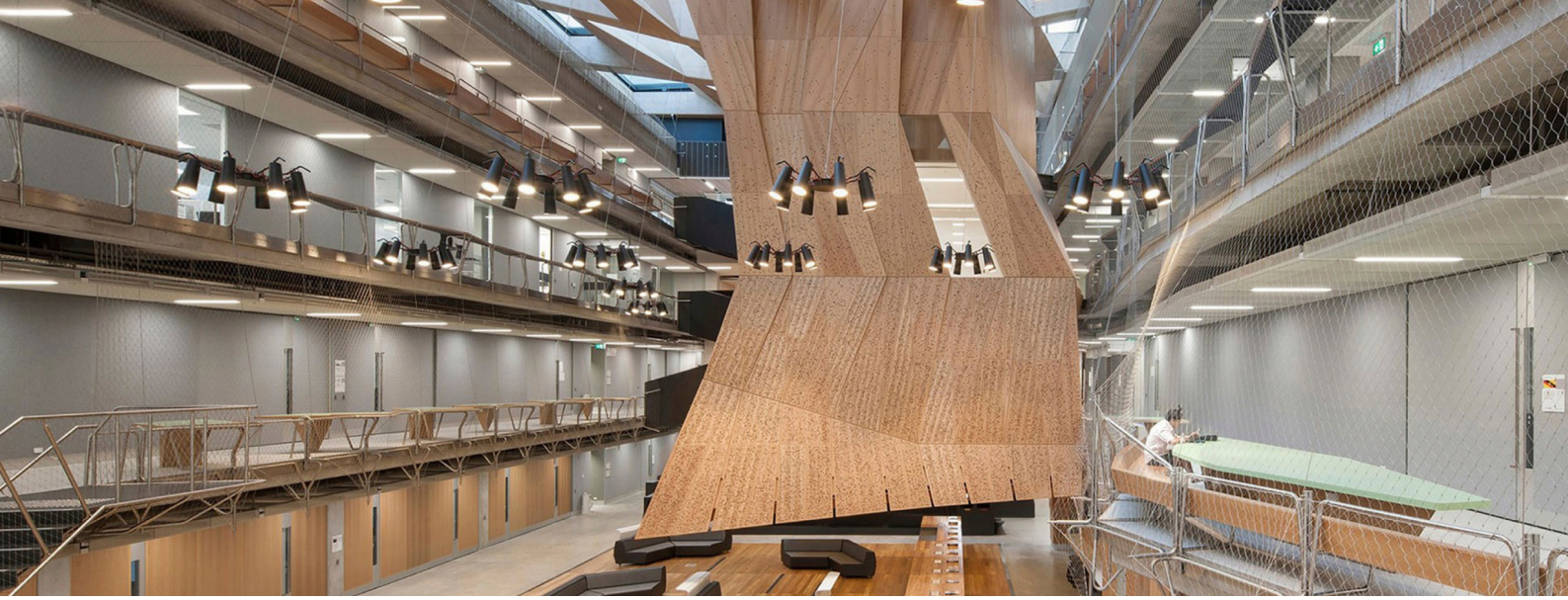

Call for Papers

LIVING SYSTEMS AND MICRO-UTOPIAS: TOWARDS CONTINUOUS DESIGNING

21st International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA)

30 March-2 April 2016
Melbourne School of Design, The University of Melbourne, in collaboration with RMIT University
www.caadria2016.org

2-page (min. 500-word) abstract due: 25 September, 2015
Submit to: www.caadria-review.org

Today, human activities constitute the primary environmental impact on the planet. In this context, commitments to sustainability, or minimization of damage, prove insufficient. To develop regenerative, futuring (Fry, 2008) capabilities, architectural design needs to extend beyond the form and function of things in contained projects and engage with the management of complex systems. Such systems involve multiple types of dynamic phenomena – biotic and abiotic, technical and cultural – and can be understood as living. Engagement with such living systems implies manipulation of pervasive and unceasing change, irrespective of whether it is accepted by design stakeholders or actively managed towards homeostatic or homeorhetic conditions. Manipulation of continuity requires holistic and persistent design involvements. In other words, "designers should become the facilitators of flow, rather than the originators of maintainable 'things' such as discrete products or images" (Wood, 2007)

Responding to this challenge, CAADRIA 2016 seeks to interrogate the notion of continuity and the applicable architectural toolsets in order to map and discover opportunities for innovation. Can architecture utilize computing to dynamically specify services and allocate resources to control flows of matter, energy, money or people (Thackara, 2005)? Can architecture overcome the impossibility of perfect design by focusing on the co-emergence of technical systems and their user communities? Can it extend and radicalize the idea of lifecycle management, for example towards the inclusion of non-human stakeholders?

