

Programme Schedule

Time	Event
Part I - Symposium Programme (9:30 - 16:00)	
9:10-9:30	Registration
9:30-9:40	Opening Remarks Speaker: Denise Tse-Shang Tang, Associate Professor & Head, Department of Cultural Studies, Lingnan University
9:40-10:40	<u>Panel 1</u> Moderator: Pun Ngai, Chair Professor, Department of Cultural Studies, Lingnan University Abstraction and Extraction in AI Infrastructure Speaker: Brett Neilson, Professor, Institute for Culture and Society, Western Sydney University, Australia DeepPower: Data Inferencing and the Politics of AI Infrastructures Speaker: Ned Rossiter, Professor & Director of Research, Institute for Culture and Society, Western Sydney University, Australia
10:40-11:00	Coffee Break & Photo-taking
11:00-12:00	<u>Panel 2</u> Moderator: Xinmiao Song, Postdoctoral Fellow, Lingnan University Creative and Cultural Innovation Research Institute (CCIRI), Lingnan University Earthing AI: Community Interventions for Just and Sustainable Futures Speaker: Sebastián Lehuedé, Lecturer (Assistant Professor), Department of Digital Humanities, King's College London, UK On the Recursive (Off)shore Speaker: Andrea Pollio, Assistant Professor, Department of Urban and Regional Studies, Polytechnic of Turin, Italy
12:00-14:00	Lunch

14:10-15:40 Panel 3

Moderator: Daren Leung Shi Chi, Research Assistant Professor, Department of Cultural Studies, Lingnan University

Data center for the tropics: Heat, Chinese tech, and thermopolitics in West Africa

Speakers: Miao Lu, Assistant Professor, Department of Cultural Studies, Lingnan University; Seyram Avle, Associate Professor, Department of Communication, University of Massachusetts, Amherst, USA

Cooling Cultures and Coloniality: A View from Tropical Data Centres in Singapore

Speaker: Yee Win Neo, KCL-NUS Joint PhD Candidate, Department of Digital Humanities, King's College London & Department of Communications and New Media, the National University of Singapore

Friction in the Tropics: AI Policy and Development Imaginaries in Peru

Speaker: Marco Trigos, PhD Candidate, Department of Communication, University of Massachusetts, Amherst, USA

15:40-16:00 Coffee Break

Part II - Joint Book Launch (16:00 - 17:30)

16:00-17:30 *The Transsion Approach: Translating Chinese Mobile Technology in Africa*

Author: Miao Lu, Assistant Professor, Department of Cultural Studies, Lingnan University

Silicon Elsewhere: Nairobi, Global China, and the Promise of Techno-Capital

Author: Andrea Pollio, Assistant Professor, Department of Urban and Regional Studies, Polytechnic of Turin, Italy

Discussants:

Ned Rossiter, Professor & Director of Research, Institute for Culture and Society, Western Sydney University, Australia

Gordon Mathews, Emeritus Professor, Department of Anthropology, Chinese University of Hong Kong

Moderator: Pun Ngai, Chair Professor, Department of Cultural Studies, Lingnan University

Abstract & Biography

Panel 1

Abstraction and Extraction in AI Infrastructure - Brett Neilson

Abstraction and extraction are central tropes in critical assessments of AI infrastructure. But what is the relation between abstraction and extraction and how is this relation changed by the infrastructure that supports and enables AI? This paper approaches abstraction and extraction at once as concepts and material processes. Drawing on political economy, environmental humanities, and media theory, the aim is to trace how computational abstraction both depends upon and actively shapes extraction across multiple scales and domains—from data and labor to mineral resources. In Marxist theory, extraction is linked with primitive accumulation or rent, whereas abstraction is central to the production of value, concretely enacting the equivalence of different things in ways that generate the social relation of capital. Observing how AI data centers privilege internal ‘east-west’ traffic between servers over external ‘north-south’ communication with clients, the paper argues this operational logic reconfigures the tension between extraction and abstraction. At stake is a reorientation of economic value and sovereign power that reveals contemporary capitalism to depend less on market exchange than infrastructural control.

Brett Neilson is Professor and Deputy Director at the Institute for Culture and Society, Western Sydney University. Among his recent publications are (with Sandro Mezzadra) *The Rest and the West: Capital and Power in a Multipolar World* (Verso 2024) and (with Jason W. Moore, David Whyte and Sandro Mezzadra) *Drowning Capitalism: Three Essays on What to Do Next* (V2 Lab for Unstable Media, 2025).

