



FACULTY OF ENGINEERING AND
ARCHITECTURE

BULLETIN

APRIL 2023



mmf.gelisim.edu.tr/en/

What you will read in this issue

News from Faculty

Actual Topics in Engineering
and Architecture

Academic and Scientific
Activities

COORDINATOR

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. Nurdan TÜYSÜZ

Res.Asisst. Oğuzhan Murat HALAT

Res.Asisst. Tunay ACIMAN

DESIGN AND EDITING

Lecturer Burak Kaan YILMAZSOY

Res.Asisst. Hazal TÜRKMEN YAZGAÇ

CONTACT

(+90) 212 422 70 00

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

TAAG

APRIL CELEBRATIONS

- **MAY YOUR RAMADAN BE BLESSED.**
- **HAPPY APRIL 23 NATIONAL SOVEREIGNTY AND CHILDREN'S DAY.**

NEWS FROM



THE FACULTY

ELECTRICAL AND ELECTRONICS ENGINEERING

- Electrical and Electronics Engineering laboratories were introduced at the Çengelköy VIP Science Course Center event held on April 7, 2023.
- Electrical and Electronics Engineering laboratories were introduced at the IMM Yavuz Sultan Selim Anatolian Imam Hatip High School event on April 12, 2023.
- Electrical and Electronics Engineering laboratories were introduced at the events of Bağcılar Barbaros Anatolian High School and Çatalca Atatürk Anatolian High School on April 11, 2023.
- Electrical and Electronics Engineering Laboratories were introduced at the promotional event held on April 18-19.

INDUSTRIAL ENGINEERING



Online ERP Workshop

An online ERP workshop was held by the Industrial Engineering Club on April 6, 2023, at 17:00. All our students attended to the event was held by Login Software Business Solutions Manager Ahmet Savaş Göktürk.

"Laboratory Introductions"

Working at IGU Faculty of Engineering and Architecture, Department of Industrial Engineering, Assist. Prof. Dr. Binnur on April 7 and 12; Assist Prof. Dr. Didem Yılmaz on April 11, 18 and 25; Prof. Dr. Kenan Özden on April 19; introduced our department laboratory and university to high school students.



CIVIL ENGINEERING

Prof. Dr. Miklós Horváth from the University of Dunaújváros in Hungary has visited our department within the framework of the Erasmus+ Teaching Mobility Programme.

The results of the "SCImago University Rankings 2023", in which the research, innovation and social impacts of world universities are ranked according to percentiles, have been announced. As a result of the evaluation made on the data of SCOPUS research outputs, Istanbul Gelisim University ranked 5th in Civil Engineering.



ARCHITECTURE



Our Student's Success

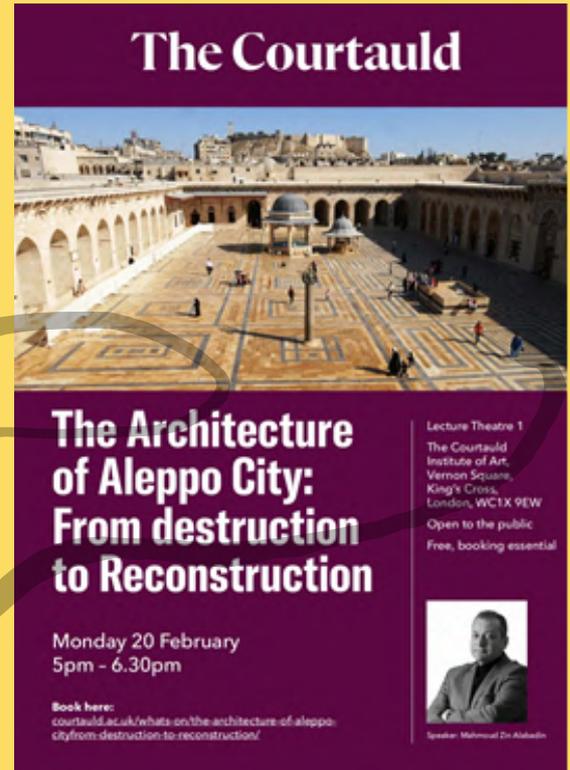


We congratulate our student Mustafa Akdoğan, who won the first prize in the Andor Field Landscape Arrangement Ideas Competition held in the United States, and wish him continued success.

