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DEPARTMENT OF ARCHITECTURE

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Coordinator: Assoc. Prof. Dr. İpek Gürsel Dino

12:30 - 13:00**Hüseyin Polat****Supervisor:** Assoc. Prof. Dr. İpek Gürsel Dino**Jury:** Assoc. Prof. Dr. Funda Baş Bütüner

Assoc. Prof. Dr. Ayşem Berrin Çakmaklı

Towards Net-Zero Cities:**An Assessment of Computational Tools for Decarbonization Strategies in the Built Environment**

The urgency of addressing climate concerns has led to an increased focus on decarbonization strategies in the built environment, particularly in the context of creating net-zero cities. Net-zero cities aim to offset the emissions they generate with the same amount of carbon sequestration or removal. This objective requires integrated and interdisciplinary strategies, engaging multiple stakeholders including architects. Although various studies have been focused to develop such strategies, the lack of holistic and bottom-up approaches to the carbon footprint issue of the built environment is among the obstacles that prevent existing strategies from achieving their intended results.

To aid decision-making processes, computational tools play a pivotal role in assessing the carbon emissions of design choices, modeling energy consumption, and optimizing resource allocation. As urban and climatic data has become significantly more detailed and comprehensive, modeling, simulation-based approaches, and various data-driven and geospatial techniques have become effective mediums for mitigating the impacts of different carbon emissions including operational and embodied carbon. However, the proposed models in the majority of the existing research focus on only one of these carbon emissions in the built environment, thus omitting the potential for a more comprehensive perspective to aid decision-making processes. This study aims to demonstrate the necessity of a holistic model that enables the assessment of both operational and embodied carbon

in the built environment with computational tools. In this regard, it presents an overview of decarbonization strategies in the built environment, encompassing both operational and embodied carbon, and highlights the role of computational tools in facilitating the transition towards net-zero cities.

Keywords: net-zero cities, decarbonization in the built environment, operational and embodied carbon, computational tools

13:00 - 13:30**Çağrı Burak Başkol****Supervisor:** Assoc. Prof. Dr. Ela Aral**Jury:** Assoc. Prof. Dr. Funda Baş Bütüner,

Prof. Dr. Özlem Erkarıslan

Mapping Urban Potentials: Exploring Vacant Spaces and Their Offerings for Spontaneous Events and Public Uses

I intend to create an urban mapping of vacant spaces within the urban fabric in order to investigate their potentials and bring an architectural criticism/evaluation of the tectonics of these places in relation to public uses. Mapping as a medium of documenting and observing an urban fabric as nexus of relations, consonances, and disruptions will be an important tool throughout this research. The map assembles and exhibits the things hidden or out of sight, tangible or abstract, and seemingly disconnected. These connections and disruptions have the potential to come forth spontaneous events through the public space. Moreover, vacant spaces have the potency to host and link these events. The vacancy is related to emptiness, obscurity, dereliction, abandonment, and voids. These spaces have equivocal characteristics that lack a social identity within the public space. Social space reflects articulations among physical spaces, daily routines, and social interaction. Ignasi de Sola Morales uses the term "Terrain Vague" for these places, and he states that these spaces are "internal

to the city yet external to its everyday use.". The link between the lack of use, occupation, and the sense of liberty and expectation is critical to grasping the expressive possibilities of the vacant spaces' equivocal conditions. The mapping will reveal the relationships between these vacant spaces and discuss possible forms and potentials of connectivity between these spaces. After these discussions, the potential of these mapped vacant spaces will be discussed to bring together different social groups and activities within the urban fabric.

Keywords: mapping, vacant space, ambivalent space, diversity, public space

13:30 - 14:00**Ayşen Çerşil****Supervisor:** Asst. Prof. Esin Kömez Dağlıoğlu**Jury:** Assoc. Prof. Dr. Funda Baş Bütüner,

Assoc. Prof. Dr. Olgu Çalıışkan

The Spatiality of Commoning in Co-Housing: An Exploration of Collective Food Production, Preparation, and Meal Sharing

The current food crisis in cities urges architecture and urban design disciplines to take action and develop alternative design strategies. In this respect, the concept of food commons can offer valuable references for architects and urban designers to address food-related challenges.

Food commoning practices, which encompass collective food production, preparation, and sharing can create more inclusive, socially vibrant, and resilient urban spaces. By blurring the boundaries between public and private, inside and outside, food commoning activities can also transform urban spaces into common spaces for social reproduction. In this respect, they act as a catalyst for social interaction, cooperation, and community involvement that help individuals to reshape urban environments according to their food-related needs. In fact, incorporating food and its associated activities into the existing social and

physical fabric of cities can enrich urban life and provide solutions for multi-dimensional problems that cities are facing today.

