



INTERNATIONAL

INVITED SESSION SUMMARY

Title of Session: Buildings in the Circular Economy

Name, Title and Affiliation of Chair: Brandon E. Ross, PE, PhD, Cottingham Associate Professor, Glenn Department of Civil Engineering, Clemson University

Details of Session (including aim and scope):

Rapid urbanization, environmental degradation, and volatile markets are just a few of the challenges and opportunities facing the building design, construction, and management industries. Circularity, a concept involving waste reduction through material reuse and regeneration, offers a promising solution. Buildings in a circular economy will not be fixed and stagnant but will be readily modified to suit ever-changing occupant and community needs. They will also be easily dismantled and used as raw materials for future buildings. In this manner, circular buildings can support environmental, social, and economic sustainability.

This session seeks papers and presentations about circularity of buildings in a broad sense. Thus, researchers and practitioners are highly encouraged to submit papers on related topics such as *adaptability, open buildings, design for adaptation and deconstruction, future-ready architecture, upcycling*, etc. Specific topics of interest include:

- Technologies that enable buildings' circularity
- Evaluation and measurement of circularity in the built environment
- Practical solutions to legal, social, and business issues of buildings' circularity
- Case studies of circularity in existing buildings and/or building design for circularity
- Future research directions for buildings in circular economies
- Human interaction with circular buildings
- Pedagogy for circularity and buildings

Time permitting, the session will also engage attendees in a crowdsourcing activity. Attendees and speakers will conduct a Strength-Weakness-Opportunity-Threat (SWOT) analysis on the current state of buildings in a circular economy. Results of the SWOT analysis will be compiled by the moderator and distributed to attendees. These results can then be used in support of future research proposals and projects.

Main Contributing Researchers / Research Centres (tentative, if known at this stage):

I have received tentative statements of interest from researchers in the Netherlands, Belgium, UK, and USA. Members of The Council on Open Buildings have also agreed to promote the session and assist in review of papers. Students from my own research group are also keen to submit papers to this conference.

Website URL of Call for Papers (if any):

Will be established after session has been confirmed by the conference.

Email & Contact Details:

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