

## HYDROPHILIC STRUCTURES

*Kutay KARABAĞ\**, *Zeynep ŞAHBAZ\*\**

### ABSTRACT

This text intends to present the outcome of the graduate design studio titled 'hydrophilic structures', as well as to discuss the potential and design parameters of the waterfront at Santralİstanbul campus. Studio research is structured for revealing the potentials of floating spaces in connection with the public spaces. Concepts such as floating structures, interaction with water and public waterfront may initially refer to human utilization however, non-human living organisms are critical for their decisive role on the qualities of the water itself. Through this perspective, it is required to reveal the ecological cycles as design input when working in relation to water, and any possible environmental effects have to be handled as design parameters.

Design of floating structures and water interaction had been a niche inside the traditional culture and practice of architectural design, whereas design and production skills in connection with water had historically developed mostly in the field of engineering and transportation. On the one hand, floating structures and their potential for unconventional spatial experiences have recently engaged in the focus of contemporary design culture, mainly due to the increasing density and lack of public spaces on the land.

In parallel, the presented design-research covers principal case-studies of floating spaces, the buoyancy principles, various material tests and essential variables of ecological dynamics in Haliç as a general framework. The subsequent prototype, developed with the above intentions, serves for a specific bird population utilizing Haliç as a part of their life cycle, rather than human utilization. Through this way, the project intends to contribute to ecologic cycles of the small habitat as well as, though indirectly, to the public life. On the one hand, it triggers a discussion for architectural design experience where users are non-human. The proposal, designed through computational tools and fabricated through robotic technology, concentrates on various ways of interaction with water and acknowledge distinct formal potentials for the birds, as the users of space.

---

\* Studio instructor and full-time lecturer in Bilgi University, Department of Architecture, İstanbul, Turkey, kutaykarabag@gmail.com

\*\* Graduate student, History, Theory and Criticism in Architecture in Bilgi University, İstanbul, Turkey, zeyneshahbaz@gmail.com

**Keywords:** Floating Structures, Hydrophilic Design, Robotic Fabrication, Floating Space, Haliç

***The full version of this paper is selected to be published in the special issue of International Journal of Architecture and Planning (ICONARP) after the peer review process.***