IAcSAS 2024

FINAL INTERNATIONAL UNIVERSITY

4TH INTERNATIONAL ARCHITECTURAL SCIENCES & APPLICATIONS SYMPOSIUM

May 30-31, 2024 / Final International University
Kyrenia, Turkish Republic of Northern Cyprus
Online and Face to Face

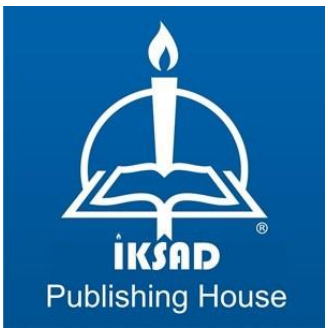
PROCEEDINGS BOOK

Editor in Chief
Prof. Dr. Atila GÜL

Assistant Editors
Prof. Dr. Öner Demirel
Assoc. Prof. Dr. Seyithan Seydoşoğlu
Assoc. Prof. Dr. Nafiya Güden
Asst. Prof. Dr. Seden Turamberk Özerden
Prof. Dr. Zeynep Üstün Onur



IKSAD Publishing House
ISBN: 978-625-367-814-2



IKSAD Publishing House

Institution of Economic Development and Social Researches

All rights of this book belongs to IKSAD Publishing House.
Without permission of the publisher (İKSAD), can't be duplicate or copied.
Authors of chapters are responsible both ethically and juridically.

(Licence Number of Publicator: 2014/31220)

TÜRKİYE TR: +90 342 606 06 75 USA: +1 631 685 0 853

E mail: iksadyayinevi@gmail.com

www.iksadyayinevi.com

Copyright © 2024 by İKSAD publishing house All rights reserved

IV. International Architectural Sciences and Applications Symposium

(IArcSAS-2024)

https://www.iarcsas.org/

May 30-31, 2024, Girne-Turkish Republic of Northern Cyprus

PROCEEDINGS BOOK

(Abstracts & Full Texts)

Editor in Chief

Prof. Dr. Atila GÜL

Assistant Editors

Prof. Dr. Öner Demirel
Assoc. Prof. Dr. Seyithan Seydoşoğlu
Assoc. Prof. Dr. Nafiya Güden
Asst. Prof. Dr. Seden Turamberk Özerden
Prof. Dr. Zeynep Üstün Onur

ISBN: 978-625-367-814-2

DOI: 10.5281/zenodo.13623830

All rights of this book belongs to IKSAD Publishing House.
Without permission can't be duplicate or copied.
Authors of chapters are responsible both
ethically and juridically.

Layout Editors

Prof. Dr. Ümit Arpacıoğlu
Prof. Dr. H. Tendü Göktuğ
Assoc. Prof. Dr. Şirin Gülcen Eren
Assoc. Prof. Dr. Ertan Düzgüneş
Assoc. Prof. Dr. H. Berk Türker
Assoc. Prof. Dr. Ahmet Erkan Metin
Assoc. Prof. Dr. Meryem Bihter Bingül Bulut
Assoc. Prof. Dr. Sultan Sevinç Kurt Konakoğlu
Asst. Prof. Dr. Mert Çakır
Asst. Prof. Dr. Gizem Dinç
Asst. Prof. Dr. Yeter Çilesiz
Dr. Çağla Aydemir
Dr. Pelin Fırat Örs
Dr. Sibel Akten
Dr. Tuba Gizem Aydoğan
PhD Student, Neriman Gül Çelebi
PhD Student, Halime Gözlükaya
PhD Student, İskender Emre Gül
Masters's Student, Hatice Eda Gül
Undergraduate student, Seniye Ela Gül

ISBN: 978-625-367-814-2

DOI: 10.5281/zenodo.13623830

Cover Design:
Atabek Movlyanov

ISSUED: 30/08/2024

IV. International Architectural Sciences and Applications Symposium

(IArcSAS-2024)

https://www.iarcsas.org/

May 30-31, 2024
Girne- Turkish Republic of Northern Cyprus

CONTENTS

Titles	Page Numbers
Symposium ID	1
Organizing Board	3
Science and Advisory Board	6
Symposium Schedule	15
Symposium Photos	73
Abstract List	76
Abstract Contents	100
Full Text List	331
Full Text Contents	345-2177

SYMPOSIUM ID

SYMPOSIUM TITLE

IV. International Architectural Sciences and Applications Symposium
(IArcSAS-2024)

DATE AND PLACE

May 30-31, 2024
Final International University, Girne- Turkish Republic of Northern Cyprus

ORGANIZING

The Editorial Board of the Journal of Architectural Sciences and Applications,
Isparta, Türkiye.
(https://dergipark.org.tr/en/pub/mbud)

Institute of Economic Development and Social Research,
Ankara, Türkiye.
(https://www.iksadinstitute.org/)

Final International University,
Girne- Turkish Republic of Northern Cyprus
https://www.final.edu.tr/

PRESENTATION

Oral and Online Presentations

EVALUATION PROCESS AND POLICIES

All applications have undergone double blind peer review process. In addition, each paper was accepted and the process of publishing in the book was carried out through editorial oversight. The published papers were presented and discussed at the meeting.

Full texts and abstracts published in accordance with the Symposium Policy have been prepared in accordance with ethical rules and APA standards. Authors of all papers are both ethically and legally responsible.

AIM OF THE SYMPOSIUM

This Symposium aims to bring together qualified scientists from Türkiye and abroad on a common international platform under the umbrella of Architectural Sciences and to enable different disciplines to share their valuable research.

TOPICS OF THE SYMPOSIUM

- Planning (Planning theories, planning paradigms, types of planning, regional planning, watershed planning, landscape planning, urban planning, rural planning, planning and protection, spatial and temporal changes, site selection methods, etc.)
- Design (Design theories, Space, Building, Urban, Landscape, Rural, Village, Tourism, Recreational, Environment, Interior Architecture, Plantation, Industrial Products, Ecological, Universal, Disabled, etc.)
- Sociology / Psychology / Art / Philosophy / History / Identity / Theory / Aesthetics
- Protected Areas / Natural and Cultural Heritage Protection / Documentation / Renovation / Repair / Restoration / Soil sealing
- Tourism / Recreation / Cultural Tourism / Nature Tourism / Ecotourism / Archaeology
- Climate Change / Renewable Energy / Energy saving / Energy Transition / Water / Sustainability / Ecology/ Environment / Sustainable Development
- Smart and Ecological Cities / Urbanism / Landscape / Open and Green Spaces / Green infrastructure / Transportation / Urban Agriculture / Urban Renewal / Transformation
- Building Materials / Green Buildings / Urban Accessories and Furniture / Landscape materials/ Landscape Plant Materials and Using/ Plant Cultivation and Use
- Technology / Artificial Intelligence / Digital Architecture and 3D Software and Printer, GIS, Remote sensing
- Health / Pandemic / Food / Occupational Health and Safety
- Higher Education in Architectural Sciences / R&D / Scientific Researches / Publications
- Economic / Policies / Legislation / Management / Governance / Practices / Sectoral Problems
- Planning and Design Project Competitions and Processes /Applied Project

PARTICIPANTS COUNTRIES

Algeria, Azerbaijan, Germany, Hungary, India, Indonesia, Italy, Kazakhstan, Malaysia, Morocco, Nigeria, Portugal, Pakistan, Poland, Portugal, Romania, South Africa, Spain, Türkiye, Turkish Republic of Northern Cyprus, Vietnam

TOTAL ACCEPTED ARTICLES: 390

Number of Rejected Papers: 30
The Number of Accepted Papers from Türkiye: 182
The Number of Accepted Full Papers from Other Countries: 208

INDEX IN

Index of Academic Documents (IAD), Open AIRE, Google Scholor, ResearchGate, Britishindex Scientific Database

IV. International Architectural Sciences and Applications Symposium

(IArcSAS-2024)

https://www.iarcsas.org/

CHAIRS OF THE ORGANIZING BOARD

- **Prof. Dr. Atila Gül**
- Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta- Türkiye
- **Prof. Dr. Öner Demirel** –
- Kırıkkale University, Faculty of Fine Arts, Department of Landscape Architecture, Kırıkkale- Türkiye
- **Assoc. Prof. Dr. Nafiya Güden**
- School of Tourism and Culinary Arts, Final International University, Girne -TRNC
- **Prof. Dr. Zeynep Üstün Onur**
- Faculty of Architecture and Fine Arts, Final International University, Girne- TRNC
- **Asst. Prof. Dr. Seden Turamberk Özerden**
- Final International University, Girne -TRNC

SYMPOSIUM COORDINATORS

- **Assoc. Prof. Dr. Seyithan Seydoşoğlu**
IKSAD Scientific Support Coordinator
- **Atabek Movlyanov**
IKSAD Scientific Support Coordinator

ORGANIZING BOARD MEMBERS

- Assoc. Prof. Dr. Aminreza Iranmanesh - Final International University, Faculty of Architecture and Fine Arts, TRNC
- Prof. Carmela Gargiulo - University of Naples Federico II, Department of Civil, Architectural and Environmental Engineering, Naples, Italy
- Prof. Dr. Ümit Arpacıoğlu - Mimar Sinan Fine Arts University, Department of Architecture, İstanbul-Türkiye
- Prof. Dr. Niyazi Uğur Koçkal - Akdeniz University, Faculty of Engineer, Department of Civil Engineering, Antalya- Türkiye
- Prof. Dr. Sedef Doğaner-Wentworth Institute of Technology, Wentworth School of Architecture and Design, U
- Prof. Dr. H. Tendü Göktuğ - Adnan Menderes University, Faculty of Agriculture, Department of Landscape Architecture, Aydın-Türkiye
- Prof. Dr. Asena Soyluk - Gazi University, Faculty of Architecture, Department of Architecture, Ankara-Türkiye
- Prof. Dr. Şebnem Ertaş Beşir - Akdeniz University, Faculty of Architecture, Department of Interior Architecture, Antalya- Türkiye
- Assoc. Prof. Dr. Elif Tokdemir Demirel - Kırıkkale University, Faculty of Arts and Sciences, Department of Translation and Interpretation, Türkiye
- Assoc. Prof. Dr. Elif Sönmez - Altınbaş University, Faculty of Engineering and Natural Sciences, Department of Interior Architecture and Environmental Design, İstanbul- Türkiye
- Assoc. Prof. Dr. Ertan Düzgüneş - Karadeniz Technical University, Faculty of Forestry, Department of Landscape Architecture, Trabzon-Türkiye
- Assoc. Prof. Dr. Hayriye Hale Kozlu - Erciyes University, Faculty of Architecture, Department of Architecture, Kayseri- Türkiye
- Assoc. Prof. Dr. Mete Ünal Girgen - Final International University, School of Tourism & Culinary Arts, TRNC
- Assoc. Prof. Dr. Sultan Sevinç Kurt Konakoğlu - Amasya University, Faculty of Architecture, Department of Urban Design and Landscape Architecture, Amasya-Türkiye
- Assoc. Prof. Dr. Şirin Gülcen Eren - Süleyman Demirel University, Faculty of Architecture, Department of City and Regional Planning, Isparta- Türkiye
- Assoc. Prof. Dr. Vibhavari Janhi - Kansas State University, College of Architecture, Planning, and Design, Department of Interior Architecture & Product Design, USA
- Assoc. Prof. Dr. Ahmet Erkan Metin - Uşak University, Banaz Vocational School, Forestry and Forest Products Program, Uşak- Türkiye
- Assoc. Prof. Dr. H. Berk Türker - Uşak University, Faculty of Architecture and Design, Department of City and Regional Planning, Uşak- Türkiye
- Assoc. Prof. Dr. Meryem Bihter Bingül Bulut - Kırıkkale University, Faculty of Fine Arts, Department of Landscape Architecture, Kırıkkale- Türkiye

- Assist. Prof. Dr. Farzad Safaeimanesh - Final International University, School of Tourism & Culinary Arts, TRNC
- Assist. Prof. Floriana Zucaro - University of Naples Federico II, Department of Civil, Architectural and Environmental Engineering, Naples- Italy
- Assist. Prof. Dr. Foad Irani - Final International University, School of Tourism & Culinary Arts, TRNC
- Assist. Prof. Dr. Gizem Dinç - Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta- Türkiye
- Assist. Prof. Dr. Mert Çakır - Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta- Türkiye
- Assist. Prof. Dr. Pooya Lotfabadi - Final International University, Faculty of Architecture and Fine Arts, TRNC
- Assist. Prof. Dr. Soad Abokhamis Mousavı - Final International University, Faculty of Architecture and Fine Arts, TRNC
- Dr. Çağla Aydemir - Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta- Türkiye
- Dr. Gerardo Carpentieri - University of Naples Federico II, Department of Civil, Architectural and Environmental Engineering, Naples, Italy
- Dr. Pelin Fırat Örs - Çanakkale Onsekiz Mart University, Faculty of Architecture and Design, Department of Architecture, Çanakkale- Türkiye
- Dr. Kasra Talebian - Final International University, Faculty of Architecture and Fine Arts, TRNC
- Dr. Sibel Akten - Isparta University of Applied Sciences, Department of Park and Horticulture, Isparta- Türkiye
- Halime Gözlükaya - Süleyman Demirel University, Faculty of Architecture, Department of City and Regional Planning, Isparta- Türkiye
- Hatice Eda Gül - Student, Mehmet Akif University, Faculty of Engineering- Architecture, Department of Architecture Burdur- Türkiye
- İlayda Türker - Süleyman Demirel University, Faculty of Architecture, Department of City and Regional Planning, Isparta- Türkiye
- İskender Emre Gül - Akdeniz University, Sciences Institute, Department of Civil Engineer, Antalya - Türkiye
- Seyed Shahab Miri - School of Foreign Languages, Final International University, TRNC
- Tuba Gizem Aydoğan - Kırıkkale University, Faculty of Fine Arts, Department of Landscape Architecture, Kırıkkale- Türkiye
- Seniye Ela Gül - Demokrasi University, Faculty of Architecture, Department of Architecture, İzmir- Türkiye
- Lecturer Neriman Gül Çelebi - Istanbul Nişantaşı University, Faculty of Art and Design, Vocational School, Türkiye
- Rasiha Kayalar - Final International University, Faculty of Architecture and Fine Arts, TRNC
- Kamiar Yazdani - Final International University, Faculty of Architecture and Fine Arts, TRNC
-

SCIENCE AND ADVISORY BOARD

- Abdullah Kelkit - Onsekiz Mart University, Faculty of Architecture ve Design, Department of Landscape Architecture, Çanakkale- Türkiye
- Afer Elıfov - Bakü Engineering University, Faculty of Architecture, Bakü- Azerbaijan
- Alper Büyükkaragöz - Gazi University Faculty of Technology Department of Civil Engineering, Ankara-Türkiye
- Altuğ Sarıyar - Istanbul Esenyurt University, Faculty of Engineering and Architecture, Department of Interior Architecture, Istanbul-Türkiye
- Andjela Jaksic Stojanovic - Univerzitet Mediteran Podgorica, Montenegro
- Ahmet Fidan - Ordu University, Department of Marine Transportation Management Engineering, Ordu-Türkiye
- Arif Mısırlı - Trakya University, Faculty of Architecture, Department of Architecture, Edirne-Türkiye
- Arzu Memmedova - Baku Engineering University, Baku- Azerbaijan
- Arzu Çağlar - Ahi Evran Üniversitesi, Faculty Of Engineering-Architecture, Department of Architecture Kırşehir, Türkiye
- Aslan Nayeb - Yeditepe University, Faculty of Architecture, Department of Interior Architecture, Istanbul-Türkiye
- Aslı Güneş Gölbey - İzmir Democracy University, Faculty of Archıtecture, Department of Landscape Architecture, İzmir-Türkiye
- Ayfer Aybike Karadağ - Düzce University, Faculty of Forestry, Department of Landscape Architecture, Düzce- Türkiye
- Aylin Salıcı - Hatay Mustafa Kemal University, Faculty of Architecture, Department of Landscape Architecture, Hatay-Türkiye
- Ayşe Esra Cengiz - Çanakkale 18 Mart University, Faculty of Architecture and Design, Department of Landscape Architecture, Çanakkale-Türkiye
- Ayşe Özdemir - Pamukkale University, Faculty of Architecture and Design, Department of Landscape Architecture, Denizli, Türkiye
- Aziz Cumhur Kocalar - Nigde Omer Halisdemir University. Faculty of Architecture. Department of City and Regional Planning. Department of Urbanism, Nigde-Türkiye
- Bader Alatawneh - Department of Architecture, Palestine Polytechnic University, Palestine
- Banu Apaydın - Istanbul Okan University, Department of Interior Architecture and Environmental Design, İstanbul-Türkiye
- Banu Çelebioğlu - Yıldız Technical University, Department of Architecture, Istanbul-Türkiye
- Banu Öztürk Kurtaslan - Selçuk University, Faculty of Architecture and Design, Department of Landscape Architecture, Konya-Türkiye
- Barbara Żarska - Warsaw University, Poland

- Berkant Konakoğlu - Amasya University Amasya Technical Sciences Vocational School Department of Architecture and Urban Planning
- Berna Güç - Süleyman Demirel University, Faculty of Architecture, Department of Architecture, Isparta-Türkiye
- Betül Bilge Özdamar - Baskent University, Faculty of Fine Arts, Design and Architecture, Department of Interior Architecture and Environmental Design Ankara-Türkiye
- Bilge Çakır - Hatay Mustafa Kemal University, Faculty of Architecture, Department of City and Regional Planning, Hatay- Türkiye
- Bilgen Dündar - Beykent University, Faculty of Engineering and Architecture, Department of Architecture, Istanbul-Türkiye
- Buket Özdemir Işık - Trabzon University, Faculty of Sports Sciences, Department of Recreation, Trabzon-Türkiye
- Burçin Ekici - Namık Kemal University, Faculty of Fine Arts, Design and Architecture, Department of Landscape Architecture, Tekirdağ-Türkiye
- Bülent Yılmaz - İnönü University, Faculty of Fine Arts and Design, Department of Landscape Architecture, Malatya- Türkiye
- Cahide Aydın İpekçi - Gebze Technical University, Faculty of Architecture, Department of Architecture, Kocaeli-Türkiye
- Carmen Guida - The University of Naples Federico II, Department of Civil, Architectural and Environmental Engineering, Napoli, Italy
- Cem Alpay - Istanbul Technical University, Department of Industrial Design, Istanbul-Türkiye
- Cem Beygo - Istanbul University, Department of City and Regional Planning, Istanbul -Türkiye
- Cem Tilki - Final International University, School of Tourism and Culinary Arts, Department of Gastronomy, TRNC
- Cengiz Tavşan - Karadeniz Technical University, Faculty of Architecture, Department of Architecture, Trabzon- Türkiye
- Cengiz YücedaĞ - Mehmet Akif University, Faculty of Engineering-Architecture, Department of Landscape Architecture, Burdur- Türkiye
- Ceren Selim - Akdeniz University, Faculty of Architecture, Department of Landscape Architecture, Antalya-Türkiye
- Claudia Juroskı - Northern Arizona University, USA
- Demet Demiroğlu - Kilis 7 Aralık University, Faculty of Agriculture, Department of Horticulture, Kilis-Türkiye
- Deniz Hasırcı - Izmir University of Economics, Faculty of Fine Arts and Design, Department of Interior Architecture and Environmental Design, İzmir -Türkiye
- Dicle Aydın - Necmettin Erbakan University, Faculty of Fine Arts and Architecture, Department Of Architecture, Konya Türkiye
- Didem Dizdaroğlu - Bilkent University Faculty of Fine Arts, Design and Architecture Department of Urban Design and Landscape Architecture, Ankara-Türkiye

- Doruk Görkem Özkan - Karadeniz Technical University, Faculty of Forestry, Department of Landscape Architecture, Trabzon-Türkiye
- Drahşan Uğuryol - Yıldız Technical University, Faculty of Architecture, Department of Conservation and Restoration of Cultural Heritage, Istanbul-Türkiye
- Duygu Doğan - Pamukkale University, Faculty of Architecture and Design, Department of Landscape Architecture, Denizli-Türkiye
- Ebru Doğan - Malatya Turgut Özal University Faculty of Art, Design, and Architecture Department of Architecture, Malatya-Türkiye
- Elif Akpınar Külekçi - Atatürk University, Faculty of Architecture and Design, Department of Landscape Architecture, Erzurum-Türkiye
- Elif Bayramoğlu - Karadeniz Technical University, Faculty of Forestry, Department of Landscape Architecture, Trabzon-Türkiye
- Elif Ebru Şişman - Tekirdağ Namık Kemal University, Faculty of Fine Arts, Design and Architecture, Department of Landscape Architecture, Tekirdağ-Türkiye
- Elif Merve Alpak - Karadeniz Technical University, Faculty of Forestry, Department of Landscape Architecture, Trabzon-Türkiye
- Elif Özer Yüksel - Gebze Technical University, Faculty of Architecture, Department of Architecture, Kocaeli-Türkiye
- Elif Sağlık - Çanakkale 18 Mart University, Faculty of Architecture and Design, Department of Landscape Architecture, Çanakkale-Türkiye
- Elif Şatıroğlu - Recep Tayyip Erdogan University, Faculty of Engineering and Architecture, Department of Landscape Architecture, Rize-Türkiye
- Emel Akın - Atılım University GSTMF Department of Architecture, Türkiye
- Emine Akcan Şirin - Mimar Sinan Fine Arts University, Institute of Science, Istanbul-Türkiye
- Emine Dağtekin - Dicle University, Faculty of Architecture, Department of Architecture, Diyarbakır-Türkiye
- Emine Keleş - Trakya University Faculty of Architecture, Department of Landscape Architecture, Edirne-Türkiye
- Emine Seda ARSLAN - Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta- Türkiye
- Engin Kepenek - Akdeniz University, Faculty of Architecture, Department of City and Regional Planning, Antalya-Türkiye
- Erdinç Çakmak - Breda University of Applied Sciences, Netherlands.
- Esra Lakot Alemdağ - Recep Tayyip Erdogan University, Faculty of Engineering and Architecture, Department of Architecture, Rize-Türkiye
- Farzad Safaeimanesh - Final International University, School of Tourism and Culinary Arts, Department of Tourism, TRNC
- Federica Gaglione - The University of Sannio, Department of Engineering, Benevento, Italy

- Feran Aşur - Yuzuncu Yıl University, Faculty of Architecture and Design, Department of Landscape Architecture, Van-Türkiye
- Filiz Karakuş - Ankara Yıldırım Beyazıt University, Faculty of Architecture and Fine Arts, Department of Architecture, Ankara-Türkiye
- Filiz Tavşan - Karadeniz Technical University, Faculty of Architecture, Department of Interior Architecture, Trabzon-Türkiye
- Foad Irani - Final International University, School of Tourism and Culinary Arts, Department of Tourism, TRNC
- Funda Tan - Gebze Technical University, Faculty of Architecture, Department of Architecture, Kocaeli-Türkiye
- Gamze Fahriye Pehlivan - Sivas Cumhuriyet University, Faculty of Architecture, Fine Arts and Design, Department of Architecture, Sivas-Türkiye
- Gerardo Carpentieri - The University of Naples Federico II, Department of Civil, Architectural and Environmental Engineering, Napoli, Italy
- Gonca Büyükmıhçı - Erciyes University, Faculty of Architecture, Department of Architecture, Kayseri-Türkiye
- Gözde Çakır Kiasif - Haliç University, Faculty of Architecture, Department of Architecture, Istanbul-Türkiye
- Gülçöhre Memmedova - Azerbaijan Architecture and Construction University, Baku-Azerbaıjan
- Gülferah Örs Çorapçıoğlu - Istanbul Arel University Faculty of Engineering and Architecture Department of Architecture, Istanbul-Türkiye
- H. Burçin Henden Şolt - Zonguldak Bulent Ecevit University. Alaplı Vocational School Department of Architecture and Urban Planning, Zonguldak-Türkiye
- Hakan Alphan - Çukurova University, Faculty of Architecture, Department of Landscape Architecture, Adana-Türkiye
- Hasan Haştemoğlu - Süleyman Demirel University, Faculty of Architecture, Department of Architecture, Isparta- Türkiye
- Hasan Yılmaz - Atatürk University, Faculty of Architecture ve Design, Department of Architecture, Erzurum-Türkiye
- Hatice Çınar - Selcuk University, Faculty of Architecture and Design, Department of Interior Architecture, Konya-Türkiye
- Hilal Kahveci - Bilecik Şeyh Edebali University, Faculty of Fine Arts and Design, Department of Interior Architecture and Environmental Design, Bilecik-Türkiye
- Hilal Tuncer - Mehmet Akif University, Faculty of Engineering-Architecture, Department of Architecture, Burdur- Türkiye
- Hüccet Vural - Bingol University Faculty of Agriculture, Department of Landscape Architecture, Bingol-Türkiye
- Isidora Karan - The University of Banja Luka, Faculty of Architecture, Civil Engineering and Geodesy, Republic of Srpska, Bosnia, and Herzegovina

- Işıl Kaymaz - Ankara University, Faculty of Agriculture, Department of Landscape Architecture, Ankara-Türkiye
- İ. Emre Kavut - Mimar Sinan Fine Arts University, Department of Interior Architecture, Istanbul-- Türkiye
- İlkay Maşat Özdemir - Karadeniz Technical University, Faculty of Architecture, Department of Architecture, Trabzon -Türkiye
- İsmail Çınar - Muğla Sıtkı Koçman University, Fethiye Ali Sıtkı Mefharet Koçman Vocational School, Department of Park and Horticulture, Muğla -Türkiye
- İsmail Kılıç - Kırklareli University, Faculty of Engineering, Department of Civil Engineering, Kırklareli-Türkiye
- Julide Edirne - Haliç University, Faculty of Architecture, Department of Architecture, İstanbul-Türkiye
- Kasım Çelik - Çukurova University, Faculty of Architecture, Department of Architecture, Adana-Türkiye
- Koray Velibeyoğlu - İzmir Institute of Technology, Faculty of Architecture, Department of City and Regional Planning, İzmir -Türkiye
- Kübra Müezzinoğlu - Selcuk University, Faculty of Architecture and Design, Department of Interior Architecture, Konya-Türkiye
- Levent Arıdağ - Gebze Technical University, Faculty of Architecture, Department of Architecture, Kocaeli, Türkiye
- Leyla Kaderli - Erciyes University, Faculty of Architecture, Kayseri, Türkiye
- Leyla Suri - İstanbul Ticaret University, Faculty of Architecture, İstanbuk, Türkiye
- M. Serhat Yenice - Hasan Kalyoncu University, Faculty of Fine Arts and Architecture, Gaziantep-Türkiye
- Mahmut Tuğluer - Sütçü İmam University, Faculty of Forestry, Department of Landscape Architecture, Kahramanmaraş-Türkiye
- Mahşid Mıkaeılı- Bursa Technical University, Faculty of Foresty, Department of Landscape Architecture, Bursa-Türkiye
- Mehmet Akif Irmak - Atatürk University, Faculty of Architecture and Design, Department of Landscape Architecture, Erzurum-Türkiye
- Mehmet Ali Yüzer - Istanbul Technical University, Faculty of Architecture, Department of City and Regional Planning, Istanbul -Türkiye
- Mehmet Doruk Özügül - Yıldız Technical University, Faculty of Architecture, Department of City and Regional Planning, Istanbul-Türkiye
- Mehmet Fırat Baran - Siirt University, Faculty of Agriculture, Department of Biosystem Engineering-Siirt-Türkiye
- Mehmet Sinan Yum - Istanbul Commerce University, Faculty of Architecture and Design, Industrial Design Undergraduate Program, Istanbul
- Mehmet Tuncer - Çankaya University, Faculty of Architecture, Department of City and Regional Planning, Çankaya-Türkiye
- Mehmet Uğuryol - Yıldız Technical University, Faculty of Architecture, Department of Conservation and Restoration of Cultural Heritage, Istanbul-Türkiye

- Melda Açmaz Özden - Çanakkale Onsekiz Mart University, Faculty of Architecture and Design, Department of City and Regional Planning, Çanakkale-Türkiye
- Melih Kurnalı - Konya Technical University, Faculty of Architecture and Design, Department of Interior Architecture, -Türkiye
- Meltem Özçakı - Tekirdağ Namık Kemal University, Faculty of Fine Arts, Design and Architecture, Department of Architecture, Tekirdağ-Türkiye
- Merih Kasap - Altınbaş University, Faculty of Engineering and Natural Sciences, Department of Interior Architecture and Environmental Design, İstanbul- Türkiye
- Merve Karaoğlu Can - Kütahya Dumlupınar University, Faculty of Architecture, Department of Interior Architecture, Kütahya-Türkiye
- Meryem Elif Çelebi Karakök - Akdeniz University, Faculty of Architecture, Department of Architecture, Antalya-Türkiye
- Mete Ünal Girgen - Final International University, School of Tourism and Culinary Arts, Department of Tourism Management, TRNC
- Metin Demir - Atatürk University, Faculty of Architecture ve Design, Department of Architecture, Erzurum-Turkey
- Mine Sungur - Selcuk University, Faculty of Architecture and Design, Department of Interior Architecture, Konya-Türkiye
- Mohammad Jafar Chamankar - The Department of History of Urmia University, İran
- Mohammad Waheeb - Department of Cultural Resource Management (CRM), Queen Rania Faculty of Tourism and Heritage (QRFTH), The Hashemite University
- Murat Akten - Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta-Türkiye
- Murat Doğruyol - Siirt University, Faculty of Engineering, Department of Civil Engineering, Siirt-Türkiye
- Murat Zengin - Pamukkale University, Faculty of Architecture ve Design, Department of Architecture, Denizli-Türkiye
- Mustafa Gülen - Van Yüzüncü Yıl University, Faculty of Architecture and Design, Department of Architecture, Van-Türkiye
- Mustava Var - Yıldız Technical University, Faculty of Architecture, Department of City Regional Planning, İstanbul - Türkiye
- Mustafa Korumaz - Konya Technical University, Faculty of Architecture and Design, Department of Architecture, Konya-Türkiye
- Müberra Pulatkan - Karadeniz Technical University, Faculty of Architecture, Department of Architecture, Trabzon- Türkiye
- Naif Haddad - Department of Conservation Science, Queen Rania Faculty of Tourism and Heritage, Hashemite University, Jordan
- Nermeen Adnan Dalgamoni - Jordan University of Science and Technology, Department of City Planning and Design, Irbid, Jordan

