



FACULTY OF ENGINEERING AND  
ARCHITECTURE

# BULLETIN

JUNE 2023



[mmf.gelisim.edu.tr/en/](http://mmf.gelisim.edu.tr/en/)

## What you will read in this issue

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News from Faculty

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Actual Topics in Engineering  
and Architecture

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Academic and Scientific  
Activities

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## **COORDINATOR**

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**PROF.DR. NECMETTİN MARAŞLI**

## **CONTENT EDITORS**

---

Res.Asisst. Beray İKİNCİ

Res.Asisst. Burcu KORKUT

Res.Asisst. Mehmet Ali BARIŞKAN

Res.Asisst. Mustafa Cem AVCI

Res.Asisst. Duygu TÜYLÜ

Res.Asisst. Oğuzhan Murat HALAT

Res.Asisst. Ufuk ATEŞOĞLU

## **DESIGN AND EDITING**

---

Lecturer Burak Kaan YILMAZSOY

Res.Asisst. Hazal TÜRKMEN YAZGAÇ

## **CONTACT**

(+90) 212 422 70 00

<http://mmf.gelisim.edu.tr/en/>

**TAG**



*Happy*  
**EID  
AL-ADHA!**

We wish you a happy and peaceful holiday with your loved ones.





***NEWS FROM  
THE FACULTY***

# COMPETITION ANNOUNCEMENT

## “THE FUTURE IS ACCESSIBLE” STUDENT ARCHITECTURAL IDEA COMPETITION

The competition is organized by Istanbul Gelisim University, Faculty of Engineering and Architecture, Department of Architecture and Department of Architecture (English). The competition, named The Future is Accessible Student Architectural Idea Project Competition, is aimed at the evaluation of the undergraduate students of the Department of Architecture and Department of Architecture (English), who are active users of the campus, addressing the J Block and K Block areas, the most crowded campus of Istanbul Gelişim University (IGU). It starts with the announcement of the competition on the web pages and social media accounts of Istanbul Gelişim University on Wednesday, May 31, 2023.

The competition is open to the participation of undergraduate students of Istanbul Gelişim University, Faculty of Engineering and Architecture, Department of Architecture and Department of Architecture (English).

Participation in the competition is free.

## SCHEDULE

Announcement of the competition: May 31, 2023

Pre-registration: June 30, 2023 (until 17:00)

Asking questions: July 7, 2023

Announcement of answers: July 14, 2023

Deadline for digital submissions: August 7, 2023 (until 17:00)

Deadline for print submissions: August 10, 2023 (until 17:00)

Announcement of the results of the competition: September 1, 2023

## PRIZES

First prize: 6.000 TL

Second prize: 4.000 TL

Third prize: 2.000 TL

Honorable Mention: 1.000 TL (x3)

