

Dr.Efrosini Charalambous (she/her)

PERSONAL DETAILS

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Born in Larnaca, Cyprus, in 1979

Qualified Architect by Scientific Technical Chamber of Cyprus (ETEK), since 2005 (A108452)

Associate Fellow of Higher Education Academy (AFHEA) since 2018

EDUCATION

- 2019 **PhD in Architectural Space, Spatial Cognition and Behavioural Neuroscience**
The Bartlett School of Architecture, Space Syntax Lab, UCL
Doctoral Thesis: *The Aha! moment of spatial reorientation*
Supervisors: Dr. Sean Hanna, Prof. Alan Penn
- 2007 **MArch Advanced Architecture**
Institute of Advanced Architecture of Catalonia, IAAC- UPC
Grade: 8/10 Very Good
Thesis project: *Adaptive Microclimates Housing Prototype*
- 2005 **Dipl.Arch.Eng, Diploma in Architecture Engineering**
School of Architecture, National Technical University of Athens
Grade: 8.45/10 Very Good
Diploma project: *New media art: cause for the formation of spatialities*
Research thesis: *The space of the in-between and the multi-city*

AWARDS AND SCHOLARSHIPS

- 2018 **UCL Education Award**
For outstanding contribution to education at UCL (The Bartlett School of Architecture)
- 2018 **Recognised by Higher Education Academy as Associate Fellow**
Awarded for demonstrating effectiveness in enhancing students' learning experience according to the criteria of the UK Professional Standards Framework (UKPSF) for teaching and supporting learning in higher education.
- 2015-2018 **Educational Grants from A.G. Leventis Foundation**
Scholarship to support doctoral studies
- 2013-2015 **Greek State Scholarship Foundation, Scholarship for Postgraduate Studies**
Scholarship to support doctoral studies

- 2002-2003 **Greek State Scholarship Foundation & National Technical University Athens**
Scholarship of the program Socrates Erasmus Action 2.2 for student exchange
- 1997-2001 **Greek State Scholarship Foundation, Scholarship for Undergraduate Studies**
Scholarship to support the diploma studies in the Department of Architecture
Engineering of the National Technical University of Athens

RESEARCH ACTIVITY

Research Interests:

My research interests are primarily focused on the study of human spatial and architectural experience, embodied-enactive cognition, ecological psychology and wayfinding behaviour using EEG and Virtual Reality. Within this context, I am particularly interested in both quantitative and qualitative approaches to human experience within the built environment (including urban emotions and public policies) as well as dynamic system theories, complexity, urban theory, human geography and smart urbanism.

- 2019-2021 *Research Fellow*
Institute for Global Prosperity (IGP), UCL
Procol-UK (Co-Lab on shared prosperity for the UK)

London Prosperity Index

Analyses of London Prosperity Index dataset collected in 2017 in East London: descriptive statistics, data visualisation, and reporting. Analyses were focused on areas and topics related to prosperity such as housing, health, place satisfaction, racial injustice etc.

Development of research proposals and funding applications (ESRC).

Principal Investigator: Dr. Saffron Woodcraft

Assessing the impact of Covid-19 on diverse ethnic communities

Survey design, data analysis, visualisation and reporting. Project supported with funding from UCL Culture and UCL East as part of Listen and Respond. The project's aim was to assess the impact of the Covid-19 pandemic on Money Advice & Education service users. Money A&E and IGP's partnership was established with the aim to define, measure and achieve prosperity in relation to debt and finance.

Principal Investigator: Dr. Christopher Harker

Institute for Global Prosperity (IGP), UCL **RELIEF Centre in collaboration with Catalytic Action and the Beirut Urban Lab**

Assessing Vulnerabilities for urban recovery solutions in Beirut Post-Explosion
Statistical data processing and analysis, data visualisation, and reporting. The project explored the changing landscape of local vulnerabilities, from pre-crisis to post-explosion Beirut. The project was funded by the UKRI Global Challenges Research Fund

Principal Investigator: Dr. Elisabetta Pietrostefani

Selected Achievements:

Co-author of *Ethnicity and prosperity in East London*, selected to be included in The Bartlett Review 2021.

