

sg2016

This document provides an overview of the sg2016 Challenge, an outline for the Call for Cluster proposals, and timeline for selection.

CHALLENGE  
CLUSTERS

Proposals  
Shortlist  
Selection

TIMELINE  
HOST

smartgeometry

中大  
建築  
SCHOOL OF ARCHITECTURE

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## sg2016 Hybrid Domains

The act of producing architecture is a collaborative, interdisciplinary exercise. Architects design with knowledge from many branches of study. Architecture involves the coordination of building projects, which themselves are products of a wide range of technologies and systems. Buildings are constructed and procured within a complex ecology of different disciplines, building trades, economic markets, and legal regulations. However, developments in digital technology continue to introduce new design methods and tools to the practice of architecture. Performance simulation, information modelling, and algorithmic design are now part of the expected skillset of the architect, and these new skills require knowledge from multiple disciplines.

Information technology has introduced new potentials for building designers and Smartgeometry is at the forefront in the exploration of this territory. Computational design and digital manufacturing are creating changes in the design process, often shifting the boundaries of disciplinary roles. Perhaps more fundamentally, as the tools of design change, so does the cognitive structure of the architect's own mind. As Brett Steele writes, the value of Smartgeometry's collective, collaborative and sustained focus lies not only in helping to define the role of information-based approaches to architectural design, but also in the making of the most difficult of all architectures, the architect's own cognitive structure.

With new digital tools comes the potential for new knowledge, new collaborations, and new ways of thinking. The notion of interdisciplinarity refers to the integration of two or more disciplines focused on a complex problem, and in this new landscape of interdisciplinary working lies the potential to address some of architecture's most challenging problems, for example: designing better performing buildings, decreasing environmental impact, and developing new manufacturing techniques. At sg2016, designers and researchers will operate between, across, and at the edge of their own disciplines. They are challenged to question how they work and connect and borrow from other disciplines, thereby creating new hybrid domains.

The sg2016 Workshop challenges participants to tackle problems that span different knowledge realms. Clusters will connect distinct research domains and will be coordinated by champions from different disciplines (likely one architect and one non-architect). The Cluster participants will collaborate to solve a complex and connected problem. Issues of communication, representation, prototyping, and simulation will be critical to address, and full-scale prototyping is encouraged. Cluster champions are asked to propose a series of linked research questions, outline the framework of interdisciplinary collaboration, propose methods, and predict Workshop outcomes.



# sg2016 Workshop Call for Clusters

The sg2016 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 champions, and workshop participants are assigned by Smartgeometry to each cluster. Consistent with the theme of hybrid domains, champions should bring expertise in different disciplines, for example: architect/engineer, or urban designer/computer scientist. While the number of cluster champions is limited to two, additional experts are more than welcome to apply as Smartgeometry participants.

Smartgeometry can cover travel and accommodations for two Cluster Champions. Each cluster will be given a budget of €2000 for purchasing materials.

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

## **Cluster Proposals**

(max 3 Pages with two images)

1. Research question
2. Cluster goals – What do you expect to accomplish?
3. Background to your proposed research
4. Research methods
5. Overview of proposed schedule for four days
6. Requirements: hardware, software, materials
7. Industrial partners and sponsors (if any)
8. Cluster Champion individual workshop applications

## **Individual Champion Application**

1. CV (max 2 page)
2. Design or Research Portfolio (max 3 page)

**DEADLINE** Sunday 6 December 2015 at midnight

**SUBMISSION** Please submit PDF applications to [2016@smartgeometry.org](mailto:2016@smartgeometry.org)

# sg2016 Workshop Cluster Selection

## **CLUSTER SHORTLIST**

After a brief review, those shortlisted will be distributed for public feedback, appraisal and response by the SG community on Monday 7 December 2016. All Cluster proposals will undergo a peer review process by the Smartgeometry committee in dialogue with our hosts, Chalmers University. 10 clusters will be chosen, representing a broad spectrum of approaches to the challenge.

## **CLUSTERS SELECTION**

Selection of Clusters will proceed based on:

- Addressing the challenge in innovative ways
- Diversity of domain expertise. Priority will be given to those clusters exploring ideas in two or more fields.
- Well laid out and achievable goals within the four day timeframe
- The experience of the Cluster leaders
- Those with a collaborative rather than pedagogical nature
- The potential to create new knowledge and interesting results in the form of physical objects, drawing or data sets, or tools and techniques

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.

Selected clusters will be publicly announced on Monday 21 December, and opening of workshop applications will follow on Monday 4 January 2016 (date subject to change).

**ANNOUNCED**      **Monday 21 December 2015 at midnight**

# sg2016 Timeline

Dates listed below, other than the Deadline for the Call for Challenges and the Smartgeometry 2016 event dates, are subject to change.

2015 October 30 Friday	Call for Cluster Proposals
2015 December 6 Sunday	Deadline Cluster Proposals
2015 December 7 Monday	Publication of Cluster Proposals
2015 December 21 Monday	Announcement of sg2016 Clusters
2016 January 4 Monday	Opening of sg2016 Workshop Applications
2016 February 1 Monday	Workshop Applications close
2016 April 4-7 Monday - Thursday	Smartgeometry 2016 Workshop
2016 April 8-9 Friday - Saturday	Smartgeometry 2016 Conference

## sg2016 Host

### **VENUE**

Hosts for sg2016 Workshop is the Chalmers University of Technology in Gothenburg, Sweden.

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.