## CONTACT

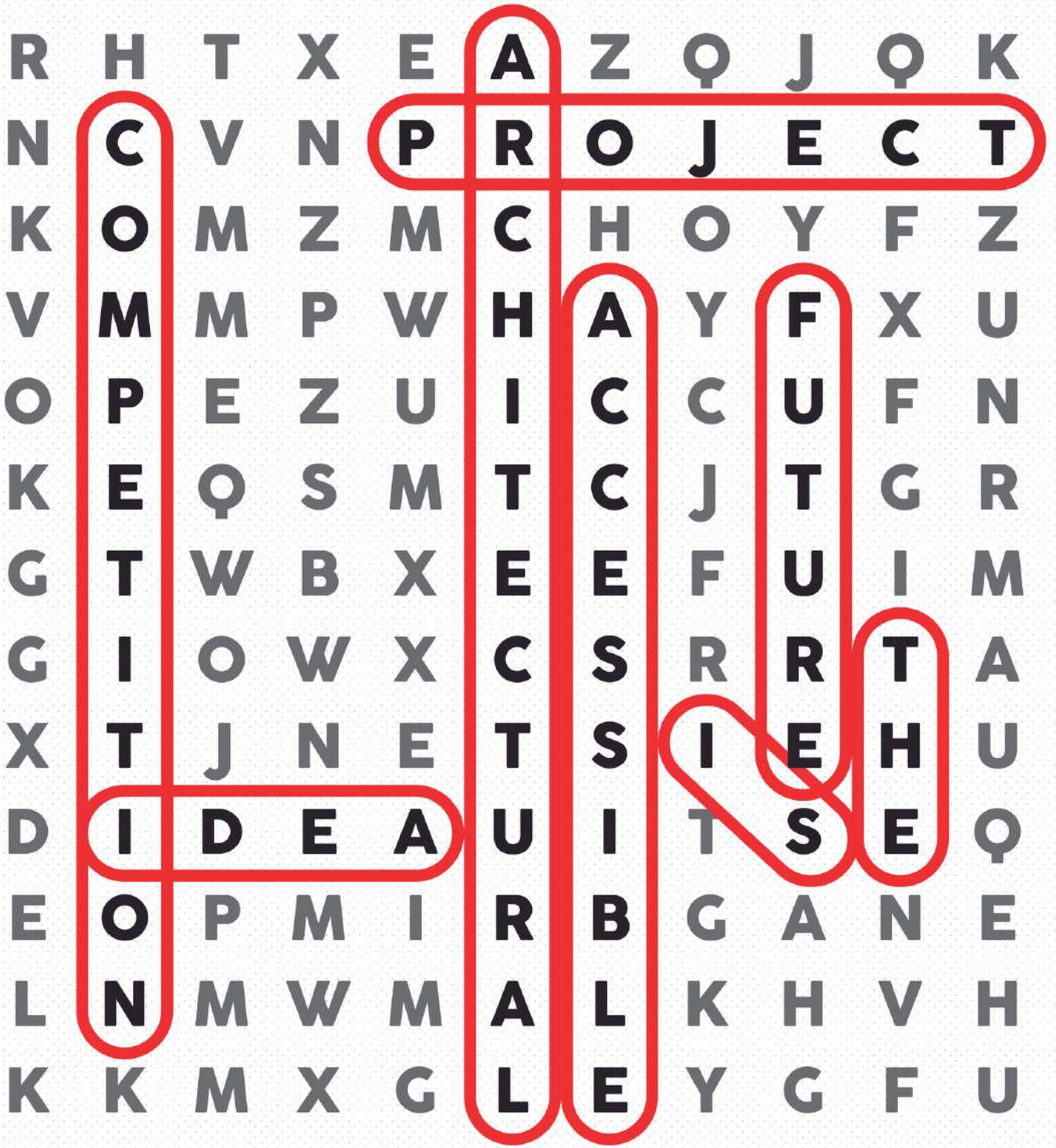
Department of Architecture web page:

<https://mmf.gelisim.edu.tr/tr/akademik-bolum-mimarlik>

Department of Architecture (English) web page:

[https://mmf.gelisim.edu.tr/en/akademik-department-architecture-\(english\)](https://mmf.gelisim.edu.tr/en/akademik-department-architecture-(english))





**~~THE FUTURE IS ACCESSIBLE~~**  
**~~STUDENT ARCHITECTURAL IDEA~~**  
**~~PROJECT COMPETITION~~**

**SCHEDULE**

Announcement: May 31, 2023  
 Pre-registration: June 30, 2023  
 Deadline for digital submissions: August 7, 2023  
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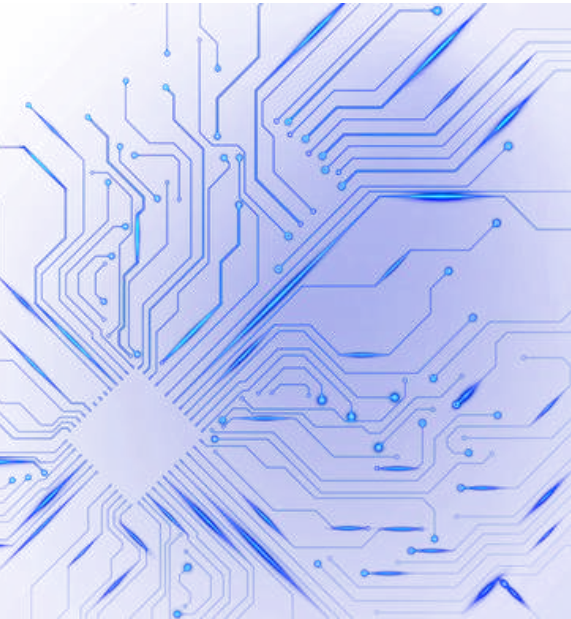
**PRIZES**

First prize: 6.000 TL  
 Second prize: 4.000 TL  
 Third prize: 2.000 TL  
 Honorable mention: 1.000 TL



# News From The Faculty

J u n e 2 0 2 3



## **Electrical and Electronics Engineering**

Electrical and Electronics Engineering Laboratories were introduced at the promotional event held on June 13.

## **Civil Engineering**

Within the scope of the seminar activities of our Young Civil Engineers Club, Mahmoud ANWAR made a seminar presentation titled " White Cementitious Composites with Brick Powder Additives " and came together with our students and faculty members.



