Potential Primary Supervisors

1. **Space Syntax Laboratory** – Professor Laura Vaughan l.vaughan@ucl.ac.uk

**Ms Ava Fatah gen Schieck** (Space Syntax Laboratory, Bartlett School of Architecture, UCL)
Architecture and interaction design; Media Architecture; Media City; Digital Urban Interaction; Mixed Reality; Augmented Reality; Sensory environments (with the focus on museums); human-centered Smart city; embodied and embedded interactions; Urban Media art; Design, content creation, placement and evaluation of public displays and networked urban screens; Co-creation of media content with communities.

**Dr Sean Hanna** (Space Syntax Laboratory, Bartlett School of Architecture, UCL)
Spatial cognition; mathematical and computational modelling of spatial and social relationships; individual and collective creativity; machine learning and intelligence; complexity and big data.

**Dr Sam Griffiths** (Space Syntax Laboratory, Bartlett School of Architecture, UCL)
Theories and methods for researching and writing the historical relationship between urban populations and their built environments; the spatial cultures of industrial cities, suburbs and high streets; urban manufacturing; architecture as chronotope in realist fiction and historical writing; space syntax as an interdisciplinary approach to research in the humanities and social sciences.

**Dr Kayvan Karimi** (Space Syntax Laboratory, Bartlett School of Architecture, UCL)
Evidence-informed, analytical, urban and architectural design; Organic cities and naturally-evolved urban systems; Informal settlements and slum regeneration; New Towns; Strategic planning and large-scale developments; Public realm and street design; spatial networks and transport systems; spatial networks and urban economics..

**Professor Alan Penn** (Space Syntax Laboratory, Bartlett School of Architecture, UCL)
Urban research at the scale between the building and the city; design of complex buildings and their relations to organisations (i.e. hospitals, laboratories and offices); development of computing for architecture; urban pollution dispersal; virtual reality applications for the built environment; simulation of social phenomena and urban growth and change.

**Dr Sophia Psarra** (Space Syntax Laboratory, Bartlett School of Architecture, UCL)
Architecture narrative and fiction, geometry of architecture and urban space; conceptual order, spatial morphology and spatial experience; the formation of spatial meaning in architecture and symbolic languages across different media; architectural theory; the morphology of cities in relation to processes of industrialisation, de-industrialisation and innovation; spatial design of complex buildings and its relation to society and organisations; computer modelling and visualisation.

**Dr Kerstin Sailer** (Space Syntax Laboratory, Bartlett School of Architecture, UCL) Relationship between spatial configuration, organisational structure and social dynamics within complex
buildings (offices, schools, laboratories, universities, hospitals, multifunctional buildings); Space usage patterns; Organisational theory, Organisational behaviours, Space Syntax, Social Network Analysis, Evidence-Based Design.

**Professor Laura Vaughan** (Space Syntax Laboratory, Bartlett School of Architecture, UCL) The relationship between urban form and society with regard to communities, social and economic spatial patterns; suburbs and suburban town centres; ethnic and immigrant quarters; neighbourhoods and town centres; poverty and prosperity; wellbeing and health. Urban historical research, focusing on the nineteenth century city; urban mapping.

2. **Centre for Advanced Spatial Analysis** – Dr Ed Manley <ed.manley@ucl.ac.uk>

**Dr Elsa Arcaute** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Network Modelling; Scaling Laws; Percolation Theory; Fractal Models

**Dr Martin Zaltz Austwick** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Data Visualisation; Digital Humanities; Cycling; Participation and Public Engagement

**Professor Michael Batty** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Land Use Transportation Modelling; Network Models; Agent-based Modelling; Urban Planning

**Dr Adam Dennett** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Migration; Demographics; Population Geography; Urban Geography

**Dr Hannah Fry** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Mathematical Models of Economic and Social Systems

**Professor Andy Hudson Smith** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Internet of Things; Smart Cities; Urban Planning

**Dr Ed Manley** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Transportation; New Forms of Data; Machine Learning; Spatial Cognition; Agent-based Modelling

**Dr Duncan Smith** (The Bartlett Centre for Advanced Spatial Analysis, UCL) Urban Geography; Data Visualisation; Transport Accessibility

3. **Transport Institute** - Dr Nicola Christie <nicola.christie@ucl.ac.uk>

**Professor Tao Cheng** (UCL Department of Civil, Environmental & Geomatic Engineering) Analysis of geo-located and time-stamped data in order to engineer solutions to improve the mobility, security, health and resilience of urban living.

**Dr Nicola Christie** (UCL Department of Civil, Environmental & Geomatic Engineering) The relationship between psychological, social, economic and environmental factors which underlie risk in the built environment and create perceived barriers to active travel; The
impact of transport on the people’s health and wellbeing; The causes and consequences of unintentional injuries from a human factors perspective; Evaluation science

**Professor Muki Haklay** (UCL Department of Civil, Environmental & Geomatic Engineering)
Public access to environmental information citizen science: community-led investigation, development and use of participatory GIS and mapping, and Human-Computer Interaction (HCI) for geospatial technologies.

