



August 2026

ANADOLU BİL VOCATIONAL SCHOOL



e-newsletter

R.T.

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Ayten Nahide Korkmaz Participated as an International Keynote Speaker

10th World Conference on Social Sciences — Copenhagen, Denmark

Ayten Nahide Korkmaz, Chair of the International Development, Monitoring, and Steering Commission, successfully delivered an oral presentation titled “Bioeconomy in the Context of Women’s Labor and Sustainable Consumption” at the 10th World Conference on Social Sciences, held in Copenhagen on July 24–26, 2026. As a featured speaker at the conference, Korkmaz discussed the critical roles played by women’s labor and the circular bioeconomy in achieving sustainable development goals on a global platform and engaged with distinguished academics from various countries.





Dr. Öğretim Üyesi Güven Özdemir

Assistant Professor Dr. Güven Özdemir Commented On The Weather Forecast Expected Across Turkey For September

September is here, but summer isn't over: First 30-degree temperatures, then rain... An expert breaks it down day by day.

Following the heatwaves that gripped Europe, attention has turned to the weather in Turkey for September. People are curious about temperature trends and expected weather changes in the coming days. So, what kind of weather is anticipated across Turkey this September? What will the weather be like in Istanbul this week? When will the summer heat subside, and when will autumn truly make itself felt? Meteorology expert Dr. Güven Özdemir addressed these questions in an exclusive interview with [Hürriyet.com.tr](https://www.hurriyet.com.tr).

Europe has been overshadowed by extreme heat and drought conditions that intensified throughout the summer. Oppressive temperatures, insufficient rainfall, and successive heatwaves have once again highlighted their impact on the continent. The combination of rising temperatures and declining precipitation has resulted in severe drought conditions across many regions of the continent.

While drought and extreme heat fueled the spread of forest fires—particularly in Mediterranean nations—vast areas across numerous countries, most notably Spain, Portugal, France, and Greece, were affected. In Turkey, too, developments regarding temperatures, drought, and wildfires remained key topics on the agenda throughout the summer.

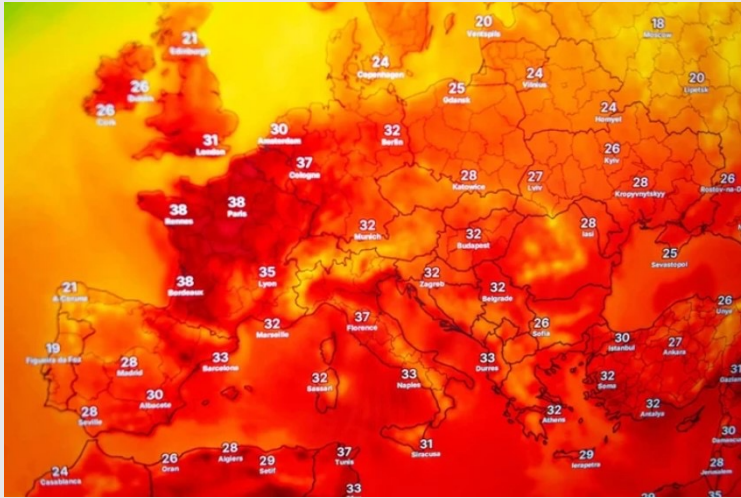
So, as the summer season draws to a close, will Sep-

tember bring cooler weather, or will summer linger for another month? What kind of conditions can be expected across the country—and in Istanbul in particular—in the coming days? We have examined the situation in detail.

Europe sweltered all summer; heatwaves marked the season in turkey

“The summer of 2026 was exceptionally hot for Europe; for Turkey, it was hot—though not as extraordinary as in Western Europe—yet it was characterized by more frequent and intense heatwaves,” said Dr. Güven Özdemir, a faculty member and meteorology expert at Istanbul Aydın University. “A very distinct temperature difference emerged, particularly between Western Europe and Turkey.” Özdemir continued:

The most notable feature of the summer in Europe was the persistence of early heatwaves—which began in late May—throughout June, July, and August. Europe experienced its hottest June on record. The average air temperature was 1.78 degrees Celsius above the 1991–2020 norm. In Western Europe, temperatures soared 3.06 degrees above normal, marking the region's hottest June in history. Across Europe as a whole, temperatures averaged 0.66 degrees above normal. Western Europe also saw record-high average temperatures for



the June–July–August period; the three-month average reached 21 degrees, a figure 2.10 degrees above the norm.

What was particularly striking about the situation in Europe was that not only daytime temperatures but also nighttime temperatures were extremely high. Temperatures exceeding 40 degrees were recorded in some areas, reaching extraordinary levels in regions inhabited by millions of people. Consequently, the summer of 2026 is regarded in Europe not merely as a ‘hot summer,’ but as an extreme season defined by a succession of heatwaves.

