

# NEWS FROM SABANCI UNIVERSITY

DECEMBER 2023

## Sabancı University is the Leader in Türkiye in Research Quality

*According to the "2022 Performance Ranking of Research Universities" prepared by the Council of Higher Education (YÖK), Sabancı University ranked first among all research universities with a score of 34.74 in the "Research Quality" category.*

The Annual Evaluation Meeting of Research Universities was held in Izmir, hosted by Ege University, on Tuesday, November 21, 2023. Presidents and Vice-Presidents of Research Universities, along with YÖK President Erol Özvar, attended the meeting, at which the annual performances of research universities were evaluated.

Sabancı  
University  
is the Leader  
in Türkiye  
in Research  
Quality

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## "Phase Transition" in Artificial Intelligence was Discussed at Sabancı University

*Sabancı University hosted Ece Kamar, a Partner Research Area Manager and Deputy Laboratory Director at Microsoft Research, who carries out important work in the field of artificial intelligence, at a special event.*



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## Sabancı University Executive MBA Program is Among the Best Business Schools in the World

*Sabancı Business School was ranked among the top 100 business schools in the "World's Best Executive MBA Programs" 2023 list created by the Financial Times (FT). Sabancı University, which achieved its highest success so far by ranking 81<sup>st</sup>, ranked first in Türkiye in 8 different categories.*



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According to the results of the 2022 Performance Ranking of Research Universities shared at the meeting, where our President Yusuf Leblebici was present, our University maintained its leadership among all research universities with a score of 34.74 in the "Research Quality" category. In the general rankings, Sabancı University ranks third among all research universities in Türkiye, as it did last year.

Making an evaluation of the subject, **Yusuf Leblebici** stated that Sabancı University has carried out Türkiye's pioneering and distinctive research studies with its faculties and center. He continued, "According to October 2023 figures, 274 projects with a total size of 856 Million TL are being carried out at our university. We started 97 of these projects this year. In terms of total resource size, 56 percent of our projects are international projects. We strive to be among the best not only in Türkiye but also in the world in the field of research. We will continue our success, especially in research quality, by maintaining the importance we attach to this field in the coming years."



Sabancı University was included in the Research-Focused Mission Differentiation Program carried out by YÖK in 2021. There are 20 state universities and 3 foundation universities within the scope of the program.

Performance indicators considered in the Research Quality dimension include the following:

- Publication Rate in the Top 50% in InCites Journal Impact Factor
- Publication Rate in the Top 10% of InCites Journal Impact Factor
- Number of Science Awards
- Amount of Funds Received Within the Scope of Technology Platform Project Supported within the Scope of TÜBİTAK 1004 Program
- Open Access Percentage of Publications
- Performance in Global Overall Academic Achievement Rankings
- Number of Accredited Programs
- Number of International PhD Students
- Number of PhD Graduates
- Number of PhD Students

The top 6 Turkish universities in the Research Quality category and their scores (out of a maximum of 40 points) are listed below:

- |   |  |
|---|--|
| 1. <b>Sabancı University 34.74</b>        | 4. Boğaziçi University 28.62           |
| 2. Koç University 32.00                   | 5. Bilkent University 28.36            |
| 3. Middle East Technical University 30.62 | 6. Istanbul Technical University 28,29 |

## Senem Aydın Düzgüt Has Been Named a Richard von Weizsacker Fellow

Senem Aydın-Düzgüt, Professor of International Relations at the Faculty of Arts and Social Sciences and Academic Affairs Coordinator of the İstanbul Policy Center, has been named a Richard von Weizsacker Fellow by the board of the Robert Bosch Academy in Berlin.

Weizsacker Fellows are selected through a rigorous nomination process as the academy identifies outstanding personalities who actively shape the political and social dialogue at the international level and offers them a residency of several months in Berlin.

The fellowship is considered one of the most prestigious in Germany where fellows include politicians, policy makers and renowned scholars. The Richard von Weizsacker Fellowship was established in honor of the former Federal President, who served for many years on the Board of Trustees of the Robert Bosch Stiftung.



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The categories in which Sabancı University came first from Türkiye were as follows:

- Career development rate,
- Average work experience,
- Achieving career goal after graduation,
- Number of female members on advisory boards,
- Rate of faculty members with doctoral degrees,
- Rate of articles published in FT 50,
- ESG rate in the field of sustainability,
- Satisfaction rate of our graduates.

Nihat Kasap, Dean of Sabancı Business School, stated that they will continue to offer international education experience with course content delivered at world standards in Türkiye, and said:

"Our success this year made us very happy. We achieved world-class education by achieving superior success in different fields in the list of the world's most prestigious schools. While we share the success of our program with all our academic and administrative staff, I know that the greatest success is our Executive MBA graduates, and I believe that we will continue to share various national and international achievements with our graduates and colleagues in the coming years."



## About the Financial Times Rankings

Only business schools with AACSB or EQUIS accreditation can apply to the Financial Times Executive MBA rankings. In its global rankings, the Financial Times evaluates schools based on 16 criteria, including career development and salary increases of graduates, gender and citizenship breakdown of students, faculty and advisory board members, FT 50 publications of faculty members, and corporate social responsibility activities. The 16 selection criteria that make up the Financial Times rankings consist of data collected through a survey conducted with Sabancı University EMBA Program graduates.

## Selected to Join Academia Europaea as an Invited Member, Our President Yusuf Leblebici Attended the New Members Ceremony in Munich

*The Academia Europaea New Members Ceremony, organized for scientists selected to join Academia Europaea due to their outstanding academic achievements, took place in Munich on October 10, 2023. Our President Yusuf Leblebici, who was selected to join the academy, also took part in the ceremony.*

Scientists, including Yusuf Leblebici, who had newly joined the world's most prestigious academy, were welcomed at the podium by European Academy President, Marja Makarow. Within the scope of the 3-day event bringing together the leading scientists of the European continent, presentations were made on subjects involving science and academic life.

Among the total 5362 members of Academia Europaea, the world's most prestigious Academy of Humanities, Letters, Law and Sciences, there are 85 Nobel laureates and 20 scientists who have received the Fields Medal. Sabancı University is represented by 5 faculty members in Academia Europaea, which has a total of 27 members from Türkiye.



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**Sabancı University President Yusuf Leblebici made the opening speech of the event attended by Güler Sabancı, the Founding Chair of Sabancı University Board of Trustees, held at the Sakıp Sabancı Museum. Emphasizing the importance of artificial intelligence, Yusuf Leblebici said the following:**

“The scientific world has been working for nearly 50 years to develop models that resemble neural networks in the human brain, consisting of approximately 86 billion interconnected cells. The reason why progress in this area was not as fast as desired until recently was that there was not enough 'data' to 'train' these models. The launch of the first smartphone in 2007 is an important milestone in this regard. With these devices, everyone has a data generator in their pocket. All of a sudden, there was a huge repository of data containing billions of images, texts, and materials that could be used to train machines. The main factor driving the transformation in the field of artificial intelligence, which we have witnessed in recent years, has been the 'data pool' created by smartphones and the internet.”

