



PhD in PROGETTAZIONE ARCHITETTONICA, URBANA E DEGLI INTERNI / ARCHITECTURAL, URBAN AND INTERIOR DESIGN - 38th cycle

Number of scholarship offered	4
Department	DIPARTIMENTO DI ARCHITETTURA E STUDI URBANI

Description of the PhD Programme

The Architectural Urban Interior Design (AUID) Ph.D. program offers a constant sharing of knowledge, information, and practices. AUID is a creative, open, multicultural environment where the researchers find frequent occasions of exchange with the board of professors, other research centers, and doctoral institutions; the Program supports international exchanges, conferences, exhibitions, and research networks.

The AUID Program promotes research focused on architectural design, with studies and projects aiming at different scales, contexts, and finalities. Research activities are based on the critical analysis and development of design processes and techniques, in dynamic relationships with the urgent questions related to the urban and rural environment, the green, blue, and grey infrastructure. Research is supported by the acquisition and elaboration of insights and skills precisely linked to contemporary architecture's theoretical and critical horizon.

The AUID Program foresees a continuous elaboration and discussion of theoretical and operational tools. This dialectic process aims to foster the development of a critical and creative reflection on architectural design, exploring and testing experimental approaches, and delivering autonomous and innovative scientific products to be disseminated through seminars, publications, conferences. The Program is embedded into the Department of Architecture and Urban Studies (DASU), which hosts more than 160 professors and researchers engaged in an open multidisciplinary scenario of architectural and urban studies, including every branch of design culture.

The AUID Program provides opportunities for teaching and tutoring activities, which is considered an essential research complement, thanks to the close connection with the Polimi School of Architecture, Urban Design, and Building Construction. Too, the Program is included in the Polimi Ph.D. School, which gives the candidates the possibility to attend a large number of



interdisciplinary courses and to be inserted into the life of a large scientific community.



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OPEN SUBJECT Research Field: ARCHITECTURAL URBAN INTERIOR DESIGN

Monthly net income of PhDscholarship (max 36 months)

€ 1195.0

In case of a change of the welfare rates or of changes of the scholarship minimum amount from the Ministry of University and Research, during the three-year period, the amount could be modified.

Context of the research activity

Motivation and objectives of the research in this field

- Research activities point to the critical analysis and development of design processes and techniques in dynamic relationships with the urgent questions related to the urban and rural environment and the green, blue, and grey infrastructure. Within the 38th Cycle, starting in the 2022-23 academic year, the preferential research lines follow these topics, which be pursued by choosing various viewpoints and fields:
- Theory of architecture and architectural Design: reframing premises and goals, with case studies from the past and from the present times.
- Architecture and mass media: how architectural design interacts with political and social issues.
- Architecture as a contemporary narrative: research, criticism, education form an elaborate creative engine of producing ideas, ideologies, fetishism, and critical thought.
- Research by design: this relationship, carefully investigated in the past years, is a test site for specific Design-driven research applied to different contemporary challenges.



Methods and techniques that will be developed and used to carry out the research	<p>The Candidate will develop a research methodology starting from the lectures and assignments of the AUID courses and the courses of the Polimi Ph.D. School. Studying the different formats, methods, expressions of research in architectural design, the Candidate will profile a personal methodology considering the specificity of the selected object, the target, the attended results.</p> <p>The Program considers that design is a relevant and necessary component of any research. Together with the AUID Faculty and the Supervisor, each Candidate will find a specific position between design and research.</p>
Educational objectives	<p>Educational objectives focus on the deep understanding of a well-selected and defined topic; the main goal is to develop research containing a comprehensive survey of the chosen question, which leads to an original track and output.</p> <p>The Candidate will acquire the skill to organize a consistent analysis of case studies, formulate a clear proposal for an original approach to a question, and elaborate innovative strategies and research methods. The Candidate will be supported to deliver autonomous and innovative scientific products to be disseminated through seminars, publications, and conferences.</p>
Job opportunities	<p>The Program aims to train highly qualified researchers and professionals who will work in academic institutions, research centers, public administration, as well as in the private sector, in the fields of architectural, urban, and interior design:</p> <ul style="list-style-type: none"> • University researchers and lecturers in the scientific fields of the Ph.D. Program. • Researchers with an excellent scientific profile in complex architectural developments and interventions of recovery and transformation. • Independent professionals qualified in the management of highly complex design processes. • Designers with tasks of high responsibility in institutions and professional structures and leading manufacturers, engaged in traditional residential and special utilities,



	cultural institutions (museums, libraries, universities, schools, cultural centers), public and private services, commercial networks, accommodation, and leisure.
Composition of the research group	15 Full Professors 22 Associated Professors 6 Assistant Professors 69 PhD Students
Name of the research directors	Alessandro Rocca

