

Title: Digital Geographies and Smart City

Convenor and lecturer: Prof. Ayona Datta, UCL; Prof. Wen-I Lin, NTPU

Guest Lecturer: For 5 guest lectures and seminars, experts/professionals from the public, private and third sector.

Introduction of specially Invited Lecturer: Professor Ayona Datta, UCL

Professor Ayona Datta, a leading human geographer at University College London (UCL), is internationally recognized for her influential research on urban futures, smart cities, and digital governance in the Global South. Her interdisciplinary expertise spans urban development, feminist geographies, and digital transformations, focusing on the critical intersections of technology, equity, and spatial justice in rapidly urbanizing contexts. Professor Datta serves as the Editor of Urban Geography and an editorial board member of leading international journals like Dialogues in Human Geography. Her pioneering work has earned her prestigious accolades such as the Busk Medal from the Royal Geographical Society, acknowledging her contributions to smart cities research. She has played a leading role of the Geography Section at the British Science Association. Widely sought after as a keynote speaker, she has presented at global forums, including the UN-Habitat, EU and international academic conferences.

Her recent work focuses on smart urbanism in the Global South, exploring how digital technologies transform urban governance while perpetuating or challenging inequalities. Her European Research Council-funded project, Regional Futures, examines the territorial politics of digitalization as urbanization, with fieldwork in cities like Nairobi, New Delhi, and Mexico City. This research offers comparative insights into the socio-political implications of digital urbanization. Her prolific scholarship includes high-impact publications in top-tier journals and edited volumes, engaging critically with urban theory, governance paradigms, and feminist perspectives. For postgraduate students, this course will introduce the transformative impact of digital technologies on urban governance, space and everyday life. Covering topics like digital infrastructures, smart city initiatives, digital citizenship and labour, the course bridges theory and practice through global and regional case studies. It provides students with critical thinking grounded in diverse social, cultural, and political perspectives of digitalization and fosters engagement with cutting-edge research.

Course Aims:

1. Develop students' understanding of the connections between digital technologies, geographic space, smart cities, and everyday life in both Global North and South contexts, with a particular emphasis on case studies from Taiwan.
2. Introduce students to current debates about how digital technologies, infrastructures, devices, logics and cases are transforming the ways we think and do geography across different scales and spaces.
3. Develop students' ability to apply critical skills to academic texts and real-life examples, culminating in the presentation of an essay.
4. Guest lecturers from the public, private, and third sectors specializing in smart cities, digital governance, and science parks will be invited to provide students with in-depth insights into real-world Taiwanese case studies. This initiative fosters meaningful dialogue between academic discourse and practical development.

Course Content:

This module emerges from recent calls to examine a 'digital turn' in geography, whereby knowledge and information about places, spaces and people are increasingly produced with and transformed by digital technologies and initiatives of smart city. It will examine the links between digital technologies, geographic space, smart city and people using examples and case studies from both Western and global south contexts. This module begins with exploring how digital and smart technologies have proliferated every aspect of our daily lives, around work, travel, leisure, consumption, production and reproduction, in ways that are simultaneously virtual and material. This focuses on how such technologies, infrastructures, devices, logics and methods are blurring the divides across analogue and digital spaces. It then looks at how digital and smart technologies can simultaneously break down and reinforce inequalities along class, race, gender, sexuality through new 'digital divides'. Finally, it examines the implications this has for producing new forms of digital citizenships and claims to social and spatial justice.

Method of Teaching: 10 Lectures + 5 Seminars

Core content will be delivered through 10 two-hour lectures. These will cover key theoretical concepts, global and regional cases (e.g. digital geographies, smart city, digital citizenship) and summarize key scholarly debates. Lectures will be supported by a reading list of relevant recommended and optional readings. Some lectures will include short group exercises and Q&A discussion to stimulate student engagement.

Lectures will be supplemented by 5 weekly two-hour seminars during the module that will invite guest lectures from central and local state, private ICT enterprises and NGOs, such as experts from National Development Council, Smart City Association. Each topic will fit with the expertise of guest lectures. Guest lecturers will provide short talks about their professional experiences, and open the in-depth discussions with students and course lecturers.