To review the competition page and our student's winning project:
<https://tr.arcbazar.com/frontyard-backyard-design/competition/andor-yards-united-states>

Presentations by Dr. Mahmoud Zin Alabadin in London and Scotland

Dr. Mahmoud Zin Alabadin, one of our faculty members of the Department of Architecture, made a scientific visit to London and Scotland between January 30 and March 3, 2023, upon the invitation of the Courtauld Art Institute and the University of London, and visited many research centers and libraries together with the Courtauld Art Institute. During this scientific visit, he introduced the project titled Aleppo City: Yesterday, Today & Tomorrow, which he had previously prepared with the students of Yıldız Technical University Faculty of Architecture.



Dr. Mahmoud Zin Alabadin gave lectures at two different universities during this scientific visit. The first conference on Aleppo architecture was held on 20 February 2023 at the Courtauld Art Institute of the University of London. The second conference, in which Dr. Alabadin explained the architecture of Aleppo, was held on February 24, 2023, upon the invitation of the Faculty of Architecture of Dundee University in Scotland.

Department of Architecture Res. Assist. Burcu KORKUT graduated from Istanbul Technical University Graduate School Urban Design Program by completing her thesis entitled Externalization of Urban Praxis in Consumption and Production Dialectic: Street Art. We congratulate her and wish her success in her academic life.





ISTANBUL
GELISIM
UNIVERSITY

Trip

Head of Architecture Department

CONSTRUCTION SITE TRIP

YESILYAKA PROJECT - MESA-NUROL PARTNERSHIP



Construction Site - Hadımköy MESA NUROL CONSTRUCTION



23 Mayıs, 2023
Tuesday



09.30 - 15.00

gelisim.edu.tr @gelisimedu @igugelisim



igü
SKS
Health Culture and
Sports Department



Engineering and
Architecture
Faculty



SOFTWARE ENGINEERING

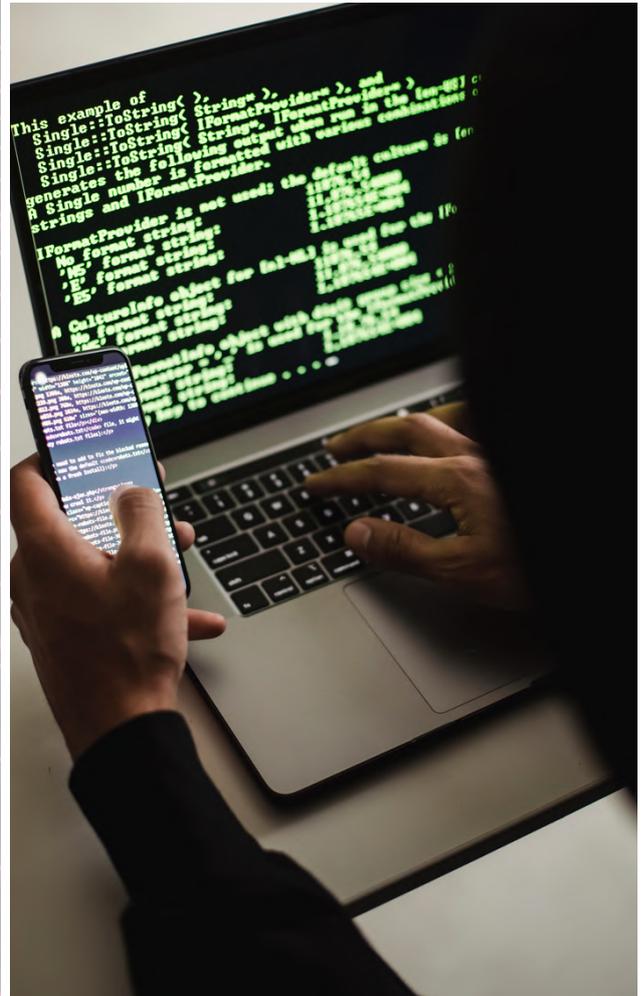
İGÜ Cyber Academy Project Launches with a Budget of 6.5 Million TL

Istanbul Gelişim University (İGÜ) is initiating the "İGÜ Cyber Academy Project" with a budget of 6.5 million TL, in collaboration with and supported by the Istanbul Metropolitan Municipality (İBB). The project is financed by the Istanbul Development Agency (İSTKA).

