# FEA

# MONTHLY BULLETIN

## APRIL 2026

# APRIL 23

*Happy April 23rd National Sovereignty and Children's Day!*

ISTANBUL GELISIM UNIVERSITY
EST. 2008

# THE “ENGINEERS AND ARCHITECTS OF THE FUTURE” PROJECT FESTIVAL WAS HELD

The “Future Engineers and Architects Project Festival,” organized by the Faculty of Engineering and Architecture, was held with the participation of high school students. The competition brought together young talents developing projects in four main fields: Construction-Architecture, Industrial, Computer Science and Software, Electrical-Electronic and Mechatronics.

The younger generation, who will play a key role in our country’s technological and architectural development, showcased the innovative solutions they prepared in their respective disciplines during this festival and established their first strong connections with the academic and technological communities. At the event, aspiring future engineers and architects gained an interdisciplinary perspective and engaged in technical exchanges of ideas.

As a result of the evaluations:

-Projects that placed in each category were identified,

-Certificates of achievement were presented to the top three students,

-And the winners of the first-place projects were additionally awarded.

This event served as a strategic platform that supported students—who will shape our nation’s future—in developing their project development, presentation, and innovative thinking skills, thereby enhancing their motivation in scientific and technical production processes.

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IGU FEA

APRIL 2026

Faculty of Engineering and Architecture

# NEWS FROM THE FACULTY

Powering the Future with Technology

ARTIFICIAL INTELLIGENCE

INNOVATION

SCIENCE

TECHNOLOGY

# INTERNSHIP MEETING HELD IN THE DEPARTMENT OF INDUSTRIAL ENGINEERING

The internship meeting for the students of the Department of Industrial Engineering was held on Friday, April 3, 2026, between 11:00 and 12:00 in the J-287 Ergonomics Laboratory. During the meeting, issues that students were curious about regarding the internship process were addressed, and information was provided about internship procedures.

Within the scope of the meeting, explanations were given about the internship application process, required documents, the internship schedule, and important points to be considered. In addition, the questions raised by the students regarding internships were answered, and a general evaluation of the process was made.

The meeting, which was organized to help department students carry out their internship process in a more informed and effective manner, was completed productively through mutual exchange of ideas.

# END224 PRODUCTION AND OPERATIONS MANAGEMENT COURSE ENRICHED WITH PRACTICAL ACTIVITIES

One of our department's courses, END224 – Production and Operations Management, was conducted as a practical session on April 10, 2026 in the J-287 Ergonomics (Human Factors) Laboratory under the coordination of Dr. Didem YILMAZ, with the contributions of Research Assistants Duygu Tüylü and Sude Nur Bozik.

Through the planned practices, workshops, and interactive activities carried out during the course, students had the opportunity to transform their theoretical knowledge into practice. The active participation of the students made the learning process both more effective and enjoyable.

In this practice-oriented course, the fundamental concepts of production and operations management were addressed through real examples and hands-on activities. In this way, the course aimed to strengthen students' professional knowledge while also improving their teamwork, problem-solving, and practical application skills.

The session, which was carried out with strong interest and active participation, provided students with a learning environment that was both instructive and enjoyable.

# INTERNSHIP INFORMATION MEETING HELD FOR MECHATRONICS ENGINEERING STUDENTS

An internship information meeting was organized by the Department of Mechatronics Engineering at Istanbul Gelisim University, Faculty of Engineering and Architecture, to increase students' awareness of internship processes. The meeting took place on Tuesday, April 14, at 16:30 in classroom J-290, with the participation of sophomore Mechatronics Engineering students. The session was led by the department's Research Assistants, Res. Asst. Tunay ACIMAN and Res. Asst. Ufuk ATEŞOĞLU, who provided comprehensive information regarding the internship journey.

# A TECHNICAL TRIP TO YILDIZ PALACE WAS ARRANGED BY THE DEPARTMENT OF ARCHITECTURE

As part of the MIM432 Istanbul elective course, a technical field trip was arranged to Yıldız Palace under the supervision of Dr. Meryem Müzeyyen Fındıkgil. The excursion commenced at 11:00 AM on Saturday, March 28th, starting at the Yıldız Hamidiye Mosque, the final imperial mosque constructed by the Ottomans, and concluded at the Yıldız Palace Library.

# A TECHNICAL TRIP TO TOPKAPI PALACE WAS ARRANGED BY THE DEPARTMENT OF ARCHITECTURE

As part of the course "Social Change, City and Architecture" within the Architecture Master's program at Istanbul Gelisim University, a technical field trip to Topkapi Palace was conducted under the supervision of Dr. Meryem Müzeyyen Fındıkgil. The excursion commenced at 10:00 AM on Sunday, April 5th, starting at the III. Ahmed Fountain, a notable example of Ottoman Baroque architecture, and concluded at Gülhane Park.

# CIVIL ENGINEERING

## PRACTICAL SESSION CONDUCTED WITHIN THE SURVEYING COURSE

A practical session was conducted with students as part of the Surveying course in the Civil Engineering Department by Asst. Prof. Mustafa Yurdabal APAK.
During the session, students had the opportunity to gain hands-on experience with surveying techniques and reinforce their theoretical knowledge through field practice. The use of surveying instruments, data collection processes, and fundamental measurement methods were demonstrated in a practical setting. Such activities contribute to the development of students' professional skills and strengthen the connection between theory and practice in engineering education.

## SOIL MECHANICS LABORATORY APPLICATIONS CONDUCTED FOR CIVIL ENGINEERING STUDENTS

Practical laboratory experiments were conducted for students within the scope of Soil Mechanics and Zemin Mekaniği courses offered in the Civil Engineering Turkish and English programs.