There is required reading or seminar preparation for each week, with a combination of lecture-based content delivery and different methods of engagement to enhance student interaction and develop skills in discussion/application.

Pre-requisites and Relationship with other courses

No pre-requisites. This course will introduce mostly new material to students.

Assessment

The main course assessment consists of two essays, each 2,000-3,000 words in length (midterm and final). Students' attendance and participation in lecture discussions will be evaluated based on the tutor's observations and occasional questioning of students at random. Depending on the number of enrolled students and the dynamics of the class, the assessment methods may be adjusted and will be announced during the course.

For any inquiries regarding the course, please feel free to contact Professor Wen-I Lin's teaching assistant at: monica29066@gmail.com.

Lecture Times:

Week/ Time	Lecturer:	Lecture Title
Wk. 1/ 20 th Feb 2025	Prof. Ayona Datta	What is digital geography? The Digital turn in geography and smart city
Wk. 2/ 27 th Feb 2025	Prof. Ayona Datta	Digital Infrastructures I
Wk. 3/ 6 th Mar 2025	Prof. Ayona Datta	Digital Infrastructures II
Wk. 4/ 13 th Mar 2025	Prof. Wen-I Lin	The digital revolution and smart city
Wk. 5/ 20 th Mar 2025	Prof. Wen-I Lin	Experimenting smart urbanism in Taiwan
Wk. 6/ 27 th Mar 2025	Prof. Wen-I Lin	Digital citizenships and surveillance capitalism in smart city
Wk. 7/ 3 th Apr 2025		National Holiday
Wk. 8/ 10 th Apr 2025	Prof. Ayona Datta	Digital Labour
Wk. 9/ 17 th Apr 2025	Prof. Ayona Datta	Digital intimacies
Wk. 10/ 24 th Apr 2025	Prof. Ayona Datta/ Prof. Wen-I Lin	Guest lecture and seminar 1: lecturers from central government
Wk. 11/ 1 st May 2025	Prof. Ayona Datta/ Prof. Wen-I Lin	Guest lecture and seminar 2: Guest lecturers from science park
Wk. 12/ 8 th May 2025	Prof. Wen-I Lin	Regulating the digital and land governance
Wk. 13/ 15 th May 2025	Prof. Wen-I Lin	Manufacturing for the digital age – science park
Wk. 14/ 22 nd May 2025	Prof. Wen-I Lin/ Prof. Ayona Datta	Guest lecture and seminar 3: Guest lecturers from science park
Wk. 15/ 29 th May 2025	Prof. Wen-I Lin/ Prof. Ayona Datta	Guest lecture and seminar 4: Guest lecturers from private sector
Wk. 16/ 5 th Jun 2025	Prof. Wen-I Lin/ Prof. Ayona Datta	Guest lecture and seminar 5: Guest lecturers from NGO

(Some course schedules, titles, lecture may be adjusted based on the course progress and the instructor's requirements.)

Non-NTPU students

This course welcomes all students from partner university to take. All non-NTPU student have the same assessments requirements as NTPU students (i.e. reading summaries, coursework essay and exam).

General Readings

These are very general readings that you will find useful in providing an overview of digital geographies and smart city. You are not expected to read all of them but should consult a wide selection to give you background knowledge and/or if you are interested in finding out more. Some of these readings are also available as e-books via the library catalogue. In addition, there are specific readings for each lecture that will be provided in the first lecture.