- Neslihan Dalkılıç - Dicle University, Institute of Science and Technology, Department of Architecture, Diyarbakır-Türkiye
- Neslihan Yıldız - Istanbul Gedik University Faculty of Fine Arts and Architecture Department of Architecture, Istanbul-Türkiye
- Neşe Yılmaz Bakır - Erciyes University, Faculty of Architecture, Department of City and Regional Planning, Kayseri -Türkiye
- Nihal Arda Akyıldız - Balıkesir University, Faculty of Architecture, Department of Architecture, Balıkesir-Türkiye
- Nilay Coşgun - Gebze Technical University, Faculty of Architecture, Department of Architecture, Gebze-Türkiye
- Nilgün Görer Tamer - Gazi University, Department of City and Regional Planning, Ankara- Türkiye
- Nilüfer Kart Aktaş - Istanbul University-Cerrahpasa, Faculty of Forest, Department of Landscape Architecture, Istanbul -Türkiye
- Nur Belkayalı - Kastamonu University, Faculty of Engineering and Architecture, Department of Landscape Architecture, Kastamonu-Türkiye
- Nur Çağlar - TOBB ETU Faculty of Architecture and Design, Architecture, Ankara- Türkiye
- Nuray Benli Yıldız - Düzce University, Faculty of Art and Design, Department of Architecture, Düzce-Türkiye
- Nurdil Eskin - Istanbul Technical University, Department of Mechanical Engineering, Istanbul, Türkiye
- Nusret Algan - Mersin University Faculty of Fine Arts Ceramics Department, Mersin-Türkiye
- Oleksandr Zinenko - V. Karazin Kharkiv National University, Kharkiv, 61022, Ukraine
- Osman Arayıcı - Mimar Sinan Fine Arts University, Department of Interior Architecture, Istanbul-Türkiye
- Osman Attmann - The University of Colorado Denver, College of Architecture and Planning, Department of Architecture, Denver-USA
- Ömer Atabeyoğlu - Ordu University, Faculty of Agriculture, Department of Landscape Architecture, Ordu-Türkiye
- Ömer Faruk Uzun - Sakarya App. Sciences Univ. Faculty of Agriculture, Department of Landscape Architecture, Sakarya-Türkiye
- Ömer Lütfü Çorbacı - Recep Tayyip Erdoğan University, Faculty of Engineering and Architecture, Department of Landscape Architecture, Rize-Türkiye
- Ömer Mimaroğlu - Istanbul Sabahattin Zaim University Faculty of Engineering and Natural Sciences Department of Architecture, Türkiye
- Önder Küçükerman - Haliç University, Faculty of Architecture, Department of Industrial Design, İstanbul-Türkiye
- Özgü Özturan - Akdeniz University, Department of Interior Architecture, Antalya-Türkiye
- Özgür Yıldız - Malatya Turgut Özal University Faculty of Art, Design, and Architecture Department of Architecture, Malatya-Türkiye
- Özlem Bozkurt - Tekirdağ Namık Kemal University, Vocational School of Technical Sciences, Department of Materials and Materials Processing Technologies, Tekirdag-Türkiye

- Özlem Sağıroğlu - Gazi University, Faculty of Architecture, Department of Architecture, Ankara-Türkiye
- Pelin Şahin Körmeçli - Çankırı Karatekin University, Faculty of Forestry, Department of Landscape Architecture, Çankırı-Türkiye
- Pınar Kılıç Özkan - İzmir Demokrasi University, Faculty of Architecture, Department of Architecture İzmir - Türkiye
- Pervin Yeşil - Ordu University, Faculty of Agriculture, Department of Landscape Architecture, Ordu-Türkiye
- Piyush Sharma - Amity University, Hindistan/ Prof. Dr., Amity University, Hindistan
- Rosa Anna La Rocca - The University of Naples Federico II, Department of Civil, Architectural and Environmental Engineering, Napoli, Italy
- Rüya Ardıçoğlu - Firat University, Faculty of Architecture, Department of Architecture, Elazig-Türkiye
- S. Gül Güneş - Selçuk University, Faculty of Tourism, Department of Recreation Management, Konya-Türkiye
- Sadia Farooq - University of Home Economics, Lahore, Pakistan
- Salih Salbacak - Fatih Sultan Mehmet Vakif University, Department of Interior Architecture, Türkiye
- Saliha Taşçıoğlu - Kilis 7 Aralik University Technical Sciences Vocational School Department of Park and Horticulture - Türkiye
- Sara Demir - Bursa Technical University, Faculty of Forestry, Department of Landscape Architecture, Bursa -Türkiye
- Seden Acun Özgünler - Istanbul Technical University, Faculty of Architecture, Department of Architecture, Building Science Program, İstanbul-Türkiye
- Seema Mehra Parihar - Department of Geography, Kirori Mal College, University of Delhi, India
- Serap Kayasu - Middle East Technical University, Faculty of Architecture, Department of City and Regional Planning
- Serdar Selim - Akdeniz University Faculty of Science, Department of Space Science and Technologies, Department Of Distance Education, Antalya-Türkiye
- Serdar Oktay - Final International University, School of Tourism and Culinary Arts, Department of Tourism, TRNC
- Serpil Önder - Selçuk University, Faculty of Architecture and Design, Department of Landscape Architecture, Konya-Türkiye
- Sertaç Güngör - Selcuk University, Faculty of Architecture and Design, Department of Landscape Architecture, Konya-Türkiye
- Sevgi Yılmaz - Atatürk University, Faculty of Architecture and Design, Department of Landscape Architecture, Erzurum-Türkiye
- Shirin Izadpanah - Antalya Bilim University, Department of Interior Architecture and Environmental Design, Antalya -Türkiye
- Sibel Acar - TOBB ETU Faculty of Architecture and Design, Architecture, Ankara-Türkiye
- Silvia Rossetti - The University of Parma, Department of Engineering and Architecture, Parma Italy

- Sima Pouya - İnönü University, Faculty of Fine Arts and Design, Department of Landscape Architecture, Malatya-Türkiye
- Swetha Madhusudanan - MGR University, School of Architecture, Chennai, India
- Şevket Alp - Van Yüzüncü Yıl University, Faculty of Architecture and Design, Department of Landscape Architecture, Van-Türkiye
- Şeyda Emekci - Ankara Yıldırım Beyazıt University, Faculty of Architecture and Fine Arts, Architecture Department, Ankara- Türkiye
- Şirin Dönmez - Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta-Türkiye
- Şule Kısakürek - Kahramanmaraş Sütçü İmam University, Faculty of Forestry, Department of Landscape Architecture, Kahramanmaraş-Türkiye
- Şükran Şahin - Ankara University, Faculty of Agriculture, Department of Landscape Architecture, Ankara-Türkiye
- Taner Özdil - The University of Texas, College of Architecture, Planning and Landscape Architecture, Arlington-USA
- Tonguç Akış - İzmir Institute of Technology, Faculty of Architecture, Department of Architecture, İzmir - Türkiye
- Tonguç Tokol - Marmara University, Department of Interior Architecture, Istanbul-Türkiye
- Tuğba Düzenli - Karadeniz Technical University, Faculty of Forestry, Department of Landscape Architecture, Trabzon-Türkiye
- Ufuk Çoşgun - Karabük University, Faculty of Forestry, Department of Forestry, Karabük- Türkiye
- Umut Tuğlu Karslı - Istanbul University, Faculty of Architecture, Department of Interior Architecture and Environmental Design, Istanbul -Türkiye
- Ümit Yurt - üzce University, Düzce Vocational School Construction Technology Department, Düzce-Türkiye
- Vibhavari Janhi - Kansas State University, College of Architecture, Planning, and Design, Department of Interior Architecture & Product Design, USA
- Vagif Memmedov - Baku Engineering University, Baku- Azerbaijan
- Yasin Xəlilov - Baku Engineering University, Baku- Azerbaijan
- Zeidan Kafafi- Emeritus of Archaeology of Yarmouk University, Jordan
- Zeliha Şahin Çağlı - Ostim Technical University, Faculty of Architecture and Design, Department of Industrial Design, Ankara-Türkiye
- Zeynep Pirselimoğlu Batman - Uludağ University, Faculty of Forestry, Department of Landscape Architecture, Bursa -Türkiye
- Zuhal Kaynakçı Elinç - Akdeniz University, Faculty of Architecture, Department of Interior Architecture, Antalya Türkiye

IV. International Architectural Sciences and Applications Symposium

(IArcSAS-2024)

https://www.iarcsas.org/

May 30-31, 2024

Girne- Turkish Republic of Northern Cyprus

SYMPOSIUM SCHEDULE

Join Zoom Meeting

https://us02web.zoom.us/j/86052666988?pwd=QVh6aWM5MVEzQm8zaEdIVmVab0Q4Zz09

Meeting ID: 860 5266 6988
Passcode: 123456

PARTICIPATING COUNTRIES

Algeria, Azerbaijan, Germany, Hungary, India, Indonesia, Italy, Kazakhstan, Malaysia, Morocco, Nigeria, Portugal, Pakistan, Poland, Portugal, Romania, South Africa, Spain, Türkiye, Turkish Republic of Northern Cyprus, Vietnam

TOTAL ACCEPTED ARTICLES: 390

Türkiye: 182
Other Countries: 208

IMPORTANT

- To be able to make a meeting online, log in via **https://zoom.us/join** site, enter ID instead of "Meeting ID or Personal link Name'' and solidify the session.
- **Each presentation is limited to a maximum of 15 minutes.**
- **Session times should never be exceeded. It must be completed on time before the next session starts.**
- **Presentations can be presented in "English or Turkish". However, visual presentations must be "English text".**
- The Zoom application is free and no need to create an account.
- The Zoom application can be used without registration.
- The application works on tablets, phones, and PCs.
- Speakers must be connected to the session **15 minutes before** the presentation time.
- All Symposium participants can connect live and listen to all sessions.
- During the session, your camera should be turned on at least %70 of the session period
- Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.

TECHNICAL INFORMATION

- Make sure your computer has a microphone and is working.
- You should be able to use the screen sharing feature in Zoom.
- Attendance certificates will be sent to you as a pdf at the end of the Symposium.

Before you, log in to Zoom indicate Session and Hall number and your surname
(SESSION 1-HALL-1, BARAN)

ÖNEMLİ

- Sempozyumda Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildiriler için online (video konferans sistemi üzerinden) sunum imkanı sağlanmıştır.
- Online sunum yapabilmek için **https://zoom.us/join** sitesi üzerinden giriş yaparak "Meeting ID or Personal Link Name" yerine ID numarasını girerek oturuma katılabilirsiniz.
- **Her bir sunum en fazla 15 dakika ile sınırlandırılmıştır.**
- **Oturum süreleri kesinlikle aşılmamalıdır. Bir sonraki oturum başlamadan önce zamanında tamamlanmalıdır.**
- **Sunumlar "İngilizce veya Türkçe" sunulabilir. Ancak görsel sunumlar mutlaka "İngilizce metin" olmalıdır.**
- Zoom uygulaması ücretsizdir ve hesap oluşturmaya gerek yoktur.
- Zoom uygulaması kaydolmadan kullanılabilir.
- Uygulama tablet, telefon ve PC'lerde çalışmaktadır.
- Sunum yapacakların sunum saatinden **15 dk önce** oturuma bağlanmış olmaları gerekmektedir.
- Tüm katılımcılar oturumlara online katılıp dinleyebilir.
- Oturumdaki sunumlardan ve bilimsel tartışmalardan (soru-cevap) oturum başkanları sorumludur.

TEKNIK BILGILER

- Bilgisayarınızda çalışır durumda mikrofon bulunmalıdır.
- Zoom'da ekran paylaşma özelliği kullanılabilmelidir.
- Katılım belgeleri Sempozyum sonunda tarafınıza pdf olarak gönderilecektir.
- Sempozyum programında yer ve saat değişikliği gibi talepler dikkate alınmayacaktır.

Zoom'a girişte sırayla Oturum ve Salon numarasını ve Soyadınızı yazınız
(OTURUM 1-SALON-1, BARAN)

SYMPOSIUM SCHEDULE

May 30, 2024 (Thursday)

Join Zoom Meeting

https://us02web.zoom.us/j/86052666988?pwd=QVh6aWM5MVEzQm8zaEdIVmVab0Q4Zz09

Meeting ID: 860 5266 6988

Passcode: 123456

Cyprus Time 10:00-11:00	Opening Speeches

Cyprus Time 11:30-12:45	PANEL 1 (Face to Face and Online) (Hall: St. Hllarion)		
Moderator	Nafiya GÜDEN		
Invited Speakers	Birgül GÜVENIR BEYATLI	Hasan KARLITAŞ	Feriha TEL
13:00-14:00 IAUNCH			

	Face to Face SESSIONS May 30, 2024 (Thursday)		
Cyprus Time 14:00-16:15	SESSION 1 (Hall: St. Hilarion)	SESSION 2 (Hall: Kantara)	SESSION 3 Hall : Buffavento
Moderators	Seden TURAMBERK ÖZERDEN	Murat AKTEN	Ahmet FİDAN
Cyprus Time 16:30-18:45	SESSION 4 (Hall: St. Hilarion)	SESSION 5 (Hall: Kantara)	
Moderators	Soad Abokhamis MOUSAVİ	Tendü Hilal GÖKTUĞ	

May 30, 2024 (Thursday) (Online)

Join Zoom Meeting

https://us02web.zoom.us/j/86052666988?pwd=QVh6aWM5MVEzQm8zaEdIVmVab0Q4Zz09

Meeting ID: 860 5266 6988

Passcode: 123456

Cyprus Time 14:00-16:15	SESSION 6 (Online) HALL-1	SESSION 7 (Online) HALL-2	SESSION 8 (Online) HALL-3	SESSION 9 (Online) HALL-4	SESSION-10 (Online) HALL-5	SESSION 11 (Online) HALL-6	SESSION 12 (Online) HALL-7
Moderators	Filiz KARAKUŞ	Arzu ISPALAR ÇAHANTIMUR	Sevgi YILMAZ	Zeynep ÜSTÜN ONUR	Rasiha KAYALAR	Kamal Kumar ARORA	Slobodan POPOVIĆ

Cyprus Time 16:30-18:00	SESSION 13 (Online) HALL-1	SESSION 14 (Online) HALL-2	SESSION 15 (Online) HALL-3	SESSION 16 (Online) HALL-4	SESSION-17 (Online) HALL-5	SESSION 18 (Online) HALL-6	SESSION 19 (Online) HALL-7
Moderators	Ahmet Cüney DİRİ	Öner DEMİREL	Hasan YILMAZ	Kasra TALEBIAN	Deniz HASIRCI	Pelin FIRAT ÖRS	Abdelmoutalib BENFRID

Cyprus Time 18:15-20:00	PANEL 2 (Online) HALL-1				
Moderator	Aminreza IRANMANESH				
Invited Speakers	Ruşen KELEŞ	Şükran ŞAHİN	Mehmet TUNCER	Kağan GÜNÇE	

May 31, 2024 (Friday) (Online)

Join Zoom Meeting

https://us02web.zoom.us/j/86052666988?pwd=QVh6aWM5MVEzQm8zaEdIVmVab0Q4Zz09

Meeting ID: 860 5266 6988

Passcode: 123456

May 31, 2024							
	Cyprus Time 8:30-10:45	SESSION 20 (Online)	SESSION 21 (Online)	SESSION 22 (Online)	SESSION 23 (Online)	SESSION-24 (Online)	SESSION 25 (Online)
		HALL-1	HALL-2	HALL-3	HALL-4	HALL-5	HALL-6
	Moderators	Floriana ZUCARO	Şükran ŞAHİN	Pooya LOTFABADİ	Ufuk ÇOŞGUN	Halime GÖZLÜKAYA	Wasiu Abiodun MAKINDE
	Cyprus Time 11:00-13:15	SESSION 26 (Online)	SESSION 27 (Online)	SESSION 28 (Online)	SESSION 29 (Online)	SESSION-30 (Online)	SESSION 31 (Online)
		HALL-1	HALL-2	HALL-3	HALL-4	HALL-5	HALL-6
	Moderators	Sultan Sevinç KURT KONAKOĞLU	Ümit ARPACIOĞLU	H. Berk TÜRKER	Ahmet Erkan METİN	Fedwa BEGHDADI	Irfan MUSTAFA
	Cyprus Time 13:30-15:45	SESSION 32 (Online)	SESSION 33 (Online)	SESSION 34 (Online)	SESSION 35 (Online)	SESSION-36 (Online)	SESSION 37 (Online)
		HALL-1	HALL-2	HALL-3	HALL-4	HALL-5	HALL-6
	Moderators	Niyazi Uğur KOÇKAL	Şirin Gülcen EREN	Gizem DİNÇ	Hatice Eda GÜL	Kamiar YAZDANI	Alexandrov V.S.
	Cyprus Time 16:00-18:15	SESSION 38 (Online)	SESSION 39 (Online)	SESSION 40 (Online)	SESSION 41 (Online)	SESSION-42 (Online)	SESSION 43 (Online)
		HALL-1	HALL-2	HALL-3	HALL-4	HALL-5	HALL-6
	Moderators	Berna ÜSTÜN	Murat ZENGİN	Meryem Bihter BİNGÜL BULUT	Mete Ünal GİRGEN	Tuba Gizem AYDOĞAN	Dhulasiraman M
	Cyprus Time 19:00-21:45	SESSION 44 (Online)	SESSION 45 (Online)	SESSION 46 (Online)	SESSION 47 (Online)	SESSION-48 (Online)	SESSION 49 (Online)
		HALL-1	HALL-2	HALL-3	HALL-4	HALL-5	HALL-6
	Moderators	Asena SOYLUK	Leyla SURİ	Ertan DÜZGÜNEŞ	Mert ÇAKIR	Çağla AYDEMİR	İlayda TÜRKER

OPENING SPEECHES

Date: May 30, 2024

CYPRUS Time: 10:00 -11:15

Announcer:

Face to Face and Online

Join Zoom Meeting

https://us02web.zoom.us/j/86052666988?pwd=QVh6aWM5MVEzQm8zaEdIVmVab0Q4Zz09

Meeting ID: 860 5266 6988

Passcode: 123456

SPEAKERS	AFFILIATION
Prof. Dr. Atila GÜL	President of the Organizing Board (IArcSAS-2024) and Chief Editor, *Journal of Architectural Sciences and Applications*, Türkiye
Dr. Mustafa Latif EMEK	President of the Economic Development and Social Research Association (IKSAD), Türkiye
Prof. Dr. Orhan GEMİKONAKLI	Vice Rector of Final International University,
Özgün OLGUNER	TRNC Tourism Planning and Department Representative
Ahmet REŞBER	Çatalköy-Esentepe Municipality Director of Architecture Department

Invited Speakers for IArcSAS- 2024

PANEL-1

'Architectural Structures and Sustainable Tourism

May 30, 2024 (THURSDAY) - Cyprus Time: 11:30-12:45

Face to Face St. Hillarion-Salon II

Join Zoom Meeting

https://us02web.zoom.us/j/86052666988?pwd=QVh6aWM5MVEzQm8zaEdIVmVab0Q4Zz09

Meeting ID: 860 5266 6988- Passcode: 123456



MODERATOR
Nafiya GÜDEN







Birgül GÜVENİR BEYATLI	**Hasan KARLITAŞ**	**Feriha TEL**
Architect, Boutique Hotel businesswoman and Founder of Cyprus Small Hotels Association, North Cyprus	***Tourist Guide and Author, North Cyprus***	***President of the Cyprus Green Peace Movement, North Cyprus***
"The Contribution of Small Accommodations to Sustainable Tourism" *(Küçük Konaklamaların Sürdürülebilir Turizimine Katkısı)'*	**"Tour Guide Perspective on Architecture"** *(Tur Rehberinin Mimariye Bakış Açısı)*	**"Tourism and the Role of Infrastructure Development on the Environment"** *(Turizm ve Altyapı Gelişiminin Çevre Üzerindeki Rolü)*

Invited Speakers for IArcSAS- 2024

PANEL-2

Sustainable Urbanization and Architectural Heritage

May 30, 2024 (THURSDAY) - Cyprus Time: 18:15-20:00

Join Zoom Meeting

https://us02web.zoom.us/j/86052666988?pwd=QVh6aWM5MVEzQm8zaEdlVmVab0Q4Zz09

Meeting ID: 860 5266 6988-- Passcode: 123456



MODERATOR:

Assoc. Prof. Dr. Aminreza IRANMANESH









Prof. Dr. Ruşen KELEŞ	**Prof. Dr. Şükran ŞAHİN**	**Prof. Dr. Mehmet TUNCER**	**Prof. Dr. Kağan GÜNÇE**
Kapodokya University, Faculty of Architecture, Design and Fine Arts. City and Regional Planning, Ürgüp /Nevşehir, Türkiye.	*Ankara University Faculty of Agriculture, Department of Landscape Architecture, Department of Landscape Architecture, Ankara, Türkiye.*	*Çankaya University, Faculty of Architecture, Dep. of City and Regional Planning, Ankara, Türkiye.*	*Eastern Mediterranean University, The Department of Interior Architecture, Famagusta, North Cyprus.*
"Sustainability and Urbanization" *(Sürdürülebilirlik ve Kentleşme)*	**"Beyond Buildings: Exploring the Interplay of Ecological Dynamics and Urban Spaces"** *(Binaların Ötesinde Ekolojik Dinamikler ile Kentsel Alanların Etkileşimi)*	**"Türkiye Experience Within The Scope of Interdisciplinary New Town Project: Gaziantep Bizimşehir Project"** *(Disiplinlerarası Yeni Şehir Projesi Kapsamında Türkiye Deneyimi:Gaziantep Bizimşehir Projesi)*	**"Reviewing the Layers of Palimpsest City Nicosia through Architectural Heritage"** *(Palimpsest Kent Lefkoşa Katmanlarının Mimari Miras Üzerinden Okunması)*

THURSDAY – May 30, 2024 Cyprus Time 14:00-16:15 (Face to Face) SESSION-1, HALL-St. Hilarion / OTURUM-1, SALON- St. Hilarion MODERATOR: Seden TURAMBERK ÖZERDEN		
TITLE	AUTHORS	AFFILIATION
Smart Hotel Design of the Future: Case of Northern Cyprus	• Soad Abokhamis MOUSAVI • Nafiya GUDEN	Final International University
Architectural Adaptations of Emerging Nomadic Lifestyles in The New Digital Age	• Mulham HRİTANİ • Kasra TALEBIAN • Aminreza IRANMANESH	Final International University
Cultural Heritage Database: Presentation, Interpretation, and Expectations of Digitized Cultural Heritage in Virtual Museums	• Betül GELENGÜL EKİMCİ	İTÜ- TRNC Education and Research Campuses
Advancing Sustainable Tourism Practices in Northern Cyprus: Opportunities and Challenges	• Farzad SAFAEIMANESH • Nafiya GUDEN	Final International University
An Interactive Digital Platform for Preserving Sociocultural Heritage in Yeşilköy Through Local Participation and Crowdsourcing	• Elif Ece ILGAZ • Ahmet GÜN	Istanbul Kültür University
An Investigating the Role of Biomimetic Architecture Developments	• Elnaz FARJAMI • Shabnam GOLKARIAN • Nafiseh ZAMANZADEH	Near East University
Sustainable Pavements at the Neighborhood Scale	• Fatma AŞILIOĞLU • Rukiye Duygu ÇAY	Trakya University
The Role of Urban Green Spaces on Human Health	• Rukiye Duygu ÇAY • Fatma AŞILIOĞLU	Trakya University

THURSDAY – May 30, 2024
Cyprus Time 14:00-16:15
(Face to Face)
SESSION-2, HALL- Kantara / OTURUM-2, SALON- Kantara
MODERATOR: Murat AKTEN

TITLE	AUTHORS	AFFILIATION
The Relationship Between Landscape Architecture and Anthropometry the Case of Isparta Cumhuriyet Street	• Murat AKTEN • Deniz KARAKUYU	Süleyman Demirel University
Moss Wall Panel System in Vertical Plant Applications	• Sibel AKTEN • Şuayip KÖRÜK	Isparta University of Applied Sciences
Aesthetic and functional evaluation of planting design in Bursa Technical University Mimar Sinan Campus	• Onur AKSOY • Kamil ERKEN	Bursa Technical University
Resilient and Sustainable Cities: A Conceptual Framework	• Beyza Mürüvet YİĞİT • Murat AKTEN	Süleyman Demirel University
Evaluating School Spaces as Opportunities for Carbon Footprint Reduction	• Sibel AKTEN • Atila GÜL	Isparta University of Applied Sciences
Determining the Criteria for the Conversion of Existing Education Buildings According to Green Building Standards	• Hatice Eda GÜL • Seniye Ela GÜL • Sibel AKTEN • Atila GÜL	Süleyman Demirel University

THURSDAY – May 30, 2024
Cyprus Time 14:00-16:15
(Face to Face)
SESSION-3, HALL- Buffavento / OTURUM-3, SALON- Buffavento
MODERATOR: Ahmet FIDAN

TITLE	AUTHORS	AFFILIATION
An Innovative Approach in the Relationship between Material and Form: in Glass Fiber Reinforced Concrete (GFRC) Applications	• Esra BAYIR • Pelin KARAÇAR • Aysun Ferrah GÜNER • Zülal Nurdan KORUR	İstanbul Medipol University
Evaluation of BIM Applications in Türkiye	• Elif Hazal ŞENER • Aysun Ferrah GÜNER	Istanbul Medipol University
Floating Cities in Terms of Space Management: Structural, Legal, Administrative and Functional Approach	• Ahmet FIDAN • Pelin KARAÇAR	Ordu University
Evaluation of BIM Education in Architecture Undergraduate Programs Ranked in the Top 10 Based on the Cohe Score System in Türkiye	• Nafia Büşra ERSAVAŞ • Pelin KARAÇAR	İstanbul Medipol University
The Significance of Building Information Modeling (BIM) in Construction Management: A Perspective of Undergraduate Civil Engineering Students	• Gizem ŞIMŞIR • Ahmet TUZ	Istanbul Medipol University
Interaction of Urban Space and Everyday Life	• Seda Kaplan ÇINÇIN	Kocaeli University
Architectural Representation and Presentation of Modern Housing Architecture, 1950's	• Seda Kaplan ÇINÇIN	Kocaeli University
Teaching Sustainable Architectural Design with BIM	• Salih OFLUOĞLU	Antalya Bilim University

THURSDAY – May 30, 2024
Cyprus Time 16:30-18:45
(Face to Face)

SESSION 4, HALL- St. Hilarion / OTURUM-4, SALON- St. Hilarion
MODERATOR: Soad Abokhamis MOUSAVİ

TITLE	AUTHORS	AFFILIATION
Legislation on Energy Efficiency Practices in Buildings Proposal for TRNC	• Kerem AKKAYA	Çanakkale Onsekiz Mart University
Documentation of Earthquake Damages Over the Years and Restoration Recommendations for the Historic Malatya Teze Mosque	• Lale KARATAŞ	Bursa Technical University
Changing Concepts of Temporality and Permanence In 21st-Century Paradigms	• Orhun İNCE • Gülhis DUYGUN	Kocaeli University
A Study on Hygrothermal Performance of Traditional Veneered Timber Framed Exterior Wall in Türkiye	• Seda Nur ALKAN • Fatih YAZICIOĞLU	İstanbul Medipol University
Achieving Sustainable Development Goals (SDGs) via Energy Security through Sustainable Practices in Northern Cyprus	• Shahrzad SAFAEIMANESH • Farzad SAFAEIMANESH	Cyprus Science University
Effects of Anthropogenic Geomorphology on Collective Memory and Space Relationship	• Gülhis DUYGUN • Elif Yeşim ÖZGEN KÖSTEN	Kocaeli University
Experiences From the Disaster Perspective in Architecture	• Orhun İNCE • Gülhis DUYGUN	Kocaeli University
Yoga Tourism as a Type of SIT and Improvement Suggestions: Case of Northern Cyprus	• Naile SOYEL • Mete Ünal GİRGEN	Kyrenia Municipality

THURSDAY – May 30, 2024 Cyprus Time 16:30-18:45 (Face to Face) SESSION-5, HALL-Kantara / OTURUM-5, SALON-Kantara MODERATOR: Tendü Hilal GÖKTUĞ		
TITLE	AUTHORS	AFFILIATION
Adverse Impacts of Recreational Activities on Protected Coastal Ecosystems	• Tendü Hilal GÖKTUĞ	Aydın Adnan Menderes University
A Public Opinion Research for Environmental Impacts of the Aydın Railway Line and Its Planning as a Greenway.	• Burhan EŞLİK • Tendü Hilal GÖKTUĞ	Aydın Adnan Menderes University
Mountain Ecosystem and Recreation Services Examination in the Example of Mount Dedegöl	• Deniz KARAKUYU • Murat AKTEN	Süleyman Demirel University
Evidence-Based Design: An Assessment within the Framework of Landscape Architecture	• Nazlı Deniz ERSÖZ • Gül SAYAN ATANUR	Bursa Technical University
Visual Perception Analysis of 3rd Generation Coffee Houses: 'The Case of Akaretler'	• Serhat ANIKTAR • Elif Nur UYGUR	İstanbul Sabahattin Zaim University
A Children's Playground Proposal Based on Environmental Characteristics and Demographic Structure	• Nazlı Deniz ERSÖZ • Mahshid MIKAEIL	Bursa Technical University
Evaluation of Lake Eğirdir and its Coastal Band within the Scope of Blue-Green Infrastructure	• Hüseyin Batuhan DÜNDAR • Murat AKTEN	Süleyman Demirel University
Are Carbon Market Instruments Created by Neoliberalism Policies a Solution for Reducing Carbon Emissions	• Atila GÜL • İskender Emre GÜL	Süleyman Demirel University

THURSDAY – May 30, 2024
Cyprus Time 14:00-16:15
(Online)
SESSION-6, HALL-1 / OTURUM 6, SALON-1
MODERATOR: Filiz KARAKUŞ

TITLE	AUTHORS	AFFILIATION
Evaluation of Adaptive Reuse of Historical Buildings in Terms of Sustainability: The Case of Bolu Tabaklar Hamam/Bath	• Filiz KARAKUŞ	Ankara Yıldırım Beyazıt University
An Architectural Examination of Historical Water Structures in the Esenler District of Istanbul	• Miskine AKAR • Selvi Burcu GÜLER	Recep Tayyip Erdoğan University
Typological Analysis of The Projection Structure: Sivrihisar Traditional Houses	• Zuhal KARA SARIÇİÇEK • Hicran Hanım HALAÇ	Eskişehir Technical University
Ecological Settlements: The Example of Akpınar Neighborhood	• Ahmet Berk TAHMAZOĞLU • Demet IRKLI ERYILDIZ	Okan University
The Problem of Originality in Historicist Architecture After the 2000s: The Case of Government Mansions	• Elifcan DUYGUN • Rifat Gökhan KOÇYIĞIT	Pamukkale University
The Change of İnegöl City Center from Past to Present and Old Government House Conservation Project	• Seda ÇAKMAK • Zeynep ERES ÖZDOĞAN	Istanbul Technical University
An Inquiry of Traditional Urfa and Ürünlü Built Environment in the Context of Sustainability	• Hasan DOĞAN	Harran University