The laboratory sessions were carried out by our faculty members Assoc. Prof. Suleiman KHATRUSH and Asst. Prof. İbrahim Rasin DÜZCEER, along with our research assistants Res. Asst. Oğuzhan Murat HALAT and Res. Asst. Kemal ERTUNÇ.

During the laboratory studies, fundamental experiments aimed at determining the engineering properties of soils were demonstrated to students in a hands-on manner. These sessions enabled students to reinforce theoretical knowledge through practical applications and actively participate in the experimental processes.

Such applied training activities contribute significantly to students' professional development and strengthen the connection between theory and practice in engineering education.

# CIVIL ENGINEERING

## AN ORIENTATION PRESENTATION FOR INTERNSHIPS WAS CONDUCTED FOR CIVIL ENGINEERING STUDENTS.

On April 6-7, 2026, Research Assistant Oğuzhan Murat HALAT, from the Civil Engineering Department, delivered an orientation presentation on internship processes to students enrolled in both the Turkish and English programs.

The presentation offered students detailed insights into the internship process, encompassing application stages, necessary documentation, critical considerations during the internship, and evaluation procedures. Additionally, student inquiries were addressed, elucidating essential elements of the process.

The objective of these informational activities is to assist students in navigating their internship processes with greater knowledge and efficiency.

We extend our best wishes to all our students for success in their internships.

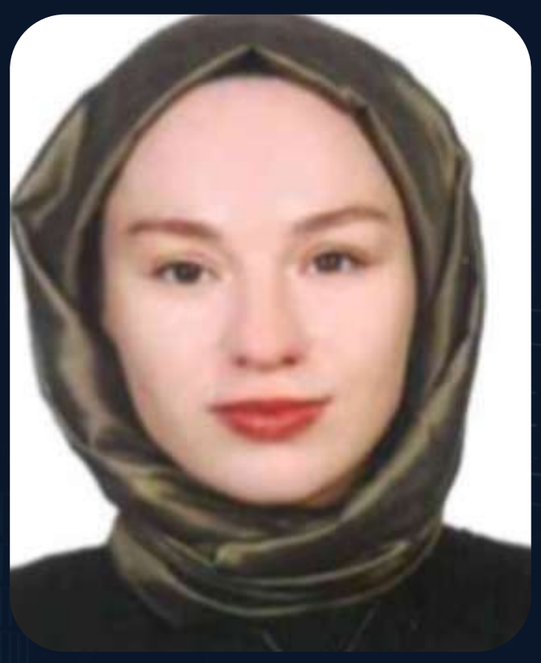
## CIVIL ENGINEERING DEPARTMENT BOARD MEETING HELD

The Civil Engineering Department held its department board meeting on April 8, 2026. During the meeting, various agenda items related to academic, administrative, and quality processes were discussed. The meeting covered topics such as activities carried out within the scope of the quality calendar, meetings with external stakeholders, and departmental board processes. The meeting concluded with decisions aimed at improving the efficiency and coordination of the department's academic and administrative processes.

## CIVIL ENGINEERING DEPARTMENT INTERNAL STAKEHOLDER MEETING HELD

The Civil Engineering Department held an internal stakeholder meeting on April 8, 2026, chaired by Assoc. Prof. Ahmad Reshad NOORI. The meeting focused on improving the department's teaching and learning processes. During the meeting, student feedback regarding the need for increased practical components in courses was discussed. It was emphasized that efforts would be made to enhance applied learning opportunities within existing resources and to explore alternative approaches.
The meeting concluded with a commitment to continue efforts aimed at improving the quality of education within the department.

# CIVIL ENGINEERING



The Department of Civil Engineering at Istanbul Gelisim University has welcomed Research Assistant Havva Sevde Iskender Kaya to its academic staff. Research Assistant Kaya completed her undergraduate studies at Zonguldak Bülent Ecevit University and is currently pursuing a master's degree in structural engineering at Sakarya University of Applied Sciences. We extend our best wishes for her success in her academic career and congratulate her on her contributions to the scientific endeavors of our university.

Istanbul Gelisim University, Department of Civil Engineering, has welcomed Research Assistant Sercan KAYA to its academic staff. Research Assistant KAYA completed his undergraduate studies at Istanbul Medeniyet University and is currently pursuing a master's degree in structural engineering at Yıldız Technical University. We extend our best wishes for his success in his academic career and congratulate him on his contributions to the scientific endeavors of our university.

# ARCHITECTURE

Istanbul Gelisim University's Department of Architecture has welcomed Research Assistant Serpil AKAN to its academic staff. Research Assistant Serpil AKAN earned her undergraduate degree in Architecture from Yıldız Technical University and is presently engaged in graduate studies in Architecture at Fırat University.

We extend our best wishes for her success in her academic career and commend her for her contributions to the scientific pursuits of our university.

# SOFTWARE ENGINEERING

Istanbul Gelisim University's Software Engineering Department has welcomed  Res. Asst. Enis ÖZBEK, a researcher specializing in Game Development. He completed his undergraduate studies in Computer Engineering at Istanbul Gelisim University and is currently pursuing a Master's degree in the same field. We extend our best wishes for his success in his academic career and congratulate him on his contributions to the scientific endeavors of our university.

Istanbul Gelisim University's Software Engineering Department has welcomed Res. Asst. Göksu Turaç, who specializes in Artificial Intelligence in Healthcare. Göksu Turaç earned her degree in Computer Engineering from Eskisehir Technical University and is presently pursuing a Master's degree in the same field. We extend our best wishes for her success in her academic endeavors and congratulate her on her contributions to the scientific work of our university.