Turkey periodically experienced intense heat originating from north africa and the persian gulf

Dr. Güven Özdemir noted that Turkey did not experience temperatures as extraordinarily high during June and July as those seen in Western Europe. He stated, “The reason we perceived the weather as extremely hot in Turkey was the periodic influx of hot air from North Africa, the Mediterranean, and the Persian Gulf/Iraq region during the summer of 2026,” and added:

“When these weather systems persisted for several days, very high temperatures were recorded, particularly in Southeastern Anatolia, Central Anatolia, the Mediterranean, the Aegean, and parts of the Marmara region. Combined with humidity, the heat felt intense both day and night. Although strong northerly winds (*poyraz*) prevailed in the Marmara and coastal Aegean regions—especially during the second half of August—the hot air intensified once again. It was also significant that daytime temperatures in Istanbul

exceeded 30 degrees Celsius on certain days, with the ‘feels-like’ temperature being even higher due to high humidity.”

What kind of weather is expected throughout september?

“In the seasonal forecast for September—based on data from the European Centre for Medium-Range Weather Forecasts (ECMWF) and issued by the General Directorate of Meteorology (MGM)—temperatures across most of Turkey are expected to be 1–2 degrees Celsius above normal, with some regions seeing levels 0.5–3 degrees above normal,” said Dr. Güven Özdemir. “Regarding precipitation, there are indications of above-normal levels, particularly in Thrace, the southwest Marmara region, parts of the Aegean, the Western Mediterranean, and the Western Black Sea. Even more importantly, the MGM’s October update projects above-normal precipitation across Turkey.”

Pay attention to september 1–15!

Assessing the first 15 days of September, Dr. Güven Özdemir stated, “The effect of hot weather may persist; days with temperatures exceeding 30 degrees Celsius could be seen in the Marmara and Aegean regions. Nights will begin to cool down gradually, but due to sea temperatures, humidity and oppressive conditions will continue, especially in Istanbul. The MGM’s current monthly forecast also anticipates above-normal temperatures for a significant portion of Turkey.”

Sharing his predictions for Istanbul’s weather during this 15-day period, Özdemir added, “It appears





Istanbul will experience daytime temperatures around 28–32 degrees and nighttime temperatures around 20–24 degrees. However, the key factor is this: even if the air temperature is around 30 degrees, the ‘feels-like’ temperature could be higher due to the combination of sea temperature and high humidity. The first significant shift may occur in the second half of September. That is when the atmospheric character will begin to change, with a high probability of more frequent cool air incursions from the Balkans.”

Rain is coming to istanbul this week

Dr. Güven Özdemir outlined the weather forecast for Istanbul for the coming week, day by day:

September 1: Sunny and hot. Around 30°C; 20°C at night. / September 2: Temperatures remain around 30°C. Summer weather continues. / September 3: Winds pick up. Temperature around 29°C. / September 4: The critical day of the week. A chance of localized downpours emerges, and the temperature drops to around 28°C. / September 5: Skies clear up after the rain; around 29°C. / September 6: Around 30°C; sunny with a return to summer-like conditions.

Dr. Güven Özdemir, Faculty Member and Meteorology Expert at Istanbul Aydın University

Emphasizing that this pattern is reflected in current forecasts, Özdemir stated, “The most significant aspect of this week is not so much the temperature itself, but the atmospheric activity expected on Friday. The strengthening winds on Thursday, followed by the potential for downpours on Friday, could trigger an interaction between cooler air arriving from the north/northeast

and the existing hot, humid air.”

The expert also noted the importance of re-checking the timing and expected rainfall volume for Friday 48 to 72 hours in advance, adding, “Forecasts for brief downpours can change rapidly. The Turkish State Meteorological Service (MGM) website for Istanbul also updates its hourly and five-day forecasts. In summary: summer isn’t over yet in Istanbul. Conditions generally look favorable for swimming and outdoor activities over the weekend, while Friday stands out as the one day of the week requiring particular attention.”

When will autumn truly begin?

“October might prove to be the most interesting month of autumn,” said Dr. Güven Özdemir. “The models are particularly noteworthy here. The August update from Copernicus signals a wetter autumn for southern and western Europe. At the same time, there is a high probability that temperatures across much of Europe will remain above normal.”

Özdemir continued: “The Turkish State Meteorological Service (MGM) also forecasts above-normal precipitation across Turkey for October. The likely scenario for Turkey is: a month that is warm, humid, and occasionally very rainy. In other words, temperatures will drop, but the rains will set in. Rather than a classic ‘cool and rainy autumn,’ this could be an autumn characterized by fluctuations: hot, very hot, a sudden cool-down, heavy rain, and then a return to warm conditions.”

News Source: hurriyet.com.tr / 01.09.2026 / İsmail SARI



Lecturer Korkmaz Keskendir made important statements to Ensonhaber for its followers

While the fees and commissions that banks charge their customers for services they provide free of charge have been a subject of debate for years, the current regulations clearly define which fees can be charged.

Experts emphasize that banks cannot charge fees other than those permitted by the Banking Regulation and Supervision Agency (BDDK), and that customers should be informed about all costs before signing a contract.

Korkmaz Keskendir from Istanbul Aydın University reviewed the issue occupying public attention, for Ensonhaber followers.

According to Korkmaz Keskendir's compilation based on various sources, banks now charge fees for some services while ceasing to charge fees for others.

Banks charge various fees and commissions for the services they provide. However, the conditions under which these fees can be charged are determined by the Banking Law, the Bank Cards and Credit Cards Law, the Consumer Protection Law, and the regulations of the Banking Regulation and Supervision Agency (BDDK).

