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Supervisor Expression of Interest MSCA - Marie Skłodowska Curie Action - (PF) Postdoctoral Fellowship 2022

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Department Name:	Architecture, Built Environment and Construction Engineering
Research topic:	Architectural design
MSCA-PF Research Area Panels:	<input type="checkbox"/> CHE_Chemistry <input type="checkbox"/> ECO_Economic Sciences <input type="checkbox"/> ENG_Information Science and Engineering <input type="checkbox"/> ENV_Environmental and Geosciences <input type="checkbox"/> LIF_Life Sciences <input type="checkbox"/> MAT_Mathematics <input type="checkbox"/> PHY_Physics <input type="checkbox"/> SOC_Social Sciences and Humanities
Politecnico di Milano Areas:	<input type="checkbox"/> Cultural Heritage <input type="checkbox"/> Smart Cities <input type="checkbox"/> Horizon Europe Missions <input type="checkbox"/> Health <input type="checkbox"/> Industry 4.0
Brief description of the Department and Research Group (including URL if applicable):	<p>The Department of Architecture, Built Environment and Construction Engineering (DABC) has consolidated research and training experience in the design, production, construction, management, maintenance, transformation and decommissioning of buildings and the built environment, and in the management of building processes and related information flows.</p> <p>DABC collaborates with industry, Public Administrations, Ministries, non-profit organisations, research centres and national and international Universities to pursue excellence in research and quality in education. The mission of the DABC is to respond responsibly, scientifically, and creatively to the challenges affecting the entire construction, architecture and built environment sector.</p> <p>DABC's research (basic, applied and industrial) is organised in small multi-disciplinary clusters that are formed to address complex multi-scale and multi-factor research issues related to design and process, with reference to six strategic lines: 1) Innovative projects for architecture, spaces and services; 2) Digital, energy and technological transformation for the built environment and the construction industry; 3) Advanced materials and components, clean tech and innovative manufacturing and construction technologies; 4) Risk reduction strategies for the built</p>



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	<p>environment; 5) History, science, technology, management and development of cultural heritage and landscape; 6) Cooperation and technology transfer for emerging countries.</p> <p>The Research Group involved in this research activity includes people who were part of the MODSCAPE project/network: Cristina Pallini (Principal Investigator, PA) Francesca Bonfante (PO), Luca Monica (PO), Nora Lombardini (PA), Federico Acuto (PA), Aleksa Korolija (research associate), Emanuela Margione (PhD) Additionally, applicants may refer to the other Modscapes PIs: Axel Fisher (ULB Bruxelles) Maria Helena Maia (CESAP Porto) Simon Bell (Estonian University of Life Sciences)</p>
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Title	Bridging modernist rural landscapes to the future
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Brief project description:
(max 1 page)

Recent EU policies target long-term strategies to increase the overall quality of the living environment, encompassing the built and the unbuilt, in-between spaces and open landscapes.¹ A living environment empowering legacies of past societies to become part of future collective projections requires high-quality architecture, fulfilling functional, technological and economic demands, but also entailing a cultural dimension, thereby a coherent spatial syntax and formal expression.

For architects and designers, this is a call to leave behind self-referential gestures and embrace instead a thorough understanding of the relationships between identity features and scenarios of transformation. Moreover, a comprehensive, culture-centred approach on how to design the places in which to live represents a common challenge for architects but also for different lines of work and of expertise, such as engineering, technology, materials sciences or social studies, among others.

Future challenges like migration, demographic and climate change concern both urban and rural areas. In fact, EU policies also concern the liveability and attractiveness of rural life (to counter rural flight) as a key field of action, requiring infrastructures for mobility, but also wireless access, co-working spaces, as well as spaces for innovative farming practices.

Along this line of thought, and building on experience gained in the framework of the EU-funded project MODSCAPES², this proposal targets a special category of rural areas, namely large-scale agricultural development schemes implemented in the 20th century in different socio-political contexts across Europe.

Aimed at modernizing the countryside, these were pivotal settlements experiments and, since the very beginning, represented a common challenge for the ideas, and tools, of architects and engineers, agronomists and social scientists, planners and landscape architects. The combined effect of political programmes, scientific knowledge and up-to-date technology, exploited (or subverted) the natural order triggering the modernisation and resettlement of entire regions.

¹ Cf. Towards a shared culture of architecture. Investing in a high-quality living environment for everyone, EU work programme for culture 2019-2022.

² Modernist reinventions of the rural landscape, 2016-2019, <https://www.modscapes.eu/>. Cf. Simon Bell, Vittoria Capresi, Axel Fisher, Helena Maia, Cristina Pallini (eds), *Modernism, Modernization and the Rural Landscape*, SHS Web of Conferences, Brussels 2019.



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In today's Europe, these same regions may provide us with a unique opportunity to target long-term strategies to increase the overall quality of the living environment. This because the regions concerned provide a (largely underestimated) shared cultural heritage which stands today as a tangible evidence of recent European history. While the concept of "manmade landscape" imposes itself as a unifying paradigm, this proposal focuses on the specific role played by architecture, namely the emergence of design problems that had never previously existed or, if they did, were of subordinate importance. To name a few we may consider the emergence of new building types, along with problems of repeatability, cost-efficiency, compliance with standards, prefabrication, comfort, efficiency.

Applicants are invited to propose research-relevant case studies and focus their research on future challenges from a design-oriented approach, exploring on a case-by-case basis the relationships between identity features and scenarios of transformation.

This means:

- Critically assess academic literature on the present challenges and review existing policies (of rural development, territorial cohesiveness, environmental protection, landscape and heritage preservation...)
- Tackling these challenges at a local, national or European level. Fieldwork and focus groups with local stakeholders and citizens. Once we have stated that there is an emerging heritage, how do we protect it?
- Mapping and critically framing new design problems vis-à-vis future challenges for large-scale agricultural development schemes.

Assessment criteria:

In this project (along with the EU agenda for Higher Education 2017), architecture - both its production and interpretation a posteriori – stands at the intersection of different disciplines. Thereby, applicants must prove not only their high-profile scholarly qualities and their ability of conducting research with determination, but also their ability of crosschecking sources and research methods (i.e. grasping the reciprocal inductions between architecture, planning, landscape design and historical-contextual features).