

Match of the vacancy within the Strategic Goals of the Department

Global Strategic Goals of the Faculty of Engineering and Architecture at Ghent University

New members of the Professorial Staff (i.e. Assistant Professors, Associate Professors, Full Professors and Senior Full Professors) are expected to develop (research) activities aimed at engineering applications or architecture and to join, as far as is possible, existing research groups rather than to separately create (very) small new and isolated research groups.

The research activities within the Faculty of Engineering and Architecture are only partially realized by employees that are funded directly by the government (Professorial Staff, Assisting Academic Personnel, and Administrative & Technical Personnel) or through research funds provided by the university itself. Indeed, a considerable share of research activities within the Faculty of Engineering and Architecture is realized by researchers that are funded through external national/Flemish or international resources (e.g., FWO-Flanders/Research Foundation-Flanders, VLAIO-Flanders/Flanders Innovation & Entrepreneurship, EU, contract research in cooperation with companies). While the latter concerns external funding, the research activities are in fact managed by internal Professorial Staff members that succeed in acquiring external funding based on their expertise and experience.

If the Faculty of Engineering and Architecture wants to safeguard its competitive position (internationally and nationally), it will continuously have to succeed in acquiring the necessary external funding. It is therefore the Faculty's strategy to preferably create vacancies in domains in which chances are high that such external funding can be acquired. This aspect is explicitly considered during the appointment procedure of Professorial Staff members within the Faculty of Engineering and Architecture.

Strategic Goals of the Department - match with the vacancy

The Department of Architecture and Urbanism focuses on providing high-quality education, training young innovative researchers and conducting high-quality academic research, with particular focus on the design discipline embedded in a broad knowledge of architecture, building technology and urbanism. More specifically, the department offers teaching and research in (a) theory and history of architecture, construction and urbanism; (b) building technology, building physics and building systems; (c) urbanism, urban planning and architectural design, along with design-related knowledge areas, including graphic communication and computer-aided design. The Department also provides scientific and social services based on the expertise available with respect to the above-mentioned academic disciplines.

With regard to teaching, the Department strives to develop a broad and innovative curriculum in architectural design, supported by the technical and scientific engineering knowledge and by the historical and theoretical knowledge of the broad context in which architecture and urbanism are created. Teaching, particularly during the master's program, is supported on the one hand by research activities carried out in the various research groups and laboratories of the department, and on the other hand is related to design practice and current developments in architecture and urbanism. Throughout the curriculum, increasing attention is paid to current shifts within the discipline of architecture, in relation to broad societal challenges (e.g. climate change, energy transition, circular building economy, migration, genAI, etc.) and how these can lead to new forms of (design) practice. Teaching builds on a broad intellectual and cultural openness and active internationalization of research and teaching.

The responsibility for the field of Digital Design Techniques (DOT/DDT) within the department currently lies with three part-time visiting professors with a part-time teaching assignment (50% + 10% + 10%), two part-time (unpaid) visiting professors with a research assignment (20% + 10%) and a number of teaching assistants and researchers. In order to embed teaching and research more structurally in the staff, and to implement a shift in emphasis whereby the relationship between the field of DOT and the design disciplines (from architectural design to urban planning) is strengthened, the department wants to opt for the replacement of these splintered mandates with a full-time ZAP mandate in the field of Digital Architectural Design / Digital Architectural Design (DAO/DAD) from the academic year 2025-2026.

The newly hired professor should have a proven expertise in the field of computer-aided architectural design, with strong roots in the engineering sciences. The candidate is expected to have demonstrated expertise in a range of current software programs deployed in the broad field of digital design techniques (from CAD to Rapid prototyping, parametric and generative design, 3D visualization engines). In addition, the newly hired professor should have the necessary skills to provide education on current developments in data management and knowledge-based design tools being integrated into architectural and urban design processes today (from Building Information Modeling (BIM) to Geographic Information Systems (GIS)). Finally, the candidate is also expected to have a vision of the potential impact and significance of genAI on architectural and urban design.

A major emphasis of the responsibilities of the newly recruited professor will be on teaching. They will lead the remaining team of visiting professors and assistants and will be responsible for the organization and partial delivery of education in the field of DOT and DAO within both the Bachelor's and Master's programs in engineering-architect (theory classes, practical seminars, master's theses). This teaching should be developed in close dialogue with the members of staff active in the field of architectural design and design media. They should be willing to work in an interdisciplinary context and actively pursue collaborative teaching partnerships at different

levels (both within the department and the university, and ideally also nationally and internationally). An interest in innovative forms of teaching is a plus.

In terms of research, it is expected that the candidate has experience with and continue to engage in projects that focus on the future role of Digital Design Techniques in architectural and/or urban design. This may deal with aspects of advanced visualizations, of developing forms of data management relevant to design, or the utility and drawback of genAI. Importantly, this role is considered throughout the entire process, from sketch design to realization and possibly even post-delivery monitoring of a project. A broad understanding of recent international developments of this topic is expected, and an interest in framing the future development of this technological interplay with design practice in a historical perspective is an asset.