THURSDAY – May 30, 2024 Cyprus Time 14:00-16:15 (Online) SESSION-7, HALL-2 / OTURUM 7, SALON-2 • MODERATOR: Arzu ISPALAR ÇAHANTIMUR		
TITLE	AUTHORS	AFFILIATION
Historical Evolution of the Furnishings and Textile Features of İzmit Kasr-ı Hümayun	• Ebru ERDOĞAN • Tülay GÜMÜŞER • Gülşah ÜNER	Selcuk University
Reading Bauhaus at the Intersection of Architecture and Weaving	• Tülay GÜMÜŞER • Ebru ERDOĞAN • Büşra ÖZTÜRK	Selcuk University
A Versatisummaryle Look at the Furniture Design Adventure	• Esra ORHAN YILMAZ • Semih ÇINAR • Elif ÖZGEN	Artvin Çoruh University
Vernacular Architecture Strategies for Building Resilience in Informal Settlements of Bursa	• Rengin BECEREN ÖZTÜRK • Arzu ISPALAR ÇAHANTIMUR	Bursa Uludağ University
Evaluation of Traditional Houses in Balıkesir Urban Center for Conservation	• Ayşegül AĞAN	Balıkesir University
Property, Policy and Actor-Oriented Approach to the Classification of Rental Housing	• Muhammed Cemil DOĞAN • Ömür BARKUL	Usak University
An Attempt to Convey the Ekphrastic Space with Artificial Intelligence: Gulliver's Travels	• Meryem Sevde DOĞRUER • Arzu ÖZEN YAVUZ	Niğde Omer Halisdemir University

THURSDAY – May 30, 2024 Cyprus Time 14:00-16:15 (Online) SESSION-8, HALL-3 / OTURUM 8, SALON-3 MODERATOR: Sevgi YILMAZ		
TITLE	AUTHORS	AFFILIATION
Evaluation of the Effects of Wind on Outdoor Thermal Comfort in Rural and Urban Areas	• Mehmet Akif IRMAK • Sevgi YILMAZ • Hasan YILMAZ	Atatürk University
Pedestrian-Friendly Street Design Modeling with Wind Simulations in Cold Regions: A Case Study of Dadaşkent	• Sevgi YILMAZ • Mehmet Akif IRMAK	Atatürk University
Determining Temporal Changes in the Lakes of the Burdur Basin Using Google Earth Engine	• Nuriye Ebru YILDIZ • Barış KAHVECİ	Niğde Ömer Halisdemir University
Evaluation of Intensive Roofs in Energy Efficient Building Design and Their Role in Urban Food Security	• Enes AKDENİZ • Gülsen ÇELEN • Fatma AYDIN	Mimar Sinan Fine Arts University
The Effect of the Use of Undefined Urban Landscape Areas as Urban Agricultural Areas on Urban Aesthetics: Rize Fener Coast Case	• Fatma AYDIN • Enes AKDENİZ	Mimar Sinan Fine Arts University
Determination of Environmental Awareness Levels of University Students Regarding Climate Change: A Case Study of the Faculty of Architecture at Trakya University	• Afranur ÖZDEMİR • Emine KELEŞ	Trakya University
Determining the Carbon Storage Potential in Cities Using Geographic Information Systems and Remote Sensing Techniques: The Case of Ankara	• Nuriye Ebru YILDIZ • Şükran ŞAHİN	Niğde Ömer Halisdemir University
Examining the Influence of Various Pocket Park Designs on Thermal Comfort in Winter Cities Utilizing ENVI-met Analysis	• Sevgi YILMAZ • Başak ERTEM MUTLU	Atatürk University

THURSDAY – May 30, 2024
Cyprus Time 14:00-16:15
(Online)
SESSION-9, HALL-4 / OTURUM 9, SALON-4
MODERATOR: Zeynep ÜSTÜN ONUR

TITLE	AUTHORS	AFFILIATION
First View Graphic Restoration Project Proposal of the Odina Jome Mosque in Kashkadarya Region	• Mirzo ULUGBEK	Samarkand State University of Architecture and Construction
Development of Preserving Cultural Heritage Sites Methods in a Large City (Using the Example of Moscow)	• E.A. KARFIDOVA • A.P. SIZOV	Institute of Environmental Geoscience Russian Academy of Sciences
Analysis of the Causes of the Abandonment of Telaga Rawa Jaya Tourist Attraction	• Dyah PURBANINGRUM • Hendri Hermawan ADİNUGRAHA • Muhammad Aris SAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
Exploring the Nexus of Technology, Artificial Intelligence, & Architecture	• D. DEEPIKA	R.M.K. Engineering College
The Role of Artificial Intelligence in Optimizing Digital Architectural Designs	• Denada AHMETI RADA	Logos University College
Utilizing Python for Customizable 3D Modeling of Frame Structure Buildings: A Novel Approach to Digital Fabrication and 3D Printing	• Muneeb HASSAN	Pakistan Institute of Engineering and Technology
Using Photogrammetry for Digital Documentation of Heritage Sites and Objects in Jordan	• Fatima HAROUN	The Hashemite University
The Effect of Road Height on Noise Level Under the Canyon Effect	• Derin Hilal BİLMEZ • Ümit ARPACIOĞLU	Mimar Sinan Fine Arts University

THURSDAY – May 30, 2024
Cyprus Time 14:00-16:15
(Online)
SESSION-10, HALL-5/ OTURUM 10 SALON-5
MODERATOR: Rasiha KAYALAR

TITLE	AUTHORS	AFFILIATION
Opportunities for the Use of Artificial Intelligence in Organisations	• Vivien VÁGNER	University of Pannonia
Efficient Deep Neural Network Architecture for Practical Underwater Image Enhancement	• Ouafa. BENAIDA • Abdelhamid. LOUKI • Adda. ALI PACHA	University of Sciences and Technology of Oran Mohamed Boudiaf
Enhancing Academic Library Services: An Overview of Artificial Intelligence Applications	• Mahadevan BALASUBRAMANIYAn • Kannadasan KARUPPAIAH	Vellalar College for Women
The Role of Planning in Managing Material Resources in Small Scale Business Using De-Rahma Table Water Kaura Namoda Zamfara State, Nigeria.	• Sirajo SHEHU	Federal Polytechnic Kaura Namoda
Environmental Pollution's Impact on Life and Possible Solutions	• K. SIVASURIYAN • G. GUNASEKAR • S. GOWRI SHANKAR • V. AJAYDESOUZA • K. PRITHIVIRAJ	Annamalai University
Modeling, Simulation and Analysis of Wind System Based Doubly-Fed Induction Generator(DFIG) :	• Chaima GHERARI	University of Mohamed Cherif Messaadia
Social Economic Harmonization in Multıreligious Communities (Study in Linggoasri Village Indonesia)	• Muhammad SYUKRON • Hendri Hermawan ADİNUGRAHA	UIN K.H. Abdurrahman Wahid Pekalongan
Empowering MSME as a Driver of Economic Growth and Improving Economic's Welfare (Case Study of MSME in Kajen Subdistrict)	• Marshell Bahreiza Dana PUTRA • Hendri Hermawan ADINUGRAHA • Muhammad Aris SAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan

THURSDAY – May 30, 2024
Cyprus Time 14:00-16:15
(Online)
SESSION-11, HALL-6/ OTURUM 11 SALON-6
MODERATOR: Kamal Kumar ARORA

TITLE	AUTHORS	AFFILIATION
Proficiency of Topical Platelet Rich Plasma with Vacuum Assisted Closure Over Platelet Rich Plasma Alone in Diabetic Foot Ulcers –A Clinical Prospective Comparative Study	• Kamal Kumar ARORA	Government Medical College
Fabrication of Metal-Organic Frameworks Based Supercapacitors and Investigation of its Faradaic and Non-Faradaic Response	• Usama ZAHID • Muhammad Ramzan KHAWAR • Yasir JAVED • Dongwhi CHOI	University of Agriculture
Comparative Study of the Structural and Vibrational Properties of Dy2MMnO6 Double Perovskites with M = Ni, Co, and Zn	• Hamza Ouachtouk Amine HARBi • Chaimaa MOUKHFi • Said AZERBLOU • Youssef NAIMI • El Mostafa TACE	University Hassan II of Casablanca
Effect of Date Seed Powder on Sensory, Nutritional, and Rheological Properties of Moroccan Sourdough Bread	• Elbatoul HANOUNE • Ouahiba LAOUAT • Mohammed Aziz ELHOUMAIZI	University Mohammed First
CaO-HAP Impregnated by ZnAl2O4 as a Potential Catalyst for Biodiesel Production	• Amina OUAHBI • Youness BOUHAJ • Said SAIR • Abdeslam EL BOUARI • Omar TANANE	HASSAN II University
Crop Biofortification Using Transgenic Approaches	• P. KATHIRAVAN • V. AJAYDESOUZA • G. GUNASEKAR • K. PRITHIVIRAJ • Gowri SHANKAR	Annamalai University
Fractional Order Dynamics for HIV/AIDS Transmission with Migration	• Safae L'KIMA • Elhoussine AZROUL • Abdelouahed ALLA HAMOU	Sidi Mohamed Ben Abdellah University
Study of Electronic, Thermodynamic, and Optical Properties of RbScO2: Ab initio Calculations	• S. DAHRI • A. JABAR • L. BAHMAD • L. B. DRISSI • R. AHL LAAMARA	Mohammed V University in Rabat

THURSDAY – May 30, 2024
Cyprus Time 14:00-16:15
(Online)
SESSION-12, HALL-7 / OTURUM 12, SALON-7
MODERATOR: Slobodan POPOVIĆ

TITLE	AUTHORS	AFFILIATION
Production and Characterization of Carbon Nanotubes from Biochar Under Microwave Irradiation.	• Faisal NAZIR	The University of Agriculture
The Significance of Transformation of the Banking System in Developing Countries Like the Republic of Serbia	• Lutovac JELEN • Slobodan POPOVIĆ	Megatrend University
Internal Control in the Work of the Financial Sector and the Real Economy Sector of Small Economies	• Slobodan POPOVIĆ • Lutovac JELENA	Megatrend University
Generation of Hydrogen Using Solar Photoelectrochemical Techniques with Dye Sensitizers.	• Wadiae EL BAHRAMI • Hassan MABRAK • IMANE BOUMANCHAR • YOUSSEF NAIMI	Hassan II University of Casablanca
Strengthening Corporate Governance via Internal Control	• Mohammed Saci FERDIA • Aida KAMMOUN	University of Sfax
Analysis of Implementation of Personal Income Tax (Pph21) in an Islamic Economic Perspective	• Lisna Nisa SAVILA • Hendri Hermawan ADİNUGRAHA	UIN K.H. Abdurrahman Wahid Pekalongan
Practical and Rapid Synthesis of Various Chromene-Based Pharmaceutical Products, Assisted by Ag@Co3O4/Alginate as a Heterogeneous Catalyst, Biodegradability, and Efficacy	• Taoufyk AZZEDDINE • Benhadria LAHOUCINE • Rezzouq ASIYA • Mahfoud AGUNAOU Lahoucine BAHSIS	Hassan II University

THURSDAY – May 30, 2024 Cyprus Time 16:30-18:00 (Online)		
SESSION-13, HALL-1 / OTURUM 13, SALON-1 MODERATOR: Ahmet Cüneyd DİRİ		
TITLE	AUTHORS	AFFILIATION
Evaluation of the Carbon Footprint of Thermal Insulation Materials Used in Building Envelopes within the Building Life Cycle	• Ahmet Cüneyd DİRİ	Mimar Sinan Fine Arts University
Field Study on Determining the Impact of Design Decisions on Energy Efficiency at Settlement Scale	• Ceren Aydan NASIR • Elif ÖZER YÜKSEL • Seher GÜZELÇOBAN MAYUK	Gebze Technical University
Comparative Analysis of Life Cycle Assessment (LCA) Software	• Neriman Gül ÇELEBİ • Ümit ARPACIOĞLU	Mimar Sinan Fine Arts University,
A Research About Life Cycle Assessment of Inorganic Based of Binders in Terms of Sustainability	• Ecem KÖŞÜRGELİ • Seden ACUN ÖZGÜNLER	Final International University
Building Anatomy: Impact of Internal and External Factors on Building Design; Production and Analysis	• Neslihan Efsa ÖZÇELİK • Murat SÖNMEZ	TOBB Economy and Technology University
An Examination on Sustainability in Graduate Thesis from the Perspective of Industrial Design	• Ege KAYA KÖSE	Ankara Yıldırım Beyazıt University
Multigenerational Houses and Intergenerational Housing Typology	Dicle ÖZAVCI	Siirt University
The Effect of Environmental Design and Architecture on Crime Prevention	Dicle ÖZAVCI	Siirt University

THURSDAY – May 30, 2024 Cyprus Time 16:30-18:00 (Online) SESSION-14, HALL-2 / OTURUM 14, SALON-2 • MODERATOR: Öner DEMİREL		
TITLE	AUTHORS	AFFILIATION
A Model Trial for Creating a Site Selection Model for Urban Forests in Our Country: Kırıkkale Urban Forest	• Öner DEMIREL • Meryem Bihter BINGÜL BULUT • Bilgenur AK • Tuba Gizem AYDOĞAN	Kırıkkale University
From the Cladding Towards the Skin: A Biomimetic Perspective on the Building Envelope	• Zelal CINAR	TOBB University of Economics and Technology
Walkability on University Campuses: A Development Project at Süleyman Demirel University	• Gizem DİNÇ • Gamze VERGİSİZ	Süleyman Demirel University
Solar-Related Performance-Oriented Digital Workflow	• Sercan DENİZ • Zelal ÇINAR	TOBB Economy and Technology University
Examination of the City Image Components and Sign Elements of Balat District Through Instagram Users	• Hicran Hanım HALAÇ • Ruken AVCI • Yasemin AKCAKAYA	Eskişehir Technical University
Accreditation of Graduate Education Programs and the First Steps Taken on This Topic in Our Country	• Öner DEMİREL • Saye Nihan ÇABUK • Şükran ŞAHİN • Alper ÇABUK • Sultan Sevinç KURT KONAKOĞLU	Amasya University
Accessibility of Traditional Buildings for Elderly Individuals: The Case of Tarsus Burhanoğlu Mansion	• Sena SOYUPAK • Gökhan UŞMA	Adana Alparslan Türkeş Science and Technology University
Examining Material Use in Architectural Design from a Biomimetic Perspective	• Menşure Kübra MÜEZZİNOĞLU • Egecan ALP	Fırat University

THURSDAY – May 30, 2024
Cyprus Time 16:30-18:00
(Online)
SESSION-15, HALL-3 / OTURUM 15, SALON-3
• MODERATOR: Hasan YILMAZ

TITLE	AUTHORS	AFFILIATION
Involving Public Participation and Determining Preferences in Planning and Designing Noise Mitigation Barriers Along the Main Transportation Route in the City Center of Erzurum	• Ayşegül AKSU • Hasan YILMAZ	Atatürk University
The Importance of Bioclimatic Comfort in Ecopsychology Approach	• Ahmet Erkan METİN • Atila GÜL	Uşak University
The Role of Urban Planning in Controlling Noise Pollution from Road Transportation	• Barış KAHVECİ • Muzaffer YÜCEL	Niğde Ömer Halisdemir University
Effects of Material Selection on Urban Stormwater Management	• Nilay MISIRLI • Elif Ebru ŞİŞMAN	Trakya Üniversitesi
Investigation of the Role of Roofs in Rainwater Harvesting: Recep Tayyip Erdoğan University, Rize	• Ayça AKKAN ÇAVDAR • Esra LAKOT ALEMDAĞ	Recep Tayyip Erdoğan University
Exploring the Relationship Between Urban Resilience and Landscape Architecture	• Alev AD • Ömer Faruk UZUN	Sakarya University of Applied Science
An Evaluation on the Relationship Between Spatial Planning and Flood Disaster: The Case of Bozkurt, Kastamonu	• Zarife DEMİREZEN • Yasin BEKTAŞ	Erciyes University
Evaluation of the Sustainable Design Concept Through Architectural Project Competitions	• Nilay AYKAN • Esra LAKOT ALEMDAĞ	Recep Tayyip Erdoğan University

THURSDAY – May 30, 2024
Cyprus Time 16:30-18:00
(Online)
SESSION-16, HALL-4 / OTURUM 16, SALON-4
• MODERATOR: Kasra TALEBIAN

TITLE	AUTHORS	AFFILIATION
Exploring the Compromise Value of Azimuth Angle for Thermal and Visual Comfort in a Building in the Temperate Dry Climate of Nigeria	• Muhammad Aminu MUSA	Ahmadu Bello University
A Framework for Optimising Passive Indoor Thermal and Visual Comfort in Single-Banked Office Buildings in the Temperate Dry Climate of Nigeria	• Muhammad Aminu MUSA • Abubakar Sadiq SALISU	Ahmadu Bello University
A Model for Assessing Urban Texture in Terms of Energy Efficiency and Thermal Comfort	• Mehrdad KARIMIMOSHAVER	Bu-Ali Sina University
Climate Change and Drought Vulnerability in Northeast Algeria: A Data-Driven Approach to Risk Assessment and Management	• Abderrahmane ZIARI • Abderrahmane MEDJERAB	University of Sciences and Technology Houari Boumediene Algeriers
How Climate Change Affects Agricultural Production	• K.R. PADMA • K.R. DON	Sri Padmavati Mahila Visvavidyalayam (Women's) University
Impact of Contrasting Climate Conditions on Pomegranate Development and Productivity: Implications for Breeding and Cultivar Selection in Colder Environments	• Atman ADIBA • Abdelmajid HADDIOUI • Rachid RAZOUK • Hicham OUHAKKi • Anas HAMDANI • Hakim OUTGHOULIASt • Jamal CHARAFI	National Institute of Agricultural Research
Reservoir Simulation of Teapot Dome Classic Reservoir: Comparison of Water Flooding and Gas Flooding	• Azamat BUKAYEV • Aisha TEMIRKHAN • Masoud RIAZIA	Nazarbayev University
Renewable Resilience: Promoting a Greener World with Sustainable Energy Strategies	• Ashraful AMIN • Shahareyar EMON • Jahid Hasan RANA • Abdul Kader JELANE	University of Rajshahi

THURSDAY – May 30, 2024 Cyprus Time 16:30-18:00 (Online)		
SESSION-17, HALL-5 / OTURUM 17, SALON-5 • MODERATOR: Deniz HASIRCI		
TITLE	AUTHORS	AFFILIATION
The Bio-Interior: Holistic Biophilia in the Interior Design Studio	• Deniz HASIRCI • Silvia ROLLA • Gözde Damla TURHAN-HASKARA • İdil BAKIR KÜÇÜKKAYA	Izmir University of Economics
Examining Corporate Identity in Interior Design Through Residences	• Mehmethan ÖZERDEM • Mehmet NORASLI	Selçuk University
Changes in the Exhibition Styles of Chicago Architecture Biennials	• İrem Cansu YALÇIN • Zeynep SARAÇ • Gürkan TOPALOĞLU	Ataturk University
A Review Study on the Acoustics of Contemporary Mosques	• Fatma YELKENCİ SERT	Dokuz Eylul University
Analysis of Burdur Cumhuriyet Square with Space Syntax Method	• Tuğba BALKIS • Berna GÜÇ	Süleyman Demirel University
An Example of Sports Facilities in the Ottoman Empire: Robert College Gymnasium Building	• Tuğba YILMAZ • Zeynep Gül ÜNAL	Yıldız Technical University
A Comprehensive Study on the Visual Comfort Conditions of Historical Mosque Buildings	• Fatma YELKENCİ SERT	Dokuz Eylul University
Representation Place of the Republic: Reading the Educational Buildings of Isparta City Istasyon Street Through Urban Memory	• Nurcihan AKDAĞ • Şefika Gülin BEYHAN	Süleyman Demirel University

THURSDAY – May 30, 2024
Cyprus Time 16:30-18:00
(Online)
SESSION-18, HALL-6/ OTURUM 18, SALON-6
MODERATOR: Pelin FIRAT ÖRS

TITLE	AUTHORS	AFFILIATION
Leveraging Machine Learning for Early-Stage Energy Efficiency in Building Design: A Comprehensive Study on Predictive Models	• Hilab MANAL	University Mohamed Khider
Harmonizing Efficiency and Comfort: Unveiling Optimal Genetic Algorithm Parameters for Sustainable Building Design	• Hilab MANAL	University Mohamed Khider
Townhouse Design Solves the Problems of Tropical Climate, Save Energy and Ensure Thermal Comfort	• Bui Man Nghi • Dao Thanh Tam	University of Architecture Ho Chi Minh City
Advancements in Intelligent Optimization for Building Design: A Comprehensive Overview of Nature-Inspired Methods	• Hilab MANAL	University Mohamed Khider
Thermal Comfort in Commercial Buildings: A Comprehensive Study on Building Performance and Environmental Impact	• Hilab MANAL	University Mohamed Khider
Evaluating the Performance of Various Shading Devices on Daylighting For Visual Comfort in the Temperate Dry Climate of Nigeria	• Muhammad Aminu Musa • Usman, Abdullahi Muhammad	Ahmadu Bello University
Artificial Intelligence in Architecture for Energy Efficiency and Sustainability Objectives: Building Information Modeling, Virtual Reality, and Augmented Reality for Imaginative and Strategic Building Design and Layout	• Cristina Raluca Gh. Popescu • Gheorghe N. Popescu	University of Bucharest

THURSDAY – May 30, 2024
Cyprus Time 16:30-18:00
(Online)
SESSION-19, HALL-7 / OTURUM 19, SALON-7
• MODERATOR: Abdelmoutalib BENFRID

TITLE	AUTHORS	AFFILIATION
Efficacy of Aloe Vera Supplemented Canola Meal Based Diets on Growth Performance, Nutrient Digestibility and Carcass Composition of Catla Catla Fingerlings	• Muhammad AMJAD • Syed Makhdoom HUSSAIN • Zeeshan YOUSAF • Muhammad MAHMOOD • Adan NAEEM • Eman NAMEEM	Government College University
Cancer Data Analysis with Data Mining Algorith	• Irshad ULLAH • Aamna Saleem KHAN	Concordia College and University Delaware
The Voigt Model is Used to Homogenize High-Performance Concrete by Adding Fine Particles of Sheep Bone to Replace Fine Sand and Minimize Porosity.	• Abdelmoutalib BENFRID • Mohamed BACHIR BOUIADJRA	Université Djillali Liabes
Sımulatıon Model of a Sıngle-Phase Inverter Usıng SPWM Unıpolar Technıque	• Ramzi EL IDRISSI • Abdelkabir BACHA • Fatima LMAI	Hassan II University
Socioeconomics Factors Affecting Access to Medications and Pharmacy Services	• R. VIDHYALAKSHMi • K. RAJAGANAPATHY	Bharath Institute Of Higher Education And Research
Investigation of Structural, Microstructural and Optical Properties of ZnO, Zn0.90Co0.05M0.05O (M= Na, Al, Cd, Cu) Thin Films by USP Method.	• Sabrina ROGUAI • Abdelkader DJELLOUL	University of Abbes Laghrour Khenchela
Formulation and Evaluation of Anti Diabetic Activity of Herbal Anti Diabetic Syrup with Fenugreek	• Hina KHALID • Ayesha GHIAS • Aisha Ghulam MUSTAFA • M. HUZAIFA ALI • Mishal SHOAIB DAR • Fareeha NAWAB	Hajvery University
Regression Analysis of Hospital Statistics: A Case Study of Akure Metropolis	• O. A. OLADIMEJI • S. T, OGUNBANWO • O. T, OYEJIDE • O. O. OYEBODE	Federal Polytechnic

FRIDAY– May 31, 2024
Cyprus Time 08:30-10:45
(Online)
SESSION-20, HALL-1 / OTURUM 20, SALON-1
MODERATOR: Floriana ZUCARO

TITLE	AUTHORS	AFFILIATION
Comparative Analysis of Urban Land Cover Changes: A Case Study of İzmir, Türkiye, and Naples, Italy	• Floriana ZUCARO • Gizem DİNÇ • Atila GÜL	University of Naples Federico II
Analyzing Accessibility and Infrastructure of Cultural Heritage Sites for Visitors with Disabilities	• Nastaran DELJAVAN • Elif BİLMİŞOĞLU	KTO Karatay University
Investigation Heritage Conservation in Syria: Challenges and Strategies for Conserving the Ancient Palmyra Heritage Building	• Monzer JAGHLI • Shabnam GOLKARIAN	Near East University
Post-War Destruction and Rehabilitation Process: The Example of Syria-Aleppo	• Gülferah ÇORAPÇIOĞLU • Rüya AZİZE	Istanbul Arel University
Strategies for Urban Renewal in Revitalizing Tudun Ilu Neighborhood, Kaduna, Nigeria	• Aliyu HASSAn	Nigerian Air Force
Investigation of Sustainability Based Assessment Tools in Terms of Urban Landscape Quality	• Wajiha WAHEED	Allama Iqbal Open Univervity
Urban Planning	• Mustapha Imam MUHAMMAD	Bayero University
Historical Environment Protection Plans and Zoning Applications Antalya Province, İbradi District, Ormana Example	• Hüseyin CENGİZ	Istanbul Commerce University

FRIDAY– May 31, 2024
Cyprus Time 08:30-10:45
(Online)

SESSION-21, HALL-2 / OTURUM 21, SALON-2
MODERATOR: Şükran ŞAHİN

TITLE	AUTHORS	AFFILIATION
Ecological and Social Significance of Green Bridge Applications in Existing Urban Matrix: A Case Study in Design	• Şükran ŞAHİN	Ankara University
Urban Transformation in the View of Landscape Urbanism: Cases from İstanbul	• Ayşe Betül ÇUFALI • Emine Figen DILEK	Karabuk University
The Correlation Between Perceived Naturalness and User Typology in Urban Green Spaces	• Nida KURAK • Serap YILMAZ	Karadeniz Technical University
The Potential for the Use of Phase Change Materials in Diverse Climate Zones Across Türkiye	• Rana UZUN • Elif ÖZER YÜKSEL	Gebze Technical University
The Effects of Natural Environments on Chıldren's Learning	• Serap YILMAZ • Nida KURAK	Karadeniz Technical University
“Material Choice” in Architectural Design as “Signature”: An Analysis Through the Materials Identified with Architects and Their Buildings”	• Serkan Yaşar ERDİNÇ • Ürün BİÇER	İstanbul Beykent Üniversitesi
The Effects of Glycine Betaine and Nitrogen Applications on Turfgrass Performance of Zoysia japonica	• Mert ÇAKIR • Meryem KURT • Songül SEVER MUTLU	Süleyman Demirel University

FRIDAY– May 31, 2024
Cyprus Time 08:30-10:45
(Online)

SESSION-22, HALL-3 / OTURUM 22, SALON-3
MODERATOR: Pooya LOTFABAD

TITLE	AUTHORS	AFFILIATION
A Study to Understand the Management and Design of Green Buildings for Sustainable Development in the City of Bangalore, India	• Ravikeerthi Jangamakote VARADARAJU	Presidency College
The Role of Architecture in Sustainable Development	• Aminu Danrimi MAIKUDI	Studied at Kano University of Science & Technology Wudil - KUST
Cultural Heritage Protection and Historic Building Stability: From Geometrical Formation to Aesthetic	• Jumana Ahmad AQEEL • Naif Adel HADDAD	Hashemite University
Smart Sustainable Cities for Happier People as Envisioned by United Nations Economic Commission for Europe: Fostering Harmonious Societies, Improving Quality of Life, and Advocating Innovative Financing Approach	• Cristina Raluca Gh. POPESCU • Gheorghe N. POPESCU	University of Bucharest
Understanding Architecture: More Than Just Buildings.	• Wahaj HAIDER	Ahlul Bayt International University
Exploring Midjourney Parameters in Architectural Design: Chaos, Weird, and Stylize Parameters	• Merve GÖZEL • Changbae PARK	Pusan National University
A Method to Evaluate the Impact of Tall Residential Buildings on Cities	• Mehrdad KARIMIMOSHAVER • Banu ÖZKAZANÇ	Bu-Ali Sina University
Response of High Rise Building Against Earthquake Force and Wind Force Under Different Soil Conditions	• Subhashish DEY	Gudlavalleru Engineering College

FRIDAY – May 31, 2024
Cyprus Time 08:30-10:45
(Online)
SESSION-23, HALL-4/ OTURUM 23, SALON-4
MODERATOR: Ufuk ÇOŞGUN

TITLE	AUTHORS	AFFILIATION
Evaluation of Marketing Wood Production in Forestry	• Ufuk COŞGUN • Damla YILDIZ	Karabuk University
Exploring Teachers' Ecological Footprint Awareness	• Ömer ÇELİKKOL • Aytekin TOKGÖZ	Süleyman Demirel University
Evaluation of Employees' Perception of Workload and Job Satisfaction in Protected Areas	• Saime DEMİRTAŞ • Ufuk COŞGUN	Karabuk University
Determination of the Natural and Cultural Resource Values of the Turkish Republic of Cyprus in Terms of Tourism and Suggestions for Sustainable Management	• Sibel AKTEN • Gülsüm KASAP	Isparta University of Applied Sciences
Sustainable Ecotourism Policies in Forest Areas and Legislative Evaluations from Past to Present	• Damla YILDIZ • Ufuk COŞGUN	Karabuk University
Perception and Communication Awareness in Plants	• İlayda Merve İLERİ • Atila GÜL	Süleyman Demirel University
Evaluation of Metaphorical Perceptions of Ecotourism and Forest Park	• Damla YILDIZ • Ufuk COŞGUN • Hasan GÜNEŞ	Karabuk University
Local Identity Values and Analysis of Demre (Antalya) Region	• Atila Gül • Dilara ERDOĞAN	Süleyman Demirel University

FRIDAY– May 31, 2024
Cyprus Time 08:30-10:45
(Online)

SESSION-24, HALL-5 / OTURUM 24, SALON-5
MODERATOR: Halime GÖZLÜKAYA

TITLE	AUTHORS	AFFILIATION
Importance of Effective Leadership to Avoid Accidents at Construction Sites	• Subhojit CHATTARAJ • Sandeepan SAHA • Suman HALDER • Sudipta Naskar Alok DAS	Greater Kolkata College of Engineering and Management
Analysis of the Effect of Economic Growth on Poverty Levels in Pekalongan Regency	• KARTIKASARI • Muhammad SHULTHONI • Drajat STIAWAN	UIN K. H. Abdurrahman Wahid Pekalongan
Approaches for Analyzing Traffic Accident: A Comprehensive Overview	• Khanh Giang LE	University of Transport and Communications
Smart Traffic Systems Management in Connected Communities: Enhancing Safety and Mobility	• Khanh Giang LE	University of Transport and Communications
A Solution of Multi Objective Transportation Problem Under Uncertain Environments	• Mohammad NABEEL • Wajahat ALI • Sheema SADIA • Usman AKBAR	Aligarh Muslim University
IKN Tests the Technology Resilience of Smart Transportation Systems	• Indah KHOIRUNISA • Ade GUNAWAN • Santi Nailul IZATY	UIN K.H. Abdurrahman wahid Pekalongan
Noise Pollution Monitoring and Noise Mapping at Rajshahi University, Bangladesh	• Alamgir HASAN • Abul Kalam AZAD • KAMRUZZAMAN • MONIRUZZAMAN	Rajshahi University,
Antibiotic Pollution in Aquatic Environments: Understanding Environmental Impacts	• Priyanjali KAUSHAL • Aliza DANISH • Pushpanjali MAURYA • GULSHI • Shama AKHTAR • Mohd ZEESHAN • Abdul Rahman KHAN • Saimah KHAN	Integral University