The study focuses on two specific collective activities of food commons: urban gardening and citizen-led food sharing practices. Urban gardening act as a means of reinterpreting urban spaces and promoting alternative ideas of solidarity and self-sufficiency. Additionally, the study explores the social benefits of food sharing such as cooking and eating together and emphasizes the importance of collective kitchens for research in architecture and urban design..

Keywords: food commons, urban gardening, food sharing, collective kitchens

14:00 - 14:30

İrem Senem Büyükkoçak

Supervisor: Asst. Prof. Esin Kömez Dağlıoğlu

Jury: Prof. Dr. Güven Arif Sargin,

Assoc. Prof. Dr. Olgu Çalışkan

Architects as Activists: Solidarity, Collective Action, and Labor

The devastating earthquake that occurred on February 6th, 2023, in the southeastern region of Turkey has sparked renewed discussions on solidarity in architecture. Architects have realized the importance taking responsibility for the destructive consequences of profit-driven regulatory controls prioritizing financial gain over safety and wellbeing. In response, the architecture scene has actively organized and participated in voluntary, temporary interventions to assist the earthquake victims in the affected region. This stance has led to a shift in focus towards addressing the inequalities caused by capitalism and existing power structures since an increasing number of architects are questioning the close relationships between "starchitects" and powerful entities prioritizing profit-driven land development.

The transformation of the discipline extends beyond moments of crisis. Many architects refuse to remain indifferent to unfair working conditions and exploitative circumstances. Instead, they seek alternative positions that prioritize solidarity within the

profession and aim to support each other through collective consciousness. In recent years, significant discussion and emphasis on the need for unionization and a reevaluation of the relationship between architecture and labor have been emphasized.

This study examines the various dimensions of solidarity within architecture, as outlined above. One aspect involves solidarity with disadvantaged populations and addressing their needs within the built environment through architecture collectives. By examining particular national examples where architects have aligned themselves with disadvantaged groups, valuable insights into solidarity can be gained. Another dimension of solidarity in architecture involves fostering unity within the architectural community. This study explores the motivations behind these solidarity approaches and compares similar cases. It seeks to analyze the forms and realms of solidarity within architecture, highlighting promising aspects and areas that require improvement.

Furthermore, it raises critical questions about the nature of solidarity in architecture and its beneficiaries. The voluntary nature of these solidarity approaches raises concerns from a labor perspective, as unfair working conditions prevail in the profession worldwide. A critical analysis of these cases from a broader perspective would contribute to further developing solidarity actions within architecture. Examining these approaches to solidarity would help conceptualize the relationship between labor and collective action within architecture organizations operating within solidarity networks.

Keywords: solidarity architecture, architecture collectives, labor

14:30 - 15:00

Mert Ayaroğlu

Supervisor: Prof. Dr. Celal Abdi Güzer

Jury: Prof. Dr. F. Candaş Bilisel,

Assoc. Prof. Dr. Olgu Çalışkan

The Relationship Between Urban Transformation and Public Space: An Alternative Approach to Urban Sustainability

Sustainability is a general concept which combines different scales and multiple disciplinary issues. Energy efficiency and micro-scale environmental benefits are most popular representations of sustainability. However such a reductionist understanding of sustainability and solutions designed on the basis of individual systems are far from creating economically, socially or environmentally efficient solutions. The extent to which the concept of sustainability corresponds to the conditions of Turkey on an urban scale is another important discussion topic of this thesis. In the last two decades, there has been an ever-increasing level of change in our cities. On the one hand, the urban transformation law and its related practices continue to carry out a reconstruction activity, mainly on the basis of parcels, on the other hand, large-scale investments made in state lands permanently change the characteristics of cities. It will be examined how the urban transformation process, which has mainly emerged with the aim of structural improvement, contributes to the environmental, social and cultural development of cities, beyond the renewals on the basis of parcels. One of the fundamental components of urban sustainability is the existence of public spaces and their fair use by the citizens. From this point of view, questioning the reproduction of the public space in the urban transformation processes and the sustainability of the public space in the city will be one of the important evaluation points. Within the scope of this thesis, the relationship between the concept of sustainability and public space and its equivalent in urban scale are questioned with a holistic approach. In this context, it is aimed to develop typological alternatives for the urban transformation processes and their results through

case studies in Turkey within a wider perspective of urban sustainability.