Stating that artificial intelligence has become a dominant element in a very short time, Yusuf Leblebici said, “Today, artificial intelligence is not only capable of solving the questions asked, but also creating hallucinations. It is gradually turning into a human-like structure. We cannot move on without asking the question of what will happen to humanity. Because we are developing a "silicone life form". Artificial intelligence will either be a competitor or a helper to us humans as carbon-based life forms.”

## Everyone will be able to develop artificial intelligence applications

Ece Kamar, a Partner Research Area Manager and Deputy Laboratory Director at Microsoft Research, based in Redmond (Washington), USA, stated she was glad to make a speech at Sabancı University, from which she graduated, and talked about her work in the field of artificial intelligence and the current state of technology. Emphasizing that the new phase experienced in the field of artificial intelligence in recent years is a great revolution, Kamar said: “My mission is to use artificial intelligence for the benefit of society and individuals, and at the same time to minimize the risks that this technology can bring. During my 13 years of work at Microsoft Research, I witnessed the development of artificial intelligence technologies. We saw huge development in deep learning technology between 2016 and 2018. It achieved human-like capabilities in terms of seeing in 2016, speaking in 2017, translation and reading comprehension in 2018.”

Pointing out that there has been a serious leap in the coding skills of artificial intelligence models since 2021, Kamar pointed out that there has been a radical change in the development of artificial intelligence systems with new algorithms. Kamar shared the following example on ChatGPT, one of the current artificial intelligence systems: “ChatGPT was able to write 50 lines of code last year. However, this code was not very reliable and had some errors in it. We see that GPT-4, which was introduced this year, can write 500 lines of code correctly. We care about the transition in code skill, because it shows us that the system can also improve itself in terms of writing code. The way to bring human logic to these systems is not by learning human language, but by learning the code language. As these systems improve their

coding skills, they will be able to acquire new skills. Now everyone will be able to develop artificial intelligence applications with very little effort and expertise.”

## Systems that can learn from their prejudices have begun to form

Kamar said that direct data entry to the ChatGPT application was completed in 2021, and that these systems are open to errors, especially in training data, and therefore, an important part of the investments to be made in this field should be on the effects it will create in the social sense. Ece Kamar, who added that artificial intelligence also contains a lot of prejudice because it learns from the data produced by humans, gave the following example: “For example, when we ask artificial intelligence to complete some sentences, we can see gender bias. When we give a sentence such as “He is a doctor, she is a...” in English, AI completes the sentence as “...a nurse”, or when we say “he is smart, ...” as “...she is beautiful”. These are well-known examples of social prejudices in early applications. ChatGPT4 can also give biased responses, but it can be made to analyze those responses and find its own biases.”

Expressing her concerns about the development of artificial intelligence, Ece Kamar stated that these models can act manipulatively and can be used for hostility, emphasizing that regulations are important in protecting society and that more studies should be done to understand and measure the capabilities of models.



## The 2023 Graduate Commencement Ceremony Was Held

*Sabancı University's 21st undergraduate and 24th graduate commencement ceremony was held on the University's Tuzla campus. Founding Chair of the Sabancı University Board of Trustees, Güler Sabancı, Sabancı University President, Yusuf Leblebici, and faculty members attended the ceremony in which 1008 students graduated from the Faculty of Engineering and Natural Sciences, the Faculty of Arts and Social Sciences, and Sabancı Business School.*



Founding Chair of the Sabancı University Board of Trustees, Güler Sabancı started her speech by saying 'Welcome' to the graduates with 'AI Güler Sabancı' that simulated her own voice.

Güler Sabancı once again expressed her condolences to the relatives of our citizens who lost their lives in the earthquake disaster in February, and to our entire country, and said, "This disaster once again showed us the importance of unity, and most importantly, solidarity. We witnessed great solidarity from civil society. Our students took part in support activities in the earthquake area under the leadership of our Civic Involvement Projects. Sabancı Group and Sabancı University participated in many support activities in the earthquake zone." Güler Sabancı said that the name of Sabancı University student Neris Ece Öz, who lost her life in the earthquake, will be kept alive with the new scholarship fund launched to support earthquake-affected students.

### Her speech was prepared by artificial intelligence

In her speech prepared by artificial intelligence technologies, Güler Sabancı said, "I am sure this example, which we are experiencing for the first time today, will become very common in the future". She continued as follows: "Artificial intelligence will change our lives to a great extent and will play an important role in many fields. We see that artificial intelligence technologies have great potential in areas such as health, education, energy and sustainable development. Our young people's leadership and creative solutions in these areas will make our future brighter and more sustainable."

Pointing to the "Future of Jobs Report" of the World Economic Forum, of which the Sabancı University Competitiveness Forum is the partner in Türkiye, Güler Sabancı stated that the roles that will grow the most in the upcoming period

will be in areas such as artificial intelligence, machine learning, sustainability and cyber security. She continued: "The rate of those who think that emerging technologies such as big data and artificial intelligence will create new business areas as well as transforming companies and business areas is 55 percent in Türkiye and 51 percent in the world. Companies that are open to innovation in our country will, as always, be pioneers in adapting to new technologies. According to the same report, 23 percent of existing jobs will change. Those who will undertake these jobs will be artificial intelligence-based robots, which are referred to as 'silicon life forms' in scientific terminology. We should consider the developments in this area not as a threat, but as an opportunity. The speech I am giving you today was produced by one of the most popular artificial intelligence tools. Of course, we edited it."



## “Artificial intelligence is not yet egalitarian in terms of gender”

Emphasizing that even artificial intelligence is not yet egalitarian in terms of gender, according to the information she obtained from the experts on the subject, Güler Sabancı said, “Artificial intelligence is said to be a male-dominated environment. I believe that you, who grew up with an understanding based on gender equality, can contribute a lot to this environment. Your duty is to create value for the benefit of humanity by using artificial intelligence in an ethical and equitable way. Do not forget that as individuals who grew up in a free environment by asking questions, it is you who should ask the right questions and produce solutions”.

Noting that Sabancı University graduates grew up in a university that embraces the universal values of contemporary civilizations such as freedom, human rights and social equality and believes in the superiority of science, Güler Sabancı also emphasized the new century of our Republic and quoted the following words of our great leader, Atatürk, “Young people, you are the ones who strengthen and sustain our courage. With the upbringing and culture that you receive, you will be the most valuable example of human value and patriotism.”

## “The number of students from the first 1000 increases extensively”

In his speech to the graduates, Yusuf Leblebici, Sabancı University President, said: “We have not compromised or slowed down in the comprehensive breakthrough and transformation process that we have been going through for the last 5 years as a university. Exciting achievements await us in this new era, in which our institution has further increased its assertiveness throughout the country and the world, and raised the bar even higher.”

