Phil Langley

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Education

**Oct 2012-
current**

Final Year PhD Candidate, University of Sheffield
White Rose Scholarship, Funded by ESRC
Completion date Dec 2015

Thesis Title: The Social Making of Software and Spatial Design
This research investigates how critical, open source approaches to computational techniques can inform a practice of architecture that is defined by digital methods, rather than simply composed of digital tools. I am exploring the social means by which 'code' becomes first 'software' and then 'simulation', and through open source approaches look for the new understandings of 'interface' that are required between the digital and the designers.
Co-supervisor: Prof Doina Petrescu
Co-supervisor: Dr Mark Meagher

**Oct 2006-
Oct 2007**

MSc Computing and Design - University of East London
Funded by AHRC
Graduated with Distinction

Thesis Title: 'Meta-Cognitive Mapping – Growing Neural Networks For Generative Urbanism'
The research examined the use of dynamic learning systems and adaptive topologies within neural networks, and their implications as tools for architectural mappings. The research investigated the ability of such systems to identify, map, model and represent flows within dynamic data sets and identify topological relationships between these flows in an urban context.
Course Tutor: Christian Derix, Director of Computational Design Research, Aedas, and one of the leading specialists in practice based research in computational design methods.

June 2005

RIBA Part III - London Metropolitan University

**Sept 2001-
June 2003**

Diploma in Architecture - University of Sheffield
With Commendation in Design Report

**Sept 1997-
June 2000**

BA (Hons) Architecture - University of Sheffield
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Practice Based Research

**July 2009 -
Present**

**Bryden Wood – Architects and Designers for Manufacture, London
Associate - Head of Digital Strategy**
Bryden Wood is a multidisciplinary design practice that focuses on innovative prefabrication and 'design for manufacture' solutions. As associate, I am head of 'Digital Delivery' and responsible for the research and development of BIM strategies. Bryden Wood is recognised as an industry leader in this field. We are currently collaborating with the leading software companies to develop the UK government's BIM standards.

**Nov 2008 -
July 2009**

**Slider Studio, London
Project Director**
Slider Studio is a multi-disciplinary design, digital media and research practice, specialising in the development of digital tools and collaborative software for architectural and urban design. As project director, I was responsible for project based research and development of the companies 'siteCapacity' software, relating to detailed housing information models.

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Academic Research, Publications, Conferences and Exhibitions

Forthcoming 2015	**Invited book chapter:** *'The Social (Re)Production of Architecture: claims, collectivity and interdependence in contemporary practice'* Doina Petrescu, Kim trogal (ed.) Chapter Title: 'Social Media as an Interface for Spatial Design'
June 2013	**Conference Paper:** 'Pedagogy meets Big Data and BIM: Built Environment Education and Information Management', The Bartlett, UCL, London UK 'Branch, Merge, Commit New forms of Open Source for Designing With BIM'
May 2013	**Conference Paper:** 10th Annual AHRA Research Student Symposium: Facts and Fictions, Lund 'Tactile Programming: 'Material Computing' For Architectural Design'
Sep 2012	**Invited article:** Special issue of *Space and Culture*: 'Topologies', Celia Lury (ed.) 'Mapping topological deformations of space as diffused migrant territories' [with N. Awan, University of Sheffield]
Dec 2009	**Conference Paper:** A Topological Approach to Cultural Dynamics Conference, Barcelona (Goldsmiths University, London, UK) 'Mapping Topological Deformations of Space as Diffused Migrant Territories' [with N. Awan, University of Sheffield]
July 2009	**Exhibition:** Beyond Media Conference - *'Visions'* Exhibition, Florence 'blink and you'll miss it' - Interactive installation tracking viewers facial reactions when exposed to changing architectural images. Collaboration with T.Cecil, S. Bhooshan and Nous Gallery
June 2009	**Exhibition:** Nous Gallery, London 'Digital Intuition; the design space of artificial learning' Exhibition of topological mappings relating to memory and learning of artificial neural networks
Jan 2008	**Conference Paper:** Proceedings, EURAU'08 Cultural Landscape, Madrid 'Mapping Migrant Territories as Relations in Urban Space', (Madrid: Universidad Politécnica de Madrid, 2008), [with N. Awan, University of Sheffield]
Dec 2007	**Conference Paper:** Generative Art Conference, Milan 'Meta-Cognitive Mappings - Growing Neural Networks For Generative Urbanism' [with C. Derix and P. Coates, CECA, University of East London]
Nov 2007	**Exhibition:** Nous Gallery, London 'The Mechanical Curator of the Museum of the Unknown' Mappings from MSc thesis, using neural networks, included as part of work exhibited by CECA, University of East London

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Teaching

Aug 2014   **Relearn: Variable summer School, Brussels**
5 day Workshop - 'the quantified self - reMakeHuman'
Using the software developed as part of the 'reMakeHuman' project and in collaboration with Natacha Roussel and Anna Carreras, this workshop involved the development of alternative methods of body quantification that contest mainstream methods and tools that are currently used to define health, fitness and the body
Relearn is a summer school organised by feminist art-lab 'Constant.

Nov 2014   **GenderBlending Worksession, Brussels**
5 day Worksession ' reMakeHuman'
Genderblending was a collective worksession between body hackers, 3D theorists, game activists, queer designers and software feminists to experiment at the contact zones of gender and technology.
Event organised by feminist art-lab 'Constant.

Oct 2014   **Invited Speaker, MSc in Social Development Practice,**
The Bartlett Development Planning Unit, UCL
'Social Media and Technology': A 3 day workshop focusing on the 'social uses of technology'. Format comprised two lectures and seminars, with a pratcial session involving 'social making' and DIY aerial photography.

June 2014   **Relearn: Variable summer School, Brussels**
5 day Workshop - ' A different Kind of Design'
Using software developed during my PhD research, the workshop used 'versioning' as a way of disrupting and remaking conventional 3D design work flows to create an open stream of computational design data to dynamically explore the pasts, presents and futures of our digital designs.
Relearn is a summer school organised by feminist art-lab 'Constant.

Nov 2013 -   **MArch/ PGT Design Tutor - Studio Open Data, with Mark Meagher.**
June 2014   **Sheffield University, School of Architecture**
Explored the architectural and spatial implications of free, widely-available, open-source data. This involved a creative and critical engagement with methods for making, understanding, and communicating data. As part of the studio we investigated what it means to take an 'open source' approach to architectural design and production.This will included the use of open source softwares (e.g. processing, openframeworks) and hardwares (e.g.arduino, 3D printing) to explore the 'social making' of data-driven design and production.

2007 - 2012   **MArch Workshops.**
Sheffield University, School of Architecture
Series of 2 and 3 day workshops entitled 'Digital Design Tactics', with Diploma/ MArch students investigating parametric methods through physical modelling of project data;