**Dr James Haworth** (UCL Department of Civil, Environmental & Geomatic Engineering)
Geodemographic and geospatial analysis applied to retail patterns, crimes, policing and traffic collisions.

**Professor Peter Jones** (UCL Department of Civil, Environmental & Geomatic Engineering)
Transport policy; Option generation; Transport appraisal; Street planning and design

**Professor Francesca Medda** (UCL Department of Civil, Environmental & Geomatic Engineering)
Transport Finance; Urban Impact Finance; Indirect economic impacts and financial urban intervention under natural and human hazards

**Dr Helena Titheridge** (UCL Department of Civil, Environmental & Geomatic Engineering)
Sustainable systems, particularly transport systems; Development of decision support tools for local authorities; Social dimensions of sustainability

**Professor Nick Tyler** (UCL Department of Civil, Environmental & Geomatic Engineering)
Aspects of accessibility and public transport; Developing models for accessible pedestrian infrastructure

**Professor Andy Tolmie** (UCL Department of Civil, Environmental & Geomatic Engineering)
Transport psychology; acquisition of road-crossing skills among children

**Claire Ellul**
Geographical Information Science, 3D GIS, 3D City Modelling, Smart Cities, Building Information Modelling BIM, Spatial Databases, Spatial Data Management

**Jan Boehm**
Reality Capture, 3D Imaging, Photogrammetry, Laser Scanning, Big Geospatial Data, Building Information Modelling (BIM), Scan2BIM, Monitoring, Robotics

4. **UCL Urban Lab** – Dr Andrew Harris <andrew.harris@ucl.ac.uk>

**Professor Michele Acuto** (UCL Department of Science, Technology, Engineering and Public Policy)
Global city politics; the use of STS methods in international relations and urbanism; the intersection between city networks, urbanisation and global governance
Dr Pushpa Arabindoo (UCL Department of Geography)
Urbanization, public space and political activism in India; cities and climate change

Professor Matthew Beaumont (UCL Department of English)
The night-time city

Dr Yasminah Beebeejaun (The Bartlett School of Planning, UCL)
Territorialisation of certain spaces as ethnic; community engagement in decision-making; and exploration of the creation of inequalities both within historical and contemporary debates about nationhood, colonialism, and postcolonial society in post-war Britain and North America.

Dr Sarah Bell (UCL Department of Civil, Environmental & Geomatic Engineering)
Sustainability of urban water systems, particularly social and policy factors as they relate to engineering; community engagement with engineering and infrastructure provision

Dr Camillo Boano (The Bartlett Development Planning Unit, UCL)
Urban development, contested urbanism, socio-spatial dialectics, design and urban transformations, and shelter and housing reconstruction in geographies of the global south

Professor Iain Borden (The Bartlett School of Architecture, UCL)
Large-scale architectural and urban spaces in cities worldwide; cities, film and mobility

Dr Victor Buchli (UCL Department of Anthropology)
Architecture, domesticity, the archaeology of the recent past, critical understandings of materiality and new technologies and the anthropology of sustainability and design

Dr Ben Campkin (The Bartlett School of Architecture, UCL)
Urban decline and 'regeneration' in London; housing, including early twentieth century slum clearances, and the representation and redevelopment of modernist mass housing; and the uses of images in urban change.

Professor Licia Capra (UCL Department of Computer Science)
Ubiquitous computing. Specific topics include: crowd-sourcing and crowd-sensing, urban computing, location-based services, recommender systems, data mining for development.

Dr Claire Colomb (The Bartlett School of Planning, UCL)
Urban governance, policies and politics, European spatial planning, and urban sociology.

Dr Adam Drazin (UCL Department of Anthropology)
Culture, materials and design

Professor Murray Fraser (The Bartlett School of Architecture, UCL)
Design, architectural history & theory, urbanism, and cultural studies.
Dr Alexandre Apsan Frediani (The Bartlett Development Planning Unit, UCL)
Squatter settlement upgrading policies and participatory approaches to development. Areas of expertise include human development, housing, urban development, participation and Amartya Sen’s Capability Approach.

Dr Andrew Harris (UCL Department of Geography)
Art, space and the city; creative cities; gentrification; urban infrastructure; vertical urbanism

Dr Susan Moore (The Bartlett School of Planning, UCL)
Relational geographies of urban (and suburban) development and built form, alongside the increasing role of private development and building interests in the co-ordination and implementation of normative urban planning and design-related policies.

Professor Jane Rendell (The Bartlett School of Architecture, UCL)
Interdisciplinary intersections between architecture, art, feminism and psychoanalysis.

Professor Jennifer Robinson (UCL Department of Geography)
South Africa, including studies of segregation and state power; the politics of urban development; comparative urbanism; city strategies and the circulation of urban policy.