Stating that according to the university exam results, the number of students admitted to Sabancı University from the top 1000 has almost tripled in 5 years, Yusuf Leblebici continued as follows:

“Thanks to our distinctive and quality education system, we aim to adapt quickly to the choices of our students and to train more students in the most sought-after disciplines. Currently, we are the university that graduates the highest number of computer engineers every year among all universities in Türkiye. I am proud to emphasize that we are the only

university in Türkiye that can achieve this without applying a quota in any of our undergraduate programs. We are pleased to see that 97% of our graduates start their careers in the sector of their choice as soon as they receive their diplomas, or they can continue their postgraduate education in the country of their choice. More than 22% of Sabancı University graduates continue their achievements abroad in leading companies and organizations around the world. We are proud of our graduates who have established their own businesses after graduation, achieved worldwide success, and are at the forefront of the world of science and art. Our goal is not only to be the best in Türkiye, but also to become a real research university that is recognized and appreciated all over the world. “



Stating that they have continued to take steps to enrich the education and research infrastructure of the university in recent years, Leblebici said, “We carry out Türkiye's pioneering and prominent research activities in our faculties and centers, and we receive strong project support from domestic and foreign sources for these efforts. The fact that we have close to 60 million dollars support for our active research projects gives us strength.”

At the ceremony, **Dora Akbulut, the highest-ranking student in the Faculty of Engineering and Natural Sciences, Mert Ekici, the highest-ranking student in the Faculty of Arts and Social Sciences , and Ahmet Ali Sancaktaroğlu, the highest-ranking students at Sabancı Business School,** were presented with awards from the fund created following the will of the late Sakıp Sabancı, Honorary Chair of the Board of Trustees. Sabancı University 2023 graduates showed their joy by throwing their caps into the air at the end of the ceremony.



## Sabancı University Ranked First in Türkiye in the Ranking of the World's Best Universities

**The UK-based higher education rating institution Times Higher Education (THE) has announced the 2024 World University Rankings. In the ranking, in which universities are evaluated academically according to 5 main areas, Sabancı University ranked first among the universities in Türkiye by being in the 351-400 bracket.**

The Times Higher Education (THE) 2024 World University Rankings have been announced. In the rankings, Sabancı University is in the highest bracket among Turkish universities. The THE World University Rankings methodology consists of 17 performance indicators under 5 main areas, namely teaching, research environment, research quality, industry, and international outlook. Sabancı University, which is in the 351-400 bracket in the list, improved its score in all areas compared to the previous ranking, and stands out especially with the progress it has made in the Research Quality area. Sabancı University was ranked in the 351-400 bracket with 31.7 points in Teaching, 37.9 in Research Environment, 69.5 in Research Quality, 90.2 in Industry, and 66.6 in International Outlook.

Making a statement on the subject, Sabancı University President Prof. Dr. Yusuf Leblebici said, "We are happy and proud to be the university ranked first in Türkiye in the Times Higher Education (THE) 2024 World University Rankings. This result proves that we are Türkiye's leading university. Today, we

carry out many studies that make a difference in education. As a research university, we carry out research activities that have considerable influence on the scientific world in our faculties and centers, and receive high levels of project support from domestic and international sources for these studies. Not only do we continue to be the best in Türkiye, but are also taking firm steps towards becoming a highly-regarded and respected research university all over the world. For this purpose, we are constantly preparing for the future and taking steps to further enrich our research infrastructure. I believe that we will achieve many more successes together with our faculty members and students."



## Our Faculty Member Meltem Elitaş Receives the Alexander Von Humboldt Research Award

**Sabancı University Faculty of Engineering and Natural Sciences Faculty Member Dr. Meltem Elitaş was deemed worthy of the Alexander Von Humboldt Foundation's award, which was given in the name of researcher Alexander Von Humboldt and aims to support scientists and researchers within Germany and from abroad.**

The Humboldt Research Award aims to create academic collaboration among scientists with different backgrounds from different countries all over the World. Prof. Jan Korvink from Karlsruhe Institute of Technology nominated Dr. Elitaş to receive this prestigious award. The Alexander Von Humboldt Foundation, which evaluates and rewards scientists' lifetime achievements, offers the award-winning researcher the opportunity to work in Germany in the field and subject she/he wants to work.

Thanks to the Humboldt Research Award, Dr. Elitaş will develop microfluidic chips, which are compatible with Nuclear Magnetic Resonance (NMR) spectroscopy, to investigate antibiotic response of bacteria. For the fabrication of these chips, one of the cutting-edge technologies, two-photon polymerization-based 3D laser writing techniques will be used. These microfluidic chips will be adequate to mimic dynamic and complex microecological conditions of bacterial infections. Hence, antibiotic responses of bacteria can be measured in real-time as both metabolomic and image data in the natural microhabitats of the cells. In this approach, not only viability but also genetic and phenotypic properties of the cells will be preserved. In the light of the obtained data, it is aimed to explain the development of antibiotic tolerance and antibiotic resistance mechanisms, identifying the laboratory-based culture conditions of viable-but-non-culturable bacteria, and finally to significantly contribute to the development of new antibiotics.



## Our University's 6th Emeritus Faculty Membership Ceremony Was Held

*The 6th Emeritus Faculty Membership Ceremony organized by Sabancı University took place on Friday, June 16, 2023, at the Sabancı Performing Arts Center with the participation of the Founding Chair of the Board of Trustees, Güler Sabancı.*

Oğuz Babüroğlu, Hüveyda Başağa, Albert Erkip, Gürol Irzık, Zehra Sayers and Behlül Üsdiken received the title of "Emeritus Faculty Member" at the ceremony where the opening speeches were delivered by Sabancı University Founding Chair of the Board of Trustees, Güler Sabancı and Sabancı University President, Yusuf Leblebici.



In her speech, Güler Sabancı emphasized that the faculty members who received the title of Emeritus contributed significantly to the establishment of Sabancı University. Noting that important achievements have been achieved together in the past, she thanked the faculty members for the value they add to Sabancı University and for all their efforts. Yusuf Leblebici stated that they are very happy to hold the "Emeritus Faculty Membership" ceremony, which is a tradition for Sabancı University but could not be held for about 3 years due to the pandemic, and continued as follows: "It is an honor for us to have them at Sabancı University. Our university was founded on a very assertive vision that had not been tried before in Türkiye and had very few examples in the world. Our faculty members, who are now Emeritus, have put a lot of effort into making this model successful. Sabancı University continues to be one of the most assertive universities in Türkiye today. We are raising the bar every day. Behind this is the fact that the foundations laid 25 years ago are very solid. We are very grateful to these professors who have contributed."

### **"It was an opportunity to contribute to a great birth"**

Oğuz Babüroğlu, Emeritus Faculty Member of Sabancı Business School, stated that the title of Emeritus includes the relationship, love and belonging with the university, and said: "This reminded me of the beautiful people I have had the opportunity to work with over the past 20 years. The Search Conference held for Sabancı University in August 1995 would not have happened if it hadn't been for Sakıp Bey (Sakıp Sabancı, Sabancı University Honorary Chair). On this occa-

sion, the opportunity to contribute to an amazing birth emerged."

