

Editorial

Havva Alkan Bala (Co-Editor)

Entering the year 2025 with the energy of fresh and invigorating beginnings, the Journal of Design for Resilience in Architecture and Planning (DRArch) continues its trajectory of growth while steadfastly maintaining its commitment to quality and high standards. Through our research articles, esteemed contributors, and the inclusion of new reviewers from diverse disciplines, DRArch is embarking on a transformative new era.

We are proud to publish Volume 5, Issue 3, which opens with innovative ideas and commences with a study titled “Clay 3D Printing: Exploring the Interrelations of Materials and Techniques.” In this article, Asena Kumsal Şen Bayram and Emel Cantürk Akyıldız aim to develop an algorithm for optimizing clay 3D printing. The algorithm’s inputs are derived by synthesizing the findings of previous research with specific clay properties selected from various Anatolian regions, utilizing the design of experiment methodology. The design parameters include angle, profile, and height; printing parameters encompass compressor pressure, speed, and layer height; and material parameters are assessed through drop spike, tube pressure, and flow rate tests. After defining the inputs and their computational ranges, the algorithm was tested using various inputs and corresponding physical prints to evaluate its recommendation capability. The test prints indicated that the algorithm’s suggestions for design, printing, and material parameters were suitable for the given inputs. While the current research does not yet serve as an expert recommendation tool, it establishes a foundational framework for further development.

The second article, titled “Importance of Indicators in Sustainable Urban Transformation: The Bağcılar (Istanbul) Sustainability Index Experience,” explores sustainability criteria as a means to make the world a more livable place. Authored by Sezen Tarakçı and Gülşen Pelin Olcay, this study emphasizes the critical role of sustainable urban transformation practices within the framework of the Sustainable Development Goals. The authors discuss the methodologies and challenges encountered during the development of a Sustainability Index tailored for Istanbul’s Bağcılar district.

Tuba Sarı, Nurhilal Burak, and Rümeyşa Bayar, in their study “From Commerce to Art: Transformation of Intervention through the Interactions of Virtual and Urban Space in Karaköy,” highlight a novel form of urban intervention through virtual spaces. This research examines how virtual environments can serve as a mode of intervention in urban spaces, focusing on the transformation of ordinary commercial sites into artistic urban spaces. The fieldwork, conducted along Tersane Avenue, Mumhane Avenue, and Ali Paşa Değirmeni Street in Karaköy, documents the evolution of these areas from commerce hubs to sites of collective artistic expression.

In a world where resources are increasingly scarce and global warming continues unabated, it is imperative for researchers to focus on energy efficiency, heating and cooling systems, and their relationship with the built environment. This issue includes several articles addressing these vital topics. Mustafa Özdemir and Ayça Gülten, in their article “Effect of Phase Change Materials on Building Heating and Cooling Loads Considering Different Wall Combinations,” conducted energy analyses on a sample building. Their research explored 39 scenarios involving various combinations of materials (brick, concrete block, aerated concrete) and insulation materials, both with and without phase change materials (PCMs). Building heating and cooling loads were assessed for the coldest and hottest days of the year, as well as the total annual energy demand.

Ceren Aydan Nasır, in “Field Study on Determining the Impact of Design Decisions on Energy Efficiency at Settlement Scale,” examines the impact of design decisions on energy efficiency in a multi-unit project in Sakarya’s Serdivan district, utilizing Autodesk Forma for solar, microclimate, and comfort analyses supported by artificial intelligence. İlknur Zeren Çetin’s article, “The Effects of Sinop Province’s Relative Humidity Values on Bioclimatic Comfort and Urban and Landscape Planning,” evaluates how monthly average humidity values influence planning strategies in different districts of Sinop.

Addressing global risks, Barış Barış and Menşure Kübra Müezzinoğlu, in “Diyarbakır Hasan Pasha Inn: A Thorough Evaluation of Risk Analysis and Accessibility Concerns,” investigate the preservation of cultural heritage through improved accessibility and safety measures at the Hasan Pasha Inn in Diyarbakır. Similarly, Barış Ergen’s article, “The Effects of COVID-19 on the Agglomeration of High-Tech Knowledge-Intensive Business Services in Ankara, Istanbul, and Izmir,” analyzes the pandemic’s impact on employment in high-tech sectors.

Esra Sivri İçöz and Ahmet Tuğrul Polat, in “Investigation of the Relationship Between Physical Activity and Park Utilization in Konya City (Karatay) Using the SOPARC Method,” assess the physical activity levels of park users and provide design recommendations to encourage greater use of parks for recreational purposes.

Another noteworthy contribution comes from Deniz Yıldız Uslu, Hafith Mohammed Sulayman Almansouri, Amragia H. Mostafa Elahsadi, and Mehmet Çetin. Their article, "Towards Sustainable Cities: Evaluating the Distribution and Functionality of Green Spaces in Atakum," employs GIS analyses to assess disparities in green space accessibility in Atakum, Samsun, and offers strategic urban planning recommendations.

Zafer İslam Taşdemir and Aslihan Öztürk, in "A Reading of 'Place Attachment' in Spatial Perception: The Case of KTU Department of Architecture," explore the emotional, cognitive, and behavioral bonds between individuals and spaces, proposing strategies to improve "non-places."

Finally, Özge Zenter, in "Flexible Model Proposals for Post-Disaster Temporary Housing in Architectural Design," presents student-designed solutions for disaster-response shelters, emphasizing flexibility, portability, and modularity in both education and practice.

As a multi-stakeholder independent organization, DRArch continues to foster academic innovation and collaboration. We extend our best wishes for a prosperous 2025, filled with advancements in science, technology, peace, and meaningful endeavors.

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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