



Workshop Proposal

<p><u>Proposers' Name</u></p>	<ul style="list-style-type: none"> - Lucy Donegan - Felipe Tavares da Silva
<p><u>Proposers' Institution (if any)</u></p>	<p>Federal University of Paraiba (Universidade Federal da Paraíba).</p>
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<p><u>Proposers' Short Bio</u> (text up to 200 words)</p>	<p><u>Lucy Donegan</u> Lecturer and researcher at the Architecture and Urbanism undergraduate and graduate courses at the Federal University of Paraiba, Brazil (<i>Universidade Federal da Paraíba</i>, UFPB). Architect and Urbanist (UFC), Master and Doctor in Architecture and Urbanism (UFRN) with a research period at UCL. Lucy lectures on subjects as Graphic Representation, Urban Design, Georeferenced Information Systems, Urban Morphology and notions of Python for Architecture and Urbanism. Vice-leader of modAU (digital modelling for Architecture and Urbanism) research group, researching on themes such as urban vitality, form/uses relations, urban models, urban dynamics and sociospatial patterns.</p> <p><u>Felipe Tavares da Silva</u> Lecturer and researcher at the Architecture and Urbanism undergraduate and graduate courses at the Federal University of Paraiba, Brazil (<i>Universidade Federal da Paraíba</i>, UFPB). Undergraduate and masters in Civil Engineering and doctor in Mechanical Engineering. Felipe lectures on subjects as structural systems and parametric modelling in Architecture and Urbanism courses. Leader of modAU (digital modelling for Architecture and Urbanism) research group, researching about parametric modelling, numeric simulations for buildings and cities, urban models, building performance and structural analysis.</p>
<p><u>Workshop Title</u></p>	<p>Capturing and preparing models for ASA</p>
<p><u>Aim and Objectives</u> (describe the aims and objectives of the Workshop, indicating the scope of the workshop as well as why you think that this is a good topic for the 14th SSS)</p>	<p>This workshop aims to provide urban form researchers practical knowledge and skills to capture and prepare street network models to analyse network centrality using open data and tools. Specifically, the workshop will approach how to capture and prepare Open Street Map (OSM) Road Centre Lines (RCL) for Angular Segment Analysis (ASA) (Turner 2007) in GIS environments, exemplifying some steps described in our paper (Donegan and Tavares 2022). The python-based</p>

	<p>library OSMnx (Boeing 2017) will be used to capture street networks – calibrated for different types and delimitations (Donegan and Tavares da Silva 2023), GIS platforms such as QGIS will be used to prepare these models for Angular Segment Analysis and to run Angular Segment Analysis, graph analysis Space Syntax Toolkit interface with Depthmap. The workshop shares ways of working with street models without having to manually build them. As OSM RCL has been becoming steadily available worldwide, understanding this workflow can be useful to provide means for space syntax urban analysis for those who have not yet built a suitable and more standardized workflow to do this, while presenting and approaching a python-based library and GIS working environments. The workshop also provides a moment to discuss practical problems concerning urban data acquisition, preparation and validation in different contexts, and possible ways forward.</p>
<p>Structure (describe the format of the workshop, identifying any keynote speakers, technical information, and so on)</p>	<ul style="list-style-type: none"> - Workshop overview; - Checking Anaconda, Spyder, OSMnx and QGIS installation; - Presenting python-based library OSMnx using Spyder IDE; - Capturing different OSM RCL network models, by place, address, coordinates, adjusting different network types; - Uploading, visualizing and simplifying street network models in QGIS; - Examples of ASA processing using Space Syntax Toolkit and Depthmap; - Discussion.
<p>Duration (specify the duration of the workshop-whether it is half or full day)</p>	<p>Half day</p>
<p>Specific Requirements (provide any specific requirements you may request from the organising committee for the implementation of the workshop)</p>	<p>Infrastructure for on-line/hybrid communication lecture as we might not be able to attend the symposium physically. Participants will be asked to have computers with QGIS, Anaconda, Spyder and OSMnx installed;</p>

References

- Boeing, Geoff. 2017. 'OSMnx: New Methods for Acquiring, Constructing, Analyzing, and Visualizing Complex Street Networks'. *Computers, Environment and Urban Systems* 65:126–39. doi: 10.1016/j.compenurbsys.2017.05.004.
- Donegan, Lucy, and Felipe Tavares da Silva. 2023. 'Limites e Centralidades: Investigando Modelos de Cidades Com Diferentes Delimitações'. in *Lugares e suas interfaces intraurbanas: qualidade de sistemas urbanos e edificados*. Vol. 6. João Pessoa: Estúdio Borandá.
- Donegan, Lucy, and Felipe Tavares. 2022. 'Tuning In: Investigating OSMnx RCL Model Preparation Methods for Angular Segment Analysis'. in *Proceedings 13th International Space Syntax Symposium*. Bergen: Akkelies van Nes & Remco E. de Koning.

Turner, Alasdair. 2007. 'From Axial to Road-Centre Lines: A New Representation for Space Syntax and a New Model of Route Choice for Transport Network Analysis.' *Environment and Planning B: Planning and Design* 34(3):539–55. doi: 10.1068/b32067.