



PhD in DESIGN - 39th cycle

INTERDISCIPLINARY Research Field: DESIGN E INTELLIGENZA ARTIFICIALE PER LA TWIN TRANSITION

Monthly net income of PhDscholarship (max 36 months)
€ 1195.5
In case of a change of the welfare rates during the three-year period, the amount could be modified.

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 "INFORMATION TECHNOLOGY".</p> <p>See https://www.dottorato.polimi.it/?id=422&L=1 for further information.</p> <p>The centrality of digital technologies combined with social innovation has emerged as a response to the increasingly pressing challenges facing governments. These have highlighted several tensions that underline the need to rethink existing governance and administrative models, following two trajectories:</p> <ul style="list-style-type: none"> - Co-creation and user-centricity in public services, areas where design plays an important role. By developing service design, design has built knowledge useful for the management of complex processes, in which recipients are co-creators and co-producers; - Emerging models of data governance and algorithmic decision-making, where AI-related research plays a major role in supporting institutions and administrations to responsibly rethink their organisational mechanisms. <p>Until now, these approaches have been studied and applied independently of each other. However, a very strong potential exists in the interdisciplinary exploration and contamination between co-creation and algorithmic tools. The objective of this research is to define a robust theoretical framework and methodology that can support the transformation of public administration from two main perspectives: 1) the process</p>



	<p>of defining decision support systems that involve masses of citizens in the data acquisition and policy implementation phases, 2) the definition of strategies and ways in which public administration can be able to responsibly use the data at its disposal. As emerged in this pandemic period, given a social objective (e.g., to monitor the situation of contagions to decide on actions) it is extremely important to identify which data are significant, how to collect them in compliance with social constraints (e.g., privacy), how to analyse them correctly (e.g., with which AI techniques), how to design interventions that have the desired effect. It also emerged that many actions cannot be effective without the direct involvement of citizens. When masses of data are to be processed, it is important that they are properly identified and acquired with the active involvement of data producers themselves, i.e. the citizens. Since we are dealing with masses of data, the technologies involved are nowadays based on AI. In this context, the designer has an essential role in the development of the system, starting from the objectives provided by the decision-makers (politicians) to define the actions for implementation by responsibly involving citizens. With this in mind, the ultimate aim of this research is to identify ways and opportunities to connect design culture and AI.</p>
<p>Methods and techniques that will be developed and used to carry out the research</p>	<p>Thanks to the interaction with external bodies, the doctoral student will study the current decision-making process and identify a methodology that integrates AI into the various phases of the organisation's action, with the aim of identifying which data are significant, how to collect them in accordance with social constraints, how to analyse them correctly, and how to design interventions that have the desired effect. With this in mind, the research also aims to study how to responsibly involve citizens in the phases that are most closely linked to them and are currently critical (data collection, action), while also taking into account all the other aspects. The identified methodology will be evaluated through the implementation of prototype interventions developed with external bodies.</p>



<p>Educational objectives</p>	<p>The candidate will acquire knowledge on design research in the context of public administration and public services and will work in close connection with AI experts to understand what “algorithm” means and entails in the public sector. This is an extremely important and emergent area of research and practice, at the forefront of current European priorities (i.e. at the crossroad between the Twin Transition and the New European Bauhaus). The candidate will acquire skills on integrating human-based approaches and AI technologies, dealing with topics that connect engineering, science and design.</p>
<p>Job opportunities</p>	<p>Both public administrations and businesses are increasing their interest in and investments on digital transformation and are looking with special interest at hybrid profiles capable of combining a human-centred perspective with new and disruptive technologies. Organisations (ranging from local municipalities to the European Commission, but also public and private research centers) have already begun looking for these new multidisciplinary profiles. Throughout the research, the candidate will be involved in research and innovation projects in direct collaboration with these organisations. The research will also involve collaboration with international organisations and experts in the field.</p>
<p>Composition of the research group</p>	<p>2 Full Professors 0 Associated Professors 1 Assistant Professors 2 PhD Students</p>
<p>Name of the research directors</p>	<p>Marzia Mortati, Andrea Bonarini</p>

<p>Contacts</p>	
<p>email: marzia.mortati@polimi.it phone number:0223995915</p>	

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



Scholarship Increase for a period abroad	
Amount monthly	597.75 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information

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

max 4.872,90 euros per student (total for 3 years)

Teaching assistantship: availability of funding in recognition of supporting teaching activities by the PhD student there are various forms of financial aid both for research and teaching activities. The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.

Computer availability: 1st year, 2nd year and 3rd year: Each research group will supply PhD student with a computer, if necessary.

Desk availability: 1st year, 2nd year and 3rd year: Each research group will supply phd student with a desk.