# AERONAUTICAL ENGINEERING

Istanbul Gelisim University's Department of Aeronautical Engineering has welcomed Res. Asst. Yasemin Berivan GÜNEŞ. After completing her undergraduate studies at Adana Alparslan Türkeş University of Science and Technology, she is currently in her graduate studies. Yasemin Berivan Güneş's research focuses on twist morphing wing technologies, experimental aerodynamic analyses, and sustainable aviation systems, particularly within TÜBİTAK-supported projects and advanced aerodynamic performance enhancement studies. We extend our best wishes for her success in her academic career and congratulate her on her contributions to the scientific endeavors of our university.

# CURRENT TOPICS IN ENGINEERING AND ARCHITECTURE

# COMPUTER ENGINEERING

*Res. Asst. Hasan YILDIRIM*

## ARTIFICIAL INTELLIGENCE IS OVERCOMING THE ENERGY CRISIS: NEUROSYMBOLIC SYSTEMS ARE REDEFINING COMPUTING

In the world of artificial intelligence, a groundbreaking solution has been developed using "neuro-symbolic AI" to address energy consumption—the biggest challenge facing current systems. By combining neural networks with human-like symbolic reasoning, these systems increase learning speed while consuming up to 100 times less energy than traditional models. This development is the strongest evidence yet that sustainability is achievable in computer engineering.

As data center electricity consumption rises rapidly today, the International Energy Agency forecasts that this figure will double by 2030. The neuro-symbolic approach, which offers a solution to this challenge, combines the pattern recognition power of deep neural networks with the problem-solving methods of the human mind. By breaking tasks down into steps for analysis, this hybrid structure reduces trial-and-error cycles and produces far more efficient results.

From a technical standpoint, this architecture—which stands out for its Visual-Language-Action (VLA) models—processes images, language, and motion simultaneously. The symbolic component prevents statistical errors by directly defining physical rules within the system, thereby providing a reliable decision-making mechanism.

This technology will expand the use of artificial intelligence in fields such as autonomous robots, smart manufacturing, and medical diagnostics. This revolutionary potential, particularly for energy-constrained portable devices, is ushering in a new era where artificial intelligence can be present everywhere. By combining sustainability and ethical responsibility in computer engineering, this work represents a critical paradigm shift in the industry.

*Res. Asst. Elif ÖZTÜRK*

# ARTIFICIAL INTELLIGENCE INVESTMENTS ARE BOOSTING THE ELECTRICAL AND ELECTRONICS SECTOR

As global investments in artificial intelligence technologies grow rapidly, these developments are driving significant transformations in the field of electrical and electronic engineering. In particular, investments in data centers, semiconductor technologies, and power electronics systems are directly supporting the sector's growth.

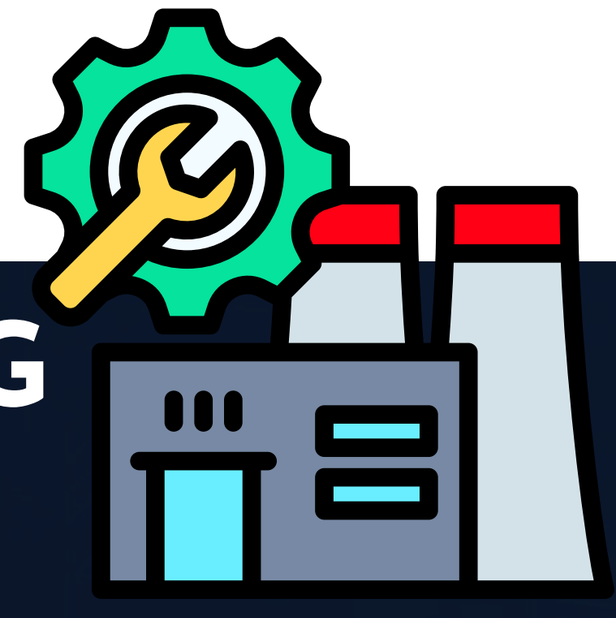
Recently, the high processing power and energy capacity required by artificial intelligence applications have increased the demand for more efficient power management solutions. In this context, advanced semiconductor materials such as GaN (Gallium Nitride) and SiC (Silicon Carbide) are coming to the forefront, offering advantages such as high efficiency, low loss, and compact design.

Furthermore, R&D efforts in areas such as smart grids, energy storage systems, and high-performance processors are further enhancing the interdisciplinary significance of electrical and electronic engineering. With the widespread adoption of AI-enabled systems, solutions focused on energy efficiency and sustainability are playing a pivotal role in the sector.

These developments are accelerating both academic research and industrial applications in the field of electrical and electronic engineering; they are playing a critical role in shaping the technological infrastructure of the future.

