Co-funded by the European Union

RESPONSIVE CITIES

DESIGN MATTER(S) FOR DECARBONIZATION

FEBRUARY 25th - 26th 2025

Responsive Cities is a biennial international symposium on the future of cities organized by the Advanced Architecture Group of IAAC.

The 2025 edition focuses on "Design Matter(s) for Decarbonization" and takes place within the framework of the CiD project, co-funded by the Erasmus+ Programme of the European Union and developed by the Institute for Advanced Architecture of Catalonia -IAAC- (Spain), Leibniz University Hannover LUH (Germany), University of Genoa (Italy), Tallinn Business Incubators (Estonia), Association ARCES Palermo (Italy), Ersilia Foundation (Spain), Architekturos Fondas (Lithuania), Materiom Ltd. (UK), National Research Council CNR (Italy), Architects' Council of Europe ACE (Belgium) , Association for Local Democracy ALDA (France), Associated Partner: Ellen MacArthur Foundation (Global network).

The Symposium is organised by

Iaac Institute for advanced architecture of Catalonia | ADVANCED ARCHITECTURE GROUP

In cooperation with

Leibniz Universität Hannover | Università di Genova | TALLINN CREATIVE INCUBATOR | ARCES | FUNDACIÓ Ersília

Architektūros fondas | materiom | Consiglio Nazionale delle Ricerche | alda European Association for Local Democracy | Architects' Council of Europe Conseil des Architectes d'Europe ace-cae.eu

Co-funded by the European Union

THE CALL

The Institute for Advanced Architecture of Catalonia (IAAC) and the CiD project partnership are delighted to announce the **Call for Papers** for the biennial international symposium, Responsive Cities 2025, a global platform to experiment and rethink urban environments in response to today's global challenges.

In an era where anthropogenic materials surpass the weight of all life on Earth, and the construction sector stands as a major driver of ecological disruption, rethinking material practices, coupled with advancements in digital technologies, presents a paradigm-shifting opportunity to address the extractive, consumptive, and contaminating logic and processes of the built environment.

Responsive Cities 2025 aims to shift the conversation on resource depletion by focusing on abundance rather than scarcity, advocating for material-driven innovations in architecture and urban design that challenge traditional material practice and advance decarbonization goals. Adopting an abundance mindset is a new paradigm relevant to design and construction practices, expanding the definition of "resources" and exploring where both raw and non-raw materials can be sourced and "mined" to offset carbon emissions.

The integration of reclaimed materials, and the upcycling of waste streams, combined with design strategies that facilitate disassembly, promote adaptive reuse, or prioritize the repurposing of existing building stock, challenges conventional design and construction norms while placing materials at the core of circular design and circular carbon economy. Embodied carbon measurements and material analytics on this front become crucial for informed decision-making. Concepts such as *urban mining* and *buildings as material banks* call for new practices in digitizing the physical world, including the use of advanced computation for monitoring material flows and carbon offsets, performing life cycle assessments, and creating digital material libraries for reuse.

Embracing this paradigm encourages the exploration of unconventional ideas and interdisciplinary collaboration, opening paths for novel approaches, new policies, and innovative uses of digital technologies.

Design Matter(s) for Decarbonization seeks to explore proposals for novel monitoring, design, and manufacturing processes that effectively detect and reconstitute materials while improving the performance of material assemblies to facilitate reuse. It also advocates for a vision of metabolic architecture: an architecture that digests its waste or decomposes itself; an architecture where its form adapts to material availability, introducing new aesthetics; an architecture that redefines building lifecycles and ultimately regenerates rather than merely reducing its negative environmental and economic footprint.

The theme of Responsive Cities 2025 additionally marks the importance of designing and building with material libraries that evolve towards organic and natural properties, or even towards synthetically created living materials that can grow and be harvested. Biomaterials such as earth, bamboo, biochar, timber, fibers, or cork, as well as living matter such as mycelium, algae, microbes, or nature-based solutions, not only contribute to reducing the carbon footprint of the building industry and enhancing biogenic carbon storage, but also support a restorative, decarbonizing approach to design and production. Buildings become carbon sinks while carbon is transformed into value for the built environment.

