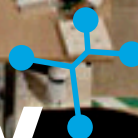# sg2014

This document provides an overview of the sg2014 Challenge, an outline for the Call for Cluster proposals, and timeline for selection.

CHALLENGE
CLUSTERS
  Proposals
  Shortlist
  Selection
TIMELINE
HOST

smartgeometry

sg2014 Urban Compaction

Large cities thrive on density and diversity - an environment where opportunity and choice are always proximate. But beyond the clear energy and pollution advantages of the elevator over the automobile, there are complex issues at play in concentrating population and built infrastructure in contemporary high-rise cities. The wicked complexity of urban systems notoriously escapes modelling, understanding and prediction in ways that lead to good design and high quality urban environments.

Around the world, the twentieth century city of the American Dream constructed at low density around the opportunities of the automobile is giving way to realities of soaring migration to cities set against the urgent need to address congestion, peak oil, the impact of carbon on the environment. In many, the clearly defined high-rise central business district, surrounded by kilometres of low suburban development is not the model – there is a much more extensive high-density urban condition. Each city presents its own particular set of conditions and pressures, but in many the pressure on limited available land in relation to demand, poor quality of land for development requiring expensive engineering solutions, and the drive to collocate for increased economic, social and cultural opportunity, is leading to very high rise development and increasing urban density.

What are the implications and opportunities of density for sustainable flows of people, food, energy and waste within building projects and at the planning scale for high rise, high density cities? Tall buildings thrive on rich infrastructure. What are the new ecological models for living, working, travel and transport, communication, production (vertical farming, innovative manufacturing) and disposal/conversion (waste to energy) in dense concentrations? Global competition between cities works to support investment in parks, art, intellectual capital and the rule of law - but how are the quality of environment and the intellectual and aesthetic qualities of the city maintained under the economic forces at play in the ultra high density city where the investment stakes are high? Does the city's provided infrastructure suffice to support urbanity, or are additional layers in parasitic symbiosis emerging to enable the full richness of the 21st century megalopolis?

Within research there are many post digital examples of urban modelling based on biological metaphor, agents systems and other models that would be hard to pursue outside a computational environment. How can and should the most advanced and adaptive models migrate to influence and prototype the built projects and city precincts of the future? In a post digital age with some increased, albeit limited, opportunity for generative and complex modelling, how do the relevant contemporary models draw on or contradict the futuristic modernist visions that have been put forward since the early twentieth century?

Shenzhen, China, had the fifth highest density in the world at 17,150 per square kilometre for an estimated population of sixteen million. Neighbouring Hong Kong with its famously hyper-dense, high rise development has a comparable urban population to fast-growing Shenzhen but with its tracts of un-developed land, its large city lungs, does not appear in the top hundred cities for urban density.

Hong Kong, the world leader in ultra compact, high-rise development and challenging infrastructure provides the theatre for Smartgeometry to pursue the exploration of ways to research and prototype all aspects of design leading to innovations to support high quality urban compaction.

smartgeometry

sg2014 Workshop   Call for Clusters

The SG2014 workshop will be organised into individual groups of expertise called Clusters.

Clusters provide a conceptual focus for a group of workshop participants, and are made up of people, knowledge, tools, materials and machines. Clusters provide a forum for exchange of ideas, processes,and techniques, acting as a catalyst for design generation, exploration, and resolution.

Clusters are led by two (and sometimes more) Cluster Champions, and workshop participants are assigned by Smartgeometry to each cluster.

This is an open invitation to submit a proposal to run a Workshop Cluster.

CLUSTER PROPOSALS
- Names of all Cluster Champions & email addresses
  - Smartgeometry can cover travel and accomodations for two Cluster Champions.
  - Additional cluster champions are welcome if they are able to cover their own expenses
- Goals of Cluster
- Pre-workshop requirements
- Overview of proposed schedule for each of four workshop days
- Hardware Requirements
- Software Requirements
- Material Requirements
- Industrial Partners + Commercial Collaborators
- 100 word bios including previous experience running workshops and your experience with the topics of this year's challenge
- Cluster Sponsors

The Cluster proposal narrative should be no more than 500 words (excluding bios) and include 2 emblematic images that help explain your proposal.

DEADLINE Sunday 2 March 2014 at midnight

CLUSTER SHORTLIST
After a brief review, those shortlisted will be distributed for public feedback, appraisal and response by the SG community on Monday 3 March 2014

CLUSTERS SELECTION
Selection of Clusters will proceed based on:
- Addressing the challenge in innovative ways
- Well laid out and achievable goals within the four day timeframe
- The experience of the Cluster leaders
- The potential to create new knowledge and interesting results in the form of physical objects, drawing or data sets, or tools and techniques

All Cluster proposals will undergo a peer review process in dialogue with our hosts, CUHK and HKU. 10 clusters will be chosen, representing a broad spectrum of approaches to the challenge.

Clusters should aim to provide participants with unique opportunities that would otherwise be unavailable. Smartgeometry encourages Cluster proposals that facilitate collaboration across disciplines as well as industry and research partnerships. The selection process will, in most cases, involve an extended dialogue with potential clusters to refine and develop proposals in time for the opening of workshop applications.

Public announcement of selected clusters will coincide with opening of workshop applications on March 17 2014 (date subject to change).

smartgeometry

sg2014 Timeline

Dates listed below, other than the Deadline for the Call for Challenges and the Smartgeometry 2014 event dates, are subject to change.

2014 January 27	Monday	**Announcement of sg2014 Challenge** **Call for Cluster Proposals**
2014 March 2	Sunday	**Deadline Cluster Proposals**
2014 March 3	Monday	**Publishing of Cluster Proposals**
2014 March 17	Monday	**Announcement of sg2014 Clusters** **Opening of sg2014 workshop applications**
2014 May 4	Sunday	**Workshop Applications close**
2014 July 14-17	Monday - Thursday	**Smartgeometry 2014 Workshop**
2014 July 18-19	Friday - Saturday	**Smartgeometry 2014 Conference**

smartgeometry

sg2014 Host

DATES
Workshop: July 14-17 2014   Monday - Thursday
Two day Conference: July 18-19 2014   Friday - Saturday

VENUE
Hosts for sg2014 Workshop are The Chinese University of Hong Kong (CUHK), in partnership with Hong Kong University (HKU), in Hong Kong, China.

More information will be provided soon.

WORKSHOP EQUIPMENT
Information will be provided soon.

Additional equipment requests may be met upon advanced demand by Cluster Champions, provided donation or funding issues are resolved.

smartgeometry