Project Coordinator Dr. Serkan Gönen emphasized that the main goal of this significant project is to cultivate skilled individuals in the field of cyber security and to close the existing gap in this area. Dr. Gönen also noted that the project will simultaneously accelerate efforts to enhance Turkey's cyber security capabilities, making the country more resilient against cyber threats.

Under the İGÜ Cyber Academy Project, educational and research activities in the field of cyber security will be organized, international collaborations will be established, and programs that provide the sector with a qualified workforce will be developed. Additionally, the project aims to raise awareness in the field of cyber security and to bring together public institutions, private sector entities, and civil society organizations to collaborate on joint initiatives.

As a project partner, İBB will contribute to the İGÜ Cyber Academy Project by increasing Istanbul's cyber security capacity and effectively combating cyber incidents, thus contributing to the city's and the country's security. With the resources provided by İSTKA, the project will enable Turkey to take a significant step forward in the field of cyber security.

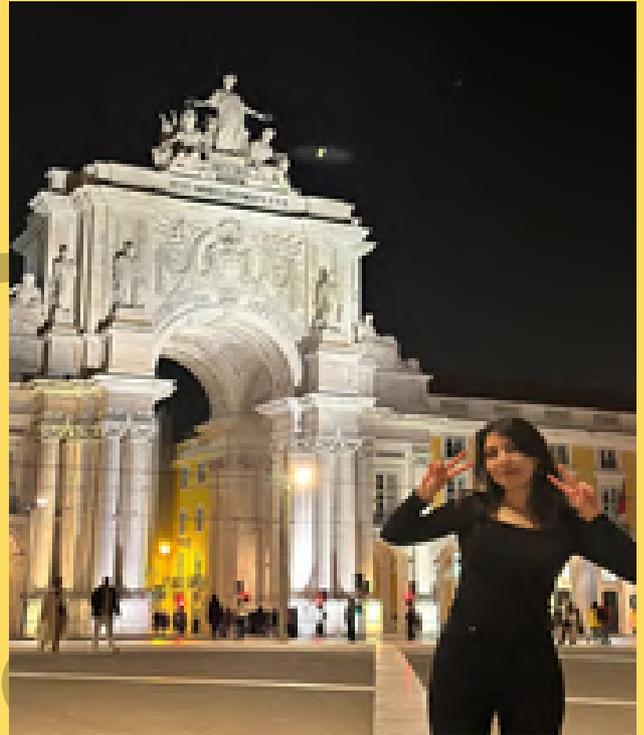


FROM OUR STUDENTS

We received the opinions of Sude Nur Bozik, student at University of Nova de Lisboa in Lisbon, the capital of Portugal, about her erasmus experience.

Hello Sude, you are currently studying at another university with Erasmus. How is your Erasmus experience going?

Hello, I am Sude Nur Bozik and I am student of Industrial Engineering Department at Istanbul Gelisim University. I am currently studying at University of Nova de Lisboa in Lisbon, the capital of Portugal, and I have been here for about a month and a half.



I really had the opportunity to meet people from many different nationalities here. Besides improving my English level, I also started learning Portuguese. Although the lessons here are a bit challenging, I feel like I've learned a lot. Normally I'm an undergraduate student, but I'm pushing myself even more because I'm taking master lessons here.

My Erasmus experience has been great so far. I met, worked and made friends with people of many different nationalities. There was someone by my side when I had any academic difficulties, the Erasmus Office and faculty members of Istanbul Gelisim University.



Lisbon is a really beautiful and pleasant city. We compare it to Istanbul in many ways. Portugal also has an incredible cuisine, especially famous for its patisseries and fish products. The Portuguese are very friendly, sweet and funny people. It is also very easy to communicate.

The Erasmus experience is a great opportunity to gain a different perspective on university life. This program is definitely ideal for meeting people from different cultures, learning new languages and having a different university experience. If you have the opportunity, I would definitely recommend you to join the Erasmus program. For me, this experience will be one of the most unforgettable memories and turning points of my life. Thank you everyone.