A New Era In Fees And Commissions

In the past, banks could charge certain fees without the customer's knowledge. However,

the Consumer Protection Law, which came into effect in 2013, made significant changes to this practice.

With the new regulations, the fees and commissions that banks can charge have been grouped under specific headings. This makes it more transparent for consumers to know how much they will pay for which service.

Protection Of Consumers.

Yasal düzenlemelerle birlikte tüketicilerin korunmasına yönelik önemli adımlar atıldı.

Buna göre:

Bankalar kendi menfaatleri doğrultusunda yaptıkları işlemler için ek ücret talep edemiyor. / Tüm ücret ve komisyonlar sözleşmede açık şekilde belirtilmek zorunda. / Müşterilere sözleşmenin bir nüshasının verilmesi gerekiyor. / Tüketiciler sözleşme imzalamadan önce anlaşılır şekilde bilgilendiriliyor. / Faiz dışında alınabilecek ücretler BDDK tarafından belirleniyor. / Tüketici işlemlerinde bileşik faiz uygulamasına izin verilmiyor.

Bankaların Alabileceği Başlıca Ücretler

Significant steps have been taken to protect consumers through legal regulations.

Accordingly:

-Banks cannot charge extra fees for transactions they conduct in their own interest. / All fees and commissions must be clearly stated in the contract. / Customers must be given a copy of the contract. / Consumers are clearly informed before signing the contract. / Fees that can be charged other than interest are determined by the Banking Regulation and Supervision Agency (BDDK). / The application of compound interest is not permitted in consumer transactions.

Main fees that banks can charge

According to regulations set by the Banking Regulation and Supervision Agency (BDDK), the main transactions for which banks can charge fees are as follows:

-Loan allocation fee; Appraisal fee; Pawn fee; Account maintenance fee; EFT and wire transfer fees; SWIFT fee; Annual credit card membership fee; Additional card membership fee; Card renewal fee; Cash advance fee; Safe deposit box fee; Invoice payment fee; Archive and research fee; Fees charged for transactions made at ATMs of other banks

Experts say banks cannot charge fees beyond these items.

Expert advice for consumers

Korkmaz Keskendir recommends using internet banking and other digital channels to reduce costs in banking transactions.

When applying for a loan, it is recommended

to get quotes from different banks, compare insurance products, and regularly check your account statements.

Digital banking in more demand

With the advancement of technology in the banking sector, internet and mobile banking applications have become widespread. Transactions conducted through electronic channels are preferred more by consumers because they are both faster and often less costly.

According to experts, the widespread adoption of digital banking reduces transaction costs and lowers fees and commissions by offering consumers alternative service channels.

Emphasis on inspection

Experts state that the banking sector is critically important to the economic system, and emphasize that transparent and effective supervision of the sector is crucial for both consumer protection and the security of the financial system.

Central bank circular protects consumers

Korkmaz Keskendir, a lecturer at Istanbul Aydın University, stated that the “Communiqué on Procedures and Principles Regarding Fees to be Collected from Financial Consumers,” published by the Central Bank of the Republic of Turkey in 2020, introduced important rules regarding banks’ fee and commission practices.

Keskendir notes that banks and other finan-

cial institutions are required to clearly and understandably inform their customers about all fees, commissions, and charges other than interest. Contracts must be prepared in a font size of at least 12 points, a copy must be given to the customer, and the consumer's consent must be obtained for each product or service for which a fee is charged.

According to the regulation, customers must be informed and their consent must be obtained before charging for a service not included in the contract. The burden of proof that consent has been obtained rests with the financial institutions.

Fees are published on websites

Under the regulation, banks are required to publish up-to-date interest rate, fee, and commission information clearly and comparably on

their websites. Furthermore, cost calculation tools for credit products must be made accessible to consumers.

The directive also stipulates that no fees will be charged during the first year if customers request a copy of documents such as contracts, transaction receipts, etc. For documents older than one year, only a reasonable fee may be charged.

Approval required for transaction fees

For instant transactions such as money transfers and bill payments, the customer must be informed and their consent obtained before any fee is charged. It is also mandatory to clearly display the fees charged on the transaction receipts.

Keskendir emphasized that these regulations strengthen the rights of financial consumers and increase transparency in fee processes.



Lecturer Korkmaz Keskendir made important statements to the Kafkas Haber Ajansı, regarding the 2026 YKS admissions

Lecturer Korkmaz Keskendir made important statements to the Kafkas Haber Ajansı, regarding the 2026 YKS (University Entrance Exam) admissions.



International Book Editing

The new book project by Ayten Nahide KORKMAZ, Lecturer in the Foreign Trade (English) Program, sets off for publication.

We are working with PETER LANG, one of the leading institutions in scientific publishing.”Greener Concepts in Economy, Circular Bioeconomy, and Sustainability”. The official contract process for our book project, titled [Project Name], has been successfully completed with the participation of all parties. We are excited to bring this sustainability and innovation-focused work to our readers. We would like to thank all our editors and professors who contributed to the process. We look forward to hearing from all interested professors regarding their valuable work.