## **Mechatronics Engineering**

Project presentations were made on 20.06.2023 within the scope of Final Year Project course. The students presented the prototypes they had prepared in the 30-minute time allocated to them in front of the juries consisting of faculty members of the department. Project topics include Smart Watch Design and Production, Smart Glasses with Artificial Intelligence and Cyber Security Features for Visually Impaired Individuals, Intelligent Underfloor Heating System Using Solar Panels, Smart Poultry House, Wire Cutting and Stripping Machine, Fire Detection and Alarm System in Smart Buildings.





## Industrial Engineering

Working in Department of Industrial Engineering, Assist. Prof. Dr. Didem Yılmaz joined Kocaeli University's doctoral thesis monitoring committee.

During the 2m Cable technical trip on May 31, 2023, conducted under the guidance of Industrial Engineering Faculty Member Assist Prof. Dr. Semanur Sarıçam, firstly the students came together with Occupational Health and Safety expert and they got information about the things to be considered before the factory trip. During the technical trip, students who visited the production, planning, quality, department, and R&D center obtained information from the company managers.



At the end of the event; it is aimed that students who are candidates to become industrial engineers will have a general knowledge about the operation and machinery in the factory, and at the same time will see the working environment. We believe that students will reflect on the observations they make and their knowledge and experience in the later stages of their lives and provide maximum benefit from the technical trip organization. We would like to thank 2m Kablo employees for their support and hospitality

Graduation Project Defense Exams of Industrial Engineering Department final class students were successfully held between 8-9 June 2023.

Each student presented and defended his/her Graduation Projects in an average of 20 minutes in front of the jury, consisting of Prof. Dr. Tarık Çakar, Prof. Dr. Kenan Özden, Prof. Dr. Yılmaz Özkan, Assist. Prof. Didem Yılmaz, Assist. Prof. Seda Erbayrak and Assist Prof. Semanur Sarıçam.

We wish success to all students who have reached the graduation stage in their future studies.



**2022-2023, Graduation  
Project Defense Exams of  
Industrial Engineering  
Held**



## ARCHITECTURE

*"ARC420 Diploma Project jury was held."*

The final jury of the ARC420 Diploma Project course was held on Friday, June 9, 2023 by the course instructors Prof. Dr. Mehmet Harun Batırbaygil, Dr. Meryem Müzeyyen Fındıkgil, Dr. Semih Göksel Yıldırım and Dr. Oluwagbemiga Paul Agboola and Res. Assist. Burcu Korkut.



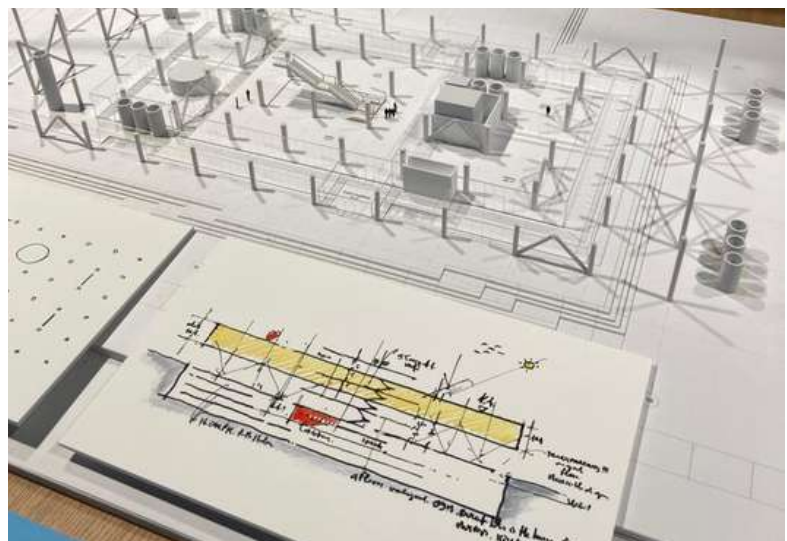


## Istanbul Modern Trip



As part of the MIM428 History of Architecture course led by Assoc. Prof. Türkan Uzun, a technical trip was organized with the students of the Department of Architecture to the Istanbul Modern Museum, designed by the world-famous architect Renzo Piano, to examine the Galataport Istanbul project on site.

During the trip, it was observed that the famous architect's observation terrace, which highlights the Bosphorus, is one of the most remarkable places. The building, which also includes the cinema, exhibition area and library, has an area of 8.000 m<sup>2</sup>. For our students, who visited the permanent and temporary exhibition areas, very important achievements in the name of art and architecture were realized today, and it was a special trip that gave our students a professional observation and spatial experience. While the newly opened hotel, cafe and restaurant along the Galataport coast, which is connected to Karaköy, were included in the sightseeing route, places such as the famous French Pass, the historical Karaköy Police Headquarters and the repurposed Historical Simit Bakery were visited. At the end of the trip, it was ensured that the students had a productive day by visiting the Chamber of Architects and the library of the chamber and contacting the officials in the fields of vocational education and development.