Hüveyda Başağa, Emeritus Faculty Member of the Faculty of Engineering and Natural Sciences, said, "I have received various titles, awards and academic appreciation in my 40-plus-year career. However, for me, the title of Founding Faculty Member of Sabancı University is perhaps the most valuable of them all. There are many things to remember in this pleasant journey that started with the first Search Conference we held in 1995, and continued with the days when we were preparing a course program in Karaköy while we were impatiently waiting for the construction of the campus, and all that happened until today."

### **"We have realized an undeniable success story"**

Saying that he joined Sabancı University 25 years ago, Albert Erkip, Emeritus Faculty Member of the Faculty of Engineering and Natural Sciences, said: "The joy and excitement I felt during this time has never changed. Over the years, I learned new things, met new people, made friends. Being a dean was an experience that benefited me a lot. Although it was difficult at times, I continued to enjoy it. It was a special pleasure for me to see the presentation project that we created together as the Faculty of Engineering and Natural Sciences come to life. At Sabancı University, we have realized an undeniable success story."

Emphasizing that Sabancı University's understanding of education allows students to draw their own paths is very



valuable, Gürol Irzik, Emeritus Member of the Faculty of Art and Social Sciences, said, "Students are under pressure to choose a profession due to increasing livelihood concerns all over the world. However, we know how important and functional it is for them and our country to be well-equipped in a wide range of fields from philosophy to literature, from sociology to economics, from psychology to political science. I am very happy that our university does not compromise on the principle that the aim of higher education is not only to provide a profession, but to provide students with a universal formation, inquiring and creative thinking skills that will shed light on all aspects of life."

### **"The most important thing is our students who blow like a fresh wind"**

Expressing her happiness to be a part of the team that tries to bring a new perspective and approach to the education system in Türkiye, Zehra Sayers, Emeritus Faculty Member of the Faculty of Engineering and Natural Sciences, said, "It gave me great pleasure to conduct some experiments with students in the field of research, which would be considered

the first in Türkiye, to teach them, to raise them. In addition to these, being the Director of the Foundations Development Program and acting as the President, even for a short time, gave me invaluable experiences. Among all these, of course, the most important thing was that we had students blowing like a fresh wind."

Sabancı Business School Emeritus Faculty Member Behlül Üsdiken recalled his early years at Sabancı University and shared his memories of Minerva Han and later Tuzla campus with the audience. Summing up the 20 years that have passed, Üsdiken pointed out that being an Emeritus has a liberating aspect in the field of writing.

In their speeches, our Emeritus faculty members commemorated Sabancı University Honorary Chair Sakıp Sabancı, Founding President Tosun Terzioğlu, Founding Secretary General Hüsnü Paçacıoğlu and many valuable people who took part in the establishment phase, with love and respect. They shared their gratitude with their colleagues at the university, starting with Güler Sabancı, Founding Chair of Sabancı University Board of Trustees.

## **2023 Outstanding Achievement Award from the Council of Higher Education to Sabancı University**

*Sabancı University was found deserving of the University-Business Cooperation Award within the scope of the Council of Higher Education 2023 Outstanding Achievement Awards. At the award ceremony held at the Presidential Complex, Professor Yusuf Leblebici, President of Sabancı University, and Associate Professor Adnan Kefal, member of the Faculty of Engineering and Natural Sciences and principal investigator, were presented the award by President Recep Tayyip Erdoğan.*

"2023-2024 Higher Education Academic Year Opening Ceremony" took place on October 9, 2023. Following the speeches of Erol Özvar, President of the Council of Higher Education, and President Recep Tayyip Erdoğan, the winners of the "Council of Higher Education 2023 Outstanding Achievement Awards", given in four categories, namely "individual award, institutional award, private field award and special award", were announced. Within the scope of Institutional Awards, the University-Business Cooperation Award was given to Sabancı University.



Sabancı University was found deserving of the award as a result of the application made for the project entitled "Development and Experimental Verification of Design, Analysis and Optimization Technologies towards Composite Manufacturing of Automotive Suspension Control Arm" coordinated by Associate Professor Adnan Kefal, member of the Faculty of Engineering and Natural Sciences, supported within the scope of TÜBİTAK 1505 University Industry Cooperation program, and carried out under the leadership of Sabancı University in cooperation with the client institution Teknorot Otomotiv Ürünleri Sanayi Tic. A.Ş.

The project, successfully carried out at Sabancı University Integrated Manufacturing Technologies Research and Application Center (SU-TÜMER), involves the development of innovative design-analysis-optimization methods for the composite manufacturing of automotive parts, the prototype production of the composite control arm, and the embedding technologies of Fiber Bragg Grating (FBG) sensors into composite control arm to collect real-time strain data and perform shape sensing during mechanical tests.

## Canan Atilgan Became a Member of Europe's Most Prestigious Organization in Molecular Biology

**Prof. Dr. Canan Atilgan, member of Sabancı University Faculty of Engineering and Natural Sciences, was elected a member of the European Molecular Biology Organization (EMBO).**

In its statement, EMBO, which aims for scientific research and collaboration, said that the extraordinary scientists elected for membership were appreciated for their contributions covering a wide range of life science research, including unraveling the molecular secrets of life and deepening our understanding of the concepts of health and disease. It was emphasized that these achievements reinforce the critical role that life sciences research plays in the lives of citizens in Europe and around the world.

Expressing that she felt proud and happy to be selected as an EMBO member, Atilgan said the following: "This success is thanks to all our students who have worked so far in our research laboratory, especially our lifelong research partner, our professor Ali Rana Atilgan, all the researchers we have collaborated with in the past and currently, and all my students who have opened new doors for me with their questions over the years. Sabancı University's multidisciplinary education and research environment, which allows me to pursue my curiosities, has been the most important factor in my ability to make a meaningful scientific contribution to the discipline of molecular biology, even though I come from a different educational background."

EMBO has more than 2,000 members, including some of Europe's and the world's leading molecular biologists and Nobel laureates. Being elected an EMBO Member means the



recognition of a scientist's extraordinary achievements in the field. EMBO Members influence the direction of European science by guiding the execution of EMBO Programs and activities. In this way, they contribute to the organization's goals of supporting talented researchers at every stage of their careers, encouraging the exchange of scientific information, and enabling the creation of research environments where scientists can carry out their work.

EMBO's programs are supported by the European Molecular Biology Conference (EMBC), an intergovernmental organization consisting of 30 member countries, including Türkiye. EMBO has 5 members from Türkiye.

It was noted that, this year, 60 full members and 9 associate members were elected as EMBO Members, 35 of whom are women and 34 are men.

## Significant Achievement from Mete Atatüre, Our Distinguished Research Fellow

**Mete Atatüre, a member of Sabancı University's "Distinguished Research Fellowship" program, was appointed as the head of department of the Cavendish Laboratory in the Department of Physics at Cambridge University.**

Carrying out studies in the field of quantum physics, Mete Atatüre has been working as a faculty member at the Department of Physics at Cambridge University since 2007. With his research to better understand the nature of light, Atatüre carried out the 'noise measurement' of the so-called immeasurable light level. With this work, he took an important step towards quantum computers and quantum communication. He also conducts studies on subjects such as the optical control of solid-state spin-photon interfaces, the development of nanoscale quantum sensors, and the investigation of new quantum materials and devices.