Participation In International Congress

Ayten Nahide Korkmaz, a lecturer in the Foreign Trade (English) Program, actively participated in the 11th International Congress on Contemporary Scientific Research, held between July 1 and 7, 2026, with a focus on the Baltic states and Finland. At the congress, I successfully delivered an oral and technical presentation on my study titled “A Green Approach to Circular Bioeconomy, Climate Change, and Environment,” a topic of strategic importance regarding sustainable development and environmental policies. Aiming to contribute to the academic literature on green approaches to the circular bioeconomy and the fight against climate change, this research

was well-received by the congress committee and recognized with a certificate of participation. I extend my sincere gratitude to the Organizing Committee Chair, Dr. Ayhan Dağdeviren, and the committee members for their immense effort in organizing this valuable scientific platform, as well as to all the academics and researchers who enriched the study with their valuable, constructive feedback during my presentation. Here is to future international endeavors as I continue to shape my academic work in green economy and sustainability with this renewed motivation...



A snapshot from the technical visit to the 3DY R&D Electronics company, conducted to foster industry collaborations within the scope of the 3+1 Education Model.

Industry Visit to 3DY R&D Electronics Company Conducted Within the Scope of the 3+1 Education Model

Asst. Prof. Dr. Hamdi Emre BAĞIRAN and Lecturer Yasemin SELİM SARAL met with Olcay YULTAY, an Electrical Engineer and Deputy General Manager of 3DY R&D Electronics, to strengthen collaborative efforts enabling students to receive high-quality workplace training within the industry under the “3+1 Education Model” set to be implemented at Anadolu Bil Vocational School’s Electrical Program.

During the meeting, discussions were held regarding the planned industry collaboration network and internship protocols designed to allow students to complete one semester of applied training in a workplace setting, in line with the 3+1 Education Model. In this context, views were exchanged regarding the company’s intern acceptance processes, the technical knowledge and skills expected of students, and expectations concerning the workplace training process.

The visit also included an on-site inspection

of the production facility and the gathering of information about the company’s fields of activity, the electronic systems it develops, and its production processes. This allowed for an assessment of potential work areas for students during their workplace training, while also providing an opportunity to closely observe the sector’s current needs and expectations.

Furthermore, the meeting addressed potential future joint initiatives aimed at developing sustainable university-industry cooperation. Possible collaborations were evaluated, including organizing technical seminars for students, updating course content to align with current industry needs, conducting sectoral consultancy processes, and including the company representative in the Electrical Program’s Advisory Board.

The visit concluded as a productive session dedicated to fostering industry partnerships that support students’ workplace training and strengthening the Electrical Program’s practice-oriented educational approach.



A snapshot from the technical evaluation meeting held with representatives of NETES regarding the development of the laboratory infrastructure for the Anadolu Bil Vocational School's Electrical Program.

A Technical Evaluation Meeting Was Held with NETES Regarding the Laboratory Infrastructure of the Electrical Program

As part of the efforts to establish the laboratory infrastructure for the planned Electrical Program at Anadolu Bil Vocational School, a technical evaluation meeting was held with sales representatives from NETES, the Turkish distributor for leading global brands in measurement and testing equipment.

Assistant Professor Hamdi Emre BAĞIRAN and Lecturer Yasemin SELİM SARAL, who are leading the establishment of the Electrical Program, attended the meeting. During the discussion, the laboratory applications and planned experiment content for the program were reviewed, and information was exchanged regarding next-

generation measurement technologies and modern laboratory equipment suitable for educational processes.

Furthermore, the meeting addressed feedback received during the recently concluded MEDEK evaluation process concerning laboratory infrastructure development; in this context, the minimum hardware and technical infrastructure requirements for the “Alternating Current (AC) Circuits Laboratory”—newly added to the curriculum—were assessed. Ideas were exchanged on how to design the planned laboratory to meet current industry needs, and potential areas for collaboration were explored.

2026 IEEE WIE DAY

"ENERGIZE: Women Leading the Future of Power, Energy and Innovation"

Fatemeh K. Purian
IEEE PES Women in Power Region 8 Representative

Dr. Rosa Serrano
IEEE PES Women in Power Region 8 Representative

Gaurav Pathak
Communication Lead and R10 Rep, IEEE WIE DEIS

Technology with Purpose:
Innovate Responsibly, Inspire Globally,
Lead with Integrity

Date : 28 June 2026
Time: 4:00 PM CET

#IEEEWIEDAY

International Pride for Istanbul Aydın University: Lecturer Fatemeh Khosravi Purian Served as the Region 8 Representative at the 2026 IEEE WIE Day

Lecturer Fatemeh Khosravi Purian from the Istanbul Aydın University Anadolu Bil Vocational School's Electrical Program proudly represented our university on the international stage by participating as an official speaker and the IEEE PES Women in Power Region 8 Representative at the 2026 IEEE WIE Day (IEEE Women in Engineering Day) event, organized by IEEE—one of the world's most prestigious engineering organizations.

Held under the theme “ENERGIZE: Women Leading the Future of Power, Energy and Innovation,” this global event highlights the pioneering roles and leadership of women in the fields of engineering, energy systems, and technological innovation.