Keywords: urban sustainability, urban transformation, public space, environmental justice

15:00 - 15:30
Utku Coşkuner

Supervisor: Prof. Dr. F. Cânâ Bilsel
Jury: Asst. Prof. Ekin Pınar,
Asst. Prof. Başak Uçar

Animating Architecture: Animation in Architectural Design

This study investigates the relationship between animation and architecture, aiming to expand the capabilities of architectural animation as a tool for design and representation. It challenges the notion of architecture as a static and permanent entity, emphasizing its temporal dimension and its continuous transformation within the surrounding context. The study acknowledges the existing limitations of current animation techniques, primarily employed for showcasing architectural products. To address these limitations, a critical examination is proposed with the objective of expanding the capabilities of architectural animation. The research sets out to explore the potential of animation to enhance spatial understanding, extend its scope beyond traditional modes of representation, and explore the dynamic relationship between space, time, and human experience. By redefining animation as an active participant within the dynamic flows of the architectural design process, this study seeks to transform its role in architectural practice. It seeks to push the boundaries of architectural animation and proposes new relationships between animation and architecture.

Keywords: architectural animation, animated representation in architecture, motion and time in architectural design

15:30 - 16:00
Sıddı Zeynep Yılmaz Kılıç

Supervisor: Assoc. Prof. Dr. Haluk Zelef
Jury: Prof. Dr. Celal Abdi Güzer,
Assoc. Prof. Dr. Meltem Şenol Balaban

The Impact of Displacement on Making Home in the Aftermath of Natural Disasters: A Study of Earthquake-Affected Communities from a Spatial Perspective

Natural disasters, exemplified by earthquakes, cause radical changes in the built environment and sufferers' everyday lives, leading to various forms of displacement. In the context of displacement, the act of making home is affected by factors including spatial, psychological, social, cultural, economic, experiential and temporal components. Hence, tension arises between home-making and displacement, which is described as contradictory in architectural literature (Beeckmans et al., 2022, p.15). The investigation of the complex interaction between these concepts has been delimited to the social sciences realm. A comprehensive understanding of the short- and long-term effects of disaster cannot be provided without considering the architectural perspective when analyzing the contradictory relationship between homes and displacement. This apparent contradiction necessitates a critical examination that analyzes lived experiences, multiple subjectivities, multiscale of displacement and multidisciplinary of home across temporal and spatial dimensions. This paper aims to fill the existing gap in the architectural literature by exploring the complex relationship between making home and displacement in the disaster context. In this regard, the research focuses on the forms of displacement and how displaced individuals create or reproduce home under diverse circumstances in the Kahramanmaraş earthquakes occurred on February 6, 2023. Furthermore, searching the spatial and social dynamics by examining the displacement and home with a multi-scalar approach is proposed. Hence, the main aim is to contribute architectural literature and practical insights or applications by comprehending the interaction between making home and displacement. This paper ultimately is an attempt to

develop architectural strategies that encourage a 'sense of home' while improving disaster resilience.

Keywords: natural disaster, making home, displacement, spatial perspective.

16:00 - 16:30
Melis Erdem

Supervisor: Prof. Dr. Celal Abdi Güzer
Jury: Prof. Dr. Lale Özgenel,
Prof. Dr. Meltem Yılmaz

Re-Visiting The 20th Century Planning Ideas Inspired from Nature: A Remedy for The 21st Century Urban Issues

There has been always link between architecture and nature as the latter inspired and altered architecture. However, with the rise of Industrial Revolution in the 18th century, this link has been severed, leading to estrangement from nature on different scales in architecture and built environment. As the founder of the term "fourth industrialization," Klaus Schwab states that the Industrial Revolution has resurfaced several times, and the world has entered its fourth stage. In fact, parallel to Schwab's theory, after the innovations set in the 18th century, several problems sprung up, escalating into major issues ranging from climate change, contamination, and vector-borne illnesses today. Consequently, cities now stand as a source for governing the climate crisis and delineating its route since the relationship between the city and nature has remained solely as an inspiration and has skirted away from being interactive and critical. Thus, it is no longer possible for architecture to exist without addressing these immediate concerns and reassess its relationship with nature again as it has entered a period to reckon with its past actions due to the glorification of industrialization. In the 20th century, new responses arose to remedy the problems that occurred due to industrialization and mechanization, embodying different movements, namely, Garden City, Eco-urbanism, and different figures, such as Lewis Mumford, Clarence Stein, and Patrick Geddes. Thus, this research aims at finding solutions related to urban issues in the 21st century through scrutinizing the examples in the 20th century. Thus,

following the models in the 20th century, this research will rethink and reassess the issues and potentials of today within a critical framework to produce a comprehensive model relationship, multidisciplinary with a renewed awareness of nature for the 21st century.

Keywords: nature, architecture, built environment, urban life, industrialization, well-being, sustainability