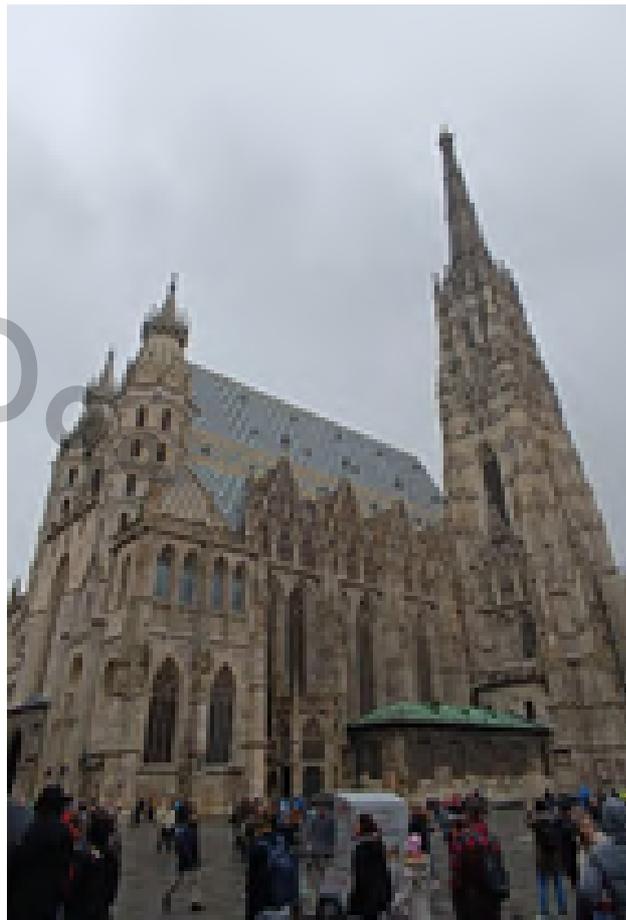
We received the opinions of Enes Demir, student at Lublin University of Technology in Lublin, the city of Poland, about her erasmus experience

Hello Enes, you are currently studying at another university with Erasmus. How is your Erasmus experience going?

Hello, I am happily writing about the decision I made as a result of long thoughts and my experience with Erasmus + mobility, which I was torn between going and not going. We spend our days in a comprehensive program with education, country trips. In addition, we meet people from many different cultures and have fun. I couldn't understand how the days passed until now. Apart from this, we may find business opportunities abroad in the future with the connections we have gained. In this respect, I know that I made a very good decision.

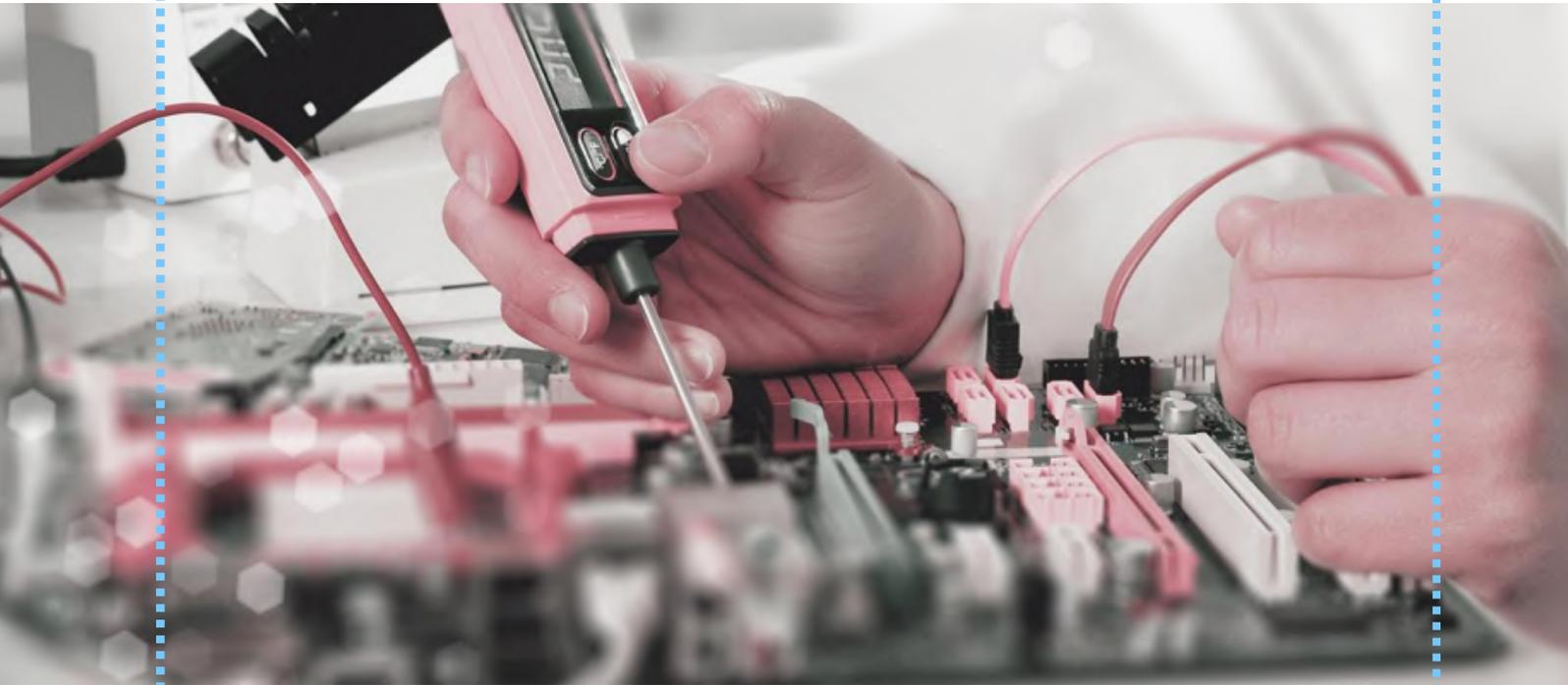
If you have the idea of joining, even if it is small, our university offers this opportunity to many students and provides an advantage with different university options in different countries.