At this significant summit held on June 28, 2026, the philosophy of “Technology with Purpose: Innovate Responsibly, Inspire Globally, Lead with Integrity” was explored. Lecturer Fatemeh Khosravi Purian's participation in this global platform as the Region 8 (Europe, Middle East, and Africa) representative once again demonstrated the international vision of Istanbul Aydın University's academic staff and their active role in global engineering networks.

We congratulate Lecturer Fatemeh Khosravi Purian for this distinguished representation, which adds a new achievement to our university's international academic successes, and we wish her continued success.



A Strong Step Toward Industry Collaboration from the Food Technology Program

The Food Technology Program at Istanbul Aydın University Anadolu BİL Vocational School signed “Workplace-Based Vocational Training Cooperation Protocols” with 11 companies in August, aiming to strengthen students’ professional knowledge and skills through industry experience.

Protocols were signed with Plus Food Gıda, Bakeground Gıda Ürünleri, Nişantaşı Petunya Gıda, Sekmanlar Gıda, Doğan Catering Gıda, Yuf-San Yufka Gıda, Can Yemek, Kemahlı Dondurma, StarFood Gıda, Tekba Gıda, and Nanolab Laboratuvar as part of these collaborations, which were facilitated by program faculty members

Dr. Ayla Ünver Alçay, Dr. Cansu Akgül, Dr. Ekin Dinçel Kasapoğlu, Dr. Nuray Can, and Lecturer Meryem Badayman.

These collaborations aim to enable students to gain firsthand insight into various sectors of the industry, enhance their theoretical knowledge through practical application, and prepare more effectively for their professional lives after graduation.

By strengthening university-industry partnerships, the Food Technology Program continues to offer its students an education environment that is practice-oriented and aligned with industry needs.



Participation in the 13th International Congress on Modern Sciences in Asia

Our academics participated in the 13th International Congress on Modern Sciences in Asia, bringing interdisciplinary approaches to the discussion of food safety and sustainable technologies.

At the congress, Assistant Professor Ayla Ünver Alçay presented on the adaptation of automotive coating technologies to the food packaging industry and sustainable preservation methods,

in a talk titled “Automotive Coating Technologies Adaptation to Food Packaging Industry: Sustainable Food Preservation Methods.” Meanwhile, Lecturer Remziye Kızıllırmak addressed the impact of vehicle exhaust emissions on food production and food safety in her presentation titled “Effects of Vehicle Exhaust Emissions on Food Production and Food Safety.”



Academics from the Food Technology and Automotive Technology programs participated in the congress

Academics from our university's Food Technology and Automotive Technology programs participated in the 5th Ephesus Congress on Current Developments in Scientific Research—held in Izmir on August 11–12, 2026—by delivering interdisciplinary presentations.

Asst. Prof. Dr. Ayla Ünver Alçay presented a paper titled “Agro-Food Wastes as Biocomposite Materials in the Automotive Sector: Current Approaches and Trends,” addressing the conversion of food waste into sustainable biocomposite materials for the automotive industry.

Lecturer Remziye Kızıllırmak shared her study titled “Effects of Electric Vehicle Battery Manufacturing Plant Emissions on Food Production and Food Safety,” in which she examined the impact of emissions from electric vehicle battery factories—associated with the green transition process—on agriculture and food safety.



Öğr. Gör. Muhammet AYDIN ve Öğr. Gör. Gülnur SONA'dan Troya'da Antik Mühendisliğin İzinde

As part of a technical site visit conducted at the Ancient City of Troy by Lecturers Muhammet Aydın and Gülnur Sona from the Istanbul Aydın University Anadolu BİL Vocational School's Construction Technology Program, the ancient road systems, water conveyance structures, and urban planning concepts of the era were examined on-site.

This academic and technical initiative aims to enhance the professional knowledge and awareness of Anadolu BİL Vocational School students, link the knowledge acquired in theoretical courses with historical engineering practices, and facilitate a comparative evaluation of engineering solutions employed across different eras.

The observations and insights gained in the field provide valuable examples for courses, projects, and practical work in professional areas such as transportation, road construction, infrastructure, drainage, water management, and urban planning. Examining the engineering solutions developed in Troy thousands of years ago—which took terrain conditions into account—will help improve students' technical perspectives, problem-solving abilities, and skills in interpreting engineering practices.

Such field visits and academic examinations aim to contribute to students' professional development and practice-oriented education by bridging the engineering heritage of the past with contemporary applications.



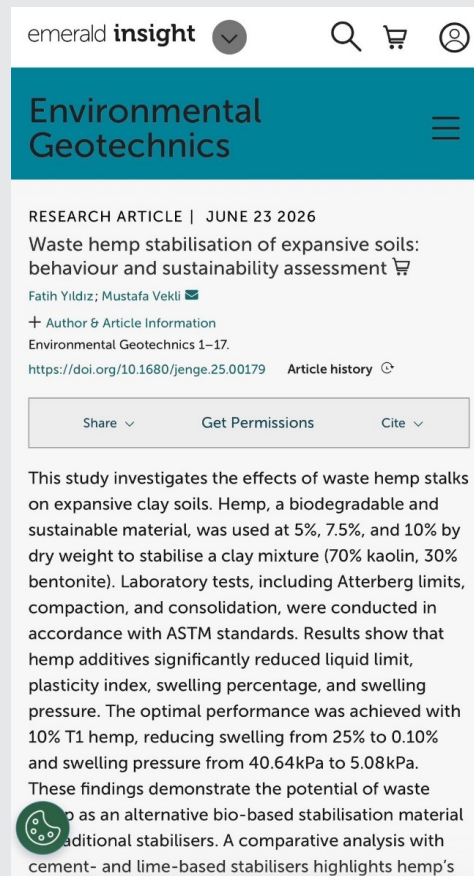
Technical Visit to the Sakarya City Hospital Construction Site by the Construction Technology Program