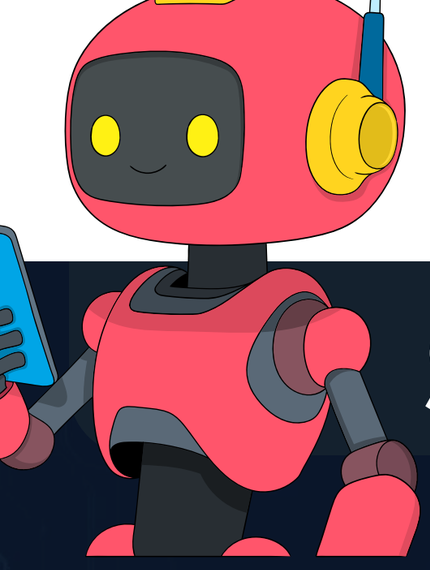
# INDUSTRIAL ENGINEERING

*Res. Asst. Duygu TÜYLÜ*



## A CURRENT TREND IN INDUSTRIAL ENGINEERING: AI-POWERED DIGITAL TWINS

Industrial engineering is a discipline that aims to increase efficiency across a wide range of areas, from production systems to supply chains, and from quality management to process optimization. In recent years, one of the most notable current topics in this field has been AI-powered digital twin technologies. A digital twin is a dynamic virtual replica of a physical system, process, or product. This structure enables production lines, machines, logistics processes, or business operations to be monitored and analyzed in real time, and future scenarios to be tested. From an industrial engineering perspective, the significance of this technology stems from its ability not only to analyze systems but also to improve them. For example, by creating a digital twin of a production line, bottlenecks can be identified, and maintenance needs can be predicted, energy consumption reduced, and different production scenarios tested without intervening in the physical system. As a result, decision-makers can make faster, data-driven decisions while reducing the costs associated with trial and error. These developments are also creating new areas of research for industrial engineering students and researchers. This approach, which integrates data analytics, artificial intelligence, simulation, optimization, and sustainability, underscores the growing importance of interdisciplinary competencies in future engineering applications. For this reason, AI-enabled digital twins are not merely a technological innovation; they are also viewed as a strategic Industrial Engineering approach that contributes to the smarter, more flexible, and sustainable management of production, service, and logistics systems.



# SOFTWARE ENGINEERING

*Res. Asst. Enis ÖZBEK*

## A NEW STANDARD IN SOFTWARE QUALITY BY 2026: SELF-HEALING SYSTEMS

As of the fourth quarter of 2025 and throughout 2026, a new paradigm is emerging in the software world that focuses on “code sustainability and resilience” rather than “code production.” Self-healing systems, as the next evolution of autonomous development tools, are evolving into a structure capable of detecting errors not only during the development phase but also at runtime, and developing autonomous hotfixes. This transformation represents a shift for software teams from a reactive error-resolution model to a proactive and autonomous improvement model.

Industry reports clearly demonstrate the impact of this shift on operational efficiency. According to Gartner’s 2026 Software Engineering Predictions report, teams that fully integrate AI-based autonomous verification tools into their DevOps processes have seen a 60% reduction in the average time to detect defects (MTTD). Similarly, 2025 State of DevOps data shows that the manual testing workload has decreased by 45%, and this has increased the time developers can dedicate to innovation by 30%. In particular, the ability of systems to autonomously analyze their own metrics and resolve bottlenecks—especially in microservices architectures—has become central to modern engineering practices.

Despite technological advancements, autonomous verification systems have sparked a serious technical debate: Logical Hallucination. The fact that solutions generated by AI agents are syntactically flawless does not always guarantee their correctness in terms of business logic. Analyses conducted by IEEE Software Quality for 2026 indicate that 2 out of every 10 patches generated by autonomous systems may have side effects that conflict with business logic. This situation creates the risk of “code that looks perfect but functions incorrectly.”

Consequently, 2026 is as much a year of efficiency for software engineering as it is a year of trust and oversight. Current data indicates that the role of the software engineer has evolved from direct code writing to that of a “system curator” who manages AI agents and validates the logical correctness of their outputs. The senior engineering of the future will be defined by the ability to orchestrate—blending the speed offered by autonomous systems with the ethical and technical safety of the engineering discipline.

# ACADEMIC AND SCIENTIFIC ACTIVITIES

# AERONAUTICAL ENGINEERING

## A New Article by Prof. Dr. Bahri Şahin, Rector of Istanbul Gelişim University, Has Been Published in a Q1-Ranked Journal

The article titled “Introduction of a novel eco-friendly eight-process engine cycle and its comprehensive performance analysis” by Prof. Dr. Bahri ŞAHİN, Rector of Istanbul Gelişim University, Prof. Dr. Güven GONCA, and Asst. Prof. Derya HAYDARGİL has been published in the SCIE-indexed journal Energy Conversion and Management, which is classified in the Q1 category. We congratulate all the authors, especially our Rector Prof. Dr. Bahri ŞAHİN, on this significant scientific achievement and wish them continued success in their academic endeavors.

ELSEVIER

Contents lists available at ScienceDirect

Energy Conversion and Management

journal homepage: www.elsevier.com/locate/enconman

Research Paper

### Introduction of a novel eco-friendly eight-process engine cycle and its comprehensive performance analysis

Guven Gonca [a,*], Bahri Sahin [b], Derya Haydargil [c]

[a] Yildiz Technical University, Naval Arch. and Marine Eng. Depart, Besiktas, Istanbul, TR, Turkey
[b] Istanbul Gelisim University, Rectorate, Avcilar, Istanbul, TR, Turkey
[c] Hasan Kalyoncu University, Aerospace Eng. Depart, Sahinbey, Gaziantep, TR, Turkey

# ELECTRICAL AND ELECTRONICS ENGINEERING

## An article by Prof. Dr. Bayram ÜNAL, Dean of the Faculty of Engineering and Architecture at Istanbul Gelişim University, has been published

An article by Prof. Dr. Bayram ÜNAL, Dean of the Faculty of Engineering and Architecture at Istanbul Gelişim University, titled “Crystal structure, morphology, magnetic, electrical, and dielectric characterization of amphoteric $Yb_2O_3$-modified lead-free $BaTiO_3$ perovskite,” has been published in the journal Micro and Nanostructures, which is indexed in the Q1 category of SCIE and SSCI. This study makes valuable contributions to the academic literature on advanced materials technologies and the characterization of lead-free perovskite structures. We congratulate Prof. Dr. Bayram ÜNAL and wish him continued success.

