of automatic photography, because we are the camera’. This is part of Lacan’s attack on the prevalent Ego Psychology in postwar psychoanalysis, which sought to restore the integrity of the ego, which Lacan saw as ‘an *object* that exists at the level of the imaginary’. In the same seminar Lacan analyses various games of chance to show how the symbolic emerges out of the real. Lacan’s neglected

engagement with Cybernetics takes on a new relevance in the light of recent developments in AI and Large Language Models, or what Richard Harper calls 'word geometry engines'.

Charlie Gere is professor of media theory and history in the School of Arts, Lancaster University. His most recent publications are *I Hate the Lake District* (2019) and *World's End* (2021). He is currently failing to finish a book on AI, bipedality, psychoanalysis and Chinese poetry.

Mobile conversations: AI and participatory art practice

This paper is based in the author's practice led art research, focussing on a series of works made in the last 5 years, building site-specific and participatory data sets for AI models. Tracing art practices with AI over the last decade, the paper explores examples of creative conversations, not only with AI as a collaborator but with other more-than-human participants involved in generating the datasets. Sharing authorship with other people, technologies, plants and animals opens practice up to a range of negotiations and conversations that are always different and dependant on the collaborator. The paper explores how more-than-human creative encounters can reveal new orientations to practice, focussing on issues such as time, growth, colour, care, and visual perspective, and asks whether there is a future for an ethics of site-specific and participatory AI.

Jen Southern is an artist and senior lecturer in Fine Art and New Media at Lancaster University where she is Director of the Centre for Mobilities Research. She has developed over 70 national and international exhibitions over the last 30 years with a research focus on the connected mobilities of people, places, technologies, animals, plants and micro-organisms. She collaborate with other artists, technologists, and more-than-human participants developing shared and discursive authorship models in material and digital installations and events.