Atatüre received the Thomas Young Medal in 2020, becoming the first Turkish physicist to do so. Atatüre is a member of the Physics Institute, the American Optical Society, Academia Europaea, and the Turkish Academy of Sciences.



Founded in 1873 and named after the British naturalist Henry Cavendish, known as the discoverer of hydrogen, the Cavendish Laboratory has hosted 30 Nobel laureates to date. Previous directors of the laboratory include legendary figures such as Maxwell, Rayleigh, and Rutherford, who made many important discoveries in the world of science. The appointment of Mete Atatüre as department head of the Cavendish Laboratory was announced on the official page of the Department of Physics at the University of Cambridge.

Commenting on his appointment to the role, Mete Atatüre said, "I am incredibly honoured to be trusted in this role and to follow in the footsteps of everyone who made the Cavendish Laboratory what it is today. As past successes have shaped our present, today's dedication to curiosity will define tomorrow's breakthroughs."

## SUNUM Researcher awarded the National Young Scientist Woman

*SUNUM researcher Begüm Yarar Kaplan, has been honored with the "L'Oreal-UNESCO for Women in Science" 2023 award in the field of 'Physical Sciences'.*



In her project entitled "Development of Bipolar Membranes with 3-Dimensional Interface for Low Cost and High Efficiency Green Hydrogen Production to Reduce Carbon Emissions", Begüm Yarar Kaplan aims to develop bipolar membranes to improve efficiency of electrolyzer systems, and consequently reducing the production cost of green hydrogen.

## The First Course at SOCAR Energy School was Delivered in Aliğa

*The first course in the SOCAR Energy School certificate program, organized for the second time this year in cooperation with Sabancı University Executive Development Unit (EDU), was delivered in Aliğa. Attended by last year's graduates in addition to 66 participants newly admitted to the program, the first course was delivered by Elchin Ibadov, SOCAR Türkiye's acting CEO.*



The first course in the SOCAR Energy School certificate program, organized by Türkiye's largest integrated industry group SOCAR Türkiye, in cooperation with Sabancı University Executive Development Unit (EDU), was delivered in Aliğa on November 25.

Delivering the first course of the certificate program, SOCAR Türkiye's acting CEO Elchin Ibadov said: "At SOCAR Türkiye, we are proud to continue the SOCAR Energy School, which we started last year, with the idea that we have the responsibility of training competent people whose knowledge is used in every field of energy, which is our main subject, based on our motto 'We are together, we are strong'. I believe that all participants from the public, private sector, press, and academia selected for this certificate program will both benefit themselves and make a great contribution to the sector by having a 360-degree perspective in the field of energy."

Making his speech after the first course given by SOCAR Türkiye acting CEO Elchin Ibadov, Sabancı University President Yusuf Leblebici stated that the Executive Development Unit, EDU, makes a difference in the development journeys of institutions and individuals. He added, "As a university that acts with the mission of creating and developing together, we are happy to contribute to the strengthening of the energy sector in Türkiye in terms of qualified human resources in the energy sector, in cooperation with SOCAR Türkiye."

In the second year of the certificate program of SOCAR Energy School, the courses, which will be conducted mainly on the online platform after the first face-to-face course, will end on January 29, 2024.

In the certificate program, courses on global and regional energy issues, the Caspian Basin, the energy policies of Türkiye and Azerbaijan, climate change and energy security, and the status and future of renewable energy resources are given by world-renowned experts in the field of energy and faculty members from national and international universities.

## Sabancı University's "Make a Promise for the Future" Scholarship Fund Supports Earthquake-Stricken Students

*Our university held a major event this year within the scope of the scholarship program it implemented with the theme "Make a Promise for the Future". All of the revenues generated from the event held together with the Alumni Meeting will be transferred to the Scholarship Fund and scholarship opportunities will be provided to successful students with inadequate financial means, especially earthquake victims.*

Sabancı University organized a meaningful event on Tuzla Campus within the scope of the scholarship program it implemented with the theme "Make a Promise for the Future". Historian and writer İlber Ortaylı also attended the event, where Sabancı University President Yusuf Leblebici and Sabancı University Secretary General Ali Çalışkan made the opening speeches. Additionally, within the scope of the event, world-famous pianist-composer Fazıl Say and singer Serenad Bağcan performed the "Mother Earth" concert.



### "Our aim is to increase the number of our successful students"

Speaking at the event, Sabancı University President Yusuf Leblebici said the following: "According to the results of the Higher Education Institutions Examination, we have proven this year that we are one of the leading universities in Türkiye. Our goal is to increase the number of our successful students and make Sabancı University not only the best university in Türkiye but also one of the leading universities in the world. For this purpose, we have to constantly improve the quality of both our education and research. In parallel, we continue to add expert faculty members from every country in the world to our team. We have added 58 new faculty members to our team in the last 3 years. 33 of them came directly from abroad to join us."

Emphasizing that, in addition to these efforts, they have very important projects on entrepreneurship, Yusuf Leblebici said, "We are implementing a new entrepreneurship and incubation center on our campus. In this way, we want to provide the necessary environment for the projects that both our students and faculty members carry out on their own initiative to create successful start-up companies. We will be inspired, in this regard, by successful examples abroad."

Sabancı University Secretary General Ali Çalışkan made the following statements regarding the "Make a Promise for the Future" Scholarship Program: "At Sabancı University, we touch the lives of approximately 55% of our total students through both our success scholarship and range of need scholarship programs. Within the scope of the "Make a Promise for the Future" scholarship program that we launched last year, within 5 years, we aim to make this fund available to 20% of the students who join our university from Anatolia through the Higher Education Institutions Exam and need financial support. After the earthquake disaster on February 6, naturally, our priority this year was the earthquake region. We support 3 of our current students and 8 of our earthquake-affected, newly admitted students with this scholarship fund."

At the event, plaques were presented to donors who covered the education, accommodation, cash needs and food support of at least one young person throughout their university life within the scope of the scholarship program.

During the Alumni Reunion, which lasted throughout the day, many activities took place, such as various workshops, live music, and medal ceremonies for 10th and 20th-year alumni, in addition to alumni, student, and academics' network events.

## Our President Has Been Selected to Join Academia Europaea as an Invited Member

*Our President Yusuf Leblebici has been selected to join Academia Europaea as an invited member, in recognition of academic excellence.*

The Academia Europaea, the world's most prestigious Academy of Humanities, Letters, Law and Sciences, has many members who have been deemed worthy of prestigious awards such as Nobel, Fields, and Abel.

Commenting on the subject, Yusuf Leblebici stated that he was honored to be invited to take part in this prestigious academic organization that covers the entire European region and said, "As an educator and an academic who continues to do research in the field of digital technologies, it is a great source of pride to be invited to such a valuable academic institution. Creating a sharing space between scientists specialized in different disciplines to contribute to society, the Academia Europaea is also of great importance in the development of scientific education."