- **Ash, J., Kitchin, R. and Leszczynski, A. eds. (2018) *Digital Geographies*. Sage Publications, Inc., London.
- Barns, S. (2018) Smart cities and urban data platforms: Designing interfaces for smart governance. *City, Culture and Society* 12, 5–12.
- **Carmody, P. (2013) A knowledge economy or an information society in Africa? Thintegration and the mobile phone revolution. *Information Technology for Development* 19.1, 24–39.
- **Cardullo, P. and Kitchin, R. (2018) Being a ‘citizen’ in the smart city: up and down the scaffold of smart citizen participation in Dublin, Ireland. *GeoJournal*. doi:10.1007/s10708-018-9845-8.
- Coletta, C., Evans, L., Heaphy, L., & Kitchin, R. (2018). *Creating Smart Cities*. New York: Routledge.
- Couldry N, Mejias U A, 2019 *The Costs of Connection: How data is colonizing human life and appropriating it for capitalism* (Stanford University Press, Stanford, CA)
- Datta, A. (2015). New urban utopias of postcolonial India: ‘Entrepreneurial urbanization’ in Dholera smart city, Gujarat. *Dialogues in Human Geography*, 5(1), 3-22.
- Datta, A. (2018) The ‘digital turn’ in postcolonial urbanism: Smart citizenship in the making of India’s 100 smart cities. *Transactions of the IBG* 43.3, 405–19.
- Datta, A. (2019) The ‘Smart Safe City’: Gendered time, speed and violence in the margins of Delhi’s urban periphery. *Annals of the American Association of Geographers*.
- **Datta, A. (2022) [The digitalising state: Governing digitalisation-as-urbanisation in the global south](#). *Progress in Human Geography*.
- Datta, A. (2023) [The Informational Periphery: Territory, logistics and people in the margins of a digital age](#), *Asian Geographer*
- **Elwood, S. and Leszczynski, A. (2018) Feminist digital geographies. *Gender, Place & Culture* 25.5, 629–44.
- **Gilbert, M. (2010) Theorizing Digital and Urban Inequalities. *Information, Communication & Society* 13.7, 1000–1018.
- **Graham, S. (2002) Bridging Urban Digital Divides? Urban Polarisation and Information and Communications Technologies (ICTs). *Urban Studies* 39.1, 33–56.
- Greenfield, A. (2017) *Radical Technologies: The Design of Everyday Life*. Verso, London.
- **Isin, E. and Ruppert, E. (2015) *Being Digital Citizens*. Rowman & Littlefield, London.
- **Kitchin, R. (2014) *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences*. London: Sage.
- Kitchin, R., Lauriault, T. P. and McArdle, G. (2015) Knowing and governing cities through urban indicators, city benchmarking and real-time dashboards. *Regional Studies, Regional Science* 2.1, 6–28.
- Marvin, S., Luque-Ayala, A., & McFarlane, C. (2015). *Smart urbanism: Utopian vision or false dawn?* New York: Routledge.
- Pink, S. and Fors, V. (2017) Being in a mediated world: self-tracking and the mind–body–environment. *Cultural geographies* 24.3, 375–88.
- Poggiali, L. (2017) Digital futures and analogue pasts? Citizenship and ethnicity in techno-utopian Kenya. *Africa* 87.2, 253–77.

The following annual reports provide useful empirical data for this course:

World Bank, World Development Reports from each year are available here:

<http://www.worldbank.org/en/publication/wdr/wdr-archive>

World Economic Forum (2014) Delivering Digital Infrastructure Advancing the Internet Economy.

Downloadable from <http://reports.weforum.org/delivering-digital-infrastructure/>

UNDP, Human Development Report

UNICEF, State of the World's Children

UN HABITAT, State of the World's Cities

Journal articles contain current debates and research. Look through some of these journals to find articles that link to the course content:

Antipode

Big Data and Society

Cambridge Journal of Regions, Economy and Society

Dialogues in Human Geography

Digital Geography and Society

Environment and Planning (A, B, C, D, E)

Geoforum

Journal of Urban Technology

Progress in Human Geography

Surveillance and Society

Urban Geography

Urban Studies

Websites

The following websites may also be of interest and useful:

Department for International Development <http://www.dfid.gov.uk/>

IMF <http://www.imf.org/external/index.htm>

UK Department for International Development <http://www.dfid.gov.uk/>

UN Women <http://www.unwomen.org/>

UNDP Human Development Reports <http://hdr.undp.org/en/year/2018>

World Bank <http://www.worldbank.org/>