Co-author of *Covid-19 as a challenge to prosperity: The case of Money A+E service users*. The work was part of the UCL cloisters exhibition on Public Art and Engagement Work in East London organised by UCL Engagement Team (08-09/2021).

Co-author of *Assessing Vulnerabilities for urban recovery solutions in Beirut Post-Explosion: The case of Mar Mikhael neighbourhood*. Data from the project featured in the Shifting Grounds Exhibition at the Venice Biennale 2021.

2018-2019 *Research Assistant*

UCL Institute for Global Prosperity (IGP)

Qualitative data analysis using NVivo. Literature reviews on various topics including prosperity and wellbeing, inclusive economies, citizen social science. Preparation of online platforms and material for dissemination of findings
Principal Investigator: Dr. Saffron Woodcraft

2013-2019 *Research Studies*

The Bartlett School of Architecture, Space Syntax Lab, UCL

PhD research on the Aha! moment of reorientation.

Areas of focus: navigation, spatial cognition, spatial experience, space syntax techniques, behavioural neuroscience and relevant methods, signal processing, virtual reality

Quantitative data collection on human behaviour and brain activity (using electroencephalography) during navigation in interactive virtual environments. Design of interactive virtual reality environment in Unity (C#), analysis of neural time series data from EEG recordings (electrical signals from the human scalp), spatial analysis using space syntax techniques, signal processing and filtering techniques in MATLAB, and statistical analyses using SPSS.

Supervisors: Dr. Sean Hanna, Prof. Alan Penn Space Syntax Lab

2018 *Research Assistant*

The Bartlett School of Architecture

Project focused on interactive 3D digital maps for community-led self-building on small publicly-owned sites as a contribution to London's housing shortage.

ARF funded project

Principal Investigator: William Hodgson

Research Networks

2021

UNESCO Inclusive Policy Lab

Invited to be part of the Lab, a global space dedicated to the emerging issues of knowledge co-production and its translation into inclusive policies. The Lab connects all those working on inclusive policy from across different sectors and countries: expert policy makers, knowledge producers and social actors.

2020

Neuroscience and Design Ecologies (NADE).

Invited to be part of NADE, an interdisciplinary network of experts across both fields of Design and Neuroscience. It was created to apply for COST Action funding with the aim to establish a novel knowledge base within the effective circle of neuroscience and design. Network includes researchers in recognised academic institutions across 23 countries

PUBLICATIONS

- 2024 Charalambous, E. (2024) **The Coloured Noise of Isovist Paths: Exploratory behaviour through the lens of dynamic systems**. Paper accepted for the 14th Space Syntax Symposium, University of Cyprus, 24-28 June, 2024
- 2023 Charalambous, E. and Djebbara, Z. (2023) **On Natural Attunement: Shared Rhythms Between the Brain and the Environment**. *Neuroscience & Biobehavioral Reviews*.155. doi: [10.1016/j.neubiorev.2023.105438](https://doi.org/10.1016/j.neubiorev.2023.105438)
- 2023 Charalambous, E. (2023) **Neurourbanism and Neuroarchitecture: How can Cognitive Sciences Inform Design? KAEBUP / 3rd CyNUM Regional Conference. From urban research to planning and design: strengthening cooperation between academia and practice**.University of Cyprus,Nicosia 6-9 December 2023. Pre-print available at :OSF Preprint, 1–18. doi:[10.31219/osf.io/6f4uc](https://doi.org/10.31219/osf.io/6f4uc)
- 2023 Djebbara, Z and Charalambous, E. (2023) **Natural Attunement: A coupling of rhythms between brain, body, and environment**. Paper presented at Academy of Neuroscience for Architecture 2023, San Diego, California, United States.
- 2022 Pietrostefani E.,Dabaj J., Sleiman Y., Jallad M., Maassarani S.& Charalambous E., (2022), **Assessing vulnerabilities for urban recovery solutions in Beirut post-explosion, the case of Mar Mikhael neighbourhood**. University College London and Catalytic Action.
- 2021 Charalambous, E., Hanna, S., & Penn, A. (2021). **Aha! I know where I am: the contribution of visuospatial cues to reorientation in urban environments**. *Spatial Cognition and Computation*. doi:10.1080/13875868.2020.1865359
- 2021 Charalambous, E., Pietrostefani, E., & Woodcraft, S. (2021). **Ethnicity and prosperity in east London: How racial inequalities impact experiences of the good life**. London, UK: UCL Institute for Global Prosperity doi:10.14324/000.wp.10130980
- 2020 Harker C., Huq Z., & Charalambous E. (2020) **Covid-19 as a challenge to prosperity: The case of Money A+E service users**. London: Institute for Global Prosperity, UCL.
- 2019 Charalambous, F. (2019). **The Aha! Experience of Spatial Reorientation** (Doctoral dissertation). UCL (University College London).
- 2017 Charalambous, E., Hanna, S., & Penn, A. (2017). **Visibility analysis, spatial experience and EEG recordings in virtual reality environments: The experience of 'knowing where one is' and isovist properties as a means to assess the related brain activity**. Proceedings of the 11th Space Syntax Symposium, 128.1-128.12. Instituto Superior Técnico, Departamento de Engenharia Civil, Arquitetura e Georrecursos, Portugal.