The academy aims to foster interdisciplinary discourse and activities, with the goals to:

- Promote a wider appreciation of the value of European scholarship and research,
- Make recommendations to national governments and international agencies concerning matters affecting science, scholarship and academic life in Europe,
- Encourage interdisciplinary and international research in all areas of learning, particularly in relation to European issues,
- Identify topics of trans-European importance to science and scholarship and propose appropriate action to ensure that these issues are adequately studied.

Currently, there are 25 members of Academia Europaea in Türkiye, 4 of whom are associated with Sabancı University, including Hasan Mandal, İsmail Çakmak, and Mehmet Ali Alpar, in addition to Yusuf Leblebici.

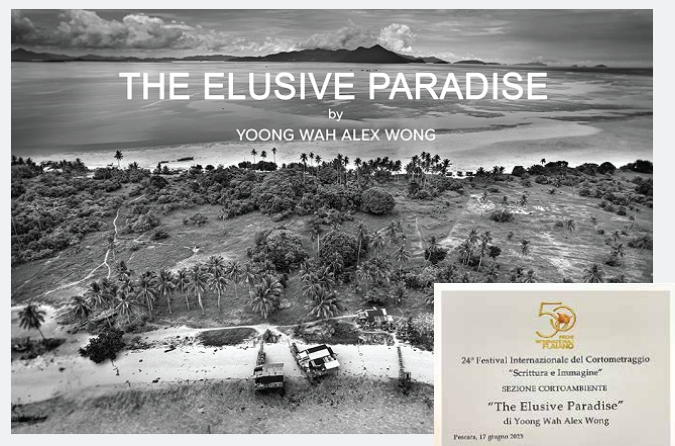


## Yoong Wah Alex Wong's Video Work "Elusive Paradise" Was Awarded

*Faculty of Arts and Social Sciences faculty member, Yoong Wah Alex Wong's video work "Elusive Paradise", was awarded 1st Prize (Environment category) at the 24th Scrittura e Immagine International Film Festival, Pescara, Italy.*

The Elusive Paradise depicted reality in contrast, where a serene landscape with invaluable natural heritage between the land and the sea is left with waste and garbage.

The extensive need for shelter from the sea dwellers created a congested and unsafe place to live and survive. Their daily life and source of income heavily depended on the sea resources yet their acts are not environmentally friendly and carefree. Let us raise awareness and alert the sea dwellers and residents to be part of the solution, not the pollution. Our landscape and seascape are facing similar pollution problems in different corners of the world. People should live and travel with a conscious mind to ensure that green lungs continue to prevail. Only healthy ecosystems can provide abundant resources for humanity to thrive.



## Sabancı University SUCool Incubation Center Opened

*Sabancı University, which set out on a journey to support entrepreneurship by establishing Inovent, Türkiye's first technology commercialization company, in 2006, launched the SUCool Incubation Center and J-Start Venture Capital Investment Fund with a ceremony.*

*Speaking at the ceremony, Sabancı University President Yusuf Leblebici said, "We established an Innovation office for the first time among all universities in Türkiye. We are proud to have a Chief Innovation Officer dedicated to this task. No other university in Türkiye has this. In addition, in cooperation with Abdul Latif Jameel (ALJ), we launched an investment fund to support all these activities. We are hoping to grow this investment fund in the near future to even higher levels".*



SUCool, which has been providing comprehensive support services to early stage entrepreneurs by guiding them within Sabancı University since 2013, opened its new Incubation Center on Sabancı University Tuzla Campus with a ceremony.

Sabancı University, which embarked on its journey of supporting entrepreneurship by establishing Inovent, Türkiye's first technology commercialization company, will provide startups in high technology categories such as Artificial Intelligence, Advanced Material Technologies, Financial Technologies, Education Technologies, Smart Cities, Digital Health, Big Data Analytics and Cyber Security a free working opportunity in an academic environment with its SUCool Incubation Center.

The ceremony also included the signing of the J-START Venture Capital Investment Fund, of which Sabancı Ventures, venture capital company of Sabancı Holding, and Abdul Latif Jameel (ALJ) are investors, and which will be implemented in cooperation with Sabancı University. The investment fund will support innovative ideas by investing in technology-focused initiatives. The J-START Cooperation Agreement was signed by Ali Çalışkan, Sabancı University Secretary General, and Fady Jameel, ALJ International Vice President and Vice Chair of the Board of Directors.

## “At sucool incubation center, we will support everyone who wants to follow their dreams”

Speaking at the opening ceremony of the Incubation Center, Sabancı University President Yusuf Leblebici stated that approximately 50 of some 1000 students who graduate from Sabancı University every year prefer to establish their own companies. He said, “50 students each year is a good number. And it is our duty to open the road for them and to give them all the possible infrastructure and support to make this a reality. And with this intention, we started developing our ecosystem internally. We established, for the first time among all universities in Türkiye, the office of Chief Innovation Officer. We are proud to have a Chief Innovation Officer dedicated to this task. No other university has this in Türkiye. And also, through our collaboration with the ALJ Group, we have established an investment fund to support all these activities and we are hoping to grow this investment fund in the near future to even higher levels

“This represents a great opportunity, not only for the students, but also for our employees, for our teaching staff, for our research staff. For anyone who wishes to develop their own ideas and pursue this dream of setting up their own startup companies and being successful, there will be possibilities supported actively by the university and we will open the road for them to be successful. And each success will be our success as Sabancı University”.

Cosmotree, a new initiative from SUCool Incubation Center, was also introduced at the opening. Cosmotree, a system consisting of the algae that produces more than 70 percent of the oxygen in the world, offers a sustainable solution that can reduce companies' carbon footprints.



## Inovent and sucool encourage entrepreneurs

The mission of Inovent, a technology transfer and seed fund company founded by Sabancı University in 2006, is to accelerate the commercialization of early-stage technologies at universities and encourage entrepreneurship at Sabancı University.

SUCool is a Startup Incubator that aims to support early-stage ideas and help entrepreneurs become readier and act faster for their entrepreneurial journey.

SUCool Incubation Center offers start-ups a unique space to work, collaborate and network, with a working environment equipped with the latest technology and facilities to provide start-ups with the resources they need to be successful.

## The fund will give priority to start-ups from universities

J-START Fund will invest in start-ups established in Türkiye and give priority to deep-tech start-ups. Therefore, start-ups from universities will have the priority. Inovent will provide consultancy and scouting services for the fund. There will be a representative from both holdings and the university in the Investment Committee, and this committee will decide on investment in start-ups to be selected from the portfolio of suggestions brought by Inovent.

## The Future of Jobs was Discussed at the REF Event

**"The Future of Jobs in the Light of the WEF Report" was organized by the TÜSİAD-Sabancı University Competition Forum (REF). At the event, WEF representatives provided information on the Future of Jobs 2023 Report and discussed predictions about the effects of the transformation in labor markets in Türkiye.**



In today's world, where green and digital transformation deeply shapes the dynamics of global competition, adapting the workforce to new-generation competencies becomes of great importance. The Future of Jobs Report has been prepared by the World Economic Forum (WEF) since 2016 to provide innovative insights on how the jobs of the future and the competencies sought in the workforce will be shaped in light of global trends. TÜSİAD-Sabancı University Competition Forum (REF), established in cooperation with TÜSİAD and Sabancı University, ensured that the survey conducted within the scope of the Future of Jobs 2023 Report was delivered to a wide sample in our country.

