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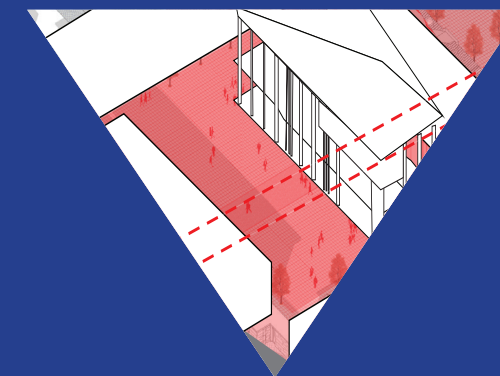
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ISSN 2385-2291

Syllabus
January 2022

Architecture Research Agenda



02



ISSN 2385-2291

Syllabus
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Syllabus
is a Pedagogical Supplement of FUOCO AMICO
Architectural Review
ISSN 2385-2291

Syllabus presents experiences and research made inside formative courses at different levels: bachelor, master, doctorate.
The goal is to offer these results, provisional and incomplete as they can be, to the scientific community, enhancing dialogues and exchanges.

Scientific Board
Andrea Gritti, Stamatina Kousidi, Alessandro Rocca
(Ph.D. Program of Architectural Urban Interior Design, Department of Architecture and Urban Studies, Politecnico di Milano)

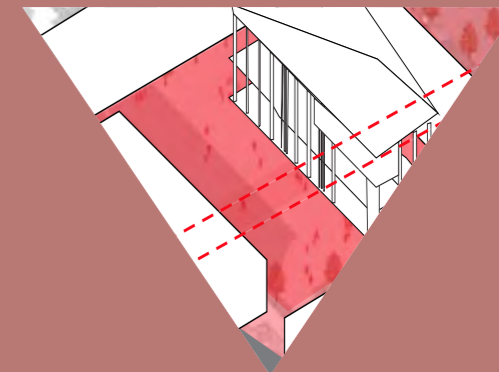
All contributions are evaluated by the scientific board with a review process.

Editor in Chief
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Kevin Santus collaborated at the editing of this issue.

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20133 - Milano
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Alessandro Rocca

Design, research, and methods

Alessandro Rocca is a professor of Architectural and Urban Design and the Head of the Ph.D. Program of Architectural Urban Interior Design at the Department of Architecture and Urban Studies, Politecnico di Milano.

The framework of the research undertaken by AUID doctoral students in the first semester traces a very varied landscape and often with interdisciplinary characteristics. Concerning the centrality of the architectural project, the backbone of the program, almost all the proposals introduce external elements involving other-dimensional scales, social and technical problems, and references to ecological, urban, and landscape issues. Furthermore, the Anthropocene question is manifest in many proposals, and we could say that it is a kind of shared background. Therefore, a sphere of reflection spontaneously arises around the destiny of the architectural project in the face of a new relationship with natural elements: people and other living forms, territories, life on the planet. Classical themes remain marginal, such as architectural composition, urban morphology and building typology, architectural theory, architectural design, the relationship between design and construction. For Ph.D. students, it seems that architecture has lost the characteristics of autonomy that have been dominant for a period of about half a century. On the other hand, architectural research focuses, above all, on the themes of the crisis. With a clear return to a neo-functional and neo-modernist attitude, architecture again seems a problem-solving practice. The main point in

starting the research is the perimeter of a problem essential not only for scientific research but also for a community. This attitude foreshadows excellent opportunities and some risks. The advantages are obvious: architecture, taking on solving general collective problems and not those that instead concern it exclusively, is a practical, generous science aimed at the common good. After decades in which architecture mainly aimed at celebrating different political, economic, and cultural powers, this turn seeks to recover a different role, certainly more popular, from a moral point of view, and more understandable for non-specialist interlocutors. And, more generally, for society. The immediate effect of this opening to the world is the activation of a dialogue with other disciplines and non-scientific actors, social and political subjects who cross the research trajectories and benefit from its results. By reviewing the research proposals, we find topics of broad interest that pose a specific problem: how to bring a general question, such as climate change, to a design dimension. Jiayi Li accepts this challenge, tackling the planetary question of sea-level rise by identifying some theoretical formats, such as Sponge City, and proposing a Design-Driven Research path that addresses the issue in precisely identified areas. Numerous researches investigate Natural Based Solutions. Sara Anna Sapone places emphasis above all on the topic of

the Smart City, where “the goal is to realize living architecture and environment, able to perceive and respond: an animated interface between humans and their habitat.” Kevin Santus studies “the role of Nature-based solution and Circular economy within the design transition due to the climate change,” elaborating operational links “from global issues to specific actions.” Adrian Moredia’s research on tools to reduce the effects of the heat island in the urban environment is of in-depth technical analysis regarding the broad theme of global warming. Also linked to the reform of urban space is Hailong Chai’s research, which focuses on the use and development of the Urban Underground Space concerning infrastructures and high-density areas. An even more specifically technical nature is Carla Bulone’s work on the possible services, in the architecture, of a material with a high technological quotient such as graphene. Xiaoyun Liu’s theme aligns with the policies of the Chinese government and sees the redemption of rural territories, in social and productive terms, as a strategic field of operation. The vernacular architecture studio of the Dong villages in South-West China aims to distinguish the possible elements of continuity by creating a new architecture with the necessary technical and typological adjustments. Also, in