- 2016 Charalambous, E; Hanna, S; Penn, A; (2016) **Updating of Mental Representations in Spatial Reasoning: Two pilot ERP Experiments**. In: KogWis 2016 Space for Cognition
- 2015 Charalambous E. (2015) **Spatial Cognition: Brain Activity during the Integration of Distinct Spatial representations**. Archidoct, 3 (1), pp. 47-58
- 2008 Charalambous E., Papachristoforou A. (2008) **Sites of Complexity in the Urban Field: Monastiraki streetscapes**. OnSite Review 19: Street, pp.8-11

Published architectural projects

- 2008 Farinea C., Piperidou Y, Charalambous E. (2008). **Adaptive Microclimates**. Complessità e Sostenibilità: il territorio e l'architecture, No 07, Gangemi Editore
- 2008 Charalambous E., Ferrando C., Piperidou Y., Natou F. (2008) **Tube Surfaces**, D.Areopagitou Reformation Competition of the rear views of historic buildings towards the New Acropolis Museum, greearchitects.gr
- 2006 Charalambous E., Papachristoforou A. (2006) **New Media Art: cause for the formation of spatialities in the action field**, 5th Panhellenic Exhibition of Architectural Work, exhibition catalogue, Athens: Papatotiriou, pp.416-419

INVITED LECTURES AND PRESENTATIONS

Invited Lectures

- 2021 **Space Syntax for the study of spatial cognition: The case of spatial reorientation**
Online Lecture: 24/02/2021
Department of Architecture, School of Sciences and Engineering (SSE), The American University in Cairo (AUC)
- 2021 **The Aha! experience of spatial reorientation**
Online Lecture: 03/03/2021
NeuroTechDesign online event series organised by NeuroTechBCN
- 2019 **How do humans think spatially? Spatial experience and participatory mapping**.
Lecture as part of the IGP Spatial Research Training workshop for citizen social scientist. Institute for Global Prosperity, The Bartlett Faculty of the Built Environment, UCL (12/02/2019).

Presentations

- 2022 **The spatial aha moment from an ecological perspective**, 12th Annual Scientific Conference, Center for Applied Neuroscience (CAN), University of Cyprus, 14 October, Nicosia (poster presentation)
- 2017 **Visibility Analysis, Spatial Experience and EEG Recording in VR Environments: The experience of 'knowing where one is' and isovist properties as a means to assess the related brain activity**, 11th International Space Syntax Symposium, Instituto Superior Técnico, University of Lisbon, 3-7 July, Lisbon
- 2016 **Updating of Spatial Representations: Two pilot ERP Experiment**. KogWis Space for Cognition, 13th Biannual Conference of the German Society for Cognitive Science, 26-30 September, Bremen.

