

Think Spatial

The UCSB brown-bag forum on spatial thinking

Presents

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Coming Home to the Land of Dynamic Spatial Analysis and Simulation: Adaptive Planning Policy and Practice in a Seamless and Fast-Moving Digital World

Tuesday, October 23, 2018

12:00 p.m.

3512 Phelps Hall

ABSTRACT:

This presentation links theory and practice of planning, planning support systems and dynamic modelling in order to build the argument that new planning policy requires adaptive planning and models that go beyond static snapshots of analysis and scenarios.

This move toward adaptive planning policy requires dynamic spatial models that produce multiple simulation scenarios through time & space that engage the public and the decision maker in the production of such results. By doing so, it requires a new practice of spatial planning, it questions the idea of certainty (proposing elasticity, the 75% confidence level for short term analysis and the 10% efficiency gain in certain policy contexts as best practice deliverables for spatial planning); it also requires a new vision for the legal and institutional framework of current planning policy and practice as well as the production of spatial plans. Ultimately it links dynamic spatial analysis with data science and complexity theory in order to develop Adaptive Planning Theory and Policy.

The talk will present the context of today's theory and practice in spatial dynamic simulation and will describe models developed during the past 25+ years as a way to evaluate the importance of adaptive planning policy in this new digital world. It will also question the current practice of both equation base and rule base modelling in the development of dynamic simulation and spatial analysis and will discuss the new contributions towards dynamic metrics, new calibration approaches, the key role of validation and cross-validation and the role of past and new data sets in a 'smart-city' policy context.

Bio:

Elisabete Silva has a research track record of approximately 20+ years, both at the public and private sector. Her research interests are centred on the application of new technologies to spatial planning in particular city and metropolitan dynamic modelling through space/time. The main subject areas include: land use change, transportation and spatial plans and policy, the use of Geographic Information Systems (GIS), Spatial Analysis, Dynamic Simulation (in particular using CA and ABM) and New Technologies applied to Planning contexts. She is the co-author of the Ashgate book, *A planner's encounter with complexity* (2010); *The Routledge Handbook of Planning Research Methods* (2014); *Comprehensive Geographic Information Systems* (3): "GIS Applications for Socio-Economics and Humanity," Elsevier. Main Editor Bo Huang, Volume 3 Editors: Kai Cao and Elisabete A. Silva (2017).

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