DeepPower: Data Inferencing and the Politics of AI Infrastructures - Ned Rossiter

In late 2024, Hangzhou based tech startup DeepSeek released its third version large language model and by early 2025 it was making headlines across the world, briefly unnerving investors and rattling markets. OpenAI and startup rivals such as Perplexity AI, Stability AI, and Anthropic along with leading tech companies like Google DeepMind, Salesforce, and Meta AI had many assuming the race for AI was all stitched up. Data centres with racks of computers running on Nvidia chips were indispensable for the AI infrastructure required in training massive volumes of data for large language models and inferencing. Building its architecture from existing training data and using lower-grade semiconductor technology not restricted by the US export bans, DeepSeek’s entrance into the contest over AI has both

exacerbated geoeconomic tensions and angled attention to the inferencing phase as AI development shifts from training to operationalization. The infrastructure demands for this next phase have seen a rapid increase in data centre construction around the world, notably in the US, Europe, the Middle East, and Asia.

Against this backdrop, this paper examines the nexus between operationalizing AI and its application as a technology of governance. Whether it is surveillance tech for private firms and government agencies, or enterprise management software for corporate and public organizations, data inferencing shifts the political stakes from the extraction and expropriation of value that attends data training models to the governance of populations and things. In focusing on the materiality of AI infrastructures, this paper considers not only the technological conditions for new idioms of data governance but also the social, environmental, and political consequences that arise from modes of power that penetrate more deeply into the organization of labour and life.

Ned Rossiter is a media theorist noted for his research on network cultures, logistical media, data politics, and the geopolitics of critical infrastructures. Rossiter is Director of Research at the Institute for Culture and Society and Professor of Communication in the School of Arts, Western Sydney University. Ned is the author of *Organized Networks: Media Theory, Creative Labour, New Institutions*, (2006), *Software, Infrastructure, Labor: A Media Theory of Logistical Nightmares* (2016), and (with Geert Lovink) *Organization after Social Media* (2018). His writings have been translated into Italian, Spanish, German, French, Finnish, Dutch, Chinese, Greek, Latvian, Hungarian, Turkish, and Polish. Ned recently completed a book manuscript with Soenke Zehle called *Entropological Materialism: Diagnosing Anxieties of Prediction in the Cybernetic Century*, and is currently working on a follow-up volume, *The Logistical Episteme*.

Panel 2

Earthing AI: Community Interventions for Just and Sustainable Futures

- Sebastián Lehuédé

In recent years, scholarship has highlighted the unequal distribution of ecological benefits and costs associated with the growth of AI. While vast segments of the population remain underserved by AI, communities living near data centres or mining sites are bearing the brunt. Yet studies on AI and sustainability have so far paid little attention to the lived experiences of those whose livelihoods are directly affected. Against this backdrop, I turn to Latin America to show that incorporating communities engaging with AI is not only a matter of justice but

also a condition for realising sustainable futures either with or without AI. The case studies I examine comprise peasants in Colombia participating in an AI initiative for plant conservation and a community in Chile mobilising against a Google data centre project. Drawing on ethnographic fieldwork, I introduce ‘earthing’ to describe community interventions across the stack that seek to align AI with local ecological visions and struggles. A focus on earthing offers a fundamentally different approach, contrasting with quantitative estimates or critiques of extraction that often overlook the complexity and nuances of local contexts. Building on the work of Arturo Escobar, I show that earthing large-scale technologies is essential for addressing the root causes of the planetary crisis. While this talk focuses on AI, earthing will become increasingly important as so-called ‘green’ technologies (such as electric vehicles) and geoengineering initiatives proliferate.

Sebastián Lehuedé is a Lecturer (Assistant Professor) in Ethics, AI & Society at the Department of Digital Humanities, King’s College London. His research explores the intersection of digital technologies and environmental justice. Combining political ecology, science and technology studies, and decolonial thought, his work draws on ethnographic and participatory methods conducted with urban, peasant and Indigenous communities across Latin America. Sebastián has contributed to conceptual development on topics such as data friction, digital sovereignty and critical data studies. He is part of *Tierra Común*, which brings together digital activists and researchers, and the *Just Cloud Network*, formed by communities, researchers and journalists concerned about the social and environmental impacts of data centres.