## Give Voice to Your City with Lecturer Hilay Atalay



This year's theme of youth meetings organized by Şişli Municipality has been determined as climate crisis. In this context, a forum was held in Nişantaşı Art Park on 3-4 June 2023 to construct an ecology-based solidarity process and to produce sustainable policies. In the forum where student clubs and non-governmental organizations came together to support the visibility of the activities carried out in the field of ecology in the city, and disaster and crisis management problems were discussed within the scope of the effects of the climate crisis, Lecturer Hilay Atalay attended the event with a Give Voice to Your City participant and social design initiative team.







## **From our students**

We received some information from Büşra İPŞİR, who will graduate from IGU Industrial Engineering Department in 2022-2023 Term.

### **Hello Büşra, can you tell us about yourself?**

Hello, my name is Büşra İpşir. I studied Industrial Engineering at Istanbul Gelisim University, which I started in 2019 and will graduate soon. In addition to my major, I am also studying in the Department of Computer Engineering, which I was entitled to within the scope of the double major program with scholarship, which is one of the opportunities provided by my university. During my education, I had the opportunity to develop myself in the professional life to my teachers who are very experienced in their. In 2021, I had the opportunity to study at Lublin University of Technology in Poland within the scope of Erasmus+ Learning mobility, which my university facilitated thanks to the highly developed agreements.

### **What kind of advantages do you think having a degree from Istanbul Gelisim University adds to you after graduation?**

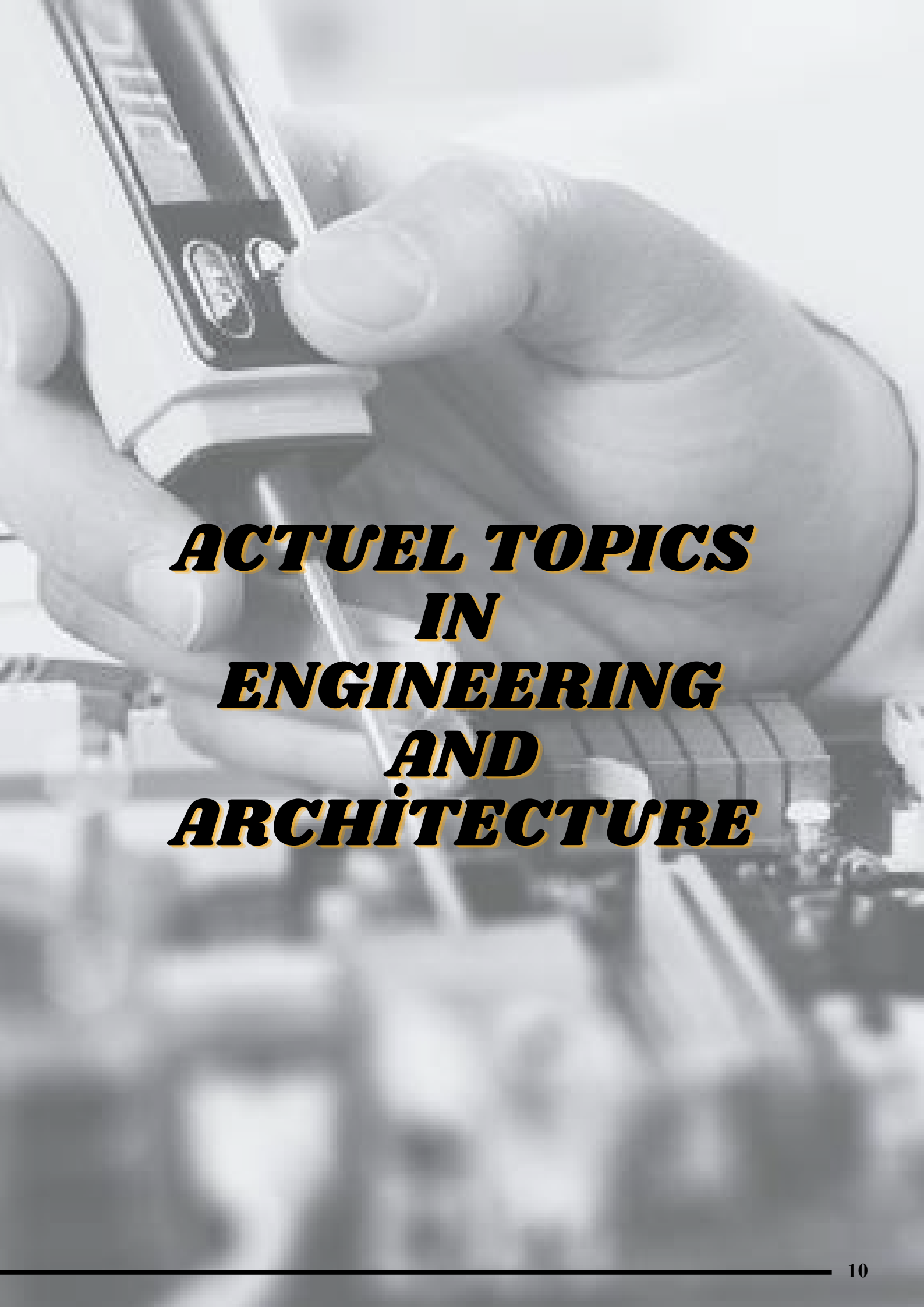
Great importance that Istanbul Gelişim University gives to internationalization in education, it offers international education opportunities to its students with many accredited departments. Industrial engineering and computer engineering departments are accredited by the world-famous Engineering Faculties Accreditation Agency ABET (USA), I think that my degree, which is valid for both my graduate applications and job applications to institutions in foreign countries, will facilitate my process.