- 2015 **An EEG Study on Spatial Cognition: mental spatial representations of small-scale vs. large-scale environments.** 12th AHRA Research Student Symposium: Synergetic Architectures: new approaches between theory & practice, School of Architecture Plymouth University, 11-13 June, Plymouth.
- 2014 **Spatial Knowledge Acquisition: The Aha! moment of spatial re-orientation and its underlying cognitive mechanisms,** SSLabSeminars, Presentation of PhD Research Bartlett School of Architecture, Nov 2014

TEACHING EXPERIENCE

- 2024 **Visiting Lecturer.** *Digital Tools IV*, Department of Architecture Engineering, Frederick University.
- Lecturing and development of learning materials. The course is focused on the use of game engines (Unity 3D) and of virtual reality as tools that enable designers to explore the experience and perception of architectural space and to collect relevant behavioural data (i.e. movement in space).
- 2022 **Adjunct Lecturer** (Special Scientist). *Research Methodologies*. Faculty of Engineering, University of Cyprus.
- Lecturing and development of learning materials. The course introduces PhD and postgraduates students MSc/ MEng Energy Technologies and Sustainable Design to data collection and analysis, written and oral presentations of academic work as well as various aspects related to research methodologies such as: different epistemological approaches, quantitative, qualitative and mixed methods approaches, design of laboratory and computational experiments, research through design, field research as well as methods of co-creation of knowledge and transdisciplinarity.
- 2018-2021 **Co-founder & co-leader.** *IGP Writing & Assessment Support Labs*. Institute for Global Prosperity, The Bartlett Faculty of the Built Environment, UCL.
- Departmental series of assessment support and writing workshops run from term 1 until end of term 3 with summer workshops tailored towards dissertation writing. Development of learning materials, research and development of relevant material, delivery of workshops (face-to-face and online), tutorials and feedback to students.
- 2018-2021 **Tutor.** *UCL Writing Lab*, Academic Communication Centre, Institute of Education, UCL
- Development of learning materials, research & development, & co-organisation of live events and discussion series, delivery of workshops tutorials, and feedback to undergraduate and postgraduate students across the Bartlett Faculty of the Built Environment
- 2018-2021 **Senior Teaching Assistant,** *MSc Global Prosperity: Measuring Global Prosperity Research Methods 1 & MSc Prosperity, Innovation and Entrepreneurship: Researching Transformative Entrepreneurship* (2020-2021). Institute for Global

Prosperity, The Bartlett Faculty of the Built Environment, UCL. Module leader
Dr. Matt Davies

Teaching and group work facilitation, formative feedback and marking, developing material for online learning (flipped & blended learning), delivering lectures and leading online sessions. The modules were focused on research methodologies.

- 2018-2021 **Senior Teaching Assistant, *Urban Systems Theory*** MSc Smart Cities and Urban Analytics. Centre of Advance Spatial Analysis, The Bartlett Faculty of the Built Environment, UCL. Module leader Dr. Jens Kandt
Formative& summative feedback, essay marking and group work facilitation on topics related to urban theories including location and complex systems theories
- 2018-2021 **Senior Teaching Assistant, *Smart Cities: Context, Policy and Government***. MSc Smart Cities and Urban Analytics. Centre of Advance Spatial Analysis, The Bartlett Faculty of the Built Environment, UCL. Module leader : Dr. Jens Kandt
Formative& summative feedback, essay marking and group work facilitation focusing on policy and smart city technology
- 2020-2021 **Senior Teaching Assistant, *Urban Futures and Prosperity*** Institute for Global Prosperity, The Bartlett Faculty of the Built Environment, UCL. Module leader: Dr. Hanna Baumann
Formative& summative feedback, essay marking and group work facilitation on topics related to the role of cities in shaping human experience (including residents' health and wellbeing) and in creating or hindering pathways to prosperous, equitable and sustainable futures.
- 2019 **Tutor, *Spatial Research Methods Training workshop***, Institute for Global Prosperity, The Bartlett Faculty of the Built Environment, UCL
Workshop facilitation and training on spatial research methods (georeferenced data) for Citizen Social Scientists
- 2018 **Tutor, *(Un) urban: Designing for the green city***, East London, UCL Global Citizenship Programme (two weeks workshop).
Tutoring, programme facilitator and project support
- 2017-2018 **Teaching Assistant, *MSc Dissertation Workshops***. Development Planning Unit, The Bartlett Faculty of the Built Environment, UCL
Leader: Andrea Rigon
Administrative and academic support for a series of workshops for postgraduate students, supporting development of learning materials& organisation of a workshop for programme leaders of all six programmes of the Development Planning Unit.