On the Recursive (Off)shore - Andrea Pollio

Roosted atop the south-westernmost peninsula of the African continent, the city of Cape Town, South Africa, has long been an offshore destination of world-making projects. Ever since five Dutch ships created a refreshment station along the naval route between Europe and Asia, Cape Town’s arable land formed part of expanded networks of colonial food security. In recent years, the city has been repositioned as a valuable destination for the offshoring of newer sorts of business processes, including customer-service call centers and telemedicine. Looking to the future, as these flexible labour regimes begin to respond to the possibilities of AI, Cape Town moves to become a global, albeit unconventional, destination for machine learning and algorithmic training. While seemingly distant, these three stories are recursive trajectories that - not incidentally - shore again and again in Cape Town. This presentation, the result of a collective research and writing project, explores the materialities of (off)shoring, where each new technological wave—from no-tilling farming to telegraphs, VoIP, and now artificial neural networks—re-assembles along familiar lines of extraction and

emancipation.

Andrea Pollio is Assistant Professor of Economic and Political Geography at the Polytechnic of Turin, Italy, and a research associate of the African Centre for Cities at University of Cape Town, South Africa. He is one of the founding editors of *Platforms & Society*, and a co-curator of UTA-Do - Urban Theory Workshop-Africa. Andrea is the author of *Silicon Elsewhere: Nairobi, Global China and the promise of Techno-Capital* (University of California Press, 2026).

Panel 3

Data Center for the Tropics: Heat, Chinese Tech, and Thermopolitics in West Africa

- Miao Lu, Seyram Avle

The race for AI and cloud computing has fueled a data center building boom across the world, with China rising as a significant data center provider and investor. Departing from the temperate normality in selecting data center sites, China's expansion into the tropics suggests both the geography and materiality of cloud infrastructure are in flux. In West African countries such as Ghana and Senegal, Chinese tech giant Huawei has played a crucial role in building their national data centers. Meanwhile, how to manage the heatwaves generated by tropical data center poses new challenges for Chinese knowledge and existing cooling technologies.

Based on ethnographic research of Ghana's National Data Center from June 2023 to July 2024, this paper aims to elucidate the thermopolitics of cloud infrastructure in West Africa. Troubled by the soaring energy cost, the Ghanaian government is working with Huawei to introduce solar technology with the aim of reducing its dependence on grid power in data center management. Using "tropical materiality" as a theoretical framework, this paper investigates how a variety of state and corporate actors navigate and negotiate the tropical materialities of data centers relating to heat, energy, and water. Empirically, this paper sheds new light on the global expansion of China's infrastructural capitalism and how it might disrupt or reshape the global cloud geography. Theoretically, this study contributes to infrastructure studies and science and technology studies by asking what we can learn from the tropics in understanding the intricate entanglements between climate and infrastructure.

Miao Lu is an Assistant Professor in the Department of Cultural Studies, Lingnan University, Hong Kong. She works at the intersection of critical media studies, science and technology studies, and Africa-China studies. She is the author of *The Transsion Approach: Translating*

Chinese Mobile Technology in Africa (University of Illinois Press, 2025). She is currently working on a new manuscript, entitled *Tropical Data Centers: Media, Heat, and Energy Politics in Afro-Asia*.

Seyram Avle is Associate Professor of Global Digital Media in the Department of Communication at the University of Massachusetts, Amherst and a Global Horizons Senior Fellow (Fall 2024) at the Swedish Collegium for Advanced Study. Dr Avle's research, funded by various institutions including the US National Science Foundation (NSF), focuses on digital technology cultures and innovation across parts of Africa, China, and the United States. This work primarily takes a critical approach towards understanding how digital technologies are made and used, as well as their implications for issues of labor, identity, and futures.

Cooling Cultures and Coloniality: A View from Tropical Data Centres in Singapore

-Yee Win Neo

Despite its year-round tropical heat, Singapore has emerged as a data centre hub because the appeal of its political stability, subsea connectivity, and friendly business environment far outweigh the high costs of cooling data centres. Nevertheless, to combat the carbon footprint of data centres, the Singapore government had undertaken several policy measures, such as a three-year moratorium, new national standards for data centres, and R&D efforts to improve energy efficiencies. At the same time, the tightening of regulations around data centres in Singapore has been attributed as a driver for data centre growth in Malaysia and Indonesia. Meanwhile, the rest of Southeast Asia is also looking to be harnessed for its cheap energy and labour resources in the operations of digital infrastructures across the region.