FRIDAY– May 31, 2024
Cyprus Time 08:30-10:45
(Online)
SESSION-25, HALL-6 / OTURUM 25, SALON-6
MODERATOR: Wasiu Abiodun MAKİNDE

TITLE	AUTHORS	AFFILIATION
Fuzzy Logic with Artificial Intelligence in Improving Service Quality in e-government Applications	• Mohammad Ali AL QUDAH • Leyla MURADKHANLI • Mutaz Mohammed ABUHASHISH	Khazar University
Economic Survey of Household Expenditure Pattern during COVID-19 Pandemic in Ogun State, Nigeria	• Daud, S.A. • Amao, O. • Aderibigbe, I.A. • Sulaimon, I.O • Omotoso, A.B.	North-West University
Economic Problems of Society in the Perspective of Islamic Studies	• Nur HİDAYAH • Hendri Hermawan ADİNUGRAHA • Muhammad Aris SAFİ'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
Compensation Management and Employee Performance in the Federal Polytechnic, Ilaro, Nigeria	• Wasiu Abiodun MAKINDE	the Federal Polytechnic
The Role of Fiscal Policy in Reducing Poverty in Indonesia	• Neki BAROKAH • Hendri Hermawan ADINUGRAHA • M. Aris SYAFI'I • Happy Sista DEVI	UIN K.H. Abdurrahman Wahid Pekalongan
Ijarah and Implementation in Sharia Banking	• LAILATUSSIFA • Hendri Hermawan ADINUGRAHA • Muhammad Aris SYAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
Healthcare Financing in the Context of South Asian Countries	• Azhar JAN • Meenakshi GUPTA • Sheikh Aftaab-Ul-MAROOF	Shri Mata Vaishno Devi University
The Impact of the Growth of Sharia Insurance on the Indonesian Economy	• Arziyah Windri WINDASARI • Hendri Hermawan ADINUGRAHA • M.Aris SYAFI'I • Happy Sista DEVI	UIN K.H. Abdurrahman Wahid Pekalongan

FRIDAY– May 31, 2024
Cyprus Time 11:00-13:15
(Online)
SESSION-26, HALL-1/ OTURUM 26, SALON-1
MODERATOR: Sultan Sevinç KURT KONAKOĞLU

TITLE	AUTHORS	AFFILIATION
A Bibliometric Analysis on the Use of Unmanned Aerial Vehicle in Land Use/Land Cover Studies	• Berkant KONAKOĞLU • Kadir Tolga ÇELİK • Sultan Sevinç KURT KONAKOĞLU	Amasya University
Structural System Optimization on Planets with Different Gravitational Accelerations	• Serra ÇELİK KIRATLI • Ali Osman KURUŞCU	Yıldız Technical University
Post Application Problems and Solution Methods in Wood-Based Building Envelope Materials	• Bahadır KIR • Zehra Canan GİRGİN	Yildiz Technical University
A Bibliometric Introduction to Architectural Research, Including the Words of "Wood" and "Carbon" Together	• Z. Sevgen PERKER • Merve Nur KORKUSUZ	Bursa Uludag University
Development Process of Iron Material Usage in Architectural Applications from Past to Present	• Gökhan MERMİ • Ümit ARPACIOĞLU	Istanbul Nişantaşı University
Energy Analysis of Natural Insulation Materials in Building Exterior Wall for Eco-Efficient Retrofits	• İlknur ARI • Figen BALO	Fırat University
Energy Efficiency of Building Envelopes Designed with Natural Stone and Foam Based Insulation Alternatives	• İlknur ARI • Figen BALO	Fırat University
Institutionalization of Contemporary Building Materials in Turkish Architecture: State Organizations and Regulations	• Sümeyye KORKMAZ • Zafer SAĞDIÇ	Yıldız Technical University

FRIDAY– May 31, 2024
Cyprus Time 11:00-13:15
(Online)

SESSION-27, HALL-2 / OTURUM 27, SALON-2

MODERATOR: Ümit ARPACIOĞLU

TITLE	AUTHORS	AFFILIATION
The Owning of Public Space: The Impact of Play on Urban Public Spaces in the Frankenberger Neighbourhood	• Pelin Işık • Christa Reicher	RWTH Aachen University
Exploring Playgrounds: The Innovative Design of Aldo Van Eyck and Isamu Noguchi	• Gizem BÜYÜCEK	Konya Technical University
Le Corbusier and His Influence on Sustainable Architecture	• Enes ÖNER • Şeyda EMEKÇİ	Ankara Yıldırım Beyazıt University
V. Chicago Architecture Biennial: Examining the Relationship between Discourse and Content	• Esmanur YAVUZ • Sena ŞEN • Gürkan TOPALOĞLU	Karadeniz Teknik Üniversitesi
Reading the New through the Traces of the Old: Palimpsest Space Şerefiye Cistern	• Zeynep TANRIVERDİ	Fatih Sultan Mehmet Vakıf Üniversitesi
Evaluation of Gaziantep Old Government House in the Context of Critical Regionalism	• Mine ÖZOVACI KILIÇ • Nur URFALIOĞLU	Yıldız Teknik University
Examining “Repetition” as a Design Attitude within the Framework of the Philosophy of Immanence: Creative Repetition in the Designs of Bernard Cache and Greg Lynn	• Çiğdem POLATOĞLU • Nehir SANRI DOĞAN	Yıldız Technical University
Architectural Transformation in Kars After 1877-78: Effects of Russian Rule and Housing Architecture	• Gül Helin ALINAK • Elif Özlem AYDIN	Gebze Teknik Üniversitesi

FRIDAY– May 31, 2024
Cyprus Time 11:00-13:15
(Online)

SESSION-28, HALL-3/ OTURUM 28, SALON-3
MODERATOR: H. Berk TÜRKER

TITLE	AUTHORS	AFFILIATION
Thermodynamic Optimization of Tb–Ni Binary System Supported by Dft Calculations	• Z. RAHOU • D. MOUSTAINe • Y. BEN-ALI • A. HALLAOUI	Sidi Mohamed Ben Abdellah University
Managerial Coaching and Subordinates' Work Behavior: Empirical Study At Malaysia's Public Department	• Nur Izzaty MOHAMAd • Suhaila ABDULLAH	Universiti Sains Malaysia
A Study on Biosorbents for the Removal Ofchloride Ion from Water	• Subhashish DEY	Gudlavalleru Engineering College
Study of Ti3C2/CNT Nanocomposite-Based Flexible Paper Electrode for Supercapacitor Applications	• Chetan Mainak BASU • Vijay KUMAR • Sunil KUMAR • Jatinder GARG	G.D. Goenka University
Improving Performance: Evaluating and Optimizing a 70 MW Thermal Power Plant through Energy Audits	• Deepak RATHOD • Ankit TIWARI	Shri Vaishnav Institute of Technology and Science
Mission Drift of Microfinance Institutions in India: Is it real?	• Anupama RAJPUt • Bhawna RAJPUT	University of Delhi
Optimal Power Conversion Efficiency of Perovskite Solar Cells	• Aisha SHAIKH • Pervez Hameed SHAIKH • Shoaib Ahmed KHATRI	Mehran University of Engineering & Technology
Radiographic Techniques for Estimating Dental Age: A Comparative Study	• Muhammad Salman KHA • Irfan ULLAH • Saskia L NASROEN • Ani Melani MASKOEN • ERLI SARILITA	University of Indonesia

FRIDAY– May 31, 2024
Cyprus Time 11:00-13:15
(Online)

SESSION-29, HALL-4/ OTURUM 29, SALON-4
MODERATOR: Ahmet Erkan METİN

TITLE	AUTHORS	AFFILIATION
Experimental Investigations on Performance of Biomedical Ash in Concrete	• Subhashish DEY	Civil Engineering Department, Gudlavalleru Engineering College
A Novel Technology for Ecological Pavement and Asphalt Production: Mine and Industrial Waste Plant (CDMI)	• Zakaria MAD ANI	Valbiom Cluster Morocco
Mechanical Properties of Sandcrete Blocks Used for Building Construction in Ilaro Township of Ogun State, Nigeria	• Olugbenga Babajide SOYEMI • Elizabeth Tofunmi OJELABI	The Federal Polytechnic
Ceramic tile Composition and Technological Properties Based on Moroccan Dark Clays	• Ayoub IMGIRNE • Youssef ARKAME • Achraf HARRATI • Abdelilah EL HADDAR • Aboubakar MOUSTAPHA • Chaouki SADIK	HASSAN II University
Study of Insulation Scenarios Using an Ecological Material as a Sustainable Solution for Comfortable and Efficient Buildings: The Case of Moroccan Buildings	• Hicham KADDOURI • Ayoub BOUCHARK • Abderrahim ABIDOUCHE	Abdelmalek Essaadi University
Laboratory Investigation on Brittleness Performances of Reinforced Masonry Cement Mortar Containing Recycled Glass Waste	• Benyahia AMAR	University of Blida
Assessment of the Properties of Innovative Cement Mortars Produced from Recycled Powder	• Benyahia AMAR • Salhi MOHAMED • Boubekeur TOUFIK	University of Saad Dahlab Blida 1
Comparison Effect of Single and Combined Applications of Municipal Sewage Sludge and Triple Superphosphate on Some Growth Traits of Quinoa under Saline Condition	• Hadis HATAMI • Hossein PARVIZI • Amir PARNIAN • Hossein BEYRAMI	National Salinity Research Center

FRIDAY– May 31, 2024
Cyprus Time 11:00-13:15
(Online)
SESSION-30, HALL-5/ OTURUM 30, SALON-5
MODERATOR: Fedwa BEGHDADI

TITLE	AUTHORS	AFFILIATION
Removal of Pharmaceutical Drugs from Binary Mixtures by Use of Nanocomposite: Experimental and Molecular Modeling Study	• SALAA Fahima • Benabbou Asmae • Medjdoub Aicha • Khelifa Amine	Université de Mostaganem
Some Natural Isolated Compounds as Anticancer Agents	• B. Pharm A. • Dinessh BABU	Bharath Institute Of Higher Education And Research Chennai
The Algerian Desert is a Rich Source of Actinobacteria with Important Biotechnological Activities	• Fedwa BEGHDADI • El-Hadj DRICHE	Hassiba Benbouali University of Chlef
Green Tea –An Antioxidant Mystic Herb	• B. Pharm • A. DINESH BABU	Bharath Institute Of Higher Education And Research Chennai
Fire Blight Disease is a tThreat to the Crop of Apple and Pear Trees	• Fedwa BEGHDADI • El-Hadj DRICHE	Hassiba Benbouali University of Chlef
Isolation and identification of actinobacteria from Algerian Saharan Soil	• Fedwa BEGHDADI • El-Hadj DRICHE	Hassiba Benbouali University of Chlef
Effect of Chromium (Cr) on Phase Transformation Behavior of Fe-20Mn-6Si Shape Memory Alloy	• Junaid KHAN • Rana Atta ur Rahman • Shahid MEHMOOD	University of Engineering and Technology
Numerical Simulation for the Thermal and Solute Analysis of Unsteady Non-Newtonian on the Oscillating Surface with Natura Convection	• T. SALAHUDDIN • Muhammad AWAIS	Mirpur University of Science and Technology

FRIDAY– May 31, 2024 Cyprus Time 11:00-13:15 (Online)		
SESSION-31, HALL-6/ OTURUM 31, SALON-6 MODERATOR: Irfan MUSTAFA		
TITLE	AUTHORS	AFFILIATION
Synthesis and Characterization of Silica-Chitosan Decorated Magnetic Nanostructure for Wastewater Treatment	• Syed Anam Shaheen ABBAS SHAH • Muhammad SHOAIB • Muhammad YASIN NAZ • Shazia SHUKRULLAH	University of Agriculture Faisalabad
The Biological Activity of Mesoporous Materials	• Boughedir NADIA	Université de Tlemcen
Exploring Chat-GPT'S Pivotal Role in Shaping the Landscape of Industry 4.0	• Zohaib Hassan SAIN	Superior University
A Theoretical Analysis of Fe2O3-C2H6O2 based Ferrofluid Flow through a Permeable Moving Wedge with Non-Linear Magnetic Field	• Irfan MUSTAFA	Allama Iqbal Open University
The Influence of Local Own-Source Revenue, General Allocation Funds, and Special Allocation Funds on Economic Growth in 15 Districts/Municipalities in West Java Province in 2021-2022	• Nafisah NURSAFANAH • Hendri Hermawan ADINUGRAHA • Muhammad Aris SYAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
Risk Minimization with the Help of Computer Systems	• Aamna Saleem KHAN • Irshad ULLAH	Concordia College and University Delaware
Role of Nanorobotics in Healthcare	• Priyanshi GOYAL	Mangalayatan University
Conservation and Rehabilitation of the Roman Aqueduct of Gadara, the Ancient World Longest Aqueduct System	• Ziad Al SAAD	Yarmouk University-Jordan

FRIDAY– May 31, 2024
Cyprus Time 13:30-15:45
(Online)

SESSION-32, HALL-1/ OTURUM 32, SALON-1
MODERATOR: Niyazi Uğur KOÇKAL

TITLE	AUTHORS	AFFILIATION
The Effect of Plant-Based Extract-Containing Mortars Used in Different Ratios on Performance	• Seda TURAN • Nazlı İpek KUL GÜL • Niyazi Uğur KOÇKAL • Fatih ÖZBAŞ • Selcan KARAKUŞ • Nevin TAŞALTIN	Antalya Belek University
A Research on the Usage Potential of Natural Compounds for the Protection of Wood against Fungi Problems in the Context of Eco-Friendly Wood Preservation Applications	• Selvi Burcu GÜLER • Seden ACUN ÖZGÜNLER	Istanbul Technical University
Investigation of Properties of Mortars Including Plant Extracts as a Waste	• Nazlı İpek KUL GÜL • Seda TURAN • Niyazi Uğur KOÇKAL • Fatih ÖZBAŞ • Selcan KARAKUŞ • Nevin TAŞALTIN	Antalya Belek University
How Can Architectural History Courses Be Made More Attractive: An Alternative Syllabus	• Cemile Feyzan ŞİMŞEK	Ankara Yıldırım Beyazıt University
The Effect of Fly Ash Aggregate Produced by Cold Bonding Method on Mortar Properties	• Niyazi Uğur KOÇKAL • Nazmiye KELEŞ	Akdeniz University
Comparison of the Production and Usage Performance of Container Structures and Earth Structures for Temporary Building	• Evrim SOLHAN • Seden ACUN ÖZGÜNLER	Mimar Sinan Fine Art University
Evaluation of the Effect of Biopolymer Additives on the Performance Properties of Earth Plaster	• Münevver Şeyda KÜÇÜKŞAKAL • Seden ACUN ÖZGÜNLER	Istanbul Technical University
Recreating Parts Produced on 3D Printers with Generative Design	• İskender Emre GÜL • Niyazi Uğur KOÇKAL	Akdeniz University

FRIDAY– May 31, 2024
Cyprus Time 13:30-15:45
(Online)

SESSION-33, HALL-2/ OTURUM 33, SALON-2
MODERATOR: Şirin Gülcen EREN

TITLE	AUTHORS	AFFILIATION
Principles of Post-Disaster Urban Reconstruction and Planning	• Burcu GÜN • Şirin Gülcen EREN	Süleyman Demirel University
Urban Planning of Green Space as Tool of Oppression	• Abdurrahman MOHAMED • Salwa ABEDELAL	Antalya Bilim University
Gauthier Linear City for Urban Development in Gaza, Palestine	• Abdurrahman MOHAMED • Ina'am ELTAWIL	Antalya Bilim University
Examining the Effects of Regulated Intersections on Urban Landscape and Urban Transportation	• Duygu KARABIÇAK GÜNAYDIN • Esra ÖZHANCI	Nevşehir Hacı Bektaş Veli University
Investigation of Sense of Place within the Framework of Conservation Plans and Physical Space in Türkiye	• Emre KOLÇAK • Eti AKYÜZ LEVİ	Dokuz Eylul University
Distinction Between Form-Process and Making-Becoming: Epistemological Foundations of Urban Theories	• Elçin Burcu TEMEL • Rifat Gökhan KOÇYİĞİT	Maltepe University
Urban Rail System Line Planning in Al-Hofuf City, Saudi Arabia	• Ömer ÇÖLOVA • Majid ALJASIM	Karabük University
Rail System Route Planning in Egypt: The Case of Luxor	• Ömer ÇÖLOVA • İbrahim KILIÇ • Aziz KADIOĞLU	Karabük University

FRIDAY– May 31, 2024
Cyprus Time 13:30-15:45
(Online)
SESSION-34, HALL-3/ OTURUM 34, SALON-3
MODERATOR: Gizem DİNÇ

TITLE	AUTHORS	AFFILIATION
Study on Self-Healing Concrete Through Experimentation	• Chayaraju BALASAI • Nadagouda KALYANI	G Pulla Reddy Engineering College
Experimental Study on the Behaviour of Concrete Filled Steel Tubes Subjected to Axial and Lateral Loading	• P. GAJALAKSHMI • Menaka A S	B.S Abdur Rahman Crescent Institute of Science and Technology
Ignition and Burning Rate of Sheanut Shell Briquettes Produced at Moderate Temperature and Die Pressure	• Elinge C.M. • D.Y. Bawa • M. S. Zubairu • Magaji M.B • F. A. Atiku	Kebbi State University of Science and Technology
A Study on Biosorbents for the Removal of in Organic Chemical from Water	• Subhashish Dey	Gudlavalleru Engineering College
A Review on Optimizing Design and Performance of Fiber-Reinforced Concrete	• Deep CHATTERJEE • Subhojit CHATTARAJ • Saheed KHAN • Soumi DEY • Jamuna PATRA	Brainware University
Optimum Design of Reinforced Concrete Cantilever Retaining Walls by Artificial Bee Colony Optimization Algorithm	• Mehdi Shalchi TOUSI	Beyte internatinal University
Microwave-Assisted Catalytic Co-Pyrolysis of Plastic Waste and Used Cooking Oil into Valuable Products as Sustainable Energy Source	• Farzin SHEIKH • Muhammad Yasin NAZ • Shazia SHUKRULLAH • Muhammad Rizwan KHALID	University of Agriculture
Transformation Sharia Finance Industry: the Vital Role of Financial Technology (Fintech) in Central Java	• Aulia Rahma Diniya PUTRI • Hendri Hermawan İNUGRAHA • M. Aris SYAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan

FRIDAY– May 31, 2024
Cyprus Time 13:30-15:45
(Online)
SESSION-35, HALL-4/ OTURUM 35, SALON-4
MODERATOR: Hatice Eda GÜL

TITLE	AUTHORS	AFFILIATION
Educational Context, Abilities and Entrepreneurial Intentions of University Students. Empirical Investigation	• Laura Diaconu MAXIM	University of Iasi
Women in Small Entrepreneurship in Kazakhstan	• Yerkezhan KENZHEALI • Talgatova DILNAZ	K. Sagadiyev University of International Business
Researching the Dynamic of Education Among Women in Kazakhstan	• Suleimenova ANEL	K. Sagadiyev University of International Business
Relatıonshıp Between Hedonıc Lıfestyle and Consumptıve Behavıor in Uın K.H Abdurrahman Wahıd Pekalongan, Indonesıa	• Muhammad Luki FATURROKHMAN • Hendri Hermawan ADINUGRAHA • Muhammad Aris SYAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
Perceived Social Support and Illness Perception in Cardiac Patients Mediating Role of Psychological Morbidity	• Anam ARSHAD • Amarah QURESHI	University Of Management and Technology
The Influence of Population, Education, And Unemployment on The Number of Poor People in Central Java in 2021	• Arinal HUSNA • Hendri Hermawan ADINUGRAHA • Muhammad Aris SAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
Ergonomic Assessment of Workers and Their Tasks in the Metal Casting Industry in North India	• Anmol BHALLA • Harjit SINGH • Harminder SINGH • Pahulpreet SINGH • Himanshu KHANNA • Manish DEV	Guru Nanak Dev University
Exploring the Potential of Online Learning: Opportunities and Challenges	• M. FAUZI • Milatul FATKHIYAH	UIN K.H. Abdurrahman Wahid Pekalongan

FRIDAY– May 31, 2024
Cyprus Time 13:30-15:45
(Online)
SESSION-36, HALL-5/ OTURUM 36, SALON-5
MODERATOR: Kamiar YAZDANI

TITLE	AUTHORS	AFFILIATION
The Role of Fiscal Policy in Promoting Sustainable Economic Growth	• Khabibah DZILKAMIL • Hendri Hermawan ADİNUGRAHA • Muhammad Aris SAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
United for Sustainability: Collaborative Strategies for Global Development	• Ashraful AMIN • Shahareyar EMON • Jahid Hasan RANA • Abdul Kader JELANE	University of Rajshahi
Empowering Economic Development in Gejlig Village Through Village-Owned Enterprises (BUMDes)	• Muhammad Risqi HARYWIBOWO • Hendri Hermawan ADINUGRAHA • M. Aris SAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
Unmasking Misinformation: A Multifaceted Strategy for Fake News Identification and Typology with TF-IDF & Passive Aggressive Classifier	• Mansi PATHAK • Varinder Kaur ATTRI	Guru Nanak Dev University
Impact of Behavioral Biases on Investment Behavior: A Study of Retail Investors	• Ishrat BASHIR • Sushil Kumar MEHTA	Shri Mata Vaishno Devi university
Unveiling Asymmetric Dynamics: Fossil Fuel Consumption and Carbon Emissions in India – Aggregate and Disaggregate Analysis	• Yousuf KHAN • Shadman ZAFAR • Syed Mohd. SHAHZEB • Mohd Azam KHAN	Aligarh Muslim University
Investment Potential for the Transfer of The Archipelago's Ikn in Indonesia	• Diva Nimas RAMADHANI • Hendri Hermawan ADİNUGRAHA • Muhammad Aris SYAFI'I, M.E.I • Happy Sista DEVY, M.M	UIN K.H. Abdurrahman Wahid Pekalongan
Implementation of I'm L Al-Kal M Rules in the Salam Contract in Online Buying and Selling Transactions	• Maryani Ayu RAHMAWATI • Hendri Hermawan ADINUGRAHA • M. Aris SYAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan

FRIDAY– May 31, 2024
Cyprus Time 13:30-15:45
(Online)

SESSION-37, HALL-6/ OTURUM 37, SALON-6
MODERATOR: Alexandrov V.S.

TITLE	AUTHORS	AFFILIATION
Photocatalytic Properties of NiO and ZnO Thin Films for Ecology/Environment Application	• Khemissi LAHOUEL • Meriem GASMI	University of Abbes Laghrour
A Systematic Review of Work-Related Musculoskeletal Disorders in the Foundry Industry and Scope for Ergonomics Design Interventions	• Anmol BHALLA • Harjit SINGH • Harminder SINGH • Pahulpreet SINGH • Himanshu KHANNA • Manish DEV	Guru Nanak Dev University
Development of New Methods of Substance Analysis in Comparison with the Reference Sample	• Alexandrov V.S.	Kazan National Research Technical University named after A.N. Tupolev
Survival Time of Cancer Patients Using Some Distribution	• P. PANDIYAN • G. SATHYAMURTHY • G. SUBASH CHANDRABOSE	Annamalai university
Conservation of Beneficial Insects Through the Insect Hotels	• GUNASEKAR G • SIVASURIYAN K • AJAYDESOUZA V • GOWRI SHANKAR S • PRITHIV R	Annamalai University
Allelochemical Effect on Averrhoa Carambolal Inanatomical Architecture on Wheat Growth	• Syeda Sabika Zahra Naqvi • Syed Mohsan Raza Shah • Zaheer Abbas	University of Education
Using Nanotechnology in Heath science	• Lamia Berkane, Azzeddine Choughrem, Ghania Ahmed, • Dalal Doudi, Mohammed Sadok Derki, • Mohammed Nadjib Derki, • Chikha Maria, • Nadjah Bedida	University of El Oued
Toxic Effect of Microplastics Supplemented Sunflower Meal-Based Diet on The Growth Performance, Body Composition, Nutrient Digestibility and Hematology of Labeo Rohita	• Muhammad AMJAD • Eram RASHID • Syed Makhdoom HUSSAIN • Danish RIAZT • Zeeshan YOUSAF	Government College University

FRIDAY– May 31, 2024
Cyprus Time 16:00-18:15
(Online)
SESSION-38, HALL-1/ OTURUM 38, SALON-1
MODERATOR: Berna ÜSTÜN

TITLE	AUTHORS	AFFILIATION
Examining the Potentials of Media Architecture in Future Architectural and Public Spaces	• Işıl AKSU İŞLEK • Berna ÜSTÜN	Eskisehir Technical University
Examining the Perception of Space through Digital Installations	• Mehmet Akif SUBAŞI • Çiğdem POLATOĞLU SERTER	Yıldız Technical University
Interdisciplinary Nature-Based Collaboration in the Digital Age	• Elif YAMAÇ • Cahide AYDIN İPEKÇİ	Gebze Technical University
A New Complex Network Based Approach for Detection of Arrhythmias in ECG Signals	• Serkan AKSU • Bayram AKGÜL	Bartın University
A Neuroscience-Based Research Strategy for the Effect of Emotions in Architectural Design Thinking	• Sevim Gülen TÜRKER • Dilek YILDIZ ÖZKAN	Istanbul Technical University
A Classification Study on Systems That Provide Automated Control of BIM-Based Building Projects in Computerized Environment According to Building Regulations	• Murat AYDIN	Ankara University
Reflections of Primitive on Contemporary Architecture at the Intersection of Techne and Technology	• Merve ARTKAN • Berna ÜSTÜN	Antalya Bilim University

FRIDAY– May 31, 2024
Cyprus Time 16:00-18:15
(Online)
SESSION-39, HALL-2/ OTURUM 39, SALON-2
MODERATOR: Murat ZENGİN

TITLE	AUTHORS	AFFILIATION
Determination of Flood Risk Areas in Central District of Denizli Province	• Duygu DOĞAN • Murat ZENGİN	Pamukkale University
The Digital Documentation of Cultural Heritage: The Case of Kalaycıoğlu Masjid	• Leyla KADERLİ • Büşra UZASLAN	Erciyes University
Digital Urban Culture between Sustainability and Creativity: Flagship Projects of Dar-ül Mülk for Cultural Tourism	• Feyza TOPÇUOĞLU	Middle East Technical University
Interaction of Cultural Heritage Assets and New Media Art	• Işıl AKSU İŞLEK • Hicran Hanım HALAÇ	Eskisehir Technical University
Color-Urban Identity Relationship in Urban Designs	• Seyhan SEYHAN • Elif BAYRAMOĞLU	Karadeniz Technical University
Designing Urban Spaces as Emotions	• Elif SAĞLIK • Emine Berfin MINKARA	Çanakkale Onsekiz Mart University
The Effect of Transportation on Urban Identity in Urban Areas	• Seyhan SEYHAN • Elif BAYRAMOĞLU	Karadeniz Technical University
The Traces of Landscape in Historical and Touristic Streets: Ayvalık – Cunda (Alibey) Island	• Mahmut Can AST • Elif SAĞLIK	Çanakkale Onsekiz Mart University

FRIDAY– May 31, 2024 Cyprus Time 16:00-18:15 (Online) SESSION-40, HALL-3/ OTURUM 40, SALON-3 MODERATOR: Meryem Bihter Bingül Bulut		
TITLE	AUTHORS	AFFILIATION
Water Efficient Landscape Design for The Sustainability of Water Resources in Urban Areas	• Bilgenur AK • Öner DEMİREL • M. Bihter BİNGÖL BULUT	Kırıkkale University
Examination of Manisa Demirci 83. Yıl Park in Terms of Universal Standards for Disabled People	• Feyza AYDIN ÇOLAKOĞLU • Dilşen ONSEKİZ	Usak University
Generating Concepts in the Process of Environmental Design Projects: The Case of Trabzon Sera lake Resort	• Tuğba DÜZENLİ • Elif Merve ALPAK	Karadeniz Technical University
The Theory of Affordances and Its Relationship with the Environment	• Tuğba DÜZENLİ • Elif Merve ALPAK	Karadeniz Technical University
Turkish Heritage in the Wellness Culture in the City of Eger, North Hungary	• Sándor Földvári	Debrecen University
Sustainable Development and Environmental Protection	• Sreekumar S.L.,	University College TVM
Insights on International Charters and Urban Planning for the Preservation of Historic and Archaeological Sites	• Mohammad JUPER • Naif Adel HADDAD	Hashemite University
VR and edutainment for Cultural Heritage, Architecture and Urban Planning Interpretation & Tourism Promotion	• Hadeel WAHISH • Sara ALJABER • Naif Adel HADDAD	Hashemite University

FRIDAY– May 31, 2024
Cyprus Time 16:00-18:15
(Online)

SESSION-41, HALL-4/ OTURUM 41, SALON-4
MODERATOR Mete Ünal GIRGEN

TITLE	AUTHORS	AFFILIATION
Transportation in Tourism Development in Non-Urban Areas in Nigeria: Faith-Based Interventions	• Favour C. UROKO	University of Nigeria
Interpretation and Intervention in Historic Building as a Street of Art and Graffiti: The Palacio De Mansilla of the UNESCO World Heritage Site of Segovia, Spain	• Mira Naif HADDAD	IE University
Harnessing Ecotourism: A Catalyst for Conservation and Sustainable Community Development in Fragile Ecosystems	• Astitva Kumar RAO	Dr. B. R. Ambedkar National Law University
Recommendations for Sustainable Recreation Development Within the Carpathian Biosphere Reserve	• Natalia HABCHAK • Svitlana MYSHKO	Uzhhorod National University
Sites of Community Importance Versus Protected Areas of National Interest in Romania	• MIHĂILESCU Simona • GHEORGHE Florentina Iuliana • MANU Minodora • ONETE Marilena	Institute of Biology Bucharest of the Romanian Academy
Development of Agroforestry Ecotourism, Mapping of Tourist Objects and Attractions in Pasawaran Regency Lampung Province, Indonesia.	• Erlina Rufaidah • Surnayanti • Machya Kartika Tsani • Sugeng P Harianto • Nuril Atmajaya	, Universitas Lampung
Implementation of Multilingual Translation as a Customer Acquisition Tool for Turkish Hotels	• Vasyl PUZANOV	Zaporizhzhya National University
Analysis of the Influence of the Number of Accommodations, Tourist Attractions, and Transportation Availability on the Number of Domestic Tourist Visits in Central Java Province in 2021	• Laila Fitria Nur RAHMA • Hendri Hermawan ADİNUGRAHA • Muhammad Aris SAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan

FRIDAY– May 31, 2024
Cyprus Time 16:00-18:15
(Online)