- 2017-2018 **Teaching Assistant**, *Architectural Phenomena*, MSc Space Syntax: Architecture & Cities, The Bartlett School of Architecture, UCL. Module leader Prof. Sophia Psarra
- Seminars, weekly feedback and marking on topics related to the theories and ideas that have influenced architecture and its relationship to the city from the 1960s to the present including contemporary ideas on how buildings and cities are produced
- 2016-2017 **Teaching Assistant**, *The City and Its Relations: Context, Institutions and Actors in Urban Development Planning*. MSc Urban Development Planning, Development Planning Unit, The Bartlett Faculty of the Built Environment, UCL Module leader: Dr. Colin Marx
- Teaching, assisting in the development of learning materials, exam marking, facilitation of group work on topics related to urban land struggles and contemporary theories on socio-spatial relations and dynamics in cities (role of land ownership, subjectivities, institutions etc.)
- 2010-2011 **Private Tutor**, Development of course material and teaching of design software AutoCAD & Rhino3D
- 2007 **Design Tutor**, *Weekend Architectural Workshop (WAW)*, Institute of Advanced Architecture of Catalonia (laaC) in collaboration with ETSAB, Barcelona, Spain (05/2007)
- Realization of basic prototypes based and constructed with laser Cut System

ACADEMIC ADMINISTRATIVE & EDUCATIONAL ACTIVITIES

- 2020 **Academic Supervising**. Supervision of a postgraduate MSc dissertation and Invitation to be part of the dissertation supervision team for coming academic years, Institute for Global Prosperity, The Bartlett School of Architecture, UCL
- 2021 **Co-organiser** of a discussion series on academic writing entitled *Writing Skills: Expanding your academic practice*. UCL Writing Lab, Academic Communication Centre, Institute of Education (02-03/2021)
- 2020-2021 **Personal Tutoring**. Provided pastoral support to postgraduate students and regular personalised guidance related to academic progress and associated development of academic and research skills, careers and personal professional development as well as general well-being. Institute for Global Prosperity, The Bartlett School of Architecture, UCL
- 2020 **Admissions**. Facilitated admission process, reviewed and assessed applications for two MSc courses. Institute for Global Prosperity, The Bartlett School of Architecture, UCL
- 2020 **Academic committee**. Participated in a Breach of regulations investigation panel examining a case with evidence of poor academic practice and plagiarism within a student's dissertation. MSc Global Prosperity, Institute for Global Prosperity, The Bartlett School of Architecture, UCL (11/2020)

- 2018, 2019 **Guest Critic**, *Pathways to Prosperity 2: Global Futures*, final review, MSc Global Prosperity the Bartlett School of Architecture, UCL (module leader Dr. Matt Davies)
- 2018 **Guest Critic**, *E-merging Design Research*, final review, MSc Space Syntax: Architecture & Cities., The Bartlett School of Architecture, UCL (module leader Prof. Sophia Psarra)

PROFFESIONAL EXPERIENCE IN ARCHITECTURAL PRACTICE

- 2011 **Principal Architect**
Restoration of a private country house in Dromolaxia, Cyprus.
Interior design and construction details
- 2011 **Collaborator Architect**, Architectural Studio of Phaethon Psichis, Athens
Proposal for architectural competition *New Municipal Market of Larnaca.*
Concept Design
- 2010 **Collaborator Architect** (with Vasileios Ntovros)
Private family house in Chalkis, Greece. Concept and design development
- 2009-2011 **Architect.** Anaxagoras Kaprianis & Partners studio, Athens Greece
Swissport VIP Lounge in Larnaca Airport, Cyprus
Design development
- Design Proposal for the Kanu Airport, Nigeria*
Concept design
- Private house in Abu Dhabi*
Concept and design development
- Private house in Al Ain*
Concept and design development
- Welfare Centre and Temporal Residence for the non-profit organization KIVOTOS, Athens*
Concept design
- Various Private Houses and Interior Designs in Attica and Grete*
Design development and construction details
- 2009 **Architect.** Andreas Aggelidakis Studio, Athens Greece
Proposal for for the Gate to Athens Marina Competition, '*Monument to an oncoming disaster*'
- 2007-2008 **Architect.** Aire Arquitectura Studio (Xavier Tragant-XTM), Barcelona, Spain
Athletic centre 'Polideportivo Sant Esteve Sesrovires'
Concept and design development
- Primary School in Sant Gugat, GISA*
Concept and design development, construction details
- 2008 **Collaborator Architect.** (with Chiara Farinea, Yota Piperidou, Carmen Ferrando)
Cerveceria Maison Belge, Barcelona, Spain. Interior design and furniture design.
- 2005-2006 **Assistant Architect.** ARSIS Architecture Studio - Prof. K.Moraitis, Athens, Greece