When you think about what I have written and what I have experienced, you should not think of not participating even if you have the opportunity. Because we have very limited opportunities to have these experiences while we are students and Erasmus will be the best option in this topic.



ACTUEL TOPICS

IN



**ENGINEERING
AND
ARCHITECTURE**

We Discover the Magazine Aspects Hidden Inside the World of Machine Learning!

Although the world of machine learning and artificial intelligence may seem technical and complex, it also includes fun and magazine aspects. In this article, we attempt to explore the interesting and exciting stories within this world. Are you ready?

Famous Artificial Intelligence Duos:

Artificial intelligence has stepped into popular culture by collaborating with celebrities. For example, the famous singer Tarkan started singing last year in collaboration with an artificial intelligence application. This interesting collaboration excited both Tarkan fans and artificial intelligence enthusiasts.

Artificial Intelligence Fashion Designers:

Machine learning also enters the world of fashion, offering designers new and interesting ideas. Artificial intelligence applications, especially used to determine color and texture combinations, shape the future of fashion.

Artificial Intelligence Artists:

The art world is also changing with the effect of artificial intelligence. Paintings, sculptures and other works of art made using artificial intelligence algorithms push the boundaries of traditional art understanding and surprise people.

The world of machine learning and artificial intelligence is not only limited to technical and scientific issues, but also shows itself in all areas of life. These entertaining and magazine aspects especially attract the attention of young people and students and increase the interest in these fields.

Artificial Intelligence and E-Sports:

Artificial intelligence is also revolutionizing the gaming world. Especially in e-sports tournaments, artificial intelligence bots trained with machine learning algorithms achieve great success against human players, and these successes both create excitement in the game world and reveal the potential of artificial intelligence.

The World of Movies and TV Series:

Artificial intelligence and machine learning are also prominent in the world of movies and TV series. Especially platforms such as Netflix and HBO use machine learning algorithms to determine the content offered to the audience. In this way, more personalized and interesting content is offered to viewers.

Artificial Intelligence Chefs:

Gourmet kitchens discover new flavors thanks to machine learning and artificial intelligence. Artificial intelligence algorithms can create new and unique recipes by analyzing different flavors from world cuisine. In this way, the culinary world is pushing the limits by meeting with technology.

Social Media Phenomena with Artificial Intelligence:

Artificial intelligence continues to be popular in the social media world. Especially thanks to deepfake technology, fun and funny content is created by placing the faces of celebrities and phenomena in other videos. This technology both opens new doors in the entertainment world and brings ethical discussions.