SESSION-42, HALL-5/ OTURUM 42, SALON-5
MODERATOR: Tuba Gizem AYDOĞAN

TITLE	AUTHORS	AFFILIATION
The Role of Religious Moderation to Build Harmonious Interreligious Relations Through Cultural Accommodation	• Ardia Puspita DEWI • Hendri Hermawan ADİNUGRAHA • Aris SYAFI'I • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan
"The Cultural Tapestry of Parenting in Pakistan: Insights into 'Pure Life' and Child-Rearing"	• Sareh Larijany • Sani e Zehra	Ahlul Bayt International University
“Alakdan: A Virtual Assistant for Centro Escolar University Processes”	• Dungca, Francis Steven Z. • Garduque, Reymark M., • Reyes, Ellesia Catherine P.	Student at Centro Escolar University
“MiniXplorer: An Image Recognition Mobile Application using Google Machine Learning Kit and Text-to-Speech Integration”	• Brendiz Allain Alamil	Centro Escolar University
Ethical Considerations in Technology Implementation In Various Sectors	• Gowri Shankar S • Ajaydesouza V • Gunasekar G • Kathiravan P • Prithiviraj K	Annamalai University
Driving Brand Leadership: Quality in the Indian Auto Industry	• Mikul • Ishwar Mittal • Rosy Dhall	Maharshi Dayanand University
A Study of Consumer Attitudes and Preferences Regarding Plant-Based Meat Substitutes	• Agata Studenna	KN Nutrition and Nutrition Prevention
Augmented Reality Mobile Applications Design for Mathematics Education: A case study of learning Linear Programming	• Laura Yohana • Asep Septiyono • Suyoto	Universitas Atma Jaya Yogyakarta

FRIDAY– May 31, 2024
Cyprus Time 16:00-18:15
(Online)
SESSION-43, HALL-6/ OTURUM 43, SALON-6
MODERATOR: Dhulasiraman M

TITLE	AUTHORS	AFFILIATION
Production of hydrogen fuel and carbon nanotubes from high-density polyethylene using an in-situ catalytic microwave pyrolysis process	• Bilal Shoukat • Muhammad Yasin Naz • Shazia Shukrullah • Hammad Hussain • Muhammad Shoaib	University of Agriculture Faisalabad
Empowering Health Through IoT-Driven Predictive Monitoring for Cost-Efficient Care	• Dhulasiraman M	R.M.K. Engineering College
Study of the Adsorption of a Basic Dyes on an Activated Carbon Derived from Jujube Cores	• BOUSSALAH Mohammed Ettahar • GUELLA Sofiane • MEDJAHDI Malika	University of Sidi bel Abbes
Quantile Regression Analysis on the New Unit Nadarajah and Haghighi Distribution	• Ayesha Siddique • Farrukh Jamal • Abdus Saboor • Shakaiba Shafiq	The Islamia University of Bahawalpur
Sedimentology and Characterization Physico-Chemical and Textural Properties Textural Properties of Bentonites Kert Neogene Basin	• Ait Hmeid H • Akodad M • El Halim M • Omdi F.E • Baghour M • Skalli A • Chahban M Aalaoul M	Mohamed 1st University
Comparison Study Between Sliding Mode Control and Backstepping Control Of A Wind Power System Based on the DFIG Generator	• Abdelghafour HERIZI • Riyadh ROUABHI • Al hassan BOUSSAG • Abdesattar DJALAB	University of M'sila
A Novel Chaotic Image Encryption Technique Based on Filtering Operation and 4D Hyperchaotic System	• M. Naim, A • Hadj Brahim	University of Sciences and Technology of Oran Mohamed Boudiaf
Smart Electric Vehicle Charging System Integrated with Renewable Sources	• B. PHARM, • A. DINESH BABU	Swedish College of engineering and technology Taxila

FRIDAY– May 31, 2024
Cyprus Time 19:00-21:45
(Online)

SESSION-44, HALL-1 / OTURUM 44, SALON-1
MODERATOR: Asena SOYLUK

TITLE	AUTHORS	AFFILIATION
Analysing The Aesthetic Control Practices Between the Ranges of Centrality-Locality and Recommendation-Prohibition	• Tarık Emre KIRHALLI • Rifat Gökhan KOÇYİĞİT	Mimar Sinan Güzel Sanatlar Üniversitesi
Examining The Concept of Place Attachment in a Temporary Accommodation Space Like Dormitory: Yeditepe University Dormitory Example	• Cansu Aktaş	Yeditepe University
Finite Element Analysis of Adobe Building Components	• Dilara KALLİ • Ali İhsan ÇELİK	Erciyes University
Examination The Effects of Iconic Buildings On Cities	• Güler BAYRAK ALCA • Berrin ŞAHİN DİRİ	Mimar Sinan Fine Arts University
Earthquake Caused Embodied Energy Potential of Demolition WasteA Case Study in Istanbul	• Ceren ÇAKAR • Cenk Üstündağ	Istanbul Technical University
A Journey with the Senses in Library Design	• Hande EYÜBOĞLU • Serap FAİZ BÜYÜKÇAM	Samsun University
The Role of Vernacular Housing Architecture in Cultural Sustainability: The Bodrum Peninsula Example	• İlayda Demirci • Hümeyra Birol	Dokuz Eylül University
Left Behind: Waste Museums	• Serap FAİZ BÜYÜKÇAM • Hande EYÜBOĞLU	Ondokuz May University

FRIDAY– May 31, 2024
Cyprus Time 19:00-21:45
(Online)
SESSION-45, HALL-2/ OTURUM 45, SALON-2
MODERATOR: Leyla SURİ

TITLE	AUTHORS	AFFILIATION
Architectural Solutions Inspired by Nature and Bringing You Closer to Nature	• Leyla SURİ	Istanbul Commerce University
Shelter Design for Living Species in Terrain Vague	• Deniz Kantar	Istanbul Bilgi University
Spatial Assessment of Bakırköy Ispirtohane, a Renovated Industrial Heritage	• Refia Anıl AĞRILI • Emel İŞLEYEN	Marmara University
Use of Multi-Criteria Decision Support Systems in Reusing of Historical Buildings	• Gülferah ÇORAPÇIOĞLU • Osman Serdar SANCAK	Istanbul Arel University
Planning Surface Runoff Using Green Infrastructure Systems in Urban Waterways	• Nazmiye ERMEYDAN • Serhat ANIKTAR	Istanbul Sabahattin Zaim University
A Cartography of Contemporary Earthen Buildings in Türkiye	• Furkan Taha GEDİKLİ • Işıl RUHİ-SİPAHİOĞLU • Matthieu Joseph PEDERGNANA	TOBB University of Economics and Technology
Spatial/Legal Problems of Cappadocia Troglodytes and Solution Suggestions	• Emine AKCAN ŞİRİN • Ufuk DOĞRUSÖZ	Istanbul Commerce University
Establishing the Post-Disaster Shelter and Belonging Bond	• Selin Rüya ÇAKIR • Ümit Turgay ARPACIOĞLU	Istanbul Gelişim University

FRIDAY– May 31, 2024
Cyprus Time 19:00-21:45
(Online)
SESSION-46, HALL-3/ OTURUM 46, SALON-3
MODERATOR: Ertan DÜZGÜNEŞ

TITLE	AUTHORS	AFFILIATION
Comparative Analysis of Visitor Preferences in Different Status Protected Areas Using Social Media Metrics	• Ertan DÜZGÜNEŞ • Duygu KARABIÇAK GÜNAYDIN	Karadeniz Technical University
Analysis of Natural Children's Playgrounds from an Ecological Perspective	• Duygu KARABIÇAK GÜNAYDIN • Ertan DÜZGÜNEŞ	Karadeniz Technical University
Evaluation of the Use of Virtual and Augmented Reality Technologies in the Presentation of Cultural Heritage Sites in the Context of Conservation Principles	• Merve Aslı KARA YÜKSEL	Maltepe University
Nature and Ecosystem Based Solutions in Urban Areas	• Burçin EKİCİ • Tuğba ARSLAN	Tekirdağ Namık Kemal University
Conservation of Historical Roads and Cultural Route Concept: The Case of Eğirdir District	• Merve YILMAZ • Elvan Ebru OMAY POLAT	Yıldız Technical University
Landscape Planning	• Muhammad MUHAMMAD	Cairo University
Watershed Planning	• Khamisu ABDULLAHI	UIN K.H. Abdurrahman Wahid Pekalongan

FRIDAY– May 31, 2024
Cyprus Time 19:00-21:45
(Online)

SESSION-47, HALL-4/ OTURUM 47, SALON-4

MODERATOR: Mert ÇAKIR

TITLE	AUTHORS	AFFILIATION
Determination of The Effects of Biostimulant and Nitrogen Applications on The Establishment of Bermuda Grass from Sprigs	• Bora Mert ŞAHİN • Bahar SANCAR • Songül SEVER MUTLU	Akdeniz University
The Effects of Biostimulant and Fertilizer Applications on The Winter Dormancy of Bermudagrass (*Cynodon dactylon* L. Pers)	• Yakup SEVGİN • Bahar SANCAR • Songül SEVER MUTLU	Akdeniz University
Effects of Artificial Intelligence Supported Smart Irrigation Systems on Water Efficiency and Plant Production	• Gülcay ERCAN OĞUZTÜRK • Şüheda TAMER • Meryem YURTSEVEN	Recep Tayyip Erdoğan University
The Role of Building Integrated Agriculture Systems as Potential Food Production Areas in Ecological Building Design	• Beyza Aleyna BAYRAM • Pınar KISA OVALI	Trakya University
Impact Assessment of Climate Change on Rice Crop in the Main Areas of Pakistan	• Muhammad Umer HAMEED • Syed Aftab WAJID • Iqra Ali AHMAD	University of Agriculture Faisalabad
Agroforestry Tree Cover Change in Agricultural Landscapes Following Farmland Exclosure in Tigray, Ethiopia	• Gebremariam YAEBIYO • Emiru BIRHANE • Tewodros TADESSE • Abbadi GIRMAY • Kiros MELES HADGU • Solomon KIROS	Tigray Agricultural Research Institute
Tuberculosis is a Threat to Olive Trees	• Fedwa BEGHDADI • El-Hadj DRICHE	Hassiba Benbouali University of Chlef
Leveraging ICT and AI for Sustainable Precision Agriculture in Pakistan- Greenai	• Muhammad FAISAL	Asian Countries General Coordinator

FRIDAY– May 31, 2024
Cyprus Time 19:00-21:45
(Online)
SESSION-48, HALL-5/ OTURUM 48, SALON-5
MODERATOR: Çağla AYDEMİR

TITLE	AUTHORS	AFFILIATION
Development of Computer Technology-Based Elementary School Learning Media in The Modern Era	• Nila SA'ADAH • Hendri HERMAWAN ADINUGRAHA • M. ARIS SYAFI'I • Happy SISTA DEVI	UIN K.H. Abdurrahman Wahid Pekalongan
Embracing Diversity: Promoting Inclusivity in Classroom Environments for Visually Impaired Students	• Sadhna JAIN • Baldev GULATI	University of Delhi
The impact of artificial intelligence technology on education management and educational jobs	• Mahmoud KIASATI	Cairo University
Social Cohesion and Solidarity: The Impact of Rehabilitation Beyond Housing	• Francisca MACHADO	University of Minho
Virtual Augmented and Mixed Reality to Improve Education Systems	• Mutaz Mohammed ABUHASHISH • Leyla MURADKHANLI • Mohammad Ali AL QUDAH	Khazar University
Friend or Foe? Assessing the Impact of Plagiarism Detection Software on Writing Instruction	• Zohaib Hassan SAIN	Superior University
Addressing Psychosocial Challenges Through Action: A Fieldwork Experience in Community	• Mohd KAIF • Qurratul AIN ALI	Medicine Department, Aligarh Muslim University
Batang Integrated Industrial Estate: Opportunities and Challenges for a Sustainable Economic Future	• Aulia Isna Shinta WATI • Hendri Hermawan ADINUGRAHA • M. Aris SYAFI' • Happy Sista DEVY	UIN K.H. Abdurrahman Wahid Pekalongan

FRIDAY– May 31, 2024
Cyprus Time 19:00-21:45
(Online)

SESSION-49, HALL-6/ OTURUM 49, SALON-6

MODERATOR: İlayda TÜRKER

TITLE	AUTHORS	AFFILIATION
The Impact of Lactobacillus in fruit and Vegetable Coating on Food Safety and Shelf Life	• Narges FATHABADIBOZCHELOEI • Zahra REZAPOUR	Islamic Azad University
Health-Related Behavior of Students in University of Ilesa	• P. F. ADEKUNLE	University of Ilesa
Comparative Study of Cellulose Based Adsorbents: A review	• Chajid Mohamed AMINE • El Bouari ABDESLAM • Tanane OMAR	Hassan II University of Casablanca
Using *Sorghum bicolor* L. (Moench) in the Phytoremediation of Heavy Metal Contaminated Industrial Landscapes of Katsina, Nigeria, for Environmental Sustainability	• Yahaya Yunusa RIKO • Zubairu Umar DARM • Kamaluddeen KABIR	Umaru Musa ‘Yar’adua University
Contemporary Trends of the Energy Economy in Georgia	• Maka JISHKARIANI	Georgian Technical University
Experimental and Computational Study of Annealed Nickel Sulfide Quantum Dots for Catalytic and Antibacterial Activity	• Sawaira MOEEN • Muhammad IKRAM • Ali HAIDER	UIN K.H. Abdurrahman Wahid Pekalongan
The Impact of Lactobacillus in Fruit and Vegetable Coating on Food Safety and Shelf Life	• Narges FATHABADIBOZCHELOEI • Zahra REZAPOUR	Islamic Azad University

IV. International Architectural Sciences and Applications Symposium

(IArcSAS-2024)

https://www.iarcsas.org/

SYMPOSIUM PHOTOS





















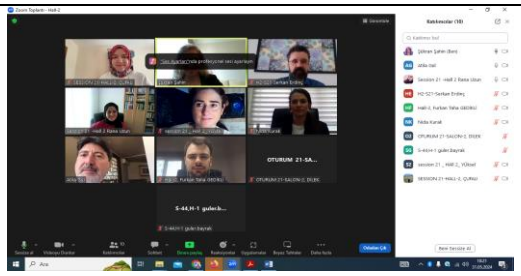


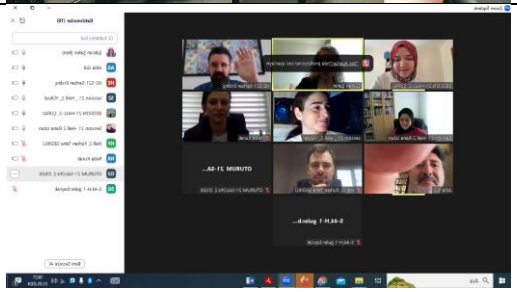


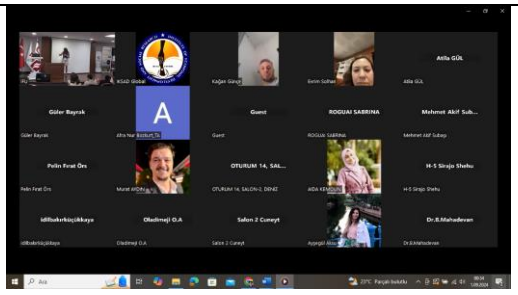

RECEPTION

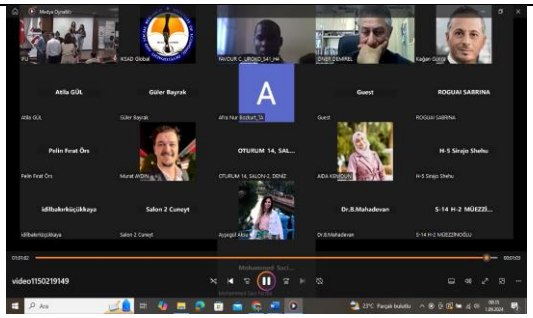


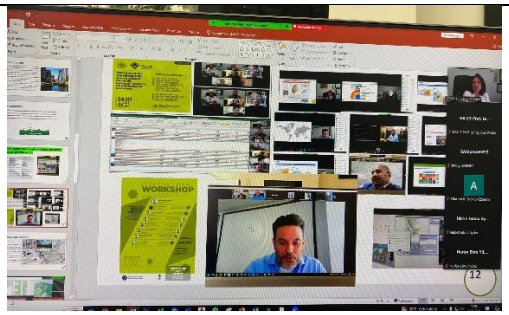


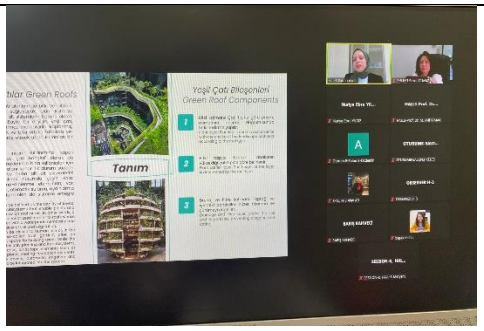


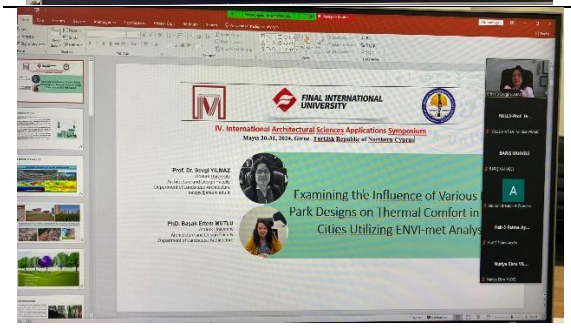


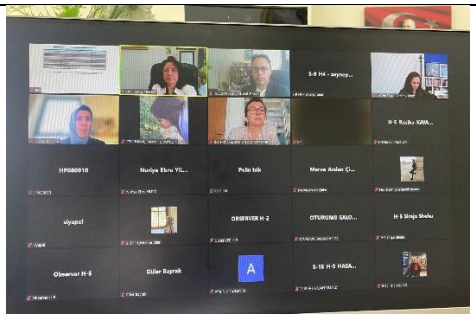







Tanım


FINAL INTERNATIONAL UNIVERSITY
IV. International Architectural Sciences Applications Symposium
Examining the Influence of Various
Park Designs on Thermal Comfort in
Cities Utilizing ENVI-met Analys



IV. International Architectural Sciences and Applications Symposium
May 30-31, 2024, Girne- Turkish Republic of Northern Cyprus
https://www.iarcsas.org/

PROCEEDINGS BOOK (Abstracts)

Editor in Chief

Prof. Dr. Atila GÜL

Assistant Editors

Prof. Dr. Öner Demirel
Assoc. Prof. Dr. Seyithan Seydoşoğlu
Assoc. Prof. Dr. Nafiya Güden
Asst. Prof. Dr. Seden Turamberk Özerden
Prof. Dr. Zeynep Üstün Onur

ISBN: 978-625-367-814-2

DOI: 10.5281/zenodo.13623830

**All rights of this book belongs to IKSAD Publishing House.
Without permission can't be duplicate or copied.
Authors of chapters are responsible both
ethically and juridically.**

ABSTRACT LIST

TITLE	AUTHORS	Page No
Smart Hotel Design of the Future: Case of Northern Cyprus	• Soad Abokhamis Mousavi • Nafiya Guden	100
Architectural Adaptations of Emerging Nomadic Lifestyles in the New Digital Age	• Mulham Hritani • Kasra Talebian • Aminreza Iranmanesh	101
Cultural Heritage Database: Presentation, Interpretation, and Expectations of Digitized Cultural Heritage in Virtual Museums	• Betül Gelengül Ekimci	102
Advancing Sustainable Tourism Practices in Northern Cyprus: Opportunities and Challenges	• Farzad Safaeimanesh • Nafiya Guden	103
The Significance of Building Information Modeling (BIM) in Construction Management: A Perspective of Undergraduate Civil Engineering Students	• Gizem Şimşir • Ahmet Tuz	104
Interaction of Urban Space and Everyday Life	• Seda Kaplan Çinçin	105
Architectural Representation and Presentation of Modern Housing Architecture, 1950's	• Seda Kaplan Çinçin	106
Teaching Sustainable Architectural Design with BIM	• Salih Ofluoğlu	107
Legislation on Energy Efficiency Practices in Buildings Proposal for TRNC	• Kerem Akkaya	108
Documentation of Earthquake Damages over the Years and Restoration Recommendations for the Historic Malatya Teze Mosque	• Lale Karataş	109

Changing Concepts of Temporality and Permanence in 21st-Century Paradigms	• Orhun Ince • Gülhis Duygun	110
Achieving Sustainable Development Goals (SDGS) Via Energy Security Through Sustainable Practices in Northern Cyprus	• Shahrzad Safaeimanesh • Farzad Safaeimanesh	111
Effects of Anthropogenic Geomorphology on Collective Memory and Space Relationship	• Gülhis Duygun • Elif Yeşim Özgen Kösten	112
Experiences from the Disaster Perspective in Architecture	• Orhun İnce • Gülhis Duygun	113
A Children's Playground Proposal Based on Environmental Characteristics and Demographic Structure	• Nazlı Deniz Ersöz • Mahshid Mikaeil	114
An Architectural Examination of Historical Water Structures in the Esenler District of Istanbul	• Miskine Akar • Selvi Burcu Güler	115
An Inquiry of Traditional Urfa and Ürünlü Built Environment in the Context of Sustainability	• Hasan Doğan	116
Vernacular Architecture Strategies for Building Resilience in Informal Settlements of Bursa	• Rengin Beceren Öztürk • Arzu Ispalar Çahantimur	117
Evaluation of Intensive Roofs in Energy Efficient Building Design and Their Role in Urban Food Security	• Enes Akdeniz • Gülsen Çelen • Fatma Aydın	118
The Effect of the Use of Undefined Urban Landscape Areas as Urban Agricultural Areas on Urban Aesthetics: Rize Fener Coast Case	• Fatma Aydın • Enes Akdeniz	119
Determining the Carbon Storage Potential in Cities Using Geographic Information Systems and Remote Sensing Techniques: The Case of Ankara	• Nuriye Ebru Yıldız • Şükran Şahin	120

Development of Preserving Cultural Heritage Sites Methods in a Large City (Using the Example of Moscow)	• E. A. Karfidova • A. P. Sizov	121
Analysis of the Causes of the Abandonment of Telaga Rawa Jaya Tourist Attraction	• Dyah Purbaningrum • H. Hermawan Adinugraha • Muhammad Aris Safi'i • Happy Sista Devy	122
Exploring the Nexus of Technology, Artificial Intelligence & Architecture	• D. Deepika	123
Utilizing Python for Customizable 3D Modeling of Frame Structure Buildings: A Novel Approach to Digital Fabrication and 3D Printing	• Muneeb Hassan	124
Opportunities for the Use of Artificial Intelligence in Organisations	• Vivien Vágner	125
Efficient Deep Neural Network Architecture for Practical Underwater Image Enhancement	• Ouafa Benaida • Abdelhamid Louki • Adda Ali Pacha	126
The Role of Planning in Managing Material Resources in Small Scale Business Using De-Rahma Table Water Kaura Namoda Zamfara State, Nigeria.	• Sirajo Shehu	127
Environmental Pollution's Impact on Life and Possible Solutions	• K. Sivasuriyan • G. Gunasekar • S. Gowri Shankar • V. Ajaydesouza • K. Prithiviraj	128
Modeling, Simulation and Analysis of Wind System Based Doubly-Fed Induction Generator(DFIG)	• Gherari Chaima • Berrezzek Ferid • Khaled Khelil	129
Social Economic Harmonization in Multıreligious Communities (Study in Linggoasri Village Indonesia)I	• Muhammad Syukron • Hendri Hermawan Adinugraha	130

Empowering MSME as a Driver of Economic Growth and Improving Economic's Welfare (Case Study of MSME in Kajen Subdistrict)	• M. Bahreiza Dana Putra • H. Hermawan Adinugraha • Muhammad Aris Safi'i • Happy Sista Devy	131
Proficiency of Topical Platelet Rich Plasma with Vacuum Assisted Closure over Platelet Rich Plasma Alone in Diabetic Foot Ulcers –A Clinical Prospective Comparative Study	• Kamal Kumar Arora	132
Fabrication of Metal-Organic Frameworks Based Supercapacitors and Investigation of Its Faradaic and Non-Faradaic Response	• Usama Zahid • Muhammad Ramzan Khawar • Yasir Javed • Dongwhi Choi	133
Comparative Study of the Structural and Vibrational Properties of Dy2mmno6 Double Perovskites with M = Ni, Co, and Zn	• Hamza Ouachtouk • Amine Harbi • Chaimaa Moukhfi • Said Azerblou • Youssef Naimi • El Mostafa Tace	134
Effect of Date Seed Powder on Sensory, Nutritional, and Rheological Properties of Moroccan Sourdough Bread	• Elbatoul Hanoune • Ouahiba Laouat • Mohammed Aziz Elhoumaizi	135
Cao-Hap Impregnated by Znal2o4 as a Potential Catalyst for Biodiesel Production	• Amina Ouahbi • Youness Bouhaj • Said Sair • Abdeslam El Bouari • Omar Tanane	136
Crop Biofortification Using Transgenic Approaches	• P. Kathiravan • V. Ajaydesouza • G. Gunasekar • K. Prithiviraj • Gowri Shankar	137
Fractional Order Dynamics for HIV/AIDS Transmission with Migration	• Safae L'kima • Elhoussine Azroul • Abdelouahed Alla Hamou	138
Study of Electronic, Thermodynamic, and Optical Properties of RBSCO2: Ab Initio Calculations	• S. Dahri • A. Jabar • L. Bahmad • L. B. Drissi	139

	• R. Ahl Laamara	
Production and Characterization of Carbon Nanotubes from Biochar Under Microwave Irradiation.	• Faisal Nazir	140
Generation of Hydrogen Using Solar Photoelectrochemical Techniques with Dye Sensitizers.	• Wadiae El Bahrami • Hassan Mabrak • Imane Boumanchar • Youssef Naimi	141
Strengthening Corporate Governance Via Internal Control	• Mohammed Saci Ferdia • Aida Kammoun	142
Analysis of Implementation of Personal Income Tax (pph21) in an Islamic Economic Perspective	• Lisna Nisa Savila • Hendri Hermawan Adinugraha	143
Practical and Rapid Synthesis of Various Chromene-Based Pharmaceutical Products, Assisted by Ag@Co3o4/Alginate as a Heterogeneous Catalyst, Biodegradability, and Efficacy	• Taoufyk Azzeddine • Benhadria Lahoucine • Rezzouq Asiya • Mahfoud Agunaou • Lahoucine Bahsis	144
Field Study on Determining the Impact of Design Decisions on Energy Efficiency at Settlement Scale	• Ceren Aydan Nasır • Elif Özer Yüksel • Seher Güzelçoban Mayuk	145
A Research About Life Cycle Assessment of Inorganic Based of Binders in Terms of Sustainability	• Ecem Köşürgeli • Seden Acun Özgünler	146
From the Cladding Towards the Skin: A Biomimetic Perspective on the Building Envelope	• Zelal Çınar	147
Solar-Related Performance-Oriented Digital Workflow	• Sercan Deniz • Zelal Çinar	148
Accessibility of Traditional Buildings for Elderly Individuals: The Case of Tarsus Burhanoğlu Mansion	• Sena Soyupak • Gökhan Uşma	149

The Role of Urban Planning in Controlling Noise Pollution from Road Transportation	• Barış Kahveci • Muzaffer Yücel	150
An Evaluation on the Relationship Between Spatial Planning and Flood Disaster: The Case of Bozkurt, Kastamonu	• Zarife Demirezen • Yasin Bektaş	151
A Framework for Optimising Passive Indoor Thermal and Visual Comfort in Single-Banked Office Buildings in the Temperate Dry Climate of Nigeria	• Muhammad Aminu Musa • Abubakar Sadiq Salisu	152
A Model for Assessing Urban Texture in Terms of Energy Efficiency and Thermal Comfort	• Mehrdad Karimimoshaver	153
Climate Change and Drought Vulnerability in Northeast Algeria: A Data-Driven Approach to Risk Assessment and Management	• Abderrahmane Ziari • Abderrahmane Medjerab	154
How Climate Change Affects Agricultural Production	• K.R. Padma • K.R. Don	155
Impact of Contrasting Climate Conditions on Pomegranate Development and Productivity: Implications for Breeding and Cultivar Selection in Colder Environments	• Atman Adiba • Abdelmajid Haddioui • Rachid Razouk • Hicham Ouhakki • Anas Hamdani • Hakim Outghouliast • Jamal Charafi	156
Reservoir Simulation of Teapot Dome Classic Reservoir: Comparison of Water Flooding and Gas Flooding	• Azamat Bukayev • Aisha Temirkhan • Masoud Riazia	157
Renewable Resilience: Promoting a Greener World with Sustainable Energy Strategies	• Ashraful Amin • Shahareyar Emon • Jahid Hasan Rana • Abdul Kader Jelane	158
A Review Study on the Acoustics of Contemporary Mosques	• Fatma Yelkenci Sert	159
An Example of Sports Facilities in the Ottoman Empire: Robert College Gymnasium Building	• Tuğba Yılmaz • Zeynep Gül Ünal	160

A Comprehensive Study on the Visual Comfort Conditions of Historical Mosque Buildings	• Fatma Yelkenci Sert	161
Leveraging Machine Learning for Early-Stage Energy Efficiency in Building Design: A Comprehensive Study on Predictive Models	• Hilab Manal	162
Harmonizing Efficiency and Comfort: Unveiling Optimal Genetic Algorithm Parameters for Sustainable Building Design	• Hilab Manal	163
Townhouse Design Solves the Problems of Tropical Climate, Save Energy and Ensure Thermal Comfort	• Bui Man Nghi • Dao Thanh Tam	164
Advancements in Intelligent Optimization for Building Design: A Comprehensive Overview of Nature-Inspired Methods	• Hilab Manal	165
Thermal Comfort in Commercial Buildings: A Comprehensive Study on Building Performance and Environmental Impact	• Hilab Manal	166
Efficacy of Aloe Vera Supplemented Canola Meal Based Diets on Growth Performance, Nutrient Digestibility and Carcass Composition of Catla Catla Fingerlings	• Muhammad Amjad • Syed Makhdoom Hussain • Zeeshan Yousaf • Muhammad Mahmood • Adan Naeem • Eman Nameem	167
The Voigt Model is Used to Homogenize High-Performance Concrete by Adding Fine Particles of Sheep Bone to Replace Fine Sand and Minimize Porosity.	• Abdelmoutalib Benfrid • Mohamed Bachir Bouiadjra	168
Simulatıon Model of a Single-Phase Inverter Usıng SPWM Unipolar Technique	• Ramzi El Idrissi • Abdelkabir Bacha • Fatima Lmai	169
Socioeconomics Factors Affecting Access to Medications and Pharmacy Services	• R. Vidhyalakshmi • K. Rajaganapathy	170