ELSEVIER

Contents lists available at ScienceDirect

Micro and Nanostructures

journal homepage: www.journals.elsevier.com/micro-and-nanostructures





# Crystal structure, morphology, magnetic, electrical, and dielectric characterization of amphoteric $Yb_2O_3$-modified lead-free $BaTiO_3$ perovskite

Yassine Slimani [a,*], Bayram Ünal [b], Abdulhadi Baykal [c], Atul Thakur [d,e]

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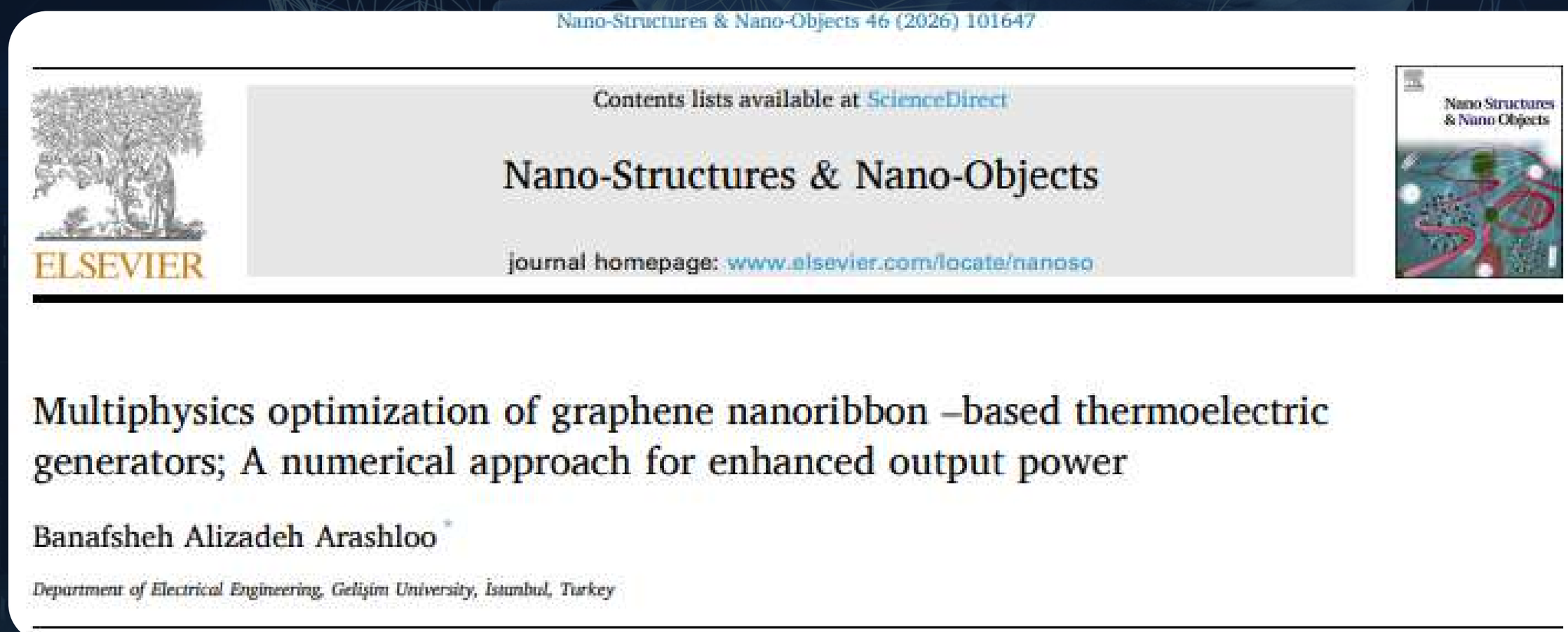
[e] Centre of Excellence in Nanotechnology, Lovely Professional University, Phagwara, Punjab 144411, India

# ELECTRICAL AND ELECTRONICS ENGINEERING

## An article by Asst. Prof. Banafsheh Alizadeh ARASHLOO has been published.

The paper titled “Multiphysics Optimization of Graphene Nanoribbon-Based Thermoelectric Generators: A Numerical Approach for Enhanced Output Power,” prepared by Asst. Prof. Banafsheh Alizadeh Arashloo, from the Department of Electrical and Electronic Engineering, has been published in the journal *Nano-Structures & Nano-Objects*, which is indexed in Scopus and SJR and falls under the Q1 category. We congratulate Asst. Prof. Banafsheh Alizadeh Arashloo and wish her continued success.



Nano-Structures & Nano-Objects 46 (2026) 101647

Contents lists available at ScienceDirect

Nano-Structures & Nano-Objects

journal homepage: www.elsevier.com/locate/nanoso

Multiphysics optimization of graphene nanoribbon –based thermoelectric generators; A numerical approach for enhanced output power

Banafsheh Alizadeh Arashloo *

*Department of Electrical Engineering, Gelişim University, İstanbul, Turkey*

# ELECTRICAL AND ELECTRONICS ENGINEERING

## An article by Asst. Prof. Khalid YAHYA has been published.

The study titled “Evaluation of sustainable distribution network design decisions for essential medical products in Turkey,” prepared by Asst. Prof. Khalid YAHYA and his graduate research group, has been published in the journal Frontiers in Sustainability, which is classified in the Q1 category and indexed in DOAJ. We congratulate Asst. Prof. Khalid YAHYA and wish him continued success.

frontiers in Sustainability

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# Evaluation of sustainable distribution network design decisions for essential medical products in Turkey

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[1]Department of Logistics Management, Faculty of Economics, Administrative and Social Sciences, Istanbul Gelisim University, Istanbul, Türkiye, [2]Department of Electrical and Electronics Engineering, Faculty of Engineering and Architecture, Istanbul Gelisim University, Istanbul, Türkiye, [3]School of Engineering, Cardiff University, Cardiff, United Kingdom, [4]Department of Electrical Engineering, College of Engineering, Najran University, Najran, Saudi Arabia

# ELECTRICAL AND ELECTRONICS ENGINEERING

## An article by Asst. Prof. Khalid YAHYA has been published.

The study titled “Secure and Lightweight Authentication for IoT-Based Smart Home Surveillance,” prepared by Asst. Prof. Khalid YAHYA, from the Department of Electrical and Electronic Engineering, has been published in the IEEE Internet of Things Journal, a Q1-ranked journal indexed in SCIE and Scopus.