Artificial Intelligence Music Festivals:

The wind of artificial intelligence is blowing in the music world. Some music festivals organize artificial intelligence and machine learning-themed performances and events, bringing both science and technology enthusiasts and music lovers together on the same platform.

Artificial Intelligence and Romance:

Artificial intelligence is also involved in relationships and romance. Especially in friendship and matching applications, machine learning algorithms are used to match people with compatible partners. In this way, it becomes possible to see the effect of artificial intelligence in people's love lives.

Artificial Intelligence and Animals:

Artificial intelligence also helps to communicate with animals. Artificial intelligence applications, which facilitate communication with pets and help us understand their needs, attract the attention of animal lovers and enable them to follow developments in this field with interest.

The world of machine learning and artificial intelligence continues to exert its influence in all areas of life, pushing the boundaries of technology and science. These magazine aspects especially inspire students and young people, increase interest in these fields and allow for more innovative ideas and projects in the future.

Artificial Intelligence and Travel:

Artificial intelligence also enriches travel experiences. In particular, artificial intelligence applications that suggest touristic routes and places to visit make holiday planning more fun and personalized. In addition, thanks to language translator artificial intelligence applications, language barriers become less important and it becomes easier to communicate with different cultures.

Innovations in Education with Artificial Intelligence:

In the field of education, artificial intelligence makes education more enjoyable and productive by offering individual learning experiences to students. It is aimed for each student to achieve unique success, thanks to courses and exams customized to students' learning speeds and preferences.

Artificial Intelligence and Space:

Artificial intelligence also plays an important role in space exploration. Especially in the discoveries made on Mars and other planets, efficient analyzes can be made and new discoveries are made thanks to artificial intelligence technologies. This, in turn, increases the interest of young people and students in space, motivating future astronauts and scientists.

Artificial Intelligence and Future Jobs:

Artificial intelligence and machine learning are shaping the jobs of the future. Especially thanks to automation and robotic technologies, new business areas are emerging where people can work more efficiently and effectively. This encourages young people and students to turn to artificial intelligence and machine learning in their career planning.

Artificial Intelligence and Events:

Events, conferences and competitions on artificial intelligence and machine learning help young people and students gain knowledge and experience in these fields. Thanks to these activities, young people both meet new ideas and take important steps for their success in this field.

You can find the news below compiled by one of our Civil Engineering faculty members Assist. Prof. Dr. Mustafa NURI.



Some News in the World of Science

The Limit of the Quantum World

You may have heard the story of Schrödinger's cat. It's a thought experiment that ironically illustrates the strangeness of the quantum world. According to this experiment, whether the cat is dead or alive represents two quantum entities superposed. But is it also true in the macro world that matter can be in the same and different states? Or where exactly is the boundary between quantum and classical physics? In April, Bild et al. published a paper in Science that suggests that this may be the case for a system of 1017 atoms. The results of the paper are illuminating for the determination of this boundary.

Impact of Seismic Waves on River Sediment

According to a paper published in the April 2023 issue of Nature Communications, thorium concentrations in river sediments can provide information about the fractures in the rock through which the river flows. Gilbert et al. According to the study by Gilbert et al., seismic waves from distant earthquakes can be considered as a triggering factor in the change of river morphology.

A New Approach to Plastic Recycling

Dipolymerization is the process used in the recycling of waste plastics, which separates the plastic into its smaller components (monomers). This process is not as efficient as it should be when done by thermomechanical methods. However, in the study by Dong et al. the heating of different parts of the plastic at different temperatures and the variation of this heating over time can make this process more efficient.

Yapı - TurkeyBuild Istanbul 2023, the leading building fair of the Turkish construction industry and region, was held at Istanbul TÜYAP Fair and Congress Center between 26 - 29 April 2023.

Information about the fair is as follows: “Building, Construction Materials and Technologies Fair Yapı - TurkeyBuild İstanbul has been holding world-class international building, construction materials and technology events throughout Turkey since 1978 thanks to its fair portfolio.

Yapı – TurkeyBuild Istanbul brings together the representatives of the construction industries from Turkey, the Balkans, North Africa, the Middle East, Russia and the CIS. The events, which offer the opportunity to introduce and discover the latest product innovations, also serve as business development platforms. In addition, the fair hosts rich business programs to support industry professionals and benefit the industry.

