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Editorial

Mehmet Topçu (Editor in-Chief)

JOURNAL of DESIGN for RESILIENCE in ARCHITECTURE and PLANNING (DRArch) has published Volume 3 Issue 2, which includes up-to-date research problems with qualified articles. DRArch began its broadcast life with the excitement, enthusiasm and assertiveness with clear goals, emerging from need and a strong team. The journal progresses rapidly within its own dynamics. The feedback shows that we are not the only ones who believe in DRArch, but the readers as well.

The articles in In the Volume 3 Issue 2 can be categorized under three different headings. The first group is the studies focusing on Istanbul. Current problems and solution suggestions in Istanbul regarding urban morphology, residential and office buildings are presented. This group also includes articles on energy efficiency in office buildings and high-rise buildings. The second group is articles focusing on innovative facilities and innovations related to materials, conservation, land use/land cover and of geospatial information technologies. The third group is in the field of education, which we attach importance to Drach in every issue.

The first article of the first group is written by Eda Coşkun, Ayşe Sema Kubat. The title of this article is

“Study for a morphological assessment: impact of a new project on the urban form of Galata, Istanbul”. The aim of this study is to determine the change and development of the Galata region over time with the Conzenian approach and to reveal the impact of the Galataport project on the region and the use of the coastline by space syntax method.At the end of this study it is observed that the Galataport project completed together with the morphological structure led to functional changes in the field and caused differences in the characteristics of the use of space. It has affected the area and old trading functions began to transform the leisure and tourism sector.

Another interesting paper deals with İstanbul titled as “Housing typologies from different markets and prices throughout Istanbul” by comes from Evren Ozus. This study focuses on rapid growth of İstanbul due to national and international migration during the last two decades. In addition, multi-center development of the city, and construction of peripheral highways, bridges, and metro systems have affected the economic, cultural and physical structure of the city. The purpose of this paper is to illustrate the changes of the housing types and prices from the center to the periphery.

The article titled as “Dynamic analysis of Istanbul office markets with highest demand and office rent” written by Nesil Aybar, Vedia Dökmeci also addressed İstanbul. This study investigated the growth and decline of office rents in office markets which have highest demand and office rents. According to the results of the study, while office rents in the office markets with growth potential have increased, that of the markets with supply increased dramatically between 2011 and 2016. Emre Ilgın also conveyed important new information about high-rise buildings in this issue. The study called “Use of aerodynamically favorable tapered form in contemporary supertall buildings” will be a basic guide for design and construction professionals including architectural and structural designers, and contractors. This important issue is explored in this article with data gathered from 41 supertall case studies, considering location, function, structural system, and structural material as well as the aerodynamic taper effect.

In this issue innovative approaches to materials, conservation, land use and geographic information technologies contains striking scientific findings. Ayşenur Karakaya and Seden Acun Özgünler’s paper “An evaluation of smart windows in a reference office building in Kayseri” argues the the energy performance of smart window systems has been evaluated comparatively with a traditional window system in a reference office building in Kayseri, Turkey. This study aims to evaluate the energy performances of smart windows and reveal their advantages and disadvantages over the available window system in this climate condition. In this context, smart window systems have been classified and explained their properties. In the simulation part, a reference office building has been modeled with each smart window system to evaluate their energy performances comparatively.

The fascinating piece of work comes from Süha Berberoğlu, Anıl Akin, Onur Şatir, Cenk Donmez, Ahmet Çilek, and Merve Şahingöz with the article titled “Geospatial Technologies for Physical Planning: Bridging the Gap Between Earth Science and Planning”. This study explores how digital technologies are reshaping physical planning and design. While the potential of digital technologies is well documented within physical planning and

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visualization, its application within practice is far less understood. This paper highlights the role of the geospatial information technologies in encouraging a new planning and design logic that moves from the privileging of the visual to a focus on processes of formation, bridging the interface of the earth science and physical planning. Another interesting paper titled "Assessing the performance of machine learning algorithms in Google Earth Engine for land use and land cover analysis: A case study of Muğla province, Türkiye'' comes from Hazal Yalçın-Bayrakdar, Mehtap Özenen-Kavlak, Burcu Yılmazel, Alper Çabuk, in which they focus on the creation of a 4-class LULC map of Muğla province over the Google Earth Engine (GEE) platform by utilizing three different machine learning algorithms, namely, Support Vector Machines (SVM), Random Forest (RF), and Classification and Regression Tree (CART), and on comparison of their accuracy assessments. Sebahat Sevde Sağlam and Seden Acun Özgünler claims that considering the various negative effects of polymers on the environment, biopolymers could be seen as a strong alternative. The study called "An experimental study on production opportunities of biocomposite by using fungal mycelium" is tried to find the most efficient ratio among different mixing ratios by using the mycelium of the genus Pleurotus Ostreatus and the same raw materials.

We believe in the strong relationship between the concept of resilience and education, which is necessary when designing the places, cities, and lives of our future. That is why DrArch try to take place to education in every issue. The article on education in this issue came from Iranian researchers. Shahab Abbaszadeh, Behrooz Khosrowjerdi, Zohreh Sadat Seyedmoradi focused on design process in their article called "To develop a model for design protocol in the research-based design process in architecture education". The aim of this study is to develop a model that can be used in the architecture educational system. We hope this research will be useful to all designer and educator.

I would like to extend my deepest gratitude to all participants and all our readers for the support they provide to the Journal. And I would like to a special thanks to the referees. We look forward to your comments, contributions, suggestions, and criticisms.

Best regards...

Following names that provided valuable contribution as referees of articles in this issue are:

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DRArch's objectives are:

- to question how future building technologies are revolutionizing architectural design, city planning, urban design, landscape design, industrial design, interior design and education,

- to catalyze the processes that lean on interdisciplinary and collaborative design thinking, creating a resilient thinking culture,

- to improve the quality of built environment through encouraging greater sharing of academicians, analysts and specialists to share their experience and answer for issues in various areas, which distributes top-level work,

- to discover role of the designers and design disciplines -architecture, city planning, urban design, landscape design, industrial design, interior design, education and art in creating building and urban resilience,

- to retrofit the existing urban fabric to produce resilience appears and to support making and using technology within the building arts,

- to discuss academic issue about the digital life and its built-up environments, internet of space, digital in architecture, digital data in design, digital fabrication, software development in architecture, photogrammetry software, information technology in architecture, Archi-Walks, virtual design, cyber space, experiences through simulations, 3D technology in design, robotic construction, digital fabrication, parametric design and architecture, Building Information Management (BIM), extraterrestrial architecture, , artificial intelligence (AI) systems, Energy efficiency in buildings, digitization of human, the digitization of the construction, manufacturing, collaborative design, design integration, the accessibility of mobile devices and sensors, augmented reality apps, and GPS, emerging materials, new constructions techniques,

-to express new technology in architecture and planning for parametric urban design, real estate development and design, parametric smart planning (PSP), more human-centered products, sustainable development, sustainable cities, smart cities, vertical cities, urban morphology, urban aesthetics and townscape, urban structure and form, urban transformation, local and regional identity, design control and guidance, property development, practice and implementation.

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Editorial Team

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