We congratulate Asst. Prof. Khalid YAHYA and his research team on this valuable scientific contribution and wish them continued success.

IEEE INTERNET OF THINGS JOURNAL, VOL. 14, NO. 8, APRIL 2026 1

### Secure and Lightweight Authentication for IoT-Based Smart Home Surveillance

Intikhab Ullah, Khalid Saeed, Saeed Ullah Jan, Khalid Yahya, Hari Mohan Rai, *Member, IEEE,* Anwar Ghani, *Member, IEEE*

# INDUSTRIAL ENGINEERING

## Prof. Dr. Tarık ÇAKAR's Patent Has Been Registered

Istanbul Gelişim University (IGU) has registered the patent titled "Hand Terminal and Algorithm for Dynamic Robot Guidance" (No. TR 2021 022147), for which Prof. Dr. Tarık Çakar, a faculty member in the Department of Industrial Engineering is the inventor. We congratulate Prof. Dr. Tarık Çakar on this significant achievement and wish him continued success in his academic and scientific endeavors.

TÜRK PATENT
TÜRK PATENT VE MARKA KURUMU

**PATENT BELGESİ**

**No: TR 2021 022147 B**

Buluş Başlığı

**DİNAMİK ROBOT YÖNLENDİRMESİ İÇİN EL TERMİNALİ VE ALGORİTMASI**

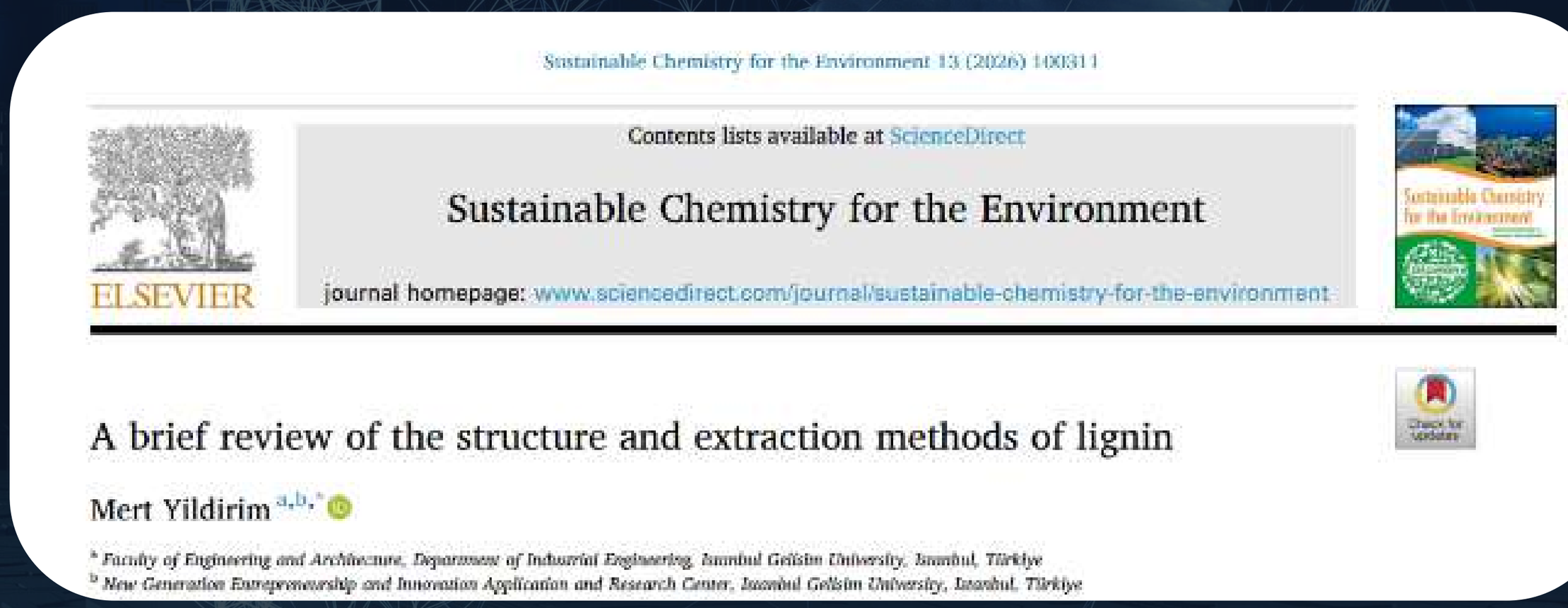
Patent Sahibi

**İSTANBUL GELİŞİM ÜNİVERSİTESİ**

# INDUSTRIAL ENGINEERING

## Asst. Prof. Mert YILDIRIM's New Article Has Been Published

An article titled “A brief review of the structure and extraction methods of lignin” by Asst. Prof. Mert YILDIRIM, from the Department of Industrial Engineering at the Faculty of Engineering and Architecture, Istanbul Gelişim University, has been published in the journal Sustainable Chemistry for the Environment. The journal is classified in the Q1 category and is indexed in Scopus and DOAJ. We congratulate Asst. Prof. Mert YILDIRIM and wish him continued success.