Investigation of Structural, Microstructural and Optical Properties of ZNO, ZN0.90CO0.05M0.05o (M= Na, Al, Cd, Cu) Thin Films by Usp Method.	• Sabrina Roguai • Abdelkader Djelloul	171
Formulation and Evaluation of Anti Diabetic Activity of Herbal Anti Diabetic Syrup with Fenugreek	• Hina Khalid • Ayesha Ghias • Aisha Ghulam Mustafa • M. Huzaifa Ali • Mishal Shoaib Dar • Fareeha Nawab	172
An Investigating the Role of Biomimetic Architecture Developments	• Elnaz Farjami* • Shabnam Golkarian • Nafiseh Zamanzadeh	173
Post-War Destruction and Rehabilitation Process: The Example of Syria-Aleppo	• Gülferah Çorapçıoğlu • Rüya Azize	174
Strategies for Urban Renewal in Revitalizing Tudun Ilu Neighborhood, Kaduna, Nigeria	• Aliyu Hassan	175
Investigation of Sustainability Based Assessment Tools in Terms of Urban Landscape Quality	• Wajiha Waheed	176
Urban Planning	• Mustapha Imam Muhammad	177
Historical Environment Protection Plans and Zoning Applications Antalya Province, Ibradi District, Ormana Example	• Hüseyin Cengiz	178
The Potential for the Use of Phase Change Materials in Diverse Climate Zones Across Türkiye	• Rana Uzun • Elif Özer Yüksel	179
A Study to Understand the Management and Design of Green Buildings for Sustainable Development in the City of Bangalore, India	• Ravikeerthi Jangamakote Varadaraju	180
The Role of Architecture in Sustainable Development	• Aminu Danrimi Maikudi	181
Understanding Architecture: More Than Just Buildings.	• Wahaj Haider	182

Exploring Midjourney Parameters in Architectural Design: Chaos, Weird, and Stylize Parameters	• Merve Gözel • Changbae Park	183
Response of High Rise Building Against Earthquake Force and Wind Force Under Different Soil Conditions	• Subhashish Dey	184
Exploring Teachers' Ecological Footprint Awareness	• Ömer Çelikkol • Aytekin Tokgöz	185
Importance of Effective Leadership to Avoid Accidents at Construction Sites	• Subhojit Chattaraj • Sandeepan Saha • Suman Halder • Sudipta Naskar Alok Das	186
Analysis of the Effect of Economic Growth on Poverty Levels in Pekalongan Regency	• Kartikasari • Muhammad Shulthoni • Drajat Stiawan	187
Approaches for Analyzıng Traffıc Accıdent: A Comprehensıve Overvıew	• Khanh Giang Le	188
Smart Traffic Systems Management in Connected Communities: Enhancing Safety and Mobility	• Khanh Giang Le	189
A Solution of Multi Objective Transportation Problem Under Uncertain Environments	• Mohammad Nabeel • Wajahat Ali • Sheema Sadia • Usman Akbar	190
IKN Tests the Technology Resilience of Smart Transportation Systems	• Indah Khoirunisa • Ade Gunawan • Santi Nailul Izaty	191
Noise Pollution Monitoring and Noise Mapping at Rajshahi University, Bangladesh	• Alamgir Hasan • Abul Kalam Azad • Kamruzzaman • Moniruzzaman	192
Antibiotic Pollution in Aquatic Environments: Understanding Environmental Impacts	• Priyanjali Kaushal • Aliza Danish • Pushpanjali Maurya • Gulshi • Shama Akhtar	193

	• Mohd Zeeshan • Abdul Rahman Khan • Saimah Khan	
Fuzzy Logic with Artificial Intelligence in Improving Service Quality in E- Government Applications	• Mohammad Ali Al Qudah • Leyla Muradkhanli • Mutaz Mohammed Abuhashish	194
Economic Problems of Society in the Perspective of Islamic Studies	• Nur Hidayah • Hendri Hermawan Adinugraha • Muhammad Aris Safi'i • Happy Sista Devy	195
Compensation Management and Employee Performance in the Federal Polytechnic, Ilaro, Nigeria	• Wasiu Abiodun Makinde	196
The Role of Fiscal Policy in Reducing Poverty in Indonesia	• Neki Barokah • Hendri Hermawan Adinugraha • M. Aris Syafi'i • Happy Sista Devi	197
Ijarah and Implementation in Sharia Banking	• Lailatussifa • Hendri Hermawan Adinugraha • Muhammad Aris Syafi'i • Happy Sista Devy	198
Healthcare Financing in the Context of South Asian Countries	• Azhar Jan • Meenakshi Gupta • Sheikh Aftaab-Ul-Maroof	199
The Impact of the Growth of Sharia Insurance on the Indonesian Economy	• Arziyah Windri Windasari • Hendri Hermawan Adinugraha • M.Aris Syafi'i • Happy Sista Devi	200
Structural System Optimization on Planets with Different Gravitational Accelerations	• Serra Çelik Kıratli • Ali Osman Kuruşcu	201
Institutionalization of Contemporary Building Materials in Turkish Architecture: State Organizations and Regulations	• Sümeyye Korkmaz • Zafer Sağdiç	202

Thermodynamic Optimization of Tb–Ni Binary System Supported by Dft Calculations	• Z. Rahou • D. Moustaine • Y. Ben-Ali • A. Hallaoui	203
Managerial Coaching and Subordinates' Work Behavior: Empirical Study at Malaysia's Public Department	• Nur Izzaty Mohamad • Suhaila Abdullah	204
A Study on Biosorbents for the Removal Ofchloride Ion from Water	• Subhashish Dey • Pradesh India	205
Improving Performance: Evaluating and Optimizing a 70 MW Thermal Power Plant Through Energy Audits	• Deepak Rathod • Ankit Tiwari	206
Mission Drift of Microfinance Institutions in India: Is it Real?	• Anupama Rajput • Janki Devi • Bhawna Rajput • Aditi Mahavidyalaya	207
Optimal Power Conversion Efficiency of Perovskite Solar Cells	• Aisha Shaikh • Pervez Hameed Shaikh • Shoaib Ahmed Khatri	208
Experimental Investigations on Performance of Biomedical Ash in Concrete	• Subhashish Dey	209
Interaction Between the Turbulent Natural Convection of Silverbased Nanofluids and Magnetic Fields in a Rectangular Cavity	• Zakaria Lafdaili* • Sakina EL-Hamdani • Mohamed El Hattab • Lahoucine Belarche	210
Mechanical Properties of Sandcrete Blocks Used for Building Construction in Ilaro Township of Ogun State, Nigeria	• Olugbenga Babajide Soyemi • Elizabeth Tofunmi Ojelabi	211
Ceramic Tile Composition and Technological Properties Based on Moroccan Dark Clays	• Ayoub Imgirne • Youssef Arkame • Achraf Harrati • Abdelilah El Haddar • Aboubakar Moustapha • Chaouki Sadık	212

Study of Insulation Scenarios Using an Ecological Material as a Sustainable Solution for Comfortable and Efficient Buildings: The Case of Moroccan Buildings	• Hicham Kaddouri • Ayoub Bouchark • Abderrahim Abidouche	213
Comparison Effect of Single and Combined Applications of Municipal Sewage Sludge and Triple Superphosphate on Some Growth Traits of Quinoa Under Saline Condition	• Hadis Hatami • Hossein Parvizi • Amir Parnian • Hossein Beyrami	214
Removal of Pharmaceutical Drugs from Binary Mixtures by Use of Nanocomposite: Experimental and Molecular Modeling Study	• Salaa Fahima • Benabbou Asmae • Medjdoub Aicha • Khelifa Amine	215
Green Tea –An Antioxidant Mystic Herb	• A. Dinesh Babu • R. Jothilakshmi • R. Srinivasan	216
The Algerian Desert is a Rich Source of Actinobacteria with Important Biotechnological Activities	• Fedwa Beghdadi • El-Hadj Driche	217
Fire Blight Disease is a Threat to the Crop of Apple and Pear Trees	• Fedwa Beghdadi • El-Hadj Driche	218
Isolation and Identification of Actinobacteria from Algerian Saharan Soil	• Fedwa Beghdadi • El-Hadj Driche	219
Effect of Chromium (Cr) on Phase Transformation Behavior of Fe-20MN-6Si Shape Memory Alloy	• Junaid Khan • Rana Atta Ur Rahman • Shahid Mehmood • Rehman Khan	220
Numerical Simulation for the Thermal and Solutal Analysis of Unsteady Non-Newtonian on the Oscillating Surface with Natural Convection	• T. Salahuddin, Muhammad Awais	221
Synthesis and Characterization of Silica- Chitosan Decorated Magnetic Nanostructure for Wastewater Treatment	• Syed Anam Shaheen Abbas Shah • Muhammad Shoaib • Muhammad Yasin Naz • Shazia Shukrullah	222
The Biological Activity of Mesoporous Materials	• Boughedir Nadia	223

Exploring Chat-GPT's Pivotal Role in Shaping the Landscape of Industry 4.0	• Zohaib Hassan Sain	224
A Theoretical Analysis of Fe2o3-C2h6o2 Based Ferrofluid Flow Through a Permeable Moving Wedge with Non- Linear Magnetic Field	• Irfan Mustafa	225
The Influence of Local Own-Source Revenue, General Allocation Funds, and Special Allocation Funds on Economic Growth in 15 Districts/Municipalities in West Java Province in 2021-2022	• Nafisah Nursafanah • Hendri Hermawan Adinugraha • Muhammad Aris Syafi'i • Happy Sista Devy	226
Role of Nanorobotics in Healthcare	• Priyanshi Goyal	227
Conservation and Rehabilitation of the Roman Aqueduct of Gadara, the Ancient World Longest Aqueduct System	• Ziad Al Saad	228
Urban Planning of Green Space as Tool of Oppression	• Abdurrahman Mohamed • Salwa Abedelal	229
Gauthier Linear City for Urban Development in Gaza, Palestine	• Abdurrahman Mohamed • Ina'am Eltawil	230
Examining the Effects of Regulated Intersections on Urban Landscape and Urban Transportation	• Duygu Karabıçak Günaydin • Esra Özhancı	231
Study on Self-Healing Concrete Through Experimentation	• Chayaraju Balasai • Nadagouda Kalyani	232
Experimental Study on the Behaviour of Concrete Filled Steel Tubes Subjected to Axial and Lateral Loading	• P. Gajalakshmi • Menaka A S	233
Ignition and Burning Rate of Sheanut Shell Briquettes Produced at Moderate Temperature and Die Pressure	• Elinge C. M. • D.Y. Bawa • M. S. Zubairu • Magaji M.B • F. A. Atiku	234

A Study on Biosorbents for the Removal of in Organic Chemical from Water	• Subhashish Dey	235
A Review on Optimizing Design and Performance of Fiber-Reinforced Concrete	• Deep Chatterjee • Subhojit Chattaraj • Saheed Khan • Soumi Dey • Jamuna Patra	236
Optimum Design of Reinforced Concrete Cantilever Retaining Walls by Artificial Bee Colony Optimization Algorithm	• Mehdı Shal Chi Tousi	237
Microwave-Assisted Catalytic Co- Pyrolysis of Plastic Waste and Used Cooking Oil Into Valuable Products as Sustainable Energy Source	• Farzin Sheikh • Muhammad Yasin Naz • Shazia Shukrullah • Muhammad Rizwan Khalid	238
Transformation Sharia Finance Industry: The Vital Role of Financial Technology (Fintech) in Central Java	• Aulia Rahma Diniya Putri • Hendri Hermawan Inugraha • M. Aris Syafi'i • Happy Sista Devy	239
Educational Context, Abilities and Entrepreneurial Intentions of University Students. Empirical Investigation	• Laura Diaconu Maxim	240
Women in Small Entrepreneurship in Kazakhstan	• Yerkezhan Kenzheali • Talgatova Dilnaz	241
Relationshıp Between Hedonic Lifestyle and Consumptive Behavior in Uin K.H Abdurrahman Wahid Pekalongan, Indonesia	• Muhammad Luki Faturrokhman • Hendri Hermawan Adinugraha • Muhammad Aris Syafi'i • Happy Sista Devy	242
Perceived Social Support and Illness Perception in Cardiac Patients Mediating Role of Psychological Morbidity	• Anam Arshad • Amarah Qureshi	243
The Influence of Population, Education, and Unemployment on the Number of Poor People in Central Java in 2021	• Arinal Husna • Hendri Hermawan Adinugraha • Muhammad Aris Safi'i • Happy Sista Devy	244

Ergonomic Assessment of Workers and Their Tasks in the Metal Casting Industry in North India	• Anmol Bhalla • Manish Dev	245
Exploring the Potential of Online Learning: Opportunities and Challenges	• M. Fauzi • Milatul Fatkhiyah	246
The Role of Fiscal Policy in Promoting Sustainable Economic Growth	• Khabibah Dzilkamil • Hendri Hermawan Adinugraha • Muhammad Aris Safi'i • Happy Sista Devy	247
United for Sustainability: Collaborative Strategies for Global Development	• Ashraful Amin • Shahareyar Emon • Jahid Hasan Rana • Abdul Kader Jelane	248
Empowering Economic Development in Gejlig Village Through Village-Owned Enterprises (Bumdes)	• Muhammad Risqi Harywibowo • Hendri Hermawan Adinugraha • M. Aris Safi'i • Happy Sista Devy	249
Unmasking Misinformation: A Multifaceted Strategy for Fake News Identification and Typology with Tf-Idf & Passive Aggressive Classifier	• Mansi Pathak • Varinder Kaur Attri	250
Impact of Behavioral Biases on Investment Behavior: A Study of Retail Investors	• Ishrat Bashir • Sushil Kumar Mehta	251
Unveiling Asymmetric Dynamics: Fossil Fuel Consumption and Carbon Emissions in India – Aggregate and Disaggregate Analysis	• Yousuf Khan • Shadman Zafar • Syed Mohd. Shahzeb • Mohd Azam Khan	252
Investment Potential for the Transfer of the Archipelago's Ikn in Indonesia	• Diva Nimas Ramadhani • Hendri Hermawan Adinugraha • Muhammad Aris Syafi'i, • Happy Sista Devy	253
Implementation of I'm L Al-Kal M Rules in the Salam Contract in Online Buying and Selling Transactions	• Maryani Ayu Rahmawati • Hendri Hermawan Adinugraha • M. Aris Syafi'i • Happy Sista Devy	254

Photocatalytic Properties of Nio and Zno Thin Films for Ecology/Environment Application	• Khemissi Lahouel • Meriem Gasmi	255
A Systematic Review of Work-Related Musculoskeletal Disorders in the Foundry Industry and Scope for Ergonomics Design Interventions	• Anmol Bhalla • Harjit Singh • Harminder Singh • Pahulpreet Singh • Himanshu Khanna • Manish Dev.	256
Development of New Methods of Substance Analysis in Comparison with the Reference Sample	• Alexandrov V.S.	257
Survival Time of Cancer Patients Using Some Distribution	• P. Pandiyan • G. Sathyamurthy • G. Subash Chandrabose	258
Conservation of Beneficial Insects Through the Insect Hotels	• Gunasekar G • Sivasuriyan K • Ajaydesouza V • Gowri Shankar S • Prithiv R	259
Allelochemical Effect on Averrhoa Carambolal in Anatomical Architecture on Wheat Growth	• Syeda Sabika Zahra Naqvi • Syed Mohsan Raza Shah • Zaheer Abbas	260
Using Nanotechnology in Heath Science	• Lamia Berkane • Azzeddine Choughrem • Ghania Ahmed • Dalal Doudi • Mohammed Sadok Derki • Mohammed Nadjib Derki • Chikha Maria • Nadjah Bedida	261
A New Complex Network Based Approach for Detection of Arrhythmias in Ecg Signals	• Serkan Aksu • Bayram Akgül	262
A Neuroscience-Based Research Strategy for the Effect of Emotions in Architectural Design Thinking	• Sevim Gülen Türker • Dilek Yıldız Özkan	263

A Classification Study on Systems That Provide Automated Control of Bim-Based Building Projects in Computerized Environment According to Building Regulations	• Murat Aydın	264
Determination of Flood Risk Areas in Central District of Denizli Province	• Duygu Doğan • Murat Zengin	265
Examination of Manisa Demirci 83. Yıl Park in Terms of Universal Standards for Disabled People	• Feyza Aydin Çolakoğlu • Dilşen Onsekiz	266
Turkish Heritage in the Wellness Culture in the City of Eger, North Hungary	• Sándor Földvári	267
Sustainable Development and Environmental Protection	• Sreekumar S.L.,	268
Vr and Edutainment for Cultural Heritage, Architecture and Urban Planning Interpretation & Tourism Promotion	• Hadeel Wahish • Sara Aljaber • Naif Adel Haddad	269
Interpretation and Intervention in Historic Building as a Street of Art and Graffiti: The Palacio De Mansilla of the Unesco World Heritage Site of Segovia, Spain	• Mira Naif Haddad	270
Harnessing Ecotourism: A Catalyst for Conservation and Sustainable Community Development in Fragile Ecosystems	• Astitva Kumar Rao	271
Recommendations for Sustainable Recreation Development within the Carpathian Biosphere Reserve	• Natalia Habchak • Svitlana Myshko	272
Sites of Community Importance Versus Protected Areas of National Interest in Romania	• Mihăilescu Simona • Gheorghe Florentina Iuliana • Manu Minodora • Onete Marilena	273

Implementation of Multilingual Translation as a Customer Acquisition Tool for Turkish Hotels	• Vasyl Puzanov	274
Analysis of the Influence of the Number of Accommodations, Tourist Attractions, and Transportation Availability on the Number of Domestic Tourist Visits in Central Java Province in 2021	• Laila Fitria Nur Rahma • Hendri Hermawan Adinugraha • Muhammad Aris Safi'i • Happy Sista Devy	275
The Role of Religious Moderation to Build Harmonious Interreligious Relations Through Cultural Accommodation	• Ardia Puspita Dewi • Hendri Hermawan Adinugraha • Aris Syafi'i • Happy Sista Devy	276
The Cultural Tapestry of Parenting in Pakistan: Insights Into 'Pure Life' and Child- Rearing	• Sareh Larijany • Sani E. Zehra	277
Alakdan: A Virtual Assistant for Centro Escolar University Processes	• Dungca, Francis Steven Z. • Garduque, Reymark M., • Reyes, Ellesia Catherine P. • Eliza B. Ayo	278
Minixplorer: An Image Recognition Mobile Application Using Google Machine Learning Kit and Text-To-Speech Integration	• Brendiz Allain Alamil	279
Ethical ConsiderationsIn Technology Implementation in Various Sectors	• Gowri Shankar S • Ajaydesouza V • Gunasekar G • Kathiravan P • Prithiviraj K	280
Driving Brand Leadership: Quality in the Indian Auto Industry	• Mikul • Ishwar Mittal • Rosy Dhall	281
A Study of Consumer Attitudes and Preferences Regarding Plant-Based Meat Substitutes	• Agata Studenna	282
Augmented Reality Mobile Applications Design for Mathematics Education: A Case Study of Learning Linear Programming	• Laura Yohana • Asep Septiyono • Suyoto	283

Production of Hydrogen Fuel and Carbon Nanotubes from High-Density Polyethylene Using an In-Situ Catalytic Microwave Pyrolysis Process	• Bilal Shoukat • Muhammad Yasin Naz • Shazia Shukrullah • Hammad Hussain • Muhammad Shoaib	284
Empowering Health Through Iot-Driven Predictive Monitoring for Cost-Efficient Care	• Dhulasiraman M.	285
Study of the Adsorption of a Basic Dyes on an Activated Carbon Derived from Jujube Cores	• Boussalah Mohammed Ettahar • Guella Sofiane • Medjahdi Malika	286
Quantile Regression Analysis on the New Unit Nadarajah and Haghighi Distribution	• Ayesha Siddique • Farrukh Jamal • Abdus Saboor • Shakaiba Shafiq	287
Sedimentology And Characterization Physico-Chemical And Textural Properties Textural Properties Of Bentonites Kert Neogene Basin	• Ait Hmeid H • Akodad M • El Halim M • Omdi F.E • Baghour M • Skalli A • Chahban M • Aalaoul M	288
Comparison Study Between Sliding Mode Control and Backstepping Control of a Wind Power System Based on the Dfig Generator	• Abdelghafour Herizi • Riyadh Rouabhi • Al Hassan Boussag • Abdesattar Djalab	289
A Novel Chaotic Image Encryption Technique Based on Filtering Operation and 4D Hyperchaotic System	• M. Naim • Hadj Brahim	290
Analysing the Aesthetic Control Practices Between the Ranges of Centrality-Locality and Recommendation-Prohibition	• Tarık Emre Kırhallı • Rıfat Gökhan Koçyiğit	291
Examining the Concept of Place Attachment in a Temporary Accommodation Space Like Dormitory: Yeditepe University Dormitory Example	• Cansu Aktaş	292
Examination the Effects of Iconic Buildings on Cities	• Güler Bayrak Alcal • Berrin Şahin Diri	293

Shelter Design for Living Species in Terrain Vague	• Deniz Kantar	294
Spatial Assessment of Bakırköy Ispirtohane, a Renovated Industrial Heritage	• Refia Anıl Ağrılı • Emel Işleyen	295
Use of Multi-Criteria Decision Support Systems in Reusing of Historical Buildings	• Gülferah Çorapçıoğlu • Osman Serdar Sancak	296
A Cartography of Contemporary Earthen Buildings in Türkiye	• Furkan Taha Gedikli • Işıl Ruhi-Sipahioğlu • Matthieu Joseph Pedergnana	297
Spatial/Legal Problems of Cappadocia Troglodytes and Solution Suggestions	• Emine Akcan Şirin • Ufuk Doğrusöz	298
Comparative Analysis of Visitor Preferences in Different Status Protected Areas Using Social Media Metrics	• Ertan Düzgüneş • Duygu Karabıçak Günaydın	299
Nature and Ecosystem Based Solutions in Urban Areas	• Burçin Ekici • Tuğba Arslan	300
Conservation of Historical Roads and Cultural Route Concept: The Case of Eğirdir District	• Merve Yılmaz • Elvan Ebru Omay Polat	301
Landscape Planning	• Muhammad Muhammad	302
Watershed Planning	• Khamisu Abdullahi	303
Impact Assessment of Climate Change on Rice Crop in the Main Areas of Pakistan	• Muhammad Umer Hameed • Syed Aftab Wajid • Iqra Ali Ahmad	304
Agroforestry Tree Cover Change in Agricultural Landscapes Following Farmland Exclosure in Tigray, Ethiopia	• Gebremariam Yaebiyo • Emiru Birhane • Tewodros Tadesse • Abbadi Girmay • Kiros Meles Hadgu • Solomon Kiros	305

Tuberculosis is a Threat to Olive Trees	• Fedwa Beghdadi • El-Hadj Driche	306
Development of Computer Technology- Based Elementary School Learning Media in the Modern Era	• Nila Sa'adah • Hendri Hermawan Adinugraha • M.Aris Syafi'i • Happy Sista Devi	307
Embracing Diversity: Promoting Inclusivity in Classroom Environments for Visually Impaired Students	• Sadhna Jain • Baldev Gulati	308
The Impact of Artificial Intelligence Technology on Education Management Nd Educational Jobs	• Mahmoud Kiasati	309
Virtual Augmented and Mixed Reality to Improve Education Systems	• Mutaz Mohammed Abuhashish • Leyla Muradkhanli • Mohammad Ali Al Qudah	310
Friend or Foe? Assessing the Impact of Plagiarism Detection Software on Writing Instruction	• Zohaib Hassan Sain	311
Addressing Psychosocial Challenges Through Action: A Fieldwork Experience in Community	• Mohd Kaif • Qurratul Ain Ali	312
Batang Integrated Industrial Estate: Opportunities and Challenges for a Sustainable Economic Future	• Aulia Isna Shinta Wati • Hendri Hermawan Adinugraha • M. Aris Syafi' • Happy Sista Devy	313
The Impact of Lactobacillus in Fruit and Vegetable Coating on Food Safety and Shelf Life	• Narges Fathabadibozcheloei • Zahra Rezapour	314
Health-Related Behavior of Students in University of Ilesa	• P. F. Adekunle	315

Comparative Study of Cellulose Based Adsorbents: A Review	• Chajid Mohamed Amine • El Bouari Abdeslam • Tanane Omar	316
Using *Sorghum bicolor* L. (Moench) in the Phytoremediation of Heavy Metal Contaminated Industrial Landscapes of Katsina, Nigeria, f or Environmental Sustainability	• Yahaya Yunusa Riko • Zubairu Umar Darm • Kamaluddeen Kabir	317
Contemporary Trends of the Energy Economy in Georgia	• Maka Jishkariani	318
Experimental and Computational Study of Annealed Nickel Sulfide Quantum Dots for Catalytic and Antibacterial Activity	• Sawaira Moeen • Muhammad Ikram • Ali Haider	319
Representation Place of the Republic: Reading the Educational Buildings of Isparta City Istasyon Street Through Urban Memory	• Nurcihan Akdağ • Şefika Gülin Beyhan	320
Toxic Effect of Microplastics Supplemented Sunflower Meal-Based Diet on the Growth Performance, Body Composition, Nutrient Digestibility and Hematology of Labeo Rohita	• Muhammad Amjad • Eram Rashid • Syed Makhdoom Hussain • Danish Riaz • Zeeshan Yousaf	321
Leveraging Ict and Ai for Sustainable Precision Agriculture in Pakistan- Greenai	• Muhammad Faisal	322
Study of Ti3C2/CNT Nanocomposite- Based Flexible Paper Electrode for Supercapacitor Applications	• Chetan • Mainak Basu • Vijay Kumar • Sunil Kumar • Jatinder Garg	323
Development of Agroforestry Ecotourism, Mapping of Tourist Objects and Attractions in Pasawaran Regency Lampung Province, Indonesia	• Erlina Rufaidah • Surnayanti • Machya Kartika Tsani • Sugeng P Harianto • Nuril Atmajaya	324

Yoga Tourism as a Type of SIT and Improvement Suggestions: Case of Northern Cyprus	• Mete Ünal Girgen • Naile Soyel	325
Some Natural Isolated Compounds as Anticancer Agents	• Dinessh Babu • S. Kalaivanan • R. Srinivasan	326
Recreating Parts Produced on 3D Printers with Generative Design	• İskender Emre Gül • Niyazi Uğur Koçkal	327
	•	
	•	
	•	

IV. International Architectural Sciences and Applications Symposium
May 30-31, 2024, Girne- Turkish Republic of Northern Cyprus
https://www.iarcsas.org/

PROCEEDINGS BOOK (Full Text)

Editor in Chief

Prof. Dr. Atila GÜL

Assistant Editors

Prof. Dr. Öner Demirel
Assoc. Prof. Dr. Seyithan Seydoşoğlu
Assoc. Prof. Dr. Nafiya Güden
Asst. Prof. Dr. Seden Turamberk Özerden
Prof. Dr. Zeynep Üstün Onur

ISBN: 978-625-367-814-2

DOI: 10.5281/zenodo.13623830

All rights of this book belongs to IKSAD Publishing House.
Without permission can't be duplicate or copied.
Authors of chapters are responsible both
ethically and juridically.