However, with Asia's cooling needs becoming a significant driver of global energy consumption, cooling data centres in the tropics becomes less of a simple technical challenge than one associated with a colonial legacy. Like air conditioning and refrigeration, cooling systems in data centres have become necessitised in the tropics due to the extension of Western sociocultural practices that depend on cool environments. The embeddedness of mechanical cooling in tropical Southeast Asia will only become further entrenched in new standardisations of buildings and cooling technologies, which Singapore is leading the charge in. Drawing upon my ethnography on data centres in Singapore, I argue for a postcolonial approach that links data centre growth in the tropics to westernised ideals of comfort (for servers) and civilisation (in the form of digitalisation and AI).

Neo Yee Win is PhD student under the joint PhD programme between King's College London (Department of Digital Humanities) and the National University of Singapore (Department of Communications and New Media). Her doctoral research looks at the thermal

cultures of data centres in Singapore, focusing in particular on the developments in liquid cooling.

Friction in the Tropics: AI Policy and Development Imaginaries in Peru - Marco Trigos

Artificial intelligence is a growing industry worldwide. Its promises of objective, universal solutions to human problems have been praised as the peak of human technical development and criticized as a new expression of colonial power. In this presentation, I examine Peruvian AI policies as part of long-standing “tropical” development imaginaries that cast countries like Peru as spaces requiring technological modernization and environmental management. Drawing on Tsing’s notion of friction (2004), I show how claims to the “universality” of AI intersect with these historically rooted imaginaries, reproducing the neo-colonial frameworks that enable AI to operate. I argue that Peruvian policymakers obscure the neo-coloniality of AI by framing it as a scientific (Ferguson 2006) and green-capitalist (Brodie 2025) resource for national development. In doing so, they present AI as a moral and environmentally responsible necessity, while overlooking the publicly known negative externalities associated with other extractivist industries—such as mining and logging—that have long shaped development in tropical regions. My analysis reveals how AI policy in Peru extends familiar developmental logics of the tropics even as it promises sustainable technological futures.

Marco Trigos is a PhD candidate in the Department of Communication at the University of Massachusetts Amherst. His research examines the political–ecological conditions that enable the expansion of the data center industry in Lima, Peru. More broadly, his interests include the environmental implications of AI development, the platformization of social relations in South America, and the depoliticization of digital technologies in the region.

Joint Book Launch

Book Title: The Transsion Approach: Translating Chinese Mobile Technology in Africa

Author: Miao Lu

Publisher: University of Illinois Press

Summary:

How do we explain China's tech rise in Africa? As Africa's top phone seller, the Shenzhen-based company Transsion has profoundly shaped the continent's digital transformation by providing affordable yet feature-rich mobile phones for the economically disadvantaged. Miao Lu draws on rich fieldwork in China and Ghana to delve into the company's operations and growing influence. Critiquing technology transfer, Lu focuses on design, marketing, and repair to illustrate the multi-layered technology translations between China and Ghana. Borrowing the metaphor of deep ploughing, Lu examines the rural-centric and lower-class-oriented approach of translating mobile technology. Transsion challenges the cultural imagination of big tech. But the company is also evolving into a regional power that's adept at marginalizing small players and increasing local dependence. Lu's analysis explores the complexity that Shenzhen can act as Silicon Valley's "South" and Africa's "North" simultaneously. The middle space created by Transsion bridges globalization from above and below, which opens the door to new possibilities and inequalities.

Book Title: Silicon Elsewhere: Nairobi, Global China, and the Promise of Techno-Capital

Author: Andrea Pollio

Publisher: University of California Press

Summary:

Heralded as Africa's "Silicon Savannah"—a cradle of innovation—Nairobi has become a technology and innovation capital for Kenya and for the continent at large. With a national strategy that has prioritized digital technology for the last two decades, many Chinese digital champions, smaller startups, and investors have since chosen Nairobi as their African landing pad. Mapping the interface between Nairobi's innovation scene and China's digital presence there, *Silicon Elsewhere* tells a unique story of ingenuity and adaptation, failure and speculation, and hopefulness and pragmatism. Andrea Pollio's ethnography draws on interviews with cautious venture capitalists, renegade entrepreneurs, dedicated bureaucrats, and ambitious data scientists to explore the competing meanings of contemporary techno-capital. Moving between leafy coworking spaces and the temperature-controlled rooms of brand-new data centers, Pollio locates Nairobi among the experimental capitals, not peripheries, of technological change in the early twenty-first century.