Business Development Platform Events, Guest Country, Guest Region, Target Market projects, MasterClass Special Fair Tours, Yapı Tech Garage Start-Up Meetings and Golden Magnet Stand Design Awards have become corporate reputation tools of the construction and building industry. With these qualities, the fair contributes to Turkey's being a rising star in the construction and building sector. Yapı Fair mediates the transfer of knowledge and business opportunities from around the world to the region with its international collaborations.” (Source: <https://yapifuari.com.tr/>)



News from Aeronautical Engineering

There have been important breakthroughs in the field of defense industry in our country this month, especially including the aircraft and aerospace industries. Defined as Turkey's domestic F-35, the National Combat Aircraft (MMU) developed by TAI was put to the taxi test on the runway for the first time. The MMU is scheduled to go into mass production in 2028.



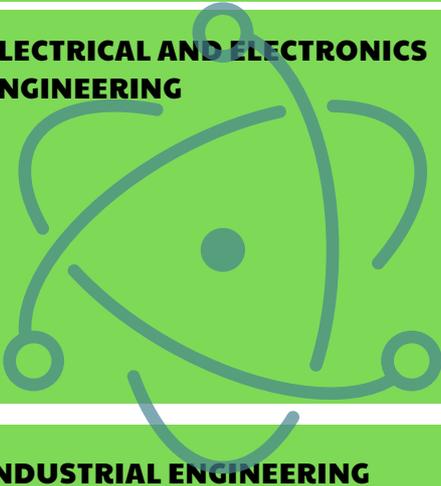
Also this month, the production of Turkey's first UAV warship TCG ANADOLU (L400) was completed. While the ship serves as a command center and flagship for the Turkish Naval Forces, it can meet various needs and requirements of the Turkish Armed Forces such as long-term combat, long-range military combat or humanitarian aid operations.

ACADEMIC AND SCIENTIFIC



ACTIVITIES

ELECTRICAL AND ELECTRONICS ENGINEERING



Department of Electrical and Electronics Engineering
Asst. Prof. Dr. Turgut Şahin's article titled "*Giant Magnetoresistance of the Electrodeposited Frucu/Cu Multilayers: Metal Oxide Formation with NaOH in the Electrolyte*" was published in the journal "Acta Physica Polonica A".

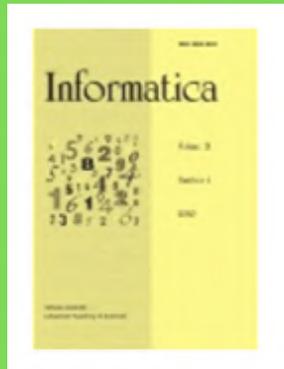
INDUSTRIAL ENGINEERING



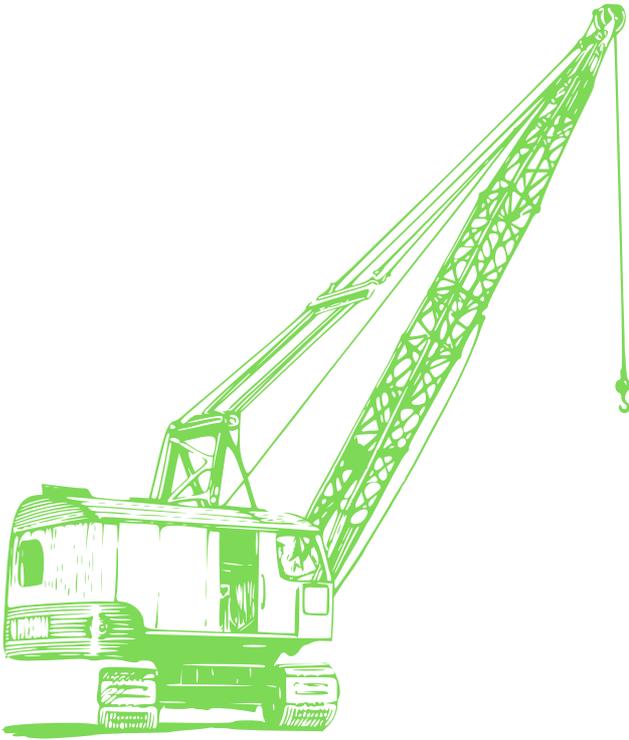
Working in Department of Industrial Engineering,
Prof. Dr. Tarık Çakar and **Assist. Prof. Dr. Binnur Gürül's** article titled "*Design of sustainable campus modal in Istanbul Gelisim University using fuzzy multicriteria decision making methods*" has been published in SCI-Expanded indexed journal "Journal of Intelligent & Fuzzy Systems".



