



Call for papers International symposium Off-site construction in the face of the Anthropocene

19th and 20th of October 2023, Maison de l'Architecture Ile de France

Organisation

The international symposium is organised by the LéaV research laboratory of the ÉNSA Versailles, in partnership with the social housing promoter Immobilière 3F and the Maison de l'Architecture Ile de France. It will stress the current state of prefabrication or “off-site construction”, with a specific focus on environmental issues.

Call for papers

Prefabrication is coming back into the architectural spotlight, considered as a means of improving the environmental impact of the construction sector, which alone generates nearly a quarter of our GHG emissions. In order to tackle this issue in a relevant manner, we need to take its historical background into account. The history of architecture in the 20th century was marked by the industrialization of the construction. Industry and architects conceived multiple systems of prefabricated buildings, similar to the way cars and other manufactured goods were fabricated. This objective became a reality in Germany in the 1920s, and in the USSR in the 1930s. In France, these ideas were put forward in several periods: Le Corbusier's model houses, the industrial processes used for reconstruction, the reinforced concrete industry's construction methods building large-scale housing complexes until 1973, and the “Open Industrialisation program” promoted by the French program “Plan Construction” in the early 1980s that divided the market between industrial suppliers on the one hand and assembly firms on the other. Regardless of the time and place, the arguments of quality of construction, economy, speed of implementation and improvement of working conditions were regularly put forward. Based on these constructive issues, architects have nourished their reflections on housing typologies, on questions of quality of life and comfort, of measurement and dimensioning, of style and aesthetics.

Facing the Anthropocene

In times of climatic urgency, many professionals are highlighting the virtues of prefabrication or “off-site construction” processes in order to reduce the quantity of materials and thus the environmental impact of buildings. The actual reflections also focus on the improvement of the quality of the construction methods, guaranteeing a better control of the energy consumption related to the buildings' usage. The optimisation of production conditions thanks to prefabrication is one of the ways to improve the carbon footprint of buildings. Is this kind of optimization appropriate to the issue at stake or will it only provide marginal benefits? Is it compatible with another approach, which focuses on the revival of natural, bio- and geo-sourced materials that take their constructive references from pre-industrial vernacular architecture? This renewed interest in ancient, minimally processed materials is based on the hypothesis of their low environmental impact. But to what extent are they adapted to industrial methods? Can they be integrated into systems with a high degree of off-site prefabrication?

Construction Methods

If we look more precisely at the construction modes of contemporary buildings, we can observe that the industrialisation of building processes and products has indeed taken place in hybrid or incomplete forms, which are very different from the meccano of components assembled “click and go” on site, as imagined by Jean Prouvé. Could a careful analysis of these heterogeneous building processes, combining industrialized products (in different degrees) and in situ craftsmanship, give an insight of what is actually going on? On the other hand, what role will robotic manufacturing play in the future? In the timber construction sector, the Swiss, German and Austrian examples show the potential for industrial production that is released from the standardisation constraints of the 20th century, maintaining architectural diversity while keeping the benefits of efficient building methods. These new construction practices also guarantee the adaptability of buildings to the different configurations of the site and the programme. Some even consider 'soft parametric models', offering high flexibility. Each building would then be like a “freeze frame” or a “phenotype” of a digital model containing a large number of morphological and dimensional possibilities, comparable to a “genotype”. In these new building processes, which are highly determined by digital tools, what would be the role of the architect and all the other involved building professionals?

Typologies, Styles and Aesthetics

While during the 20th century, numerous reciprocal relationships between industrial construction methods and architectural styles could be observed, more recent projects based on prefabricated products are attempting to hide the traces of their constructive specificities through "architectural wrapping", rather than highlighting the rules and constraints of the construction method in order to invent a new prefabrication aesthetic. Still a bit ashamed of its heavy past, prefabrication has not yet regained its right to be seen on façades. How can architecture take advantage of these new production conditions? Can original styles emerge from this transformation of construction practices? Wouldn't other kinds of typologies be better adapted to these production methods? Will architects be able to use them to conceive desirable buildings and new forms of living? Further on, isn't this an opportunity to question our lifestyles and our comfort habits in view of a "happy sobriety"?

The colloquium organised by the LéaV at the Maison de l'Architecture will therefore aim to elucidate these three mentioned problematics through a better understanding of the history of prefabrication, of its current relevance and of its perspectives. We welcome diachronic and transversal contributions and also wish to integrate knowledge from other countries in order to identify the French specificities in a broader international context. Finally, we will attempt to evaluate the relevance of the environmental hypotheses, on which the return of prefabrication is based, in the domain of architectural theory.

Proposals for papers

This call for papers is addressed to professional architects and to researchers of any discipline.

Proposals should either focus on one of the three above mentioned themes: prefabrication in relation to "Ecology and Environment", "Fabrication Methods", "Typologies, Styles and Aesthetics", or propose a transversal and/or historical reading.

They must include :

- A title
- A 350 word abstract
- A short presentation of the author (10 lines)

They must be sent to the following address before 5 May 2023:
colloque-construction-hors-site@versailles.archi.fr

Following selection by the scientific committee, speakers will have to submit the paper to be published before the conference. The editorial standards will be transmitted at a later date.

Timeframe

5th of may 2023 : Deadline for abstract submissions.

2nd of june 2023: Selection of successful proposals.

20th of september 2023 : Deadline for full paper submissions.

19th & 20th october 2023 : Conference.

Location and dates

19th and 20th of October 2023, at the Maison de l'Architecture Ile de France, 148, rue du Faubourg Saint-Martin, 75010 Paris

Organising committee

- Laboratoire LéaV, ÉNSA Versailles
- Maison de l'Architecture Ile de France
- Immobilière 3F

Scientific committee

- Stéphane Berthier, Lecturer at ÉNSA, Versailles (committee president)
- Jean-Patrice Calori, Professor at ÉNSA, Versailles
- Jean-François Caron, Professor at ENPC
- Luca de Franceschi, Immobilière 3F Architecture and Sustainable Development Director
- Yvan Delemontey, Architect at the *Office du Patrimoine et des Sites du Canton de Genève*
- Eva Madec, Engineer-Architect, PhD student, LéaV
- Léa Mosconi, Maison de l'Architecture Ile de France President
- Gabriele Pierluisi, Professor at ÉNSA, Versailles
- Philippe Rizzotti, Architect, PhD student, LéaV
- Nathalie Simonnot, LéaV lab director
- Susanne Stacher, Professor at ÉNSA, Versailles