this case, the project applies to an indicated case study, the village of Gaobu, characterized by aging and depopulation phenomena, where half of the houses are abandoned. Xiang Li also studies a rural area in China, the Jiulong River Delta in Fujian Province, trying to understand and design the architectural urban-rural continuum with architectures in dialogue with the past and the future. The study of vernacular architecture is the starting point of Zhaozhan Lu, with “a research which aims at exploring participatory design methods for promoting place identities of contemporary architectural design via Design-Driven research methods, with a focus on public community buildings.” The Rural Revitalization Strategy government program is the context of Dan Hu’s research, which “proposes to develop a low-tech Ecological Rural Settlement model based on the research and the evaluation of existing settlements.” Valentina Dall’Orto tackles similar themes, the project of rural living, in the Loja region, in southern Ecuador. The theme of low-cost housing is also at the center of “IncrE (LE) MENTAL PREvision ReseARCH”, by Alessia Macchiavello. Her research addresses “the problems of social housing in the countries of the South of the world,” thus immersing the themes typical of architectural design

in the vast social and economic problems of the Global South. Starting from the model indicated by the Mexican collective firm Elemental, Macchiavello investigates other previous experiences, such as Previ (Proyecto Experimental de Vivienda), waiting to define its field of investigation and design action.

Marianna Frangipane observes the marginal contexts in the Milanese area with particular attention to narrative and participatory techniques in architectural design. Also referring to vulnerable populations are the studies of Rose-Anne Mishio, who seeks new architectural typologies for weak social categories concerning well-being, comfort, personal and group interaction.

Liheng Zhang explores similar topics but transposes them into the public space, recognizing that the Urban Green Spaces “play a vital role in the contemporary society, and they are an indispensable part of people’s lives. Considering elements of social cohesion, health security, and participation. The main purpose is to combine relevant theories with actual construction through the design-driven research method to further illustrate the feasibility of this approach.”

In Francesca Gotti’s research, there is a strong focus on participatory logic and social behaviors in public spaces. In analyzing the formal characters, Gotti includes techniques

of ethnographic research, developing a transdisciplinary perspective.

Sarah Javed Shah also focuses on public space, internal and external, seeking a relationship between the tradition of the Walled City of Lahore (Punjab, Pakistan) and recent architectural research that creates other models of public space. Case studies are OMA’s Seattle Library, the Parasol, in Sevilla, by Jürgen Meyer, the TEK Building in Taipei, Taiwan, by Bjarke Ingels Group.

Cecilia Cempini assumes the study of the soil as a decisive factor in understanding the relationship between natural and built environments, focusing on the border areas between urban and rural.

The research that draws on the history of architecture is of a different kind. Niño Oljer Cardenas, for example, sets out to analyze the work of Pierre Jeanneret, a 20th-century hero overshadowed by his irrepressible cousin, the great Le Corbusier. The fields of study are housing and technological innovation, investigated because Jeanneret’s example may be helpful to reformulate the terms of our reflection. A challenging goal to pursue. The Latins said “historia magistra vitae,” but this transport from an era before ours is always complicated and requires a significant injection of imagination. Above all, it appears necessary to

develop an original working methodology because it is up to the researcher to graft on issues of a bygone era, relevant elements for today. Pablo Gamboa Samper studies the architecture of university campuses starting from classic modernist examples, such as Ludwig Mies van der Rohe’s IIT in Chicago, intending to introduce new architectural parameters on the campus of the National University of Bogotá.

Some Ph.D. Students ground their research on historical references, which only works if the researcher can act as an author, imposing new techniques and languages about the investigation and exposition. As examples of this literature, we recall *Project Japan: Metabolism Talks* (2011), by Rem Koolhaas and Hans Ulrich Obrist, and the two books by Peter Eisenman *Giuseppe Terragni: Transformations, Decompositions, Critiques* (1986), and *Palladio Virtuel* (2015). In these three types of research, the personality of the architect-author resonates, and sometimes even in conflict, with the architecture analyzed, generating a knowledge that goes beyond historical data and instead becomes a theoretical and critical contribution to architectural design.

Carla Rizzo’s work focuses on architectural design, analyzing above all the plan as a generative schedule of the project and as a parameter for the critical analysis of architecture.

Overall, we see a great variety of themes and places and a concentration of research on common macro-areas, such as climate change, public space, Global South, and social and territorial fragility elements. On the other hand, we also see a strong homogeneity in foreseeing a substantial part of the work through the methodology of Design Driven Research. We introduced this methodology in the Manifesto of the AUID program, and we intend to develop it with an experimental approach. The main goal is to understand the most effective ways of keeping research and project together and, on a more general level, the specific knowledge of architecture and the world in which it operates.