Working in Department of Industrial Engineering,
Prof. Dr. Kenan Özden's article titled "*Line Balancing Based on Error Rate Estimation with Artificial Neural Networks in Assembly Line Operations*" have been published in "Istanbul Gelisim University Journal of Social Sciences".



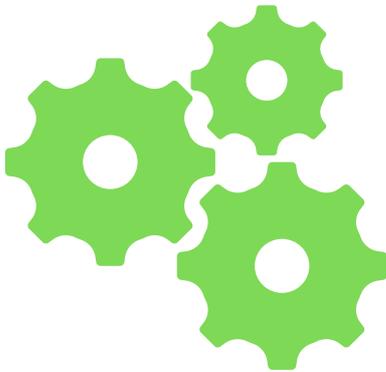
Working in Department of Industrial Engineering, **Res. Assist. Nurdan Tüysüz's** article titled "*A Novel Z-Fuzzy AHP&EDAS Methodology and Its Application to Wind Turbine Selection*" have been published in the SCI-Expanded indexed journal "Informatica".

CIVIL ENGINEERING

The research paper titled “*Bending Analysis of Curved Castellated Beams Via the Finite Element Method*” prepared by the head of our department, **Assist. Prof. Dr Ahmad Reshad NOORI** was published in the Cukurova University Journal of the Faculty of Engineering.

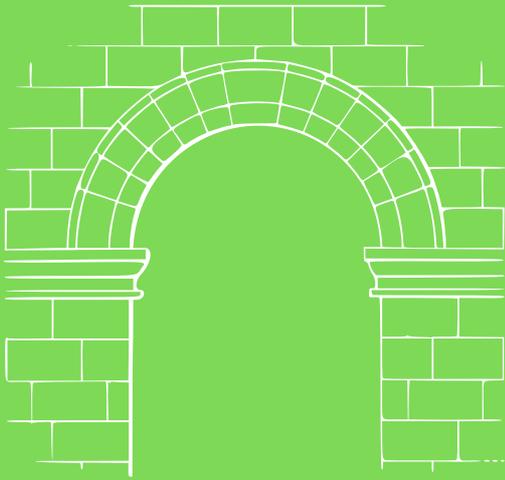
The research paper titled “*Combined effect of using steel fibers and demolition waste aggregates on the performance of fly ash/slag based geopolymer concrete*” prepared by our Civil Engineering professors, **Assoc. Prof. Dr. Anil Niş** and **Assist. Prof. Dr. Mukhallad Mohammed Mawlood Al-Masshadani** was published in the European Journal of Environmental and Civil Engineering journal that has an impact factor of Q2 by SCI rank.

The research paper titled “*Design Optimization of a Hybrid Vibration Control System for Buildings*” prepared by **Assist. Prof. Dr Aylin Ece KAYABEKİR** was published in the Buildings.

MECHATRONICS ENGINEERING

The article titled “*The role of defects in the structural and photocatalytic properties of Mg/B co-doped ZnO nanoparticles*” prepared by **Asst. Prof. Kenan ŞENTÜRK** and his working group was published by the Journal of Materials Science: Materials in Electronics.

The article named “*Obtaining plasma parameters by Langmuir probes and optical emission spectroscopy in low-pressure DC plasma*” prepared by **Asst. Prof. Kenan ŞENTÜRK** and his working group was published by Radiation Effects and Defects in Solids journal.

ARCHITECTURE

The article titled "*Ameliorating Climate Change Impacts on the Built Environment*" by **Dr. Paul Agboola Oluwagbemiga**, one of our professors of the Department of Architecture (English), was presented and published in the 11th volume of the 3rd issue of the journal Civil Engineering and Architecture.

To access the article:

<https://www.hrpub.org/download/20230330/CEA17-14829982.pdf>

The article titled *Kahrolsun Bağzı "Şeyler": Üçüncü Türden Bir Mekân Olarak Şantiye* by **Dr. Erdem Üngür**, one of our professors of the Department of Architecture, was presented and published in the 76th issue of Betonart Magazine.