Contacts	
AUID	
Ph. D. Management Office	
Ms. Marina Bonaventura marina.bonaventura@polimi.it phone +39/02/2399.5165	
Ms. Marilena Mastalli marilena.mastalli@polimi.it Phone +39/02/2399.5405	
AUID Ph.D. Head	
Prof. Alessandro Rocca Alessandro.Rocca@polimi.it	

Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents (more than 80Km out of Milano)	--

Scholarship Increase for a period abroad	
Amount monthly	597.50 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
Universities that are cooperating in the research: <ul style="list-style-type: none"> Katholieke Universiteit Leuven, Campus Sint-Lucas, Ghent HafenCity Universitaet Hamburg



- TU Delft, School of Architecture
- TU Berlin, Institute for Architecture
- University of Ljubljana

Educational activities (*purchase of study books and material, funding for participation in courses, summer schools, workshops and conferences*): *financial aid per PhD student per year ("DOTE")*:

1st year: max 1.624,30 euro

2nd year: max 1.624,30 euro

3rd year: max 1.624,30 euro

Workspace: In the AUID hall, on the 4th floor of Bldg 12 in Leonardo Campus, are available workstations for shared use. All the Ph.D. students can use their laptops with a wireless connection.

Workstations and other equipment are available in the various departmental laboratories (Dastu) linked with the doctoral Program.



PhD in PROGETTAZIONE ARCHITETTONICA, URBANA E DEGLI INTERNI / ARCHITECTURAL, URBAN AND INTERIOR DESIGN - 38th cycle

**INTERDISCIPLINARY Research Field: LARGE-SCALE PHOTOVOLTAIC SYSTEMS AND
LANDSCAPE. GUIDELINES FOR THE DESIGN, CONSTRUCTION AND OPERATION OF
LANDSCAPE-INTEGRATED PV PLANT**

Monthly net income of PhDscholarship (max 36 months)	
<p align="center">€ 1195.0</p> <p>In case of a change of the welfare rates or of changes of the scholarship minimum amount from the Ministry of University and Research, during the three-year period, the amount could be modified.</p>	
Context of the research activity	
<p>Motivation and objectives of the research in this field</p>	<p>Interdisciplinary PhD Grant</p> <p>The PhD research will be carried out in collaboration with research groups of the PhD programme in "ELECTRICAL ENGINEERING".</p> <p>See https://www.dottorato.polimi.it/?id=422&L=1 for further information.</p>
<p>Methods and techniques that will be developed and used to carry out the research</p>	<p>To achieve this aim, it is essential strengthening the integration and complementarity of the various technical and scientific disciplines, the interaction between the skills that can be traced back to the field of landscape design, and the more technical skills of electrical power systems engineering (electricity production, electrical networks, and systems, storage systems).</p> <p>This would make it possible to substantially advance knowledge in an integrated form that would allow the outlining of the entire range of evaluations, choices, technical solutions, and possible works in this field, taking into account the tasks for which large ground-mounted PV systems are intended and their economic, social, environmental and landscape impact.</p> <p>The research will be divided into three distinct phases, each with a concluding elaboration that marks the</p>



	<p>progress and becomes material for comparison with the two colleges of teachers of the two PhDs involved and to make any changes in direction or approach dictated by new needs and new opportunities in the interaction between the various disciplines.</p> <p>1.a. State of the art: a survey of the scientific literature on the subject.</p> <p>1.b. Selection and analysis of significant case studies to identify criticalities, potentials, and formulate the objectives to be achieved around four issues to be explored: biodiversity and ecosystem management; innovation in agricultural uses; requalification of environmentally compromised areas; optimization of the PV/storage system and energy transmission.</p> <p>2. Experiments on pilot projects to be identified in agreement with companies that manage and develop photovoltaic power generation activities.</p> <p>3. Guidelines for the design, implementation, and management of large-scale PV fields integrated into the territory.</p>
Educational objectives	<p>The expected result of this interdisciplinary Ph.D. program is a new researcher profile, capable of developing an integrated approach to the design of large-scale ground-mounted photovoltaic fields, meeting the objectives of increasing energy production from renewable sources within the framework dictated by the UN 2030 Agenda for Sustainable Development.</p> <p>This integrated and multidisciplinary approach goes beyond the opposition between the technical-functional objectives that guide the "engineering" design of the plant and the qualitative objectives relating to the resolution of critical issues in the relationship with the ecological-environmental systems, human systems, and the landscape.</p> <p>Large-scale plants must provide ancillary services to the electricity grids and, therefore, increasingly need storage systems, such as electrochemical batteries, combined with generation systems.</p> <p>The research proposes to evaluate different solutions, such as distributed rather than concentrated conversion and storage systems, concerning environmental and</p>

Contacts
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