Engagement with complex dynamic systems poses difficult conceptual, technical and ethical challenges. To mention but a few: How can the longevity of living systems be affected through technologies for the capturing and sharing of knowledge, including BIM, APIs or technical standards? How do living systems equip and curtail design action, for example through interactions in creative programming, open hardware and parametric modelling communities? How does stabilization of technical knowledge in data types, algorithms, computational objects, languages or user interfaces affect the capability of designers to imagine alternative futures? Can modelling and simulation tools of architectural design cope with the inherent unpredictability of complex systems by integrating such approaches as big data analysis or pervasive computing? Can advances in fabrication and mechatronics support design that functions analogously with the mechanism that evolutionary biologists call adaptive niche construction? What educational approaches are appropriate and future-ready in a world of global and accelerating change? This list of questions could be readily extended.

Crucially, research into more holistic, ecological approaches to architectural design must overcome a methodological mismatch of spatial, temporal and organizational scales. The ecologies of real-world living systems are incalculably more

extensive than the bounded experimental prototypes that are possible in research and education. What strategies and technologies can be employed to overcome this dilemma?

This call proposes to interrogate whether and how designers' capacity to create micro-utopias (Wood, 2007) can illuminate or redirect complex, longer-term processes and probe into alternative futures. Examples of relevant methods include, but are not limited to, critical making (Ratto, 2011) and critical technical practice (Agre, 1997), interrogative (Wodiczko, 1999 [1994]) , critical and speculative design (Dunne and Raby, 2013) and wild or feral computing (Fuller and Matos, 2011).

CAADRIA 2016's theme of Continuous Designing offers a viewpoint for interrogation of all research in design and computation, including, for example: theory, philosophy and methodology of design research; education; collaborative and interdisciplinary design strategies; stakeholder participation; design innovation and creativity; generative, parametric and evolutionary design; visualisation, virtualisation modelling, simulation and prediction; city, site and building information modelling; human-computer interaction; ubiquitous and pervasive computing; sensing; artificial autonomy and intelligence; mechatronics; fabrication, construction, optimization, mass customisation … and others.

Besides the above specific theme, CAADRIA 2016 also invites posters on general topics in computational design research. Young researchers currently involved in postgraduate studies are invited to submit their work-in-progress research papers to the Postgraduate Student Consortium.

IMPORTANT DATES

Abstract Submission: 25 September 2015
Notification of Abstract Acceptance: 23 October 2015
Young CAADRIA Award Submission: 13 November 2015
Full Paper Submission: 27 November 2015
Poster Submission: 27 November 2015
Postgrad Student Consortium Submission: 11 December 2015
Notification of Full Paper Acceptance: 23 December 2015
Notification of Poster acceptance: 8 January 2016
Camera ready Full Paper Submission: 29 January 2016
CAADRIA2016 Workshops: 29-30 March 2016
CAADRIA2016 Conference: 30 March-2 April 2016

PAPER SELECTION COMMITTEE

Sheng-Fen Chien, Chair (Taiwan)
Seungyeon Choo (Korea)
Mark Aurel Schnabel (New Zealand)
Walaiporn Nakapan (Thailand)
Mi Jeong Kim (Korea)
Stanislav Roudavski (Australia)
Email Submission inquiries to: psc@caadria-review.org

POSTGRADUATE STUDENT CONSORTIUM COMMITTEE

Andrew Li, Chair (Japan)
Ajibade Aibinu (Australia)
Email Submission inquiries to: pgsc@caadria-review.org

LOCAL ORGANIZING COMMITTEE

Dominik Holzer (Chair), The University of Melbourne
Jane Burry (Co-chair), RMIT University
Stanislav Roudavski (Co-chair), The University of Melbourne
Paul Loh (Co-chair), The University of Melbourne
Contact : caadria2016@gmail.com

REFERENCES

Agre, Philip E. (1997). 'Toward a Critical Technical Practice: Lessons Learned in Trying to Reform AI', in *Bridging the Great Divide: Social Science, Technical Systems, and Cooperative Work*, ed. by Geof Bowker, Les Gasser, Leigh Star, and Bill Turner (Hillsdale, NJ: Erlbaum), pp. 131–158

Dunne, Anthony, and Fiona Raby (2013). *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: MIT Press)

Fry, Tony (2008). *Design Futuring: Sustainability, Ethics and New Practice* (Oxford: Berg)

Fuller, Matthew and Sónia Matos (2011). 'Feral Computing: From Ubiquitous Calculation to Wild Interactions', *Fibreculture Journal*, 135, pp. 144–163

Ratto, Matt (2011). 'Critical Making: Conceptual and Material Studies in Technology and Social Life', *The Information Society*, 27, 4, pp. 252–260

Thackara, John (2005). *In the Bubble: Designing in a Complex World* (Cambridge, MA: MIT Press)

Wodiczko, Krzysztof (1999 [1994]). 'Interrogative Design', in *Critical Vehicles: Writings, Projects, Interviews*, ed. by Krzysztof Wodiczko (Cambridge, MA; London: MIT Press), pp. 16–17

Wood, John (2007). *Design for Micro-Utopias: Making the Unthinkable Possible* (Aldershot: Gower)