### **What advice would you like to give to students currently studying in the department?**

First, it's important to identify your academic and career goals. Create a clear roadmap for yourself and take steps to achieve these goals. Be actively involved by joining clubs or organizations related to your department. Try to get internship and job opportunities by getting support from our university's career center and your lecturers. Do not miss the opportunity to study a field that you are interested in as well as your own field thanks to the double major program with scholarship provided by our university. It's important to keep your balance by taking time for yourself outside of classes, so take care of your hobbies and give importance to maintaining your social relations. Follow closely the Erasmus mobility activities that our university has quite a lot of quotas and definitely try to take advantage of it. I think Erasmus mobility is the best activity where you can improve yourself both socially and culturally and internationally. Finally, always stay motivated, persevere and constantly improve for a successful career.

### **And, what comes to mind when you think of Istanbul Gelisim University?**

When Istanbul Gelisim University is mentioned, the first thing that comes to my mind is international education and diversity. As the university with the highest number of internationally accredited programs in Turkey, Istanbul Gelişim University offers the opportunity to study in accordance with the international education system. The meeting of students from different countries offers the opportunity to share various cultural experiences and increase tolerance. In addition, our university's leading Turkish and world degrees in education quality and some other fields from international rating institutions such as THE increase our confidence in ourselves and the education we receive.



***ACTUEL TOPICS  
IN  
ENGINEERING  
AND  
ARCHITECTURE***

## Computer Engineering and Cloud Computing: Pioneering the Future of Technology

Prepared by: Res. Assist. Mehmet Ali BARIŞKAN



In the exciting landscape of technological innovation, two areas stand out prominently: Computer Engineering and Cloud Computing. The nexus of these two fields is increasingly captivating the curiosity and interest of students worldwide, for it bears the promise of a bright and transformative future.

Computer Engineering, a discipline that integrates several fields of computer science and electrical engineering, is essential to develop computer hardware and software. This field drives the backbone of tech innovation, from designing microprocessors, personal computers, and supercomputers to circuit design and writing software for various applications.

On the other hand, Cloud Computing, an offshoot of the internet's evolution, has revolutionized the way we store, process, and access data. It provides on-demand availability of system resources, especially data storage and computing power, without direct active management by the user. This technology has given rise to flexible resources, economies of scale, and the era of "big data," where large amounts of data are analyzed for insights.

The intersection of Computer Engineering and Cloud Computing offers a myriad of opportunities for the technologists of tomorrow. By learning the principles of computer engineering, students acquire a firm foundation in hardware and software aspects. They learn to develop efficient, reliable software applications, and design robust hardware systems.

Meanwhile, an understanding of cloud computing equips students with the knowledge to architect, deploy, and manage scalable and secure cloud applications. Cloud computing skills are increasingly becoming a must-have in today's job market due to the high demand for cloud services across various sectors. It is no wonder then that the integration of these two fields generates a potent mix of curiosity, interest, and potential career paths for students.

Young tech enthusiasts embarking on their journey in Computer Engineering and Cloud Computing are set to become the architects of our digital future. They will lead the way in developing innovative solutions to complex problems and creating robust, scalable digital infrastructures that will drive societal progress.

The fusion of computer engineering and cloud computing is a beacon for those who dream of making significant contributions to technological advancement. In this rapidly evolving digital world, the amalgamation of computer engineering and cloud computing signifies an exciting area that future leaders will shape. If you aspire to become a trailblazer in technology, this field promises an exciting and rewarding path.

