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

In the Liquid Crystals and Photonics group, research is focused on the physics of materials and components in which there is an interplay between electrical and optical phenomena. The group is involved in research and development of liquid crystal devices, electro-optic modulators for integrated photonics, electrical and optical characterization of particles in liquids, novel types of photovoltaic devices, etc. Thorough insight into the physics of such materials or components is obtained through theoretical and numerical calculations, which are linked with experimental data. The group has several labs which are equipped for electrical, optical or electro-optical characterization. The group operates several process bays in the UGent NaMiFab cleanroom which are equipped for thin film deposition, liquid crystal device assembly and evaporation of organic materials. In addition, the group operates high-end tools which are shared with different research groups such as e-beam lithography or FIB-SEM.

Members of the research unit are responsible for education in the Bachelors and Master of Science in Engineering (Engineering Physics, Photonics Engineering and Electrical Engineering). The courses vary from basic engineering courses to applications in the domains of electrical networks, optical and electrical materials and sustainable energy.

The candidate should be able to take responsibility of a number of optical setups and seek funding for expanding the experimental facilities for electrical, optical or electro-optical characterization. Experience in micro- and nanofabrication in a cleanroom environment is a plus and the candidate should express which research plans are linked with the cleanroom facilities.

The candidate should be able to guide PhD students, organize project work, collaborate with industrial partners and apply for funding in the field of electro-optics. In the first years, the candidate should be able to co-supervise some of the PhD students that have already started working in the field of liquid crystals but will be given the freedom to perform research and supervise students in the broader field of electro-optics. In addition, the candidate will be responsible for a few teaching assignments in the bachelor or master program of engineering physics, photonics and/or electronics.