Full Text List

TITLE	AUTHORS	Page No
Beyond Buildings: Exploring the Interplay of Ecological Dynamics and Urban Spaces	• Şükran Şahin	345-357
Are Carbon Market Instruments Created by Neoliberalism Policies a Solution for Reducing Carbon Emissions?	• Atila Gül • İskender Emre Gül	358-375
Evaluation of BIM Applications in Türkiye	• Elif Hazal Şener • Aysun Ferrah Güner	376-386
Evaluation of BIM Education in Architecture Undergraduate Programs Ranked in the Top 10 Based on the Cohe Score System in Türkiye	• Nafia Büşra Ersavaş • Pelin Karaçar	387-396
A Study on Hygrothermal Performance of Traditional Veneered Timber Framed Exterior Wall in Türkiye	• Seda Nur Alkan • Fatih Yazıcıoğlu	397-407
Adverse Impacts of Recreational Activities on Protected Coastal Ecosystems	• Tendü Hilal Göktuğ	408-428
A Public Opinion Research for Environmental Impacts of the Aydın Railway Line and Its Planning as a Greenway.	• Burhan Eşlik • Tendü Hilal Göktuğ	429-449
Local Identity Values and Analysis of Demre Region (Antalya)	• Atila Gül • Dilara Erdoğan	450-466
An Interactive Digital Platform For Preserving Sociocultural Heritage in Yeşilköy Through Local Participation and Crowdsourcing	• Elif Ece Ilgaz • Ahmet Gün	467-479
Sustainability of Conservation Project of the Residential Buildings at the Historical District of Jeddah	• Emad Eldin Sulaiman • Shabnam Golkarian	480-494
The Role of Urban Green Spaces on Human Health	• Rukiye Duygu Çay • Fatma Aşılıoğlu	495-501

Aesthetic and Functional Evaluation of Planting Design In Bursa Technical University Mimar Sinan Campus	• Onur Aksoy • Kamil Erken	502-514
An Innovative Approach in the Relationship Between Material And Form: In Glass Fiber Reinforced Concrete (GFRC) Applications	• Esra Bayır • Pelin Karaçar • Aysun Ferrah Güner • Zülal Nurdan Korur	515-537
Sustainable Pavements at the Neighborhood Scale	• Fatma Aşılıoğlu • Rukiye Duygu Çay	538-546
Principles of Post-Disaster Urban Reconstruction and Planning	• Burcu Gün • Şirin Gülcen Eren	547-557
Mountain Ecosystem and Recreation Services Examination in the Example of Mount Dedegöl	• Deniz Karakuyu • Murat Akten	558-571
Evidence-Based Design: An Assessment within the Framework of Landscape Architecture	• Nazlı Deniz Ersöz • Gül Sayan Atanur	572-580
Visual Perception Analysis of 3rd Generation Coffee Houses: 'The Case of Akaretler'	• Serhat Aniktar • Elif Nur Uygur	581-597-
Evaluation of Lake Eğirdir and its Coastal Band within the Scope of Blue-Green Infrastructure	• Hüseyin Batuhan Dündar • Murat Akten	598-611
Evaluation of Adaptive Reuse of Historical Buildings in Terms of Sustainability: The Case of Bolu Tabaklar Hamam/Bath	• Filiz Karakuş	612-621
Typological Analysis of the Projection Structure: Sivrihisar Traditional Houses	• Zuhal Kara Sariçiçek • Hicran Hanım Halaç	622-635
Ecological Settlements: The Example of Akpınar Neighborhood	• Ahmet Berk Tahmazoğlu • Demet Irkli Eryildiz	636-659
The Problem of Originality in Historicist Architecture After the 2000s: The Case of Government Mansions	• Elifcan Duygun • Rifat Gökhan Koçyiğit	660-676
The Change of Inegöl City Center From Past to Present and Old Government House Conservation Project	• Seda Çakmak • Zeynep Eres Özdoğan	677-689
Historical Evolution of The Furnishings and Textile Features of Izmit Kasr-ı Hümayun	• Ebru Erdoğan • Tülay Gümüşer	690-698

	• Gülşah Üner	
Reading Bauhaus at the Intersection of Architecture and Weaving	• Tülay Gümüşer • Ebru Erdoğan • Büşra Öztürk	699-711
Analysis of Burdur Cumhuriyet Square with Space Syntax Method	• Tuğba Balks • Berna Güç	712-724
Property, Policy and Actor-Oriented Approach to the Classification of Rental Housing	• Muhammed Cemil Doğan • Ömür Barkul	725-732
An Attempt to Convey the Ekphrastic Space With Artificial Intelligence: Gulliver's Travels	• Meryem Sevde Doğruer • Arzu Özen Yavuz	733-741
Evaluation of the Effects of Wind on Outdoor Thermal Comfort in Rural and Urban Areas	• Mehmet Akif Irmak • Sevgi Yılmaz • Hasan Yılmaz	742-751
Pedestrian-Friendly Street Design Modeling With Wind Simulations in Cold Regions: A Case Study of Dadaşkent	• Sevgi Yılmaz • Mehmet Akif Irmak	752-761
Determining Temporal Changes in the Lakes of the Burdur Basin Using Google Earth Engine	• Nuriye Ebru Yıldız • Barış Kahveci	762-769
Determination of Environmental Awareness Levels of University Students Regarding Climate Change: A Case Study of The Faculty of Architecture at Trakya University	• Afranur Özdemir • Emine Keleş Özgenç	770-781
Examining the Influence of Various Pocket Park Designs on Thermal Comfort in Winter Cities Utilizing ENVI-met Analysis	• Sevgi Yılmaz • Başak Ertem Mutlu	782-788
The Effect of Road Height on Noise Level Under the Canyon Effect	• Derin Hilal Bilmez • Ümit Arpacıoğlu	789- 795
Evaluation of the Carbon Footprint of Thermal Insulation Materials Used in Building Envelopes Within the Building Life Cycle	• Ahmet Cüneyd Diri	796-804
Comparative Analysis of Life Cycle Assessment (LCA) Software	• Neriman Gül Çelebi • Ümit Arpacıoğlu	805-810
Building Anatomy: Impact of Internal and External Factors on Building Design; Production and Analysis	• Neslihan Efsa Özçelik • Murat Sönmez	811-824

An Examination on Sustainability in Graduate Thesis from the Perspective of Industrial Design	• Ege Kaya Köse	825-838
Walkability on University Campuses: A Development Project at Süleyman Demirel University	• Gizem Dinç • Gamze Vergisiz	839-847
Examining Material Use in Architectural Design from a Biomimetic Perspective	• Menşure Kübra Müezzinoğlu • Egecan Alp	848-867
Development Process of Iron Material Usage in Architectural Applications From Past to Present	• Gökhan Mermi • Ümit Arpacıoğlu	868-881
Establishing the Post-Disaster Shelter and Belonging Bond	• Selin Rüya Çakır • Ümit Turgay Arpacıoğlu	882-889
Material Choice" in Architectural Design as "Signature: An Analysis Through the Materials Identified with Architects and Their Buildings	• Serkan Yaşar Erdinç • Ürün Biçer	890-904
Involving Public Participation and Determining Preferences in Planning and Designing Noise Mitigation Barriers Along the Main Transportation Route in the City Center of Erzurum	• Ayşegül Aksu • Hasan Yılmaz	905-918
The Importance of Bioclimatic Comfort in Ecopsychology Approach	• Ahmet Erkan Metin • Atila Gül	919-926
Effects of Material Selection on Urban Stormwater Management	• Nilay Mısırlı • Elif Ebru Şişman	927-936
Investigation of the Role of Roofs in Rainwater Harvesting: Rize	• Ayça Akkan Çavdar • Esra Lakot Alemdağ	937-953
Exploring the Relationship Between Urban Resilience and Landscape Architecture	• Alev Ad • Ömer Faruk Uzun	954-978
Evaluation of the Sustainable Design Concept Through Architectural Project Competitions	• Nilay Aykan • Esra Lakot Alemdağ	979-994
Exploring The Compromise Value of Azimuth Angle for Thermal and Visual Comfort in a Building in the Temperate Dry Climate of Nigeria	• Muhammad Aminu Musa	995-1003
The Bio-Interior: Holistic Biophilia in the Interior Design Studio	• Deniz Hasırcı • Silvia Rolla •Gözde Damla Turhan-	1004-1023

	Haskara • Idil Bakir Küçükkaya	
Examining Corporate Identity in Interior Design Through Residences	• Mehmethan Özerdem • Mehmet Norasli	1024-1030
Changes in the Exhibition Styles of Chicago Architecture Biennials	• İrem Cansu Yalçın • Zeynep Saraç • Gürkan Topaloğlu	1031-1044
Artificial Intelligence in Architecture for Energy Efficiency and Sustainability Objectives: Building Information Modeling, Virtual Reality, and Augmented Reality for Imaginative and Strategic Building Design and Layout	• Cristina Raluca Gh. Popescu • Gheorghe N. Popescu	1045-1068
Comparative Analysis of Urban Land Cover Changes: A Case Study of Izmir, Türkiye, and Naples, Italy	• Floriana Zucaro • Gizem Dinç • Atila Gül	1069-1083
Analyzing Accessibility and Infrastructure of Cultural Heritage Sites for Visitors with Disabilities	• Nastaran Deljavan • Elif Bilmişoğlu	1084-1095
Ecological and Social Significance of Green Bridge Applications in Existing Urban Matrix: A Case Study in Design	• Şükran Şahin	1096-1106
Urban Transformation in the View of Landscape Urbanism: Cases from Istanbul	• Ayşe Betül Çufali • Emine Figen Dilek	1107-1130
The Correlation Between Perceived Naturalness And User Typology in Urban Green Spaces	• Nida Kurak • Serap Yılmaz	1131-1136
The Effects of Natural Environments on Chıldren's Learning	• Serap Yılmaz • Nida Kurak	1137-1142
Cultural Heritage Protection and Historic Building Stability: From Geometrical Formation to Aesthetic	• Jumana Ahmad Aqeel • Naif Adel Haddad	1143-1153
A Method to Evaluate the Impact of Tall Residential Buildings on Cities	• Mehrdad Karimimoshaver • Banu Özkazanç	1154-1158
Evaluation of Marketing Wood Production in Forestry	• Ufuk Coşgun • Damla Yıldız	1159-1169
Evaluation of Employees' Perception of Workloadand Job Satisfaction in Protected Areas	• Saime Demirtaş • Ufuk Coşgun	1170-1178

Determination of the Natural and Cultural Resource Values of the Turkish Republic of Cyprus in Terms of Tourism and Suggestions for Sustainable Management	• Sibel Akten • Gülsüm Kasap	1179-1185
Sustainable Ecotourism Policies in Forest Areas and Legislative Evaluations from Past to Present	• Damla Yıldız • Ufuk Coşgun	1186-1200
Evaluation of Metaphorical Perceptions of Ecotourism and Forest Park	• Damla Yıldız • Ufuk Coşgun • Hasan Güneş	1201-1217
A Bibliometric Analysis on the Use of Unmanned Aerial Vehicle in Land Use/Land Cover Studies	• Berkant Konakoğlu • Kadir Tolga Çelik • Sultan Sevinç Kurt Konakoğlu	1218-1232
Post Application Problems and Solution Methods in Wood-Based Building Envelope Materials	• Bahadır Kır • Zehra Canan Girgin	1233-1253
A Bibliometric Introduction to Architectural Research, Including the Words of "Wood" and "Carbon" Together	• Z. Sevgen Perker • Merve Nur Korkusuz	1254-1274
Accreditation of Graduate Education Programs and the First Steps Taken on This Topic in Our Country	• Öner Demirel • Saye Nihan Çabuk • Şükran Şahin • Alper Çabuk • Sultan Sevinç Konakoğlu	1275-1284
A Model Trial for Creating a Site Selection Model for Urban Forests in Our Country: Kırıkkale Urban Forest	• Öner Demirel • Meryem Bihter Bingül Bulut • Bilgenur Ak • Tuba Gizem Aydoğan	1285-1297
Energy Analysis of Natural Insulation Materials in Building Exterior Wall for Eco- Efficient Retrofits	• Ilknur Arı • Figen Balo	1298-1305
Energy Efficiency of Building Envelopes Designed With Natural Stone and Foam Based Insulation Alternatives	• Ilknur Arı • Figen Balo	1306-1313
The Owning of Public Space: The Impact of Play on Urban Public Spaces in the Frankenberger Neighbourhood	• Pelin Işık • Christa Reicher	1314-1326

Exploring Playgrounds: The Innovative Design of Aldo Van Eyck and Isamu Noguchi	• Gizem Büyücek	1327-1341
The Role of Le Corbusier in the Evolution of Modern Architecture	• Enes Öner • Şeyda Emekçi	1342-1355
V. Chicago Architecture Biennial: Examining the Relationship Between Discourse and Content	• Esmanur Yavuz • Sena Şen • Gürkan Topaloğlu	1356-1369
Reading The New Through The Traces of the Old: Palimpsest Space Şerefiye Cistern	• Zeynep Tanrıverdi	1370-1386
Evaluation of Gaziantep Old Government House in the Context of Critical Regionalism	• Mine Özovacı Kılıç • Nur Urfalıoğlu	1387-1397
Examining "Repetition" as a Design Attitude within the Framework of the Philosophy of Immanence: Creative Repetition in the Designs of Bernard Cache and Greg Lynn	• Çiğdem Polatoğlu • Nehir Sanri Doğan	1398-1411
Architectural Transformation in Kars After 1877-78: Effects of Russian Rule and Housing Architecture	• Gül Helin Alınak • Elif Özlem Aydın	1412-1424
The Effect of Plant-Based Extract-Containing Mortars Used in Different Ratios on Performance	• Seda Turan • Nazlı Ipek Kul Gül • Niyazi Uğur Koçkal • Fatih Özbaş • Selcan Karakuş • Nevin Taşaltın	1425-1432
Investigation of Properties of Mortars Including Plant Extracts as a Waste	• Nazlı Ipek Kul Gül • Seda Turan • Niyazi Uğur Koçkal • Fatih Özbaş • Selcan Karakuş • Nevin Taşaltın	1433-1442
How Can Architectural History Courses Be Made More Attractive: An Alternative Syllabus	• Cemile Feyzan Şimşek	1443-1458
The Effect of Fly Ash Aggregate Produced by Cold Bonding Method on Mortar Properties	• Niyazi Uğur Koçkal • Nazmiye Keleş	1459-1465

Investigation of Sense of Place Within The Framework of Conservation Plans and Physical Space in Türkiye	• Emre Kolçak • Eti Akyüz Levi	1466-1489
Distinction Between the Notions of Form-Process: Epistemological Foundations of Urban Theories	• Elçin Burcu Temel • Rifat Gökhan Koçyiğit	1490-1496
Urban Rail System Line Planning In Al- Hofuf City, Saudi Arabia	• Ömer Çölova • Majid Aljasim	1497-1507
Rail System Route Planning in Egypt: The Case of Luxor	• Ömer Çölova • Ibrahim Kılıç • Aziz Kadıoğlu	1508-1522
Examining The Potentials of Media Architecture in Future Architectural and Public Spaces	• Işıl Aksu Işlek • Berna Üstün	1523-1535
Examining the Perception of Space Through Digital Installations	• Mehmet Akif Subaşı • Çiğdem Polatoğlu Serter	1536-1545
Interdisciplinary Nature-Based Collaboration in the Digital Age	• Elif Yamaç • Cahide Aydın Ipekçi	1546-1557
Reflections of Primitive on Contemporary Architecture at The Intersection of Techne and Technology	• Merve Artkan • Berna Üstün	1558-1575
The Digital Documentation of Cultural Heritage: The Case of Kalaycıoğlu Masjid	• Leyla Kaderli • Büşra Uzaslan	1576-1588
Digital Urban Culture Between Sustainability and Creativity: Flagship Projects of Dar-Ül Mülk For Cultural Tourism	• Feyza Topçuoğlu	1589-1597
Interaction of Cultural Heritage Assets and New Media Art	• Işıl Aksu Işlek • Hicran Hanım Halaç	1598-1609
Color-Urban Identity Relationship in Urban Designs	• Seyhan Seyhan • Elif Bayramoğlu	1610-1615
Designing Urban Spaces As Emotions	• Elif Sağlık • Emine Berfin Minkara	1616-1625

The Effect of Transportation on Urban Identity in Urban Areas	• Seyhan Seyhan • Elif Bayramoğlu	1626-1630
The Traces of Landscape in Historical and Touristic Streets: Ayvalık – Cunda (Alibey) Island	• Mahmut Can Ast • Elif Sağlık	1631-1646
Water Efficient Landscape Design For the Sustainability of Water Resources in urban Areas	• Bilgenur Ak • Öner Demirel • M. Bihter Bingöl Bulut	1647-1661
Generating Concepts in The Process of Envıronmental Design Projects: The Case of Trabzon Sera Lake Resort	• Tuğba Düzenli • Elif Merve Alpak	1662-1668
The Theory of Affordances and Its Relationship with the Environment	• Tuğba Düzenli • Elif Merve Alpak	1669-1673
Insights on International Charters and Urban Planning for the Preservation of Historic and Archaeological Sites	• Mohammad Juper • Naif Adel Haddad	1674-1692
Transportation in Tourism Development in Non-Urban Areas in Nigeria: Faith-Based Interventions	• Favour C. Uroko	1693-1706
Finite Element Analysis of Adobe Building Components	• Dilara Kalli • Ali Ihsan Çelik	1707-1717
Earthquake Caused Embodied Energy Potential of Demolition Wastea Case Study in Istanbul	• Ceren Çakar • Cenk Üstündağ	1718-1727
A Journey with the Senses in Library Design	• Hande Eyüboğlu • Serap Faiz Büyükçam	1728-1741
The Role of Vernacular Housing Architecture In Cultural Sustainability: The Bodrum Peninsula Example	• Ilayda Demirci • Hümeyra Birol	1742-1755
Left Behind: Waste Museums	• Serap Faiz Büyükçam • Hande Eyüboğlu	1756-1762
Architectural Building Solutions Inspired by and Bringing People Closer to Nature	• Leyla Suri	1763-1773
Planning Surface Runoff Using Green Infrastructure Systems In Urban Waterways	• Nazmiye Ermeydan • Serhat Aniktar	1774-1797

Analysis of Natural Children's Playgrounds from an Ecological Perspective	• Duygu Karabıçak Günaydın • Ertan Düzgüneş	1798-1805
Evaluation of the Use of Virtual and Augmented Reality Technologies in the Presentation of Cultural Heritage Sites in the Context of Conservation Principles	• Merve Aslı Kara Yüksel	1806-1816
Determination of the Effects of Biostimulant and Nitrogen Applications on the Establishment of Bermudagrass from Sprigs	• Bora Mert Şahin • Bahar Sancar • Songül Sever Mutlu	1817-1823
The Effects of Biostimulant and Fertilizer Applications on the Winter Dormancy of Bermudagrass (*Cynodon Dactylon* L. Pers)	• Yakup Sevgin • Bahar Sancar • Songül Sever Mutlu	1824-1831
Effects of Artificial Intelligence Supported Smart Irrigation Systems on Water Efficiency and Plant Production	• Gülcay Ercan Oğuztürk • Şüheda Tamer • Meryem Yurtseven	1832-1839
The Role of Building Integrated Agriculture Systems as Potential Food Production Areas in Ecological Building Design	• Beyza Aleyna Bayram • Pınar Kısa Ovalı	1840-1860
Social Cohesion and Solidarity: The Impact of Rehabilitation Beyond Housing	• Francisca Machado	1861-1867
The Effects of Glycine Betaine and Nitrogen Applications on Turfgrass Performance of *Zoysia japonica*	• Mert Çakır • Meryem Kurt • Songül Sever Mutlu	1868-1878
Perception and Communication Awareness in Plants	• İlayda Merve İleri • Atila Gül	1879-1894
A Versatisummaryle Look at He Furniture Design Adventure	• Esra Orhan Yılmaz • Semih Çınar • Elif Özgen	1895-1901
Evaluation of Traditional Houses in Balıkesir Urban Center for Conservation	• Ayşegül Ağan	1902-1909
Multigenerational Houses and Intergenerational Housing Typology	• Dicle Özavcı	1910-1916

The Effect of Environmental Design and Architecture on Crime Prevention	• Dicle Özavcı	1917-1927
Evaluation of the Effect of Biopolymer Additives on the Performance Properties of Earth Plaster	• Münevver Şeyda Küçükşakalak • Seden Acun Özgünler	1928-1941
Examination of the City Image Components and Sign Elements of Balat District Through Instagram Users	• Hicran Hanım Halaç • Ruken Avcı • Yasemin Akcakaya	1942-1966
Resilient and Sustainable Cities: A Conceptual Framework	• Beyza Mürüvet Yiğit • Murat Akten	1967-1980
Historical Environment Protection Plans and Zoning Applications Antalya Province, Ibradi District, Ormana Example	• Hüseyin Cengiz	1981-1993
The Relationship Between Landscape Architecture and Anthropometry the Case of Isparta Cumhuriyet Street	• Deniz Karakuyu • Murat Akten	1994-2001
Determining the Criteria for the Conversion of Existing Education Buildings According to Green Building Standards	• Hatice Eda Gül • Seniye Ela Gül • Sibel Akten • Atila Gül	2002-2016
Evaluating School Spaces as Opportunities for Carbon Footprint Reduction	• Sibel Akten • Atila Gül	2017-2027
Moss Wall Panel System in Vertical Plant Applications	• Sibel Akten • Şuayip Körük	2028-2036
A Research on the Usage Potential of Natural Compounds for the Protection of Wood against Fungi Problems in the Context of Eco-Friendly Wood Preservation Applications	• Selvi Burcu Güler • Seden Acun Özgünler	2037-2044
Comparison of the Production and Usage Performance of Container Structures and Earth Structures for Temporary Building	• Evrim Solhan • Seden Acun Özgünler	2045-2055

First View Graphic Restoration Project Proposal of the Odina Jome Mosque in Kashkadarya Region	• Elvira Jurayeva	2056-2062
The Role of Artificial Intelligence in Optimizing Digital Architectural Designs	• Denada Ahmeti Rada	2063-2070
Using Photogrammetry for Digital Documentation of Heritage Sites and Objects in Jordan	• Fatima Haroun	2071-2078
Enhancing Academic Library Services: An Overview of Artificial Intelligence Applications	• Mahadevan Balasubramaniyan • Kannadasan Karuppaiah	2079-2084
The Significance of Transformation of the Banking System in Developing Countries Like the Republic of Serbia	• Lutovac Jelena • Slobodan Popović	2085-2089
Internal Control In the Work of the Financial Sector and the Real Economy Sector of Small Economies	• Slobodan Popović • Lutovac Jelena	2090-2094
Cancer Data Analysis with Data Mining Algorith	• Irshad Ullah • Aamna Saleem Khan	2095-2098
Regression Analysis of Hospital Statistics: A Case Study of Akure Metropolis	• O. A. Oladimeji • S. T, Ogunbanwo • O. T, Oyejide • O. O. Oyebode	2099-2108
Smart Sustainable Cities for Happier People as Envisioned by United Nations Economic Commission for Europe: Fostering Harmonious Societies, Improving Quality of Life and Advocating Innovative Financing Approach	• Cristina Raluca Gh. Popescu • Gheorghe N. Popescu	2019-2131
Economic Survey of Household Expenditure Pattern During Covid-19 Pandemic in Ogun State, Nigeria	• S. A. Daud • O. Amao • I. A. Aderibigbe. • I. O. Sulaimon • A.B. Omotoso	2132-2140
Researching the Dynamic of Education Among Women in Kazakhstan	• Suleimenova Anel	2141-2148

Evaluating the Performance of Various Shading Devices on Daylighting for Visual Comfort in the Temperate Dry Climate of Nigeria	• Muhammad Aminu Musa	2149-2156
A Novel Technology for Ecologıcal Pavement and Asphalt Production: Mine and Industrıal Waste Plant (CDMI)	• Zakaria Madani	2157-2159
Floating Cities in Terms of Space Management: Structural, Legal, Administrative and Functional Approach	• Ahmet Fidan • Pelin Karaçar	2160-2177

IV. International Architectural Sciences and Applications Symposium
May 30-31, 2024, Girne- Turkish Republic of Northern Cyprus
https://www.iarcsas.org/

Perception and Communication Awareness in Plants

İlayda Merve İLERİ [1*]

ORCID 1: 0009-0007-6254-8089
[1]. Master's Student, Süleyman Demirel University, Institute of Science, Department of Landscape Architecture Isparta-Türkiye
iilaydamerve@gmail.com (Responsible Author)

Atila GÜL [2]

ORCID 2: 0000-0001-9517-5388
[2] Prof. Dr., Süleyman Demirel University, Faculty of Architecture, Department of Landscape Architecture, Isparta-Türkiye
atilagul@sdu.edu.tr

Abstract

The plant kingdom is a very large living world that includes woody, herbaceous and similar eukaryotic organisms (with one or more cell nuclei). The existence and survival of all living things in the world depends on plants. Because plants provide the energy necessary for themselves by photosynthesis thanks to the chloroplasts in their cells (autotroph). They also produce the energy necessary for all other living things and form the first link in the food chain. Plants are multicellular, eukaryotic organisms. They have chloroplast organelle and chlorophyll pigment in this organelle. They are photoautotrophs. In other words, they photosynthesize. They are the source of oxygen and food for terrestrial life. The immobility of plants is directly related and consistent with the fact that their main ecological function is the production of substrate for the community of organisms. However, immobility necessarily entails some limitations. To meet these limitations, plants show evidence that they can implement adaptively beneficial behaviors in a variety of ways. Three impressive evidences of such behavior in plants are their ability to remember, measure time and communicate with chemical signals. Plants have developed various mechanisms in order to perceive the changing environment, to adapt to the environment they live in and to continue their own development, to communicate with symbiotic factors above and below ground. Plants, which have certain hormones, enzymes and organs, have developed various receptors and microtubules related to these properties. Depending on the receptors they have developed, they receive signals and information and transmit them to their receptors and establish biocommunication with other plants, herbivores and reciprocal receptors. The organs of plants actively move and use these movements to actively manage both their abiotic and biotic environment. By sending signals and reacting accordingly, plants can recognize environmental responses, stresses and threats, and can predict future environmental conditions based on clues from the information. At the same time, they can change their behavior based on their own and their ancestors' experiences and exhibit a related memory. Plants use these responses not only for survival but also for reproduction, seed development, continuation of their generations and distribution. In this study, in the light of the information obtained because of scientific studies, the awareness levels of plants for sensory and communication will be discussed. The ability of plants to remember, measure time and communicate with chemical signals will be explained with examples.

Keywords: Plant Kingdom, Plant Awareness, Plant Perception, Plant Communication,

1. Introduction

The plant kingdom is a very large living world that includes woody, herbaceous and similar eukaryotic organisms (with one or more cell nuclei). The existence and survival of all living things in the world is dependent on plants. Because plants provide the energy necessary for themselves by photosynthesizing thanks to the chloroplasts in their cells (autotrophs), they also produce the energy necessary for all other living things and form the first link in the food chain. Plants are multicellular, eukaryotic organisms with a chloroplast organelle and a chlorophyll pigment in this organelle.

Plants are photoautotrophs, that is, they carry out photosynthesis. They are the source of oxygen and food for terrestrial life. The immobility of plants is directly related and consistent with the fact that their main ecological function is the production of substrate for the community of organisms. However, immobility necessarily entails some limitations. To meet these limitations, plants show evidence of being able to implement adaptive beneficial behaviors in a variety of ways. Three impressive evidences of such behaviors in plants are their ability to remember, measure time and communicate with chemical signals.

Plants interact with other plants in their environment through a complex network of communication. This communication often takes place through chemical substances. For example, a damaged plant releases chemicals that alert neighboring plants of the danger and encourage them to activate their defense mechanisms. Plants can also communicate through their root systems. Roots can share nutrients in the soil and send chemical signals to fight harmful organisms.

Electrical communication is another important mechanism. A change in one area is transmitted to other parts of the plant via electrical signals, triggering defense responses. All these mechanisms show that plants are not passive beings, but rather actively interact with their environment and use complex communication strategies to adapt to environmental changes.

Thousands of root tips can be likened to birds in a flock keeping a certain distance from each other to move towards a set goal. By responding to stimuli from the environment, these root tips, although seemingly acting individually, contribute to the whole organism acting to its advantage. The brain and nervous system are not unique to animals and humans. Plants also use a complex chemical language to communicate with their environment. For example, while the average student can communicate using about 700 words, a plant can use about 3000 different chemicals to communicate with its environment (Pollan, 2013).

In this study, in the light of the information obtained because of scientific studies, the awareness levels of plants for sensory and communication were discussed. The ability of plants to remember, measure time and communicate with chemical signals were explained with examples.

1.1. Sensing in Plants

Due to their immobility, plants have developed adaptation mechanisms with a higher sensitivity to environmental conditions. The process of sensing stress and making appropriate responses is highly complex. Plants sense environmental changes through receptors built into the plasma membrane and intracellular proteins. These sensed signals are transmitted within the cell through complex signal transduction networks, resulting in a series of physiological responses such as gene expression, protein production and metabolic changes. Understanding the different signaling pathways for different types of stresses is critical for the development of plant tolerance (Keskin, 2012).

1.1.1. Light detection

Environmental signals include factors such as temperature, light, mechanical (touch), water and gravity among the stimuli used to activate the plant's own developmental program. Of these factors, light is particularly important (Deng & Quail, 1999).

Plants have a richer light-sensing mechanism than other organisms (Neff et al., 2000). Light-dependent responses in plants are controlled by photoreceptors such as phytochrome, cryptochrome and phytotropin (Quail, 2000).

1.1.2. Touch sensing

In plants, responses to mechanical forces are widespread and are among the key regulators of growth and development processes. They also play an important role in regulating interactions between neighboring plants and adjusting plant responses to environmental factors (Braam, 2005; Telewski, 2006; Sampathkumar et al., 2014).

While plants' sensory abilities are often focused on animals for defensive purposes, plants' sensory responses are most pronounced with carnivorous plants, especially those associated with insects and other small animals. The carnivorous habit has appeared independently in angiosperms at least six times. However, different carnivorous plant species show considerable similarity in the mechanisms they use to attract, capture and digest their prey (Ellison & Gotelli, 2009).

1.1.3. Chemical detection

Chemical compounds released into the air or from their roots act as a kind of language, allowing plants to communicate with themselves, neighboring plants and other organisms such as microbes and insects. Plants detect these compounds using receptors in their leaves and roots and use these communication strategies for both beneficial and defensive purposes (John Innes Centre, 2024).

1.1.4. Microbe detection

Plants have been a food source for fungi, viruses, bacteria and nematodes and cannot be completely isolated from these pathogens; however, they have appropriate defense strategies that have evolved to detect and counter the inevitable pathogen attacks. To stop pathogen attacks decisively, plants use defense mechanisms that can be triggered and stimulated by pathogen attacks, in addition to existing physical and chemical barriers (Koç & Üstün, 2008).

1.1.5. Perceiving and attracting animals

Some plants use chemicals to attract animals. The colors and scents of flowers have evolved specifically to attract insects. Likewise, some fruits and seeds produce visual and chemical signals to attract animals. Carnivorous plants often use traps made of specially transformed leaves to attract insects, and these traps are often marked with textures or structures that produce colors or odors that attract insects. Some plant carnivores, such as pot plants, use passive traps to capture their prey; in such plants there are no rapid changes in the configuration of the traps, but insects are still caught (Gallie & Chang, 1997).

1.1.6. Temperature sensing

Since plants live in a fixed location, they have developed various survival strategies to sustain their growth in response to environmental signals. Among these environmental signals, temperature and photoperiod are among the most important factors in determining flowering time. In particular, plants growing in temperate climates experience vernalization, a process that requires prolonged exposure to cold conditions during winter to initiate the flowering process (Sheldon et al., 2000).

The optimal temperature and time for vernalization varies between different species and even between different varieties of the same species. Generally, the optimal temperature range for the

vernalization response is above or around freezing. Temperature is an important factor in the vernalization requirement and helps plants adapt to environmental changes (Kim, Doyle, Sung, Amasino 2009).

1.2. Signal Transduction in Plants

At the beginning of signal transduction, receptors are first needed to detect the signal. Although most known receptors are located on the plasma membrane, some are located in the cytosol and other cellular regions (Keskin, 2012). Plants communicate by sensing external signals that affect their growth and development. These signals include many factors related to the physical, chemical and biological environment of plants. Some external signals come from other plants. Unlike gravity signals, other signals vary in intensity and frequency (Trewavas & Knight, 1994). Most signals interact with each other, working together to create the final signal and enhancing each other's effect. Signal combinations that influence the complex responses of plants include red and blue light, gravity and light, growth regulators and mineral nutrients (Schroedaer, Allen, Hugouvieux, Kwak & Waner 2001).

1.2.1. Signal transduction types in plants

a. Environmental Signals

There are a number of stimuli that plants use to initiate their development program. These include various signals such as temperature, light, touch, water and gravity. However, the role of light is particularly prominent and vital for plants. In terms of light sensing mechanisms, plants are rich in comparison to other organisms (Deng & Quail, 1999).

b. Abiotic Stress Signal Transduction Pathways

Different environmental stressors have various effects on the overall growth and development of plants. For example, in the case of drought, plants face osmotic stress. In this case, plants' nutrient uptake may face obstacles caused by dryness in the soil and their photosynthetic activity may decrease, which negatively affects growth. Salinity, on the other hand, leads to physiological drought and ion toxicity, inhibiting plant growth. These stress factors can negatively affect the healthy growth and development of plants (Zhu, 2002).

c. Signal Transduction from a Biophysical Perspective

In plants, how physical forces are transmitted and sensed through the cell wall is still poorly understood. However, thanks to the semi-rigid cell wall, even distant injuries to plant organs can be recognized. The unique responses of plants to mechanical stimuli vary and some information has been obtained on the effects of external physical influences such as wind on plants (Trewavas & Knight, 1994).

d. Signal Transduction in Development

The many signaling pathways that underlie development in plants are unique but share common features. As in animals, key components are used repeatedly in many different developmental and signaling pathways in plants. This means that proteins from different developmental stages can interact with key components of specific signaling pathways. Auxin, cytokinin, abscisic acid, gibberellin, ethylene and brassinosteroid hormone pathways form a complex communication network (Keskin, 2012).

e. Signal Transduction via Auxin

The hormone auxin (Indole Acetic Acid) plays a regulatory role at various stages in plant growth and development and is a primary participant in many key processes throughout the plant life cycle. These processes include embryogenesis, lateral root development, vascular differentiation, apical dominance, tropic responses and flower development (Dharmasiri & Estelle, 2004). Auxin application induces rapid changes in the expression of many plant genes and some genes can be activated within minutes for response development. This indicates that de novo protein synthesis is not required for efficient downstream signal transduction (Abel, Oeller & Theologis, 1994).

f. Ethylene Signal Transmission

Ethylene is a two-carbon hormone that plays a critical role at various stages in the plant life cycle. It plays a vital role in many processes such as seed germination, fringe root formation, root nodulation in legumes, flower wilt, leaf and fruit shedding and fruit ripening. Ethylene production is regulated during plant development by interacting with both internal signals and environmental factors. These factors include environmental stimuli such as biotic stress (e.g. pathogen attack) and abiotic stress (injury, freezing, ozone, lack of oxygen, etc.) (Keskin, 2012).

g. ABA Signal Transmission

One of the best-studied ABA signaling pathways is ABA-induced stomatal closure (Allen et al., 2001). The acid-base balance and redox state of the cell are critical factors in regulating or directing ABA signaling (Garcia-Mata & Lamattina, 2002).