And remember, as technology keeps evolving, so will the opportunities in these fields. So, keep exploring, keep learning, and you might just become the next tech visionary who revolutionizes our digital world!



## Artificial Intelligence and Cybersecurity: Guardians of the Future

Prepared by: Res. Assist. Mehmet Ali BARIŞKAN



Every passing day, technology permeates our lives more and more, accelerating digital transformation. In this era, often referred to as the age of technology and information, two concepts stand out: Artificial Intelligence (AI) and cybersecurity. The intersection of these two notions in the world of technology has started to pique the curiosity and interest of the younger generation.

Artificial Intelligence refers to the ability of machines to mimic human-like intelligence capabilities. These include understanding speech, learning, planning, and problem-solving. Through its ability to allow computers and software to learn from large data sets and make decisions based on this data, AI has had significant impact in complex and critical areas such as cybersecurity.

Cybersecurity, on the other hand, is the practice of protecting digital systems and data from threats. These threats can range from fraudulent emails to complex computer viruses. Cybersecurity plays a role in safeguarding our personal information, sensitive business data, and the critical infrastructure of governments.

When AI and cybersecurity combine, we have the potential to significantly enhance our defensive capabilities. Artificial Intelligence offers the ability to rapidly adapt to ever-changing and evolving cyber threats. Machine learning can create automatic responses when a threat is detected or identify an attack in advance by monitoring abnormal network traffic. This allows cybersecurity professionals to work more effectively.

The potential of AI in cybersecurity is generating substantial interest among students. Students from computer science, engineering, mathematics, and other STEAM fields are gravitating towards studying more about AI and cybersecurity. This is giving them a competitive edge in the future job market.

The synergy between AI and cybersecurity means that the youth have the potential to lead the next technological revolution. Young people developing their skills in these areas can shape our defensive mechanisms against future cyber threats and perhaps even advance towards creating a more secure digital world.

For youngsters dreaming of becoming the next Steve Jobs or Elon Musk, the fields of AI and cybersecurity offer the opportunity to create innovative and impactful technological solutions. In this rapidly changing and progressing world, the combination of AI and cybersecurity will be a field shaped by the leaders of tomorrow.