Apartment building in Voula

Design development, construction details

Private House in Malesina

Concept and design development

2005 **Collaborator Architect** (with Akis Telemachou)

Private Family House in Larnaca, Cyprus. Concept Design

2003 **Assistant Architect**. Architecture Studio Filippa Vivi, Athens, Greece (April-Aug.)

2001 **Internship**. IAESTE program. Waldhauser Haustechnik Basel, Switzerland

PROFESSIONAL TRAINING & ADDITIONAL SKILLS

2021 **Statistics for Researchers: Analysis of Data & Graphical Methods**, UCL Learning and Development Team, London (03/2021)

2021 **An Introduction to R with Rstudio**, ISD Digital Skills Development, UCL , London (01-02/2021)

Introduction to the RStudio software and the R language in order to conduct statistical analysis

2021 **Agent-Based Modelling for Spatial Systems**, MSc Spatial Data Science and Visualisation, Centre for Advanced Spatial Analysis, UCL , London
Module focusing on building ABMs in a Java framework and creating object-oriented code to address spatial systems (audited module 01-04/2021).

2021 **UCL Arena for Research-based Education, Research Supervision** UCL Extend, London (10-12/2021)
Online course for research supervisors at UCL

2020 **Digital Education, Connected Learning Essentials** UCL Extend, London (06/2020)
Introduction of teaching staff to the concept and key practices of Connected Learning (online learning that is both active and collaborative but sensitive to the varied contexts of our students)

2020 **Mental Health First Aid**, IGP, UCL, London (09/2018 & 05/2020)
Student mental health training session delivered by Anne Thomas, Director of Employability and Business Development at Mind in The City

2017 **UCL Arena, Teaching Associate Programme (TAP) UCL, London (10-12/2017)**
Course focusing on develop teaching practice and work towards a nationally recognised teaching award

2017 **UCL Arena One, Gateway Workshop**, UCL, London (09/2017)
Course designed to prepare doctoral students for their teaching responsibilities by introducing approaches to teaching and learning

2017 **The UCL Grand Challenges Research Summer School. Cross-disciplinary Research**, UCL, London (05/2017)

2015 **Data analysis & Computational Modelling**, in Matlab, Institute of Cognitive Neuroscience, UCL, London (05/2015)

2014 **Programming Psychological Experiments** in Matlab, Institute of Cognitive Neuroscience, UCL, London (02-03/2014)

- 2014 **Interdisciplinary Studies of Evidence, Can There be an Integrated Concept of Evidence?** UCL, London (03/2014)
- 2013 **Matlab for Cognitive Neuroscience.** Institute of Cognitive Neuroscience, UCL, London (10-11/2013)
- 2012 **BCBT Cognition, Brain and Technology Summer School** UPF/SPECS RESEARCH LAB Barcelona, Spain (09/2012)
- 2008 **Rhinoscript Workshop**, Universitat Internacional de Catalunya, Barcelona
- 2007 **Digital Fabrication II-** Documentation of Human Body Different ways of "measuring" our bodies using laser cutter. , IaaC, Marta Male Alemany, Barcelona (01/2007)
- 2006 **Digital Fabrication I**, Fabrication of prototypes through digital procedures, IaaC, Marta Male Alemany, Barcelona (10/2006)