Fatih Kemal Ebiçlioğlu, TÜSİAD Board Member and Chair of the Industry Policies and Investment Environment Round Table, made the opening speech of the online meeting held on Tuesday, September 26, 2023, in order to examine the impact areas of the transformation in the workforce and to examine the aspects that contribute to the relevant policies based on the findings of the Future of Jobs 2023 Report, which is described as one of the most exciting projects summarizing the future of the labor market. In his speech, Ebiçlioğlu touched upon the following: "In our study entitled 'Building the Future with a New Understanding', which we shared with the public on the fiftieth anniversary of TÜSİAD,

we proposed a road map for our country's development goal that focuses on people as well as science and institutions. The analyses in our report entitled 'Overview of the Present Day of Turkish Industry and Suggestions', which we prepared within the scope of TÜSİAD-Sabancı University Competition Forum, reveal that we can only achieve high value-added industrial production by preserving a highly qualified workforce and providing digital competencies to our young and dynamic employees. In this context, developing and protecting the qualified workforce in our country, which has the third largest workforce in Europe, is among our priorities in the second century of our Republic."

Within the scope of the program, Sam Grayling, Insight Lead at the WEF Center for the New Economy and Society, and Ricky Li, Insight Product Specialist at the WEF, shared their evaluations on the findings of the Future of Jobs 2023 Report.

In the panel session titled "A Look at the Future of Jobs in Türkiye from the Perspective of Global Trends", moderated by Elvan Ünlütürk, TÜSİAD Board Member and Social Development Round Table Chair, Efe Erdem, TÜSİAD New Generation Industry Working Group Chair, Erhan Erkut, Vice-President of MEF University, Levent Kızıltan, TÜSİAD Chair of New Technologies Working Group, and Nursel Ölmez Ateş, Head of Human Resources and Corporate Communications Group at Borusan Holding, were speakers. While the transformation of jobs in our country was discussed in the panel, the studies currently carried out and those that need to be conducted in the future to close the skills gap that will arise were explained and suggested solutions for the public sector, business world and civil society were shared.

Commenting on the issue at the end of the session, Elvan Ünlütürk, TÜSİAD Board Member and Social Development Round Table Chair said, "People, who are the source of technological progress, have to adapt to constantly changing conditions and continuously develop themselves, prioritizing the sustainability of our world. While we are at such a critical turning point, we, as Türkiye, must take action with all our resources, especially our human resources. We all have important roles to play in this regard, especially the public, academia, civil society and the private sector." Ünlütürk continued by touching on the importance of a data-based holistic public policy, a modern education policy that can provide the competencies of the future, and collaborations in these areas. She also emphasized the importance of adopting lifelong learning in the working life of the future, keeping the qualified workforce in our country, having women working in qualified jobs, and eliminating gender inequality.



## Winners of EFSUN Best Article Competition were Announced

The winners of the “Best Article Competition”, which was organized for the fifth time by the Center of Excellence for Functional Surfaces and Interfaces for Nano Diagnostics (EFSUN) of Sabancı University, were announced in a Zoom event held on 21 August 2023. The FENS Dean ErKay Savaş delivered the opening speech. The FENS faculty member Prof. Burç Mısırlıoğlu was the presenter of the competition.



11 finalists consisting of distinguished young scientists from different disciplines publishing articles with high impact on Functional Surfaces and Interfaces presented their articles in the event.

The winners of the Best Article Competition were selected by the evaluation committee consisting of well-known and active scientists from different disciplines:

- 1-Dr. Betül Aldemir Dikici, İzmir Yüksek Teknoloji Enstitüsü
- 2-Dr. Elif Damla Arısan, Gebze Teknik Üniversitesi
- 3-Dr. Sibel Çetinel, SUNUM
- 4-Dr. Can Dinçer, University of Freiburg
- 5- Dr. Fatih İnci, Bilkent Üniversitesi
- 6- Dr. Burç Mısırlıoğlu- Sabancı Üniversitesi (Moderator)

The members of the committee carefully evaluated each article and presentation.

Researcher Alican Öztürk took the first place with his article titled “Vascularized hepatocellular carcinoma on a chip to control chemoresistance through cirrhosis, inflammation and metabolic activity”;

Researcher Duygu Bedük took the second place with her article titled “Smart multiplex point-of-care platform for simultaneous drug monitoring”;

Researcher Ceren Özel took the third place with her article titled “A multifunctional sateen woven dressings for treatment of skin injuries”.

## "Changing Energy Geopolitics in the World, Climate Crisis and Türkiye"

Sabancı University Istanbul International Center for Energy and Climate (IICEC), which focuses on the current issues of the world and Türkiye's agenda, discussed the changing energy geopolitics. At the conference and panel with the theme "Changing Energy Geopolitics in the World, Climate Crisis and Türkiye" held at Sabancı Center, changing energy geopolitics in the light of new developments, the climate crisis, which is the most important problem facing humanity, and the effects of all these on Türkiye were discussed. Within the scope of the conference, the launch presentation of the "IICEC - Türkiye Green Hydrogen Report 2023" prepared by IICEC was also made.



Dr. Alparslan Bayraktar, Minister of Energy and Natural Resources, stated that Türkiye's foreign dependence on energy has decreased and said, "Türkiye's foreign dependence on energy decreased to 67.8 percent in 2022. Our goal with the national energy plan is to save ourselves from foreign dependency and make Türkiye a net-zero emission country in the next 30 years."

Dr. Fatih Birol, Executive Director of the International Energy Agency (IEA) and Honorary Chair of IICEC, reminded that he said that nuclear energy was indispensable for Türkiye in meetings years ago and said, "When I look at Türkiye's current energy situation and geographical situation, I think it is an indispensable technology. There has been a rapid return to nuclear energy in the world in the last two years, even within 1.5 years. However, you need to choose the partner country with which you will build the nuclear power plant very carefully. Türkiye has now started nuclear power plant work. I hope Türkiye will further increase its work on this issue and build other nuclear power plants."



IICEC Director Bora Şekip Güray, who made the launch presentation of 'IICEC - Türkiye Green Hydrogen Report 2023' at the conference, said, "As a country, we have versatile opportunities and areas of development in green hydrogen," and shared IICEC's suggestions that will support sustainable growth in green hydrogen.

Energy dynamics changing on a global scale, the climate crisis, which is one of the inevitable issues for a sustainable future, and the effects of these two issues on Türkiye were discussed at the "Changing Energy Geopolitics in the World, Climate Crisis, and Türkiye" conference and panel organized by Sabancı University Istanbul International Center for Energy and Climate (IICEC) at Sabancı Center. Following the panel held with the participation of senior people in the business and political worlds, the launch presentation of the "IICEC - Türkiye Green Hydrogen Report 2023" prepared by IICEC was made by IICEC Director Bora Şekip Güray.