## Time machine: James Webb Space Telescope

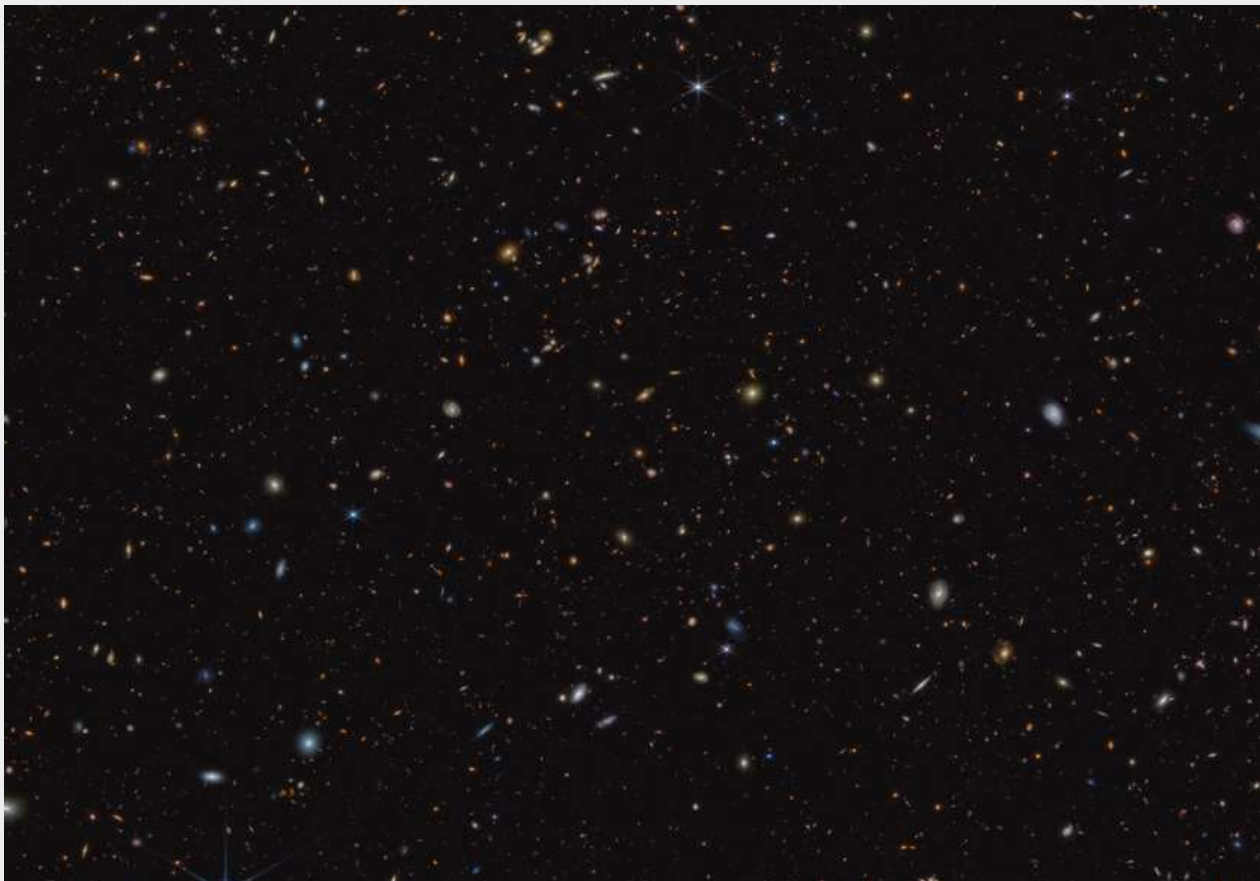
Prepared by: Dr.Öğr.Üyesi Mustafa NURİ



Launched on December 25, 2021, the James Webb Space Telescope (JWUT) continues to amaze scientists with its role in exploring the grandeur of the cosmos. With its 6.5-meter-diameter mirror consisting of 18 hexagonal segments and advanced measuring devices, each of which is a state-of-the-art technology, it allows the examination of the state of the universe in the early stages. The design, verification, and performance of this awesome telescope are detailed in two papers published in the journal Publications of Astronomical Society of the Pacific. The articles that prepared by Michael Menzel and Michael McElwain from NASA's Goddard Space Center and their colleagues at other organizations are freely available on the journal's website

<https://iopscience.iop.org/article/10.1088/1538-3873/acada0>  
<https://iopscience.iop.org/article/10.1088/1538-3873/acbb9f>

Let's end the article with an image taken by JWUT that shows the 600-million-year-old state of the universe. Although the picture covers only a small part of the sky more than 45,000 galaxies can be seen in the image.





***ACADEMIC AND  
SCIENTIFIC  
ACTIVITIES***



## **ELECTRICAL AND ELECTRONICS ENGINEERING**

Department of Electrical and Electronics Engineering Asst. Prof.Dr Fatma Gülşen Erdiñç's article titled " Comfort violation minimization oriented energy management strategy for a renewable-assisted stand – alone multi-energy electric vehicle service station " was published in the journal " Journal of Energy Storage".

One of our Electrical and Electronics Engineering Department Asst. Prof.Dr Fatma Gülşen Erdiñç participated in the 11th International Smart Grid Conference 2023 held in Paris by presenting an article titled "Development of an energy management system to minimize hydrogen consumption and analysis of the sizing effect in hybrid electric garbage trucks with fuel cells and ultracapacitors"

## **INDUSTRIAL ENGINEERING**

Working in Department of Industrial Engineering, Prof. Dr. Kenan Özden's presentation of the publication TOTAL CRISIS MANAGEMENT - A Holistic Approach with Business and Department Strategies and Policies have been published in the Academic Nobel Platform.

## **AERONAUTICAL ENGINEERING**

The 1st International Contemporary Research Conference ICRS 2023 was held on 22 and 23 June 2023, It is a multidisciplinary conference held at our university with the contributions of our lecturer, Dr. Samuel MOVEH.



The poster for the ICRS 2023 Conference features a grid of speaker portraits and logos. The text on the poster includes:

- ICRS 2023 CONFERENCE**
- To be Held On 22.06.2023 - 23.06.2023
- www.icrs2023.net
- Call for papers**
- Partnering Institutions: Includes logos for various academic and industry partners.
- Contact: +90 531 664 38 36, icrsconference@gmail.com