Lecturer Fatih Yıldız from the Istanbul Aydın University Construction Technology Program paid a technical visit to the construction site of the Sakarya 1000-Bed City Hospital, a project currently being executed by ATR Yapı.

During the visit, the project's ongoing construction activities and on-site practices were examined firsthand. Lecturer Fatih Yıldız received information from site officials regarding the project's general operations, implementation processes, and the work being carried out, while also taking the opportunity to evaluate various stages of the project through site inspections.

In addition to the technical inspections, discussions were held to foster university-industry collaboration. These talks focused on exchanging ideas regarding potential technical trips, internship opportunities, field practice sessions, and future joint projects designed to support the professional development of Construction Technology Program students.

The visit aims to expand opportunities for students to complement their theoretical knowledge with practical field experience and to develop new avenues for collaboration that strengthen the interaction between the university and the industry.



International Academic Publication Success from the Construction Technology Program

A scientific study titled “Waste Hemp Stabilisation of Expansive Soils: Behaviour and Sustainability Assessment,” co-authored by Fatih Yıldız—a lecturer in the Istanbul Aydın University Construction Technology Program—and Assoc. Prof. Dr. Mustafa Vekli, has been published in the international peer-reviewed journal *Environmental Geotechnics*.

Environmental Geotechnics, which features international publications in the field of geotechnical engineering, is a respected journal indexed in major academic databases; it holds a Q1 ranking in Scopus and a Q3 ranking in Web of Science.

This publication is significant for increasing the visibility of scientific research conducted within the Construction Technology Program on international academic platforms. It also serves as an indicator of the program’s commitment to research, scientific output, and high-quality publication activities. The Construction Technology Program continues its efforts to introduce academic work to the international scientific community, keep pace with current engineering approaches, and ensure that the scientific knowledge generated contributes to the academic literature.

Arabian Journal for Science and Engineering
https://doi.org/10.1007/s13369-026-11626-y

RESEARCH ARTICLE-ELECTRICAL ENGINEERING



DOHO: A Data-Oriented Hybrid Optimization Technique for Squirrel Cage Induction Motors

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Received: 1 October 2025 / Accepted: 18 August 2026
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Abstract

Electric machine design optimization is challenging due to conflicting objectives and complex, nonlinear relationships among parameters. Conventional optimization methods suffer from poor generalization capability due to limited data availability or incur high computational costs. This study presents a hybrid methodology that integrates Artificial Neural Network and Snake Optimization Algorithm (SO) for the design optimization of low-voltage squirrel cage induction motors. In the first stage, a Recurrent Neural Network is trained on 1164 motor dataset, whose 11 input features are sourced from manufacturer catalogs and whose 28 mechanical output features are derived through analytical computations, spanning a power range from 4 kW to 900 kW to predict the initial design parameters. In the second stage, these predictions serve as initial vectors for the SO Algorithm, which are optimized toward efficiency objectives through the adaptive constraint strategy. This hybrid framework does not require experimental procedures or high computational expenditure. It offers high generalizability, owing to its ability to learn from a diverse dataset. The hybrid pattern, which couples a deep learning predictor with a metaheuristic refinement stage under engineering feasibility constraints, can recur across domains where labeled data are sparse and physical models are available. This methodology combines the rapid prediction capability of machine learning with the global search ability of metaheuristic optimization, enabling fast convergence to feasible optimal design parameters. In scenarios where access to critical design data is limited, this approach provides a reliable starting point for processes such as drive operations and fault diagnosis, thereby contributing to industrial applications.

Keywords Induction motor · Design optimization · Hybrid methodology · Machine learning · Snake optimizer · Metaheuristic optimization

1 Introduction

The design optimization of electrical machines holds critical importance in modern engineering applications. Rising energy costs, environmental concerns, and technological

developments necessitate electrical machines to possess more sustainable characteristics. In this context, optimization processes enable the achievement of fundamental objectives such as increasing energy efficiency, providing high-performance solutions, producing long-lasting products, and reducing manufacturing costs [1, 2]. In addition to these objectives, it becomes possible to customize machines optimally for the specific requirements of different operating domains such as electric vehicles, aviation systems, and energy generation facilities.