Design Matter(s) for Decarbonization integrates the importance of ethical decisions in managing resources and in designing and constructing with them. Ethical design practices ensure that construction projects do not contribute to the displacement or harm of vulnerable communities affected by resource extraction. Managing resources, such as land or forests, on the other hand, prioritizes the conservation and responsible use of natural resources, supporting ecosystems and biodiversity while promoting practices that mitigate environmental degradation and foster long-term ecological health. This dual approach advances decarbonization goals as much as it supports new (bio)economic models, aligning with broader objectives of social equity and environmental stewardship. Such a new paradigm could disrupt "business as usual" in the built environment, favoring practices that do not exploit the climate crisis over those that do.
From new ethical "material breeding" practices and synthetic growth/degrowth, to waste farming and harvesting expired building components, Responsive Cities 2025 explores the power of design and its potential to integrate both natural and technological solutions to mitigate the harmful and extractive nature of current design and construction protocols.

The **Responsive Cities 2025** Symposium invites submissions of original research papers, case studies, and innovative projects that align with the theme of Design Matter(s) for Decarbonization. The Symposium and Call for Papers is organized around the following topics:

- **DESIGN & BUILD:** design for disassembly | form follows availability | digital manufacturing for reuse | circular feedback
- **DECARBONIZE:** zero & negative carbon materials | buildings & cities as carbon sinks | regeneration | sustainable land management
- **ADAPT TO CLIMATE & PERFORM:** synthetic ecologies | living systems | building metabolism | design performance
- **DIGITIZE THE PHYSICAL:** computing (living) matter | monitoring | digital twins | material passports
- **ETHICS & POLICIES:** design ethics | inclusivity | decision making | democratize technologies

THE DETAILS

DEADLINES

- Extended Abstract Submission: **5th October 2024**
- Selection of participants for full paper: **31st October 2024**
- Deadline for full paper: **10th December 2024**
- Selection of full papers: **2nd January 2025**
- Symposium dates: **25th-26th February 2025**

LANGUAGE

The proposals must without exception be drafted in English.

HOW TO APPLY

Papers

The paper submission will take place in two stages. The first stage will include a submission of an extended abstract that will be subject to a blind peer review process. Selected abstracts will be invited to submit a full paper. After the review of the full papers on the second stage, participants will be informed on the final selected papers to be published and/or presented in the symposium.

Extended Abstracts Details

Extended abstracts should have 1500 words. They should include the following information: title, abstract, keywords, session that best fits into (design & build, decarbonize, adapt to climate & perform, digitize the physical, ethics & policies), main text (introduction, methodology, findings/conclusions) and references. Extended abstracts should also contain figures, tables, and/or images, which are not included in the word count. References are not included in the word count. Author/s and affiliation should not be included in the extended abstract submission, as they will be subject to a blind peer review process.

Please use the template provided on the website: https://responsivecities.iaac.net

Please upload your extended abstract as a single PDF (.pdf) document by 5th October 2024 through the following link: https://easychair.org/conferences/?conf=rc2025

Copyright: all parts of the submitted material (including text and photographs), must be either authored by the person/people submitting, or must have the rights to use and publish them.

SELECTED ENTRIES

Extended abstracts will undergo blind peer reviews and those accepted will be invited to submit a paper. The full papers will be subjected to review. If the full paper is accepted, authors are in agreement to publish the paper in the conference proceedings publication, including the website.

All contributions will be collected in a digital publication with an ISBN code.

FEES

Senior 450,00 € / Junior 300,00 € (VAT included)

Note: over 40 are considered Senior (details on payment method will be given to all selected authors). The fee also includes the participation to the social dinner for one person.

ORGANISATION

General chair: Areti Markopoulou

Program chairs: Chiara Farinea and Mathilde Marengo

Symposium coordination: Fiona Demeur and Alice Bazzica

DETAILED INFORMATION AND CONTACT

Please check our website regularly https://responsivecities.iaac.net for all the detailed and updated information on this Call.

If you have any specific question about this Call, do not hesitate to contact us at rc.symposium@iaac.net

Note: Additional information regarding registration, keynote speakers, workshops, or special events associated with the symposium will be announced on the website of the Symposium as per the specific details of the event.