Sustainable Chemistry for the Environment 13 (2026) 100311

Contents lists available at ScienceDirect

Sustainable Chemistry for the Environment

journal homepage: www.sciencedirect.com/journal/sustainable-chemistry-for-the-environment

### A brief review of the structure and extraction methods of lignin

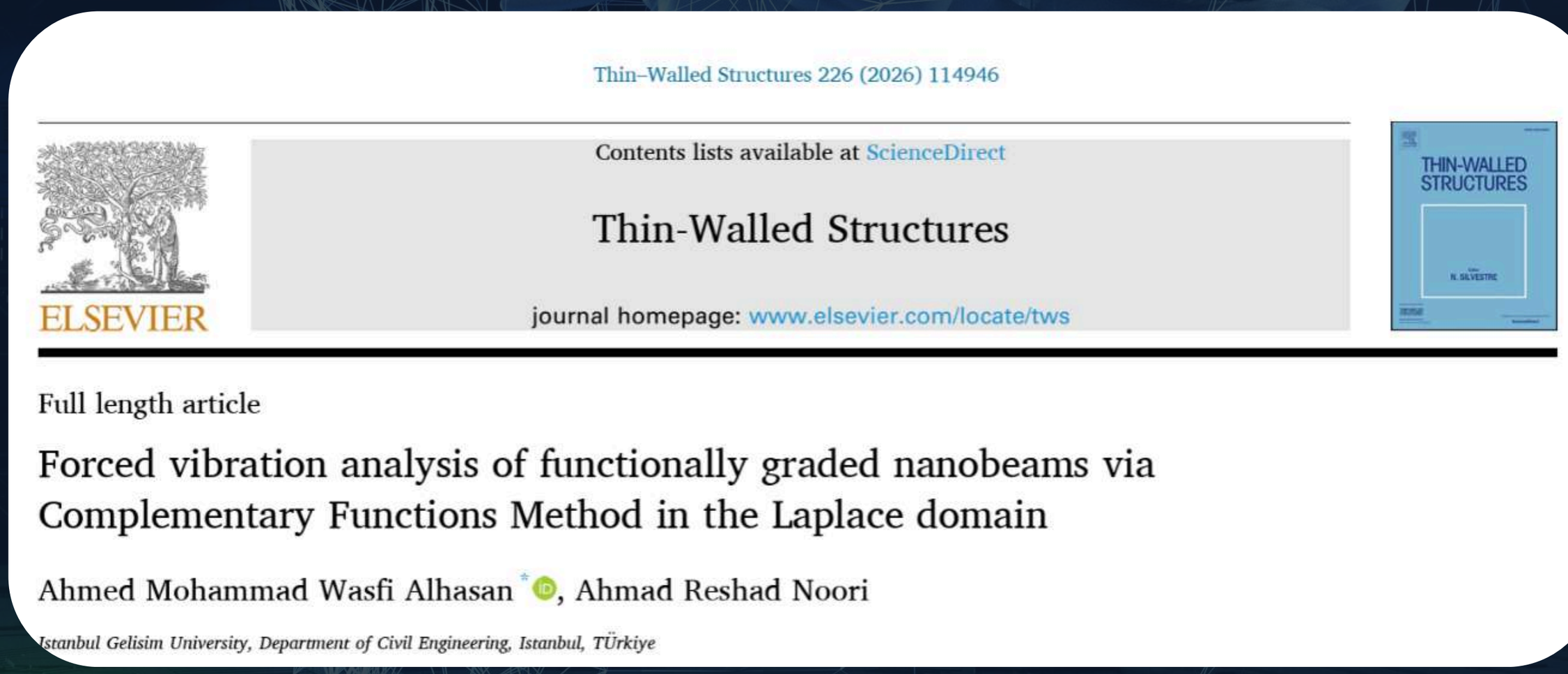
Mert Yildirim [a,b,*]

[a] Faculty of Engineering and Architecture, Department of Industrial Engineering, Istanbul Gelisim University, Istanbul, Türkiye
[b] New Generation Entrepreneurship and Innovation Application and Research Center, Istanbul Gelisim University, Istanbul, Türkiye

# CIVIL ENGINEERING

## Assoc. Prof. Ahmad Reshad NOORI's New Article in the Q1 Category Has Been Published.

The article titled "Forced vibration analysis of functionally graded nanobeams via the Complementary Functions Method in the Laplace domain" by our Department Chair of Civil Engineering, Assoc. Prof. Dr. Ahmad Reshad NOORI, and Ph.D. student Ahmed Mohammad Wasfi ALHASAN has been published in the journal Thin-Walled Structures, which is classified in the Q1 category. We congratulate Assoc. Prof. Dr. Ahmad Reshad NOORI and Ahmed Mohammad Wasfi ALHASAN on this significant scientific achievement and wish them continued success in their academic endeavors.



Thin-Walled Structures 226 (2026) 114946

Contents lists available at ScienceDirect

Thin-Walled Structures

journal homepage: www.elsevier.com/locate/tws

Full length article

### Forced vibration analysis of functionally graded nanobeams via Complementary Functions Method in the Laplace domain

Ahmed Mohammad Wasfi Alhasan *, Ahmad Reshad Noori

*Istanbul Gelisim University, Department of Civil Engineering, Istanbul, TÜrkiye*

# CIVIL ENGINEERING

## The paper by Res. Asst. Oğuzhan Murat HALAT has been published.

The paper titled “Scale-Dependent Performance of GR4J and TUW Models Under Gauge and GLOFAS Discharge Data” by Res. Asst. Oğuzhan Murat HALAT of the Department of Civil Engineering was published as part of the 8th Bilsel International Gordion Science Research Congress, held on March 27–28, 2026. We congratulate Res. Asst. Oğuzhan Murat HALAT on this valuable scientific contribution and wish him continued success in his academic endeavors.