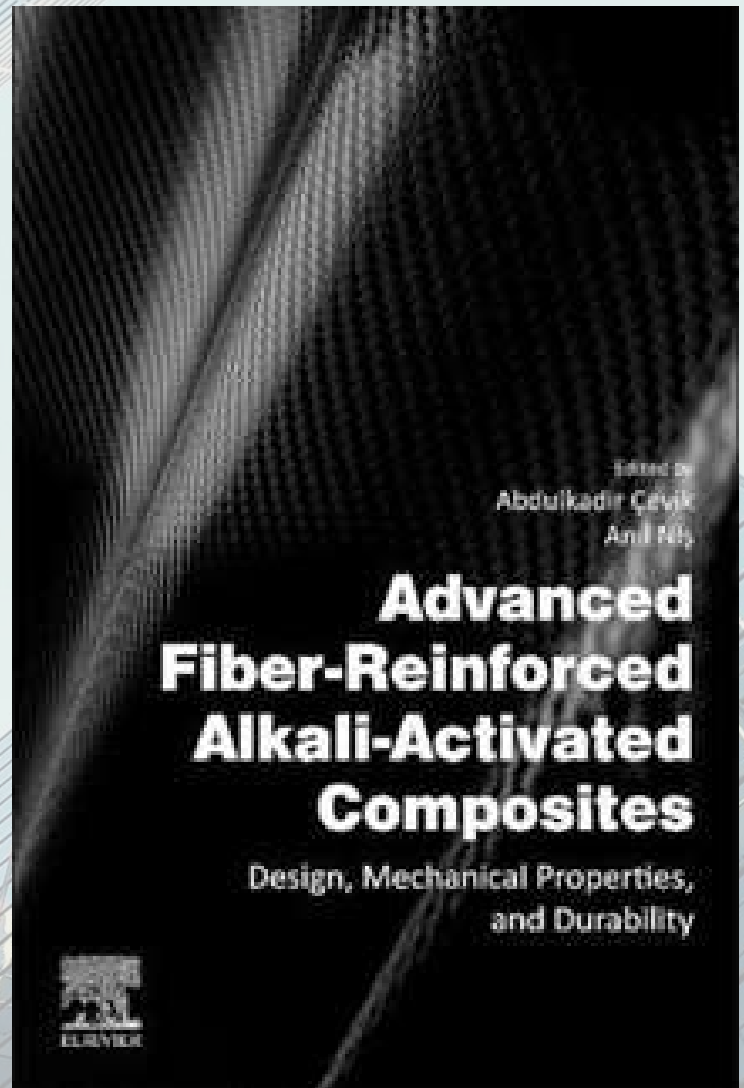
ICRS 2023 provides an excellent international forum for sharing knowledge and results in theory, methodology and applications of different areas of studies and education. ICRS 2023 is a platform for researchers, scientists, scholars, students and industry professionals from around the world to come present their recent research, and foster alliances with peers. ICRS 2023 is planned to be a hybrid conference with both face to face presentation and virtual presentation, bringing together researchers and practitioners from the academia and industry establishing new collaborations in various field of studies



**CIVIL ENGINEERING**

The research paper titled “Detection and quantification of alkali-silica-reaction (ASR) gel in cement-based mortars using microwave spectral and temporal transmission properties” prepared by the our department member, Assoc. Prof. Dr Anil NİŞ was published in the Measurement.

The book titled "Advanced Fiber-Reinforced Alkali-Activated Composites", in which Assoc. Prof. Dr. Anil NİŞ, one of our Civil Engineering faculty members, took part as an editor, was published in Elsevier publisher, one of the 3 best publishers in the world.





**ARCHITECTURE****Certificate of Appreciation to Dr O. Paul Agboola**

The 6th International Conference on Contemporary Architecture and Urbanism (ICCAUA2023), organized by Alanya University between 14 – 16 June 2023, was given a certificate of appreciation by the organizing committee to Dr. Oluwagbemiga Paul Agboola for his valuable contributions as the conference session chair.

**Dr. Mahmoud Zin Alabadin is in V&A Museum**

Dr. Mahmoud Zin Alabadin took part as a speaker at the "Culture in Crisis: Architecture Responds" event held at the Victoria & Albert (V&A) Museum in London on June 6.

Link:

<https://cultureincrisis.org/news-and-events/culture-in-crisis-event-architecture-responds>

**“City Culture Changing Architecture” by Assoc. Prof. Türkan Uzun**

Assoc. Prof. Türkan Uzun gave a speech titled “City Culture Changing Architecture” as a guest of Technological Roof and Facade Systems (TCC). The night, where representatives and employees of more than twenty companies from the sector and many architects and civil engineers were invited, took place in the historical French Embassy Palace in Beyoğlu, Istanbul. The presentation of Assoc. Prof. Türkan Uzun, one of the professors of the Department of Architecture, who conveyed the changing face of the city and the new roof and facade architecture and materials with his own observations, was met with appreciation. In her academic speech made upon the invitation of general manager Master Architect Tolga Önel, our lecturer completed her presentation by showing examples of museums, hotels and business centers that have changed from world cities.

**“The Concept of Ephemerality in Architecture and Ephemeral Structures” by Res. Assist. Betül GÖK**

The article titled "The Concept of Ephemerality in Architecture and Ephemeral Structures" by Res. Assist. Betül Gök, from the Department of Architecture at the Faculty of Engineering and Architecture, was published in TOKİ News magazine. Access link to the journal:

<https://www.tokihaber.com.tr/sayi-159-1/>