In the optimization of electrical machines, deterministic methods such as Conjugate Gradient Algorithm and Sequential Quadratic Programming, as well as stochastic methods like Genetic Algorithm (GA) and Particle Swarm Optimization (PSO), can be fundamentally utilized. These methods can evolve into multi-objective algorithms by focusing on multiple cost functions or into hybrid approaches by integrating different methods with each other [3–7]. In this scope, the

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Published online: 29 August 2026



Springer

Assistant Professor Sema Nur İpek's Article Published in an SCIE-Indexed Journal

The article titled “DOHO: A Data-Oriented Hybrid Optimization Technique for Squirrel Cage Induction Motors”—co-authored by Assistant Professor Sema Nur İpek (from the Electricity Program) and Yıldız Technical University faculty members Prof. Dr. Nur Bekiroğlu and Assistant Professor Murat Taşkiran—was published in August in the *Arabian Journal for Science and Engineering*. This journal is indexed in SCIE and holds Scopus Q1 and WoS Q2 rankings. The study proposes a novel, two-stage hybrid method combining a Recurrent Neural Network (RNN) with the Snake Optimizer algorithm for the design optimization of low-voltage squirrel-cage induction motors. In the first stage, an RNN—trained on a dataset containing data from over a thousand induction motors—predicts the motor's mechanical design parameters based on given nominal values. Subsequently, these predictions serve as initial vectors for the Snake Optimizer algorithm, which operates using an adaptive constraint strategy; this enables the algorithm to rapidly and feasibly determine optimal design parameters that meet efficiency targets.



Assistant Professor Türkan Melis Parlak's Article Published in the Journal of Feminist Imagination Academic Research

An academic study authored by Asst. Prof. Dr. Türkan Melis Parlak was published in the August special issue—themed “Feminist Approaches in Sports”—of the journal *Feminist Tahayyül Akademik Araştırmalar* (Feminist Imagination Academic Research), which is indexed in the ULAKBİM TR Index.

Titled “Sport and the Regime of Bodily Transparency: An Analysis of Female Athletes’ Right to Privacy from a Human Rights Perspective,” the article highlights that the right to privacy in the realm of sports is not merely a restricted phenomenon

but a right redefined within a performance-based regime. Through the concepts of a “regime of bodily transparency” and “compulsory transparency,” the study examines in depth how the athlete’s body is rendered constantly visible through the generation of biometric data and institutional surveillance mechanisms. The research makes a significant contribution to the literature by demonstrating—from legal and human rights perspectives—that sport is not a neutral arena of competition, but rather a biopolitical order where privacy is reproduced and structured by gendered mechanisms of surveillance.

Architectural Restoration Program



Event Participation

Lecturer Dilek Tezcan from the Istanbul Aydın University Architectural Restoration Program participated in the international exhibition titled “The Symbolic Language of Turkish Motifs: A Legacy for the Future Through the Language of Flowers”—organized by Istanbul University—with a stained-glass piece titled “Hırçın Çiğdem” (Wild Crocus).





Adalar Kültür Derneği
Büyükada'da MAVİ – PEMBE
DÜŞLER Karma Sergi

Ayşenur Özşankur
 Erhan Şanal
 Erdal Yorgancı
 Esen Hepgüler
 Fehmi Bildik
 Gülgün Kılan Tekin
 Gülnaz Yılmaz Tezcan
 Deniz Tokgöz
 K. Muzaffer Gençer
 Kıymet Ataoğul
 Nurcan Aral
 Nurşen Turhal Mengeş
 Selda Çapraz
 Şermin Kavaklıoğlu
 Şaheser Özbalçık Yasin
 Şule Özdemir Kılıç
 Tayfun Demircan
 Tülin Akın
 Ömür Sevilay Perçin
 Zekiya Yılmaz

01 – 07 Ağustos 2026
 Açılış: 16:30



Çınar Cd. No:86
 Büyükada

Küratör
 Ayşenur Özşankur

Lecturer Muhsine Gülgün Kılan Tekin Achieves Another Success in Art.

Lecturer Muhsine Gülgün Kılan Tekin from the Fashion Design Program contributed her artworks to the “Blue – Pink Dreams” (Mavi – Pembe Düşler) Group Exhibition, organized by the Adalar Culture Association in Büyükada.

Held in Büyükada from August 1 to August 7, 2026, and curated by Ayşenur Özşankur, the exhibition brought together works by numerous artists, including Lecturer Muhsine Gülgün Kılan Tekin.

We congratulate our faculty member on this valuable contribution and wish her continued success in her artistic journey.





Technical Visit Aimed at Developing Laboratory Infrastructure

Lecturer Ramazan Çoştı from the Anadolu Bil Vocational School Automotive Technology Program conducted a technical visit to the Sakarya University of Applied Sciences Engine Test Laboratory. The visit aimed to enhance the program's practical training capacity, strengthen its laboratory infrastructure, and expand educational opportunities focused on students' vocational practical skills.

During the visit, the Engine Test Laboratory's existing physical and technical infrastructure was examined on-site. Detailed information was gathered regarding the laboratory's engine test systems, dynamometer infrastructure, measurement and data acquisition systems, experimental setups, and auxiliary equipment. Furthermore, the experimental methods used for engine performance and emission testing, the testing processes, and practices regarding the use of laboratory facilities in educational activities were evaluated.

Particular emphasis was placed on laboratory practices that enable students in the field of automotive technology to reinforce their theoretical knowledge through hands-on work. Information was obtained regarding engine performance experiments, measurements under various operating conditions, the acquisition and evaluation of experimental data, and studies focused on analyzing engine performance and emission characteristics.