CERTIFICATE

of participant

This is to certify that

**Res. Assist., Oguzhan Murat HALAT**

In oral and technical presentation, recognition and appreciation of research
**“8. BİLSEL INTERNATIONAL GORDİON SCIENCE RESEARCH CONGRESS”**
**27-28 March 2026, ANKARA/TÜRKİYE**
with the paper entitled

**“SCALE-DEPENDENT PERFORMANCE OF GR4J AND TUW MODELS UNDER GAUGE AND GLOFAS DISCHARGE DATA”**

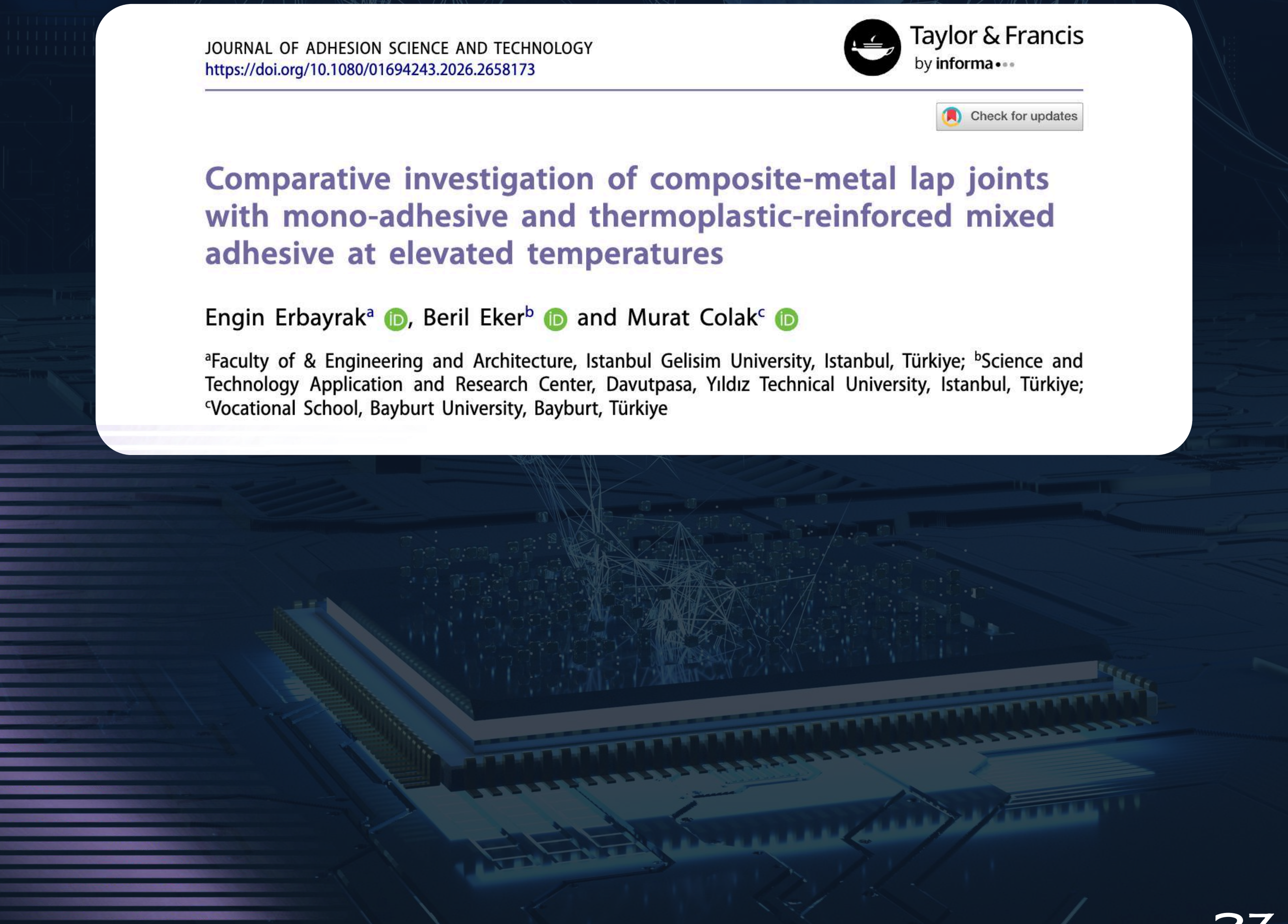
BİLSEL CONGRESS

**Asst. Prof. Dr. Taner AKARSU**
**Head of Organization Committee**

# MECHATRONICS ENGINEERING

**A study by Assoc. Prof. Engin ERBAYRAK on the investigation of composite-metal joints bonded with hybrid adhesives at high temperatures has been published.**

A study titled “Comparative investigation of composite-metal lap joints with mono-adhesive and thermoplastic-reinforced mixed adhesive at elevated temperatures” by Assoc. Prof. Dr. Engin ERBAYRAK, a faculty member of the Department of Mechatronics Engineering, has been published in the Journal of Adhesion Science and Technology. The journal is categorized as Q2 and is indexed in SCIE and Scopus. We congratulate Assoc. Prof. Dr. Engin ERBAYRAK on this innovative work and wish him continued success.



JOURNAL OF ADHESION SCIENCE AND TECHNOLOGY
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## Comparative investigation of composite-metal lap joints with mono-adhesive and thermoplastic-reinforced mixed adhesive at elevated temperatures

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# MECHATRONICS ENGINEERING

**Res. Asst. Tunay Acıman's paper titled "Planning at Every Angle in Grid Maps: The Balance Between Security and Efficiency" has been published.**

The article titled "Parameterized Clearance Cost-Shaping for Any-Angle Planning: Quantifying Safety–Efficiency Trade-Offs on Grid Maps," co-authored by Res. Asst. Tunay ACIMAN from the Department of Mechatronics Engineering, has been published in the journal Applied Sciences, which is classified in the Q1 category. We congratulate Res. Asst. Tunay ACIMAN on this significant scientific contribution and wish him continued success in his academic endeavors.

applied sciences

MDPI

*Article*

## Parameterized Clearance Cost-Shaping for Any-Angle Planning: Quantifying Safety–Efficiency Trade-Offs on Grid Maps

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