2. As a Result of Physiological and Biochemical Processes in Plants; Movement, Behavior and Intelligence

The development of plant neurobiology is important to study in more detail the behavior of plants to adapt to the environment and show resilience. Behavior is defined as a plant's rapid and reversible response to environmental changes, while intelligence is the ability to solve problems. Plants have evolved a variety of behaviors to perform vital functions such as finding food sources, reproduction and defense in the most efficient way. These behaviors are critical for plants to pass on their genetic material to future generations. For example, the movement of root tips in plants can be likened to the behavior of herds of animals keeping a certain distance from each other as they move towards a specific target. Although plants appear to act individually in response to environmental stimuli, in fact these behaviors are tuned to benefit the entire population. The distribution of auxin in plant tissues shows that movement is dependent on the direction of the stimulus, causing changes in orientation called tropism. Such movements can be reversed by the disappearance of the stimulus. On the other hand, if the movement is independent of the direction from which the stimulus comes and shows reversible changes, this is called oscillation. This oscillation can be manifested as an upward (epinasty) or downward (hyponasty) curvature of the organ. These movements in plants can be seen as orientations or oscillations towards gravity (geotropism), touch (tigmotropism), light (phototropism), temperature (thermotropism), sun (heliotropism), chemicals (chemotropism) and water (hydrotropism) (Dalkılıç, 2020).

2.1. Movement

Although plants do not have a central nervous system and are immobile, they are known to change their shape and adapt to their changing environment using physical laws and biological

mechanisms. In this process, they are seen as living information processing organisms that exhibit complex behaviors such as decision-making, adaptation and learning (Trewavas, 2003; Duran-Nebreda & Bassel, 2019).

a. Living tissue movements:

Migratory (taxis) movements in living plant tissues can either approach or move away from the stimulus. In the case of approaching the stimulus, they are defined as topic movements and in the case of moving away from the stimulus, they are defined as phobic movements. Examples include moving toward light (phototaxis), moving toward a chemical substance (chemotaxis), and moving toward gravity (geotaxis) (Dalkılıç, 2020).

b. Inanimate tissue movements

Hygroscopic movements in non-living plant tissues occur in the form of expansion of cells by taking in water or contraction by giving water. These movements are also known as cohesion movements caused by water tension differences between water molecules (Dalkılıç, 2020).

c. Tropism (orientation) Movements

The uneven distribution of auxin in plant tissues causes plants to grow in various directions. These growth orientations are towards light (phototropism, *Sinapis alba*), towards the sun (heliotropism, *Helianthus annuus, Glycine max, Gossypium hirsutum*), towards temperature (thermotropism), towards humidity (hydrotropism), towards chemicals (chemotropism, *Lupinus* sp.), towards gravity (geotropism, *Arabidopsis thaliana, Papaver somniferum)* and towards touch (tigmotropism, *Vitis vinifera*) (Güven, 1991; Kacar et al, 2002; Özen & Onay, 2013).

d. Nastic Movements

Movement is the mechanical response of plants in direct response to environmental stimuli. These responses are independent of the direction from which the stimulus is coming and are usually caused by changes in osmotic or turgor pressure. These responses can be observed as an organ curving upward (epinasty) or downward (hyponasty). For example, plants can respond to light (photonastia), temperature (thermonastia), humidity (hydronastia), chemicals (chemonastia), touch and gravity (tigmonastia). These movements help plants adapt to environmental conditions and increase their chances of survival. For example, the orientation of the leaves of some plants towards light can increase photosynthetic efficiency (Güven, 1991; Kacar et al., 2002; Coutand, 2010; Özen & Onay, 2013; Sparke & Wünsche, 2020).

2.2. Behavior of Plants against Sensory Systems

a. Orientation towards light (phototropism)

Phototropism is the directional growth of a plant organ towards a light stimulus. This phenomenon is an example of the plant's ability to respond quickly and reversibly to environmental stimuli. Stems usually show positive phototropism, meaning they grow towards the light source. Roots, on the other hand, usually show negative phototropism, meaning they move away from the light source. The basis of phototropism is that the cells on the side of the plant away from the light source grow faster. This faster growth causes the plant to bend towards the light source. This allows the plant to adjust its growth direction according to the position of the light source. Phototropism has been studied and documented by scientists for many years. In the 19th century,

Charles Darwin proposed the existence of a mechanism that causes the plant to bend towards light. Later, in the early 20th century, researchers such as Cholodny (1927) and Went & Thimann (1937) suggested that phototropism is related to the redistribution of a substance that promotes growth in plants.

b. Orientation to touch (Tigmotropism)

Thigmotropism is the response of a plant organ to a mechanical stimulus. This response is the growth orientation of the plant as a result of physical contact. For example, a plant root can grow in response to soil touch. Interestingly, there is thought to be a close relationship between the responses of roots to gravity (gravitropism) and touch (thigmotropism). Recent research suggests that proper root tip growth should integrate both the gravity response and the touch response. This suggests that plants have developed complex mechanisms to adapt to environmental stimuli (Massa & Gilroy, 2003).

Like the previously discussed responses, thigmotropism requires the ability to perceive a stimulus, a cascade in signal transduction and finally a differential growth response to the touch stimulus. This process involves the plant's ability to respond to mechanical stimuli and can occur by changing the direction of plant growth or by increasing the growth rate of cells in the touched area (Legue et al., 1997).

c. Orientation towards water (Hydrotropism)

Hydrotropism is the growth or movement of an organism towards or away from a water source. In plants, the best example is that roots prefer soil with a higher water potential. This means that plants direct their roots towards the soil to find water and grow towards areas where water is present in the soil. Hydrotropism enables plants to make the best use of water resources, contributing to their ability to survive (Takahashi et al., 2002).

d. Orientation against gravity (geotropism)

Plants combine different signals to grow and develop properly despite changing environmental conditions. These signals include the effect of gravity and changes in the direction of growth. For example, if you rotate a plant 90° from its original direction of growth, the plant perceives this change in the gravity vector and its main growth axis will eventually readjust vertically relative to the gravity vector. This explains the plant's response to changes in the gravity field and the mechanism for maintaining the appropriate gravity setting for a given organ (Blancafor & Masson, 2003).

e. Orientation towards chemicals (Chemotropism)

During the SpaceX 52/53 Expedition to the International Space Station (departure: December 15, 2017, return: January 13, 2018), several experiments were conducted to determine how roots are oriented in microgravity conditions. These experiments aimed to examine the interaction of roots with various factors such as gravity, nutrients and water. In the experiments conducted in space in zero gravity, it was observed that Daucus carota (Carrot) plants with taproot showed positive chemotropism towards disodium phosphate solution. However, in experiments conducted on Earth, the chemotropism effect was suppressed by gravity. Therefore, roots were observed to grow and develop downward regardless of the presence or absence of nutrients in the environment (Izzo et al., 2019).

2.3. Memory and Learning Mechanisms in Plants and Bio-Communication

“The term 'intelligence' is often used in relation to the brain, limited to measurements such as human communication abilities and IQ tests. However, a more appropriate definition for plants may be the ability for “adaptive variable behavior”, a concept coined by David Stenhouse (1974) and adopted by Anthony Trewavas (2003). This definition refers to the capacity of plants to learn without an organized brain (Stenhouse, 1974).

Basically, learning in plants involves using information from the environment to make changes that can enhance their adaptability. Such changes can be seen as “adaptive beneficial behaviors” that allow plants to better adapt to environmental conditions. This ability of plants allows them to optimize their responses to environmental stimuli to increase their chances of survival and development (Trewavas, 2003). The learning process takes place through the formation of new dendrites and memory is retained as long as these dendrites continue to form. The neural network is phenotypically flexible, and intelligent behavior requires this flexibility. Similarly, plant development is flexible and not immutable. Many mature plants can be reduced to a single bud and root and transformed into a new plant with a different structure under the influence of new environmental conditions (Kandel, 2001).

The most obvious evidence of the ability to remember in plants can be observed in their movements. For example, the movement of sunflowers following the sun is a clear indication of their response to the daily light signal. Sunflower flowers face east in the morning and follow the sun throughout the day, turning west in the evening. During the night, the flowers turn back to the east. This backward movement in the dark shows that plants are not only following the sun, but also waiting for the light to return, even if the light signal has not yet returned. This suggests that plants remember the arrival of morning (Salisbury & Ross, 1969).

Kalanchoe flowers follow a diurnal cycle, orienting upwards during the day and downwards at night. Even when exposed to continuous darkness, these flowers continue their daily movement for several cycles. This shows that plants remember the daily light cycle even without a light signal. They move by remembering the cycle of sunlight (Bunsow, 1953).

A similar phenomenon is observed in the daily movement of leaves in many plants. For example, the leaves of the Albizzia plant change position throughout the day and night. This position cycle continues for several days, even when the plant moves into darkness. The fact that the leaf position continues to cycle without a light signal indicates that plants remember the light cycle. Plants maintain this cycle even after the light signal is interrupted, proving that they remember the daily light signal (Bunning, 1959).

3.Hormones Involved in Plant Behavior

In addition to controlling plant growth and development, plant hormones also play an important role in plant-to-plant communication. This communication can be between plants of the same species, but also between different species and insects. Apart from phyto-hormones, chemical messenger substances include peptides such as phyto-sulfokines and RNAs. MicroRNAs play a critical role in intracellular communication during plant development. MicroRNAs are essential for processes such as meristem function, organ polarity, vasculature development, flowering patterning and hormone response. Most microRNAs are regulated according to developmental or environmental conditions. Small interfering RNAs (siRNAs) act as signals in early developmental

stages. Later in development, RNAi-dependent epigenetic processes remember these early developmental stages and regulate, for example, heterochromatin structuring. These RNAs play important roles in chromatin regulation and epigenetic silencing (Dugas & Bartel 2004; Kidner & Martienssen 2005).

Auxins

Some sources state that auxin accumulates in boron-containing tissues in plants and causes necrosis and that there is a strong link between auxin metabolism and boron deficiency (Seçer, 1989). Auxins can be transferred between cells because they can be transported in a versatile or polar manner. These hormones effectively accelerate cell division, growth, and development in plants. It has been determined that they increase osmosis in the cell, facilitate permeability to water, and support cell growth by promoting the synthesis of specific RNA and protein enzymes that increase the flexibility and expansion of the cell wall (Seçer, 1989).

• Cytokinins

They are organic substances in the quinine structure that are effective in plant tissues, especially during cell division, and are found in both plants and animals, unlike other hormones (Te-chato et al., 2008). Although cytokinins are not as common as auxin in practical application, they play an important role in plant breeding studies and tissue culture applications. The most critical organic compounds added to tissue culture media are auxins and cytokinins. The balance of these two compounds is of critical importance in controlling root and shoot formation (Güleryüz, 1982). Cytokines are generally produced in roots and promote root growth. They are effective in bud development and leaf elongation. They promote seed germination while delaying plant aging. They also stimulate chlorophyll synthesis, ensuring that leaves remain green. The widely used artificial form of cytokine in agriculture is benzyl adenine. Florists use cytokines to delay plant aging. In plant tissue culture studies, cytokines and auxin are usually used together; With this combination, it is possible to stimulate the development of different organs of the plant. For example, after the callus tissue is formed from explants obtained using plant tissue culture techniques, the development of the desired plant parts can be directed by applying auxin and cytokines at different rates. As a result of using equal amounts of auxin and cytokine, callus tissue is formed but no differentiation occurs. If auxin is used more than cytokine, root formation is encouraged in the callus tissue, while if cytokine is used more than auxin, shoot and leaf formation are observed in the callus tissue (Kaynak & Ersoy, 1997).

• Gibberellins

Giberellins were first isolated from *Gibberella fujikuroi* fungi in Japan; it was discovered that this fungus caused excessive height growth in rice plants (Seçer, 1989). Genetically, it promotes growth in dwarf plants and increases stem elongation by eliminating the inhibitory effect of red light on stem growth. It can accelerate the flowering process and hybridization practices by promoting early flowering in some plant species, which can save time in breeding studies. Since plant growth is accelerated with gibberellin application, the possibility of plant parts taken from these areas carrying viruses is also reduced. It also increases germination by breaking the dormancy state in some buds or tubers. It also promotes germination by breaking the dormancy state in apical seeds. In plants that require long-day conditions and chilling, flowering can be

encouraged by gibberellin application even if these conditions are not met (Budak et al., 1994; Kaynak & Ersoy, 1997; Kaynak & İmamgiller, 1997; Kaynak & Memiş, 1997).

• Abscessic Acid (ABA)

ABA (Abscisic Acid) is a hormone that promotes stomatal closure in most plant species. It is also known that ABA slows down RNA and protein synthesis in plants under water stress and causes stomatal closure together with CO_2. Since ABA synthesis increases in cases of water deficiency, it plays an important role in the regulation of stomata during transpiration. In annual plants, ABA inhibits growth in seeds, while in biennial and perennial plants, it also controls growth in storage organs such as buds and tubers. It also stimulates the production of storage proteins and prevents premature germination of seeds. Breaking dormancy in most seeds is generally associated with a decrease in ABA levels in the grain (Seçer, 1989; Kaynak & Ersoy, 1997).

• Ethylene

Ethylene is a gas hormone naturally produced in ripe fruits, aged leaves and flowers (Westwood, 1993). Ethylene is formed where it is produced and used by the plant itself, but it can also affect other plants in the surrounding area thanks to its gas form. For example, the flowering of a tree in a garden can encourage the flowering of other plants with ethylene gas. Ethylene stops growth in plants and accelerates the ripening of fruits. It can also cause the surrounding fruits to rot. Ethylene is also known as the "ripening hormone" and is the most widely used plant regulator in agriculture after post-skinning technology (Ergun, 2017). If the ethylene level in the air exceeds 10 ppm, it begins to show physiological effects on plants. According to some researchers, ethylene is a stress hormone rather than a ripening hormone (Karaçali, 2012). While ethylene gas promotes the increase in sugar and ripening in fruits, it can cause fruits to rot in case of overproduction. Ethylene production increases in stressed plants and can be found at high levels, especially in leaves, at the end of the plant's life cycle. Ethylene also has an effect on wilting flowers and plays an important role in seed germination and budding processes. When the amount of auxin increases above a certain level, ethylene production in the plant is stimulated. The ethylene produced can suppress the effects of auxin and stop the plant from growing (Çatak & Atalay, 2020).

- **Brassinosteroids**

Brassinosteroids are natural compounds with a steroid structure that are actively found in the second internode region of beans, causing this region to thicken and harden. They are usually crude lipoidal extracts obtained from rapeseed pollen. These compounds have been tested in various systems in terms of biological activity and significant findings have emerged. Brassinosteroids have various effects on plants. For example, they provide resistance to cold, diseases, pests and salt stress. They also promote seed germination, increase plant elongation, promote root growth and increase crop yield. They also have effects that reduce fruit drop.

The role of these compounds in plant growth and development is an important research topic, especially to understand how plants respond under stress and to increase productivity in agricultural production (Kim, 1991; Nasar, 2004).

• Strigolactones

Strigolactones (SLs) are signaling molecules synthesized by a wide range of plants and play an important role in plant development. These molecules are derived from mosses, fungi, and

angiosperms (Foo et al., 2013). In 1823, Vaucher reported that Orobanche (monstrosity) seeds depend on the host plant for germination. Studies conducted in the early twentieth century also revealed that some chemicals found in host roots promote the germination of monstrosity seeds (Xie et al., 2010). The first strigolactone derivative, strigol, was isolated in 1966, but its structure was elucidated 6 years later; the exact determination of these structures was a process that took almost 20 years (Cook et al., 1966; Zwanenburg & Blanco-Ania, 2018). The term "strigolactone" was coined by Larry Butler and is named for the fact that they promote germination of seeds of parasitic witch hazel species and that they contain a lactone ring in their chemical structure. Strigolactones play an important role in communication between plants and between plant roots and mycorrhizal fungi. They are also known to play a role in root development, lateral root formation, and plant defense against pests. Research has shown that strigolactones are an important part of complex signaling networks that regulate plant growth and development (Butler, 1995; Ćavar et al., 2015).

4.Conclusion and Recommendations

The plant kingdom is the indispensable source of oxygen and nutrients for terrestrial life. It is also the only living being that does not need other living beings by creating its own energy and food. Despite having some limitations, especially due to its immobility, plants have developed various mechanisms in order to continue their own lives, perceive the changing environment, adapt to the environment they live in, and communicate with symbiotic factors underground and above ground.

As a result of research, observations, and experiences, plants are complex and dynamic organisms that interact with their environment and give various reactions. Three impressive pieces of evidence of such behaviors in plants are seen as their ability to remember, measure time, and communicate with chemical signals. In this context, plants can perceive environmental stimuli, communicate through chemical and mechanical signals, exhibit various behaviors, make slow but distinct movements, and adapt to their environment. Plants that can perceive signals and respond appropriately to them can perceive environmental reactions, stress, and threat elements and predict possible future environmental conditions with clues from information. At the same time, they can change their behavior based on themselves and their past experiences. They may even exhibit a memory related to this. Plants use these reactions not only for survival but also for reproduction, seed development, continuation of their generations, and distribution.

Understanding, discovering, and making sense of the perception, action-reaction behaviors, and communication structure of plants will create multidimensional vital added values. Because understanding plants means understanding nature. Plants are also the library of nature. Turning this information into action will provide many benefits. For example,

• It can be used in improving agricultural and plant breeding techniques. For example, understanding how plants respond to stress can help us adopt methods to develop more resistant plant varieties. The adaptability of plants can be determined according to the conditions of the region, etc.

• It can help in the development of new plant-based technologies; For example, progress can be made in areas such as the design of sensors that can be used to detect environmental conditions of plants or the development of plant-based communication systems, etc.

• Optimization of plant growing environments: Understanding the responses of plants to changes in their environment can help optimize plant growing environments more effectively. This can increase sustainability in agricultural production by ensuring more efficient use of water and nutrient resources.

• Ecosystem management and use in biological control: It can make significant contributions to the reduction of the negative effects of climate change and the adaptation process and can increase the quality of ecosystem services with its carbon capture and storage function. Understanding the defense mechanisms that plants naturally develop can contribute to the development of biological methods in the fight against harmful organisms. This can allow us to protect the balance of ecosystems and minimize environmental impacts by reducing the use of chemical drugs, etc.

• It can be a source of inspiration in spatial, structural, or industrial product designs or in the production of building materials. Making "Biomimicry" (inspired by nature) designs will make it easier and more widespread to make designs that are compatible with nature. For this reason, elective courses that will provide plant-related information should be included in professional disciplines related to plants (Landscape Architecture, Agricultural Engineering, Forest Engineering, Industrial Product Design, Botany, etc.).

In this context, it will allow us to better understand the complex world of plants and develop more sustainable agricultural and wildlife management practices. Continuing and disseminating research in these areas will help us understand the life strategies of plants more deeply and interact with nature in a more harmonious way.

Realizing that plants have vital value as living organisms and attaching importance to them in terms of discourse and action should be the basic approach to leaving a green future.

Thanks, and Information Note

The article complies with national and international research and publication ethics.

References

Abel, S., Oeller, P. W., Theologis, A. (1994). Early auxin induced genes encode short-lived nuclear proteins. Proc. *Natl. Acad. Sci*. USA. 91: 326-330.

Allen, G. J., Chu, S. P., Harrington, C. L., Schumacher, K., Hoffmann, T., Tank, Y.Y., Grill, E., Schroederi, J. I. (2001). A defined range of guard cell calcium oscillation parameters encodes stomatal movements. *Nature.* 411: 1053-1057.

Blancaflor, E. B. & Masson, P. H. (2003). Plant gravitropism: unraveling the ups and downs of a complex process. *Plant Physiol.* 133: 1677-1690.

Braam, J. (2005). In touch: plant responses to mechanical stimuli. *New Phytologist* 165, 373–389.

Budak, N., Çalışkan, C.F., Çaylak, Ö. (1994). Bitki büyüme regülatörleri ve tarımsal üretimde kullanımı, *Ege Üniv. Zir. Fak. Dergisi*, 31, 289-296.

Bunning, E. (1959). Tagesperiodische bewegung. *Handbuch Pflanzenphysiol*; 17:579-656.

Bunsow, R. (1953). Über den Einfluss des Lichtmenge auf die endogene Tagesrhytmie bei Kalanchoe. *Biol Zentralblat,* 72:465-77.

Butler, L. G. (1995). In Insights into Allelopathy, ACS Symposium Series (Eds.: K. Inderjit, F. A. Einhellig), ACS Books, Washington, pp. 158–168.

Ćavar, S., Zwanenburg, B., & Tarkowski, P. (2015). Strigolactones: Occurrence, structure, and biological activity in the rhizosphere. *Phytochemistry Reviews*, 14(4), 691-711.

Cholodny, N. (1927) Wuchshormone und tropismem bei den pflanzen. *Biologosches Zentralblatt*, 47, 604-626.

Cook, C. E., Whichard, L. P., Turner, B., Wall, M. E., & Egley, G. H. (1966). Germination of witchweed (Striga lutea Lour.): isolation and properties of a potent stimulant. *Science*, 154(3753), 1189-1190.

Coutand, C. (2010). Mechanosensing and thigmomorphogenesis, A physiological and biomechanical point of view. *Plant Science* 179: 168- 182.

Çatak, E. & Atalay, A. (2020). Bitki hormon çeşitleri ve bitki büyümesine etkileri, *Euroasia Journal of Mathematics, Engineering*, Natural & Medical Sciences International Indexed & Refereed ISSN: 2667-6702

Dalkılıç, Z. (2020). Bitkilerde hareket, davranış ve zekâ. *ADÜ Ziraat Derg,* 2020;17(2):295-301—doi: 10.25308/aduziraat.709621.

Deng, X.W. & Quail, P. H. (1999). Signaling in light-controlled plant development. Semin. *Cell Dev. Biol.* 10: 121–129.

Dharmasiri, N., Estelle, M. (2004). Auxin signaling and regulated protein degradation. *Trends in Plant Science.* 9(6): 302-308.

Dugas, D.V., Bartel, B. (2004). MicroRNA regulation of gene expression in plants. *Curr Opin Plant. Biol* 7:512-520.

Duran-Nebreda, S. & Bassel, G. W. (2019). Plant behaviour in response to the environment: information processing in the solid state. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 374: 20180370.

Dharmasiri, N. & Estelle, M. (2004) Auxin signaling and regulated protein degradation. *Trends in Plant Science*. 9(6): 302-308.

Ellison, A. M. & Gotelli, N. J. (2009). Energetics and the evolution of carnivorous plants—Darwin's 'most wonderful plants in the world. *Journal of Experimental Botany* 60, 19–42.

Ergun, M. (2017). Bahçe Ürünlerinin Muhafazası ve Pazara Hazırlanması, Somtad Yayınları Ders Kitabı, pp. 85-111, Antalya.

Foo, E., Yoneyama, K., Hugill, C., Quittenden, L. J., & Reid, J. B. (2013). Strigolactones: internal and external signals in plant symbioses?. *Plant Signaling & Behavior*, 8(3), e23168.

Gallie, D. R. & Chang, S. C. (1997). Signal transduction in the carnivorous plant Sarracenia purpurea (Regulation of secretory hydrolase expression during development and in response to resources). *Plant Physiology*, 115, 1461–1471.

Garcia-Mata, C. & Lamattina, L. (2002). Nitric oxide and abscisic acid cross talk in guard cells. *Plant Physiology.* 128 (3): 790-792.

Güleryüz, M. (1982). Bahçe Ziraatında Büyütücü ve Engelleyici Maddelerin Kullanılması ve Önemi, Atatürk Üniversitesi Yayınları, No: 279.

Güven, A. (1991). Bitkilerde Hareket Fizyolojisi. In: Kıvanç M (ed.) Bitki Fizyolojisi Anadolu Üniversitesi Yayınları, Eskişehir, 231-248.

Izzo, L.G., Romano, L. E., de Pascale, S., Mele, G., Gargiulo, L., Aronne, G. (2019). Chemotropic vs hydrotropic stimuli for root growth orientation in microgravity. *Frontiers in Plant Science* 10: 1547.

John Innes Centre, (2024). Not so simple: Mosses and ferns offer new hope for crop protection. Access Date: July 10, 2024, ScienceDaily, www.sciencedaily.com/releases/2024/07/240710130917.htm>.

Kacar, B., Katkat, A.V., Öztürk, Ş. (2002). Bitki Fizyolojisi. Vipaş İnş. Tur. Eğt. A.Ş. Bursa.

Kandel, E. R. (2001). The molecular biology of memory storage. A dialogue between genes and synapses. *Science*, 294: 1030–1038.

Karaçalı, İ. (2012). Bahçe Ürünlerinin Muhafazası ve Pazarlanması, 8. Baskı, Ege Üniversitesi Basımevi, pp. 119-130, İzmir.

Kaynak, L. & Ersoy, N. (1997). Bitki büyüme düzenleyicilerinin genel özellikleri ve kullanım alanları, *Akdeniz Üniversitesi Ziraat Fakültesi Dergisi*, 10, 223-236.

Kaynak, L. & Memiş, M. (1997). Bitki büyüme engelleyici ve geciktiricilerinin etki mekanizmaları, *Akd. Üniv. Zir. Fak. Dergisi*, 10, 237-248.

Kaynak, L. & İmamgiller, B. (1997). Bitki büyüme düzenleyicilerinin fizyolojik olaylardaki rolleri, *Akd. Üniv. Zir. Fak. Dergisi,* 10, 289-299.

Keskin, B. (2012). Bitkilerde sinyal iletimi. *Türk Bilimsel Derlemeler Dergisi,* 5 (1): 53-73, 2012 ISSN: 1308-0040, E-ISSN: 2146-0132, www.nobel.gen.tr

Kidner, C.A, & Martienssen, R. A. (2005). The developmental role of micro-RNA in plants. Curr Opin. *Plant Biol*, 8:38-44.

Kim, S. K. (1991). Natural occurence of brassinosteroids, In: Brassinosteroids Chemistry, Bioactivity and Applications, (Eds, H. G. Cutler, T. Yokota, and (G. Adam), American Chemistry Society, Washington, DC, p 26-35.

Kim, D.H., Doyle, M.R., Sung, S. & Amasino, R.A. (2009). Vernalization: winter and the timing of flowering in plants. Annu Rev Cell Dev Biol. 2009:25:277-99. Doi: 10.1146/annurev.cellbio.042308.113411.

Koç, E. & Üstün, A. (2008). Patojenlere karşı bitkilerde savunma ve antioksidanlar. *Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 24 (1-2) 82–100.

Legue, V., Blancaflor, E., Wymer, C., Perbal, G., Fantin, D. & Gilroy, S. (1997). Cytoplasmic free Ca -2+ in Arabidopsis roots changes in response to touch but not gravity. *Plant Physiol.* 114: 789-800.

Massa, G. D. & Gilroy, S. (2003). Touch modulates gravity sensing to regulate the growth of primary roots of Arabidopsis thaliana. *Plant J.* 33: 435-445.

Nasar, A. H. (2004). Effect of homobrassinolide on in vitro growth of apical meristems and heat tolerance of banana shoots. *International Journal of Agriculture & Biology*. 06 (5): 771–775.

Neff, M. M., Fankhauser, C. & Chory, J. (2000). Light: an indicator of time and place. *Genes Development.* 14: 257–271.

Özen, H. Ç. & Onay, A. (2013). Hareket Fizyolojisi In: Özen H.Ç, Onay, A. (ed.) Bitki Fizyolojisi, Nobel Akademik Yayıncılık, Ankara, 255-274.

Quail, P. H. (2000). Phytochrome-interacting factors. Semin. *Cell Dev. Biol.* 11: 457–466.

Pollan, M. (2013). The Intelligent Plant. The New Yorker 89: 92-105.

Salisbury, F. & Ross, C. W. (1969). Plant Physiology. Wadsworth Publishing, Belmont CA.

Sampathkumar, A., Yan, A., Krupinski, P., Meyerowitz, E. M. (2014). Physical forces regulate plant development review and morphogenesis. *Current Biology*, 24, R475–R483.

Schroedaer J, Allen, G, Hugouvieux, V, Kwak, J, Waner, D. (2001). Guard cell signal transduction. *Annu. Rev. Plant Physiol. Plant Molecular Biology*. 52: 627-658.

Seçer, M. (1989). Doğal büyüme düzenleyicilerin (bitkisel hormonların) bitkilerdeki fizyolojik etkileri ve bu alanda yapılan araştırmalar, *Derim,* 6: (3),109-124,

Sheldon, C. C., Rouse, D. T., Finnegan, E. J., Peacock, W. J., Dennis, E. S. (2000). The molecular basis of vernalization: The central role of Flowering Locus C(FLC). *PNAS,* 97:3753–3758.

Sparke, M. A. & Wünsche, J. N. (2020). Mechanosensing of plants. *Horticultural Reviews,* 47: 43-83.

Stenhouse, D. (1974). The Evolution of Intelligence. Allen & Unwin, London.

Takahashi, N., Goto, N., Okada, K. &Takahashi, H. (2002). Hydrotropism in abscisic acid, wavy and gravitropic mutants of Arabidopsis thaliana. *Planta*, 216: 203-211.

Te-chato, S., Hilae, A., In-peuy K. (2008). Effects of cytokinin types and concentrations on growth and development of cell suspension culture of oil palm. *Journal of Agricultural Technology*, V. 4(2): 157-163.

Telewski, F.W. (2006). A unified hypothesis of mechanoperception in plants. *American Journal of Botany*, 93, 1466–1476.

Trewavas, A. J., Knight, M. (1994). Mechanical signalling, calcium and plant form. *Plant Molecular Biology*. 26: 1329–1341.

Trewavas, A. (2003). Aspects of plant intelligence. *Ann Bot*, 92:1-20; PMID:12740212; http://dx.doi.org/ 10.1093/aob/mcg101

Went, F.W. & Thimann, K.V. (1937). Phytohormones. The Macmillan Company, New York.

Westwood, M. N. (1993). Hormones and Growth Regulators, Temperate Zone Pomology: Physiology and Culture, Timber Press Inc, Portland, Oregon, USA.

Xie, X., Yoneyama, K., & Yoneyama, K. (2010). The Strigolactone Story. *Annual Review of Phytopathology*, 48(1), 93-117. doi:10.1146/annurev-phyto- 073009-114453

Zhu, J. K. (2002). Salt drought stress signal transduction in plants. *Annual Review Plant Biology.* 53: 247-273.

Zwanenburg, B. & Blanco-Ania, D. (2018). Strigolactones: new plant hormones in the spotlight. *Journal of Experimental Botany*, 69(9), 2205-2218.