Additionally, assessments were made regarding the technical equipment, engine test systems, measurement devices, data acquisition tools, and experimental setups required for establishing and upgrading the laboratory infrastructure, as well as the technical requirements for the laboratory's effective utilization. Based on these observations, evaluations were conducted regarding potential initiatives to improve the laboratory facilities within the Anadolu Bil Vocational School Automotive Technology Program and to enhance the effectiveness of the existing practical training infrastructure. The technical visit aims to enhance the quality of practical training activities within the Automotive Technology Program, diversify laboratory practices, and improve students' professional competencies regarding engine technologies and testing and measurement systems.

The knowledge, observations, and experiences gained during the visit are expected to guide future efforts to upgrade the program's laboratory infrastructure, develop educational experimental setups, and strengthen the technical foundation of practical courses. Ultimately, the initiative seeks to foster a practical training environment where students can reinforce their theoretical knowledge with current testing and measurement practices, hone their professional skills, and better prepare for the evolving needs of the automotive industry.



Company Visit Focused on Industry Collaboration

Lecturers Ramazan Çoştı and Oğuzhan Aslan from the Automotive Technology Program at Anadolu Bil Vocational School met with representatives from Bakırcı Otomotiv Sanayi ve Ticaret Ltd. Şti. to discuss enhancing the program's laboratory infrastructure, strengthening practical training opportunities, and fostering university-industry collaboration.

During the meeting, the parties discussed potential initiatives to upgrade the Automotive Technology Program's existing laboratory infrastructure in line with current industry technologies and needs. Discussions focused on creating educational environments where students can apply the knowledge gained in theoretical classes, as well as on the acquisition of modern vehicle systems, automotive components, testing and measurement devices, diagnostic equipment, and technical hardware for training purposes.

The meeting also included evaluations regarding the integration of engine and powertrain systems, automotive electrical and electronic systems, mechanical and electromechanical vehicle components, and industry-standard testing, measurement, and diagnostic systems into the practical training curriculum. Emphasis was placed on the benefits of introducing current industry equip-

ment and technologies into the laboratory setting for the development of students' professional knowledge and skills.

In addition to laboratory infrastructure improvements, the meeting addressed potential joint initiatives within the scope of university-industry collaboration. Discussions covered activities such as incorporating the expertise and experience of industry representatives into the educational process, organizing technical trips and industry-related events, facilitating interactions between students and industry professionals, and strengthening the program's relationships with external stakeholders. The meeting also addressed cooperation opportunities enabling students to receive practical training at companies within the scope of the "3+1 Applied Training Model" and workplace-based vocational training processes. Views were exchanged on collaboration models designed to help students familiarize themselves with real-world work environments, observe current automotive industry practices firsthand, enhance their technical knowledge and skills, and gain professional experience prior to graduation.

Furthermore, the technological transformation within the automotive sector, the evolving need for a skilled workforce, and the

professional competencies expected of graduates were evaluated. Emphasis was placed on the importance of aligning educational activities with industry expectations and improving students' practical skills regarding current automotive technologies.

This meeting aims to foster collaboration between the Anadolu Bil Vocational School's Automotive Technology Program and Bakırcı Automotive Industry and Trade Co. Ltd., while also strengthening the program's laboratory infrastructure, diversifying practical

training opportunities, and providing students with greater exposure to the industry's latest technologies.

Through meetings and collaborations with industry stakeholders, the Automotive Technology Program aims to upgrade its laboratory infrastructure in line with technological advancements, strengthen the practical component of its educational activities, and ensure students are equipped with the professional competencies required to meet industry expectations upon graduation.



Promotional Visits from the Yacht Captaincy Program to Maritime High Schools

Faculty members from the Istanbul Aydın University Anadolu BIL Vocational School's Yacht Captaincy Program visited all maritime high schools in Istanbul on August 4, 2026, to meet with students.

During these visits, students were informed about the Yacht Captaincy Program's curriculum, practical training and internship opportunities, educational facilities, and post-graduation career paths. The presentations also covered the maritime sector's current employ-

ment landscape, required certifications, and career progression, while addressing questions raised by the students.

These visits fostered a productive environment for strengthening the transition between secondary and higher education and helped students make more informed decisions regarding their academic paths in the maritime field.

We extend our gratitude to the school administrations and their esteemed teachers for their gracious hospitality and interest.



The Yacht Captaincy Program Held Meetings with Two Separate Institutions Regarding a Cooperation Protocol

The Yacht Captaincy Program at Istanbul Aydın University's Anadolu BİL Vocational School held protocol discussions with Ziya Kalkavan Maritime Vocational and Technical Anatolian High School and Friends Marin on July 29, 2026, and August 7, 2026, with the aim of establishing a formal framework for educational and industry collaborations.

During these discussions, the parties evaluated opportunities for student internships

and field practice, practical training activities, and the involvement of industry representatives in courses and seminars. They also addressed the sharing of educational and laboratory facilities, as well as informational activities to be supported by the program's academic staff. A consensus was reached regarding the establishment of a sustainable cooperation model between the institutions.