### "Türkiye's foreign dependence on energy dropped to 67.8 percent in 2022"

Stating that 6 trillion dollars are needed annually for the world's sustainable energy transformation, Minister of Energy and Natural Resources Alparslan Bayraktar continued as follows: "Successful energy transformation is definitely possible with smarter policies. As Türkiye, we shape our energy policies in line with a 2050 net-zero emission economy, without compromising supply security, contributing to global supply diversity, and reducing our dependence on foreign sources. Even though we achieved a 30 percent reduction in Türkiye's energy intensity in the last 21 years, Türkiye's energy demand doubled. We expect it to increase another fold in the next 20 years. In 2022, Türkiye's foreign dependency on energy has decreased to 67.8 percent. Our goal with the national energy plan is to save ourselves from foreign dependency and become a country with net-zero emissions within the next 30 years. We intend to put our full

renewable energy potential into use to achieve this transformation in our energy policies. When we look specifically at electricity, we predict that the demand will be around 515 terawatt hours in 2035. While meeting this high demand, we want to increase the share of renewable energy in total electricity production to 55 percent and its share in the installed capacity to 65 percent.

### **"We will invest 10 billion dollars in the electricity transmission network"**

10 thousand megawatts of licensed products have been allocated in the field of renewable energy. Our industrialists have permits for approximately 26 thousand megawatts to make investments to meet their own consumption. They have a YEKA capacity of 5 thousand 400 megawatts. There are also 33 thousand megawatts of renewable storage. When we add these together, a capacity of 76 thousand megawatts has been allocated. Strengthening the electricity grid is a



development potential in energy demand. We have become one of the largest energy sectors in Europe and one of the most dynamic in the world. Recently, important steps have been taken by our Ministry of Energy and the private sector in many areas of energy. For example, we have become one of the leading countries in Europe in renewable energy installed capacity. Strong development in electrification stands out. Awareness in energy efficiency is increasing and new business models are developing. We have a strong potential to take these even further. We have important goals regarding energy security, efficiency, competitiveness, and a comprehensive, technology-driven energy transition with a net-zero target.

### **"IICEC's 'Türkiye Green Hydrogen Future' report is a first in Türkiye"**

At Sabancı University, we have been prioritizing energy and climate issues for a long time. We founded IICEC more than a decade ago as an Energy and Climate center with the vision that these two issues cannot be separated from each other. IICEC continues to bring together the public, private sector, and academia, as it is today, towards goals that will support a safer and cleaner energy future, within the model I define as the 'Triangle of Success'. IICEC broke new ground in 2020 and published the 'Türkiye Energy Outlook' report. Following this report, which was embraced by industry stakeholders, the 'Türkiye Electric Vehicles Outlook' and 'Türkiye Renewable Energy Outlook' reports were issued in 2021 and 2022, again as firsts in Türkiye. This year, within the scope of the analytical project series, IICEC carried out a study that offers a future perspective by focusing on 'Green Hydrogen', which we expect to be on our agenda more intensively in the coming periods. The 'Türkiye Green Hydrogen Future' report was completed, again for the first time in Türkiye, with an analytical and holistic perspective, focusing on versatile dynamics and opportunities, and with a participatory approach with industry stakeholders.

I attach great importance to creating value from science-based approaches and business collaborations. It is now widely accepted that this unity has become one of today's most critical success factors. In this perspective, IICEC is a leading model and Center in Türkiye. IICEC brings together leading organizations in its field and supports the sustainable energy future with common sense. For this reason, I would like to thank the IICEC Board Members, who are the supporters of IICEC, for their continuous support in the growth, expansion, and deepening of the center's activities."

must for a sustainable energy transformation. We will make an investment of 10 billion dollars in the electricity transmission network in the next 7-8 years.

### **"We will increase our oil production to 100 thousand barrels in 2024"**

After the discovery in Gabar Mountain in 2022, we started producing oil. As of today, we are producing 30 thousand barrels. In 2024, we will increase this to 100 thousand barrels. Türkiye will become a country producing 200 thousand barrels of oil in its field. The need in our country is 1 million barrels per day, and we will do our best for this. In addition, within the scope of the 2024 - 2030 energy efficiency plan, Türkiye will reduce carbon emissions by 100 million tons. In addition to being a reliable transit country in energy, we are also working on our own interests. We aim to implement emission trading within EPIAŞ next year."

### **"We have become one of the most dynamic energy sectors in the world"**

Güler Sabancı, Founding Chair of the Sabancı University Board of Trustees, started her speech by congratulating Dr. Fatih Birol, Executive Director of the International Energy Agency (IEA) and Honorary Chair of IICEC, and said: "Under the leadership of Dr. Fatih Birol, the International Energy Agency has become an organization that directs global energy security and leads efforts to combat climate change and clean energy transformation in the world. Fatih Birol was listed among the 'TIME 100 Most Influential Climate Leaders' this year. Two weeks ago, the French Legion of Honor was presented to him by the French President at a special ceremony held at the Elysee Palace. I congratulate him.

Our esteemed Minister is one of the main architects of our energy sector's spectacular growth and development journey over the last twenty years. Our country has a strong

## **“80 percent of the emissions that cause the climate crisis come from the energy sector”**

Fatih Birol, Executive Director of the International Energy Agency (IEA) and Honorary Chair of IICEC, pointed out that energy is starting to rise in the agendas of governments, people, and companies around the world and said the following: “Energy has always been important, but today it is becoming even more important. Energy is the driving force of the economy and economic growth. Energy prices play an extremely important role in the economic competition between countries. Clean energy technologies are also intertwined in terms of energy and geopolitics. Energy security is an extremely serious issue. Critical minerals such as lithium and cobalt, which we use in oil, natural gas, and critical clean energy technologies, are also extremely important issues, and geopolitics and energy are intertwined. Finally, when talking about the climate crisis, it is impossible to separate energy and climate. Because 80 percent of the emissions that cause the climate crisis come from the energy sector.



When we look at the energy markets, let me start with oil, prices are currently around 80 dollars. When we look at the coming months, even the year, and even a little bit ahead, we see an important trend, which is that we will see a slowdown in oil demand growth. There are two reasons for this. One is the developments in China and the second is the rapid growth of electric cars. On the other hand, this year we see that there is a huge increase in oil production in America and Brazil. When we look at the coming years, it is possible to see a more moderate level in production and oil prices if oil-exporting countries do not impose greater restrictions.

## **“There will be unprecedented new LNG production starting from 2025”**

Secondly, natural gas is extremely important for us and our country. Europe's termination of its relationship with Russia in natural gas caused less damage than expected. It looks like Europe will get through this winter without too many injuries if there are no big surprises. Unless there is a major setback this year or this winter, Europe will spend this winter without experiencing a major gas outage. It is extremely important to us. As of 2025, within 4-5 years, new LNG (liquefied natural gas) production will come to the gas markets as never before. LNG facilities completed in many countries, especially two in America and Qatar, will bring significant gas to the markets. With the new LNG capacity to be added in 4-5 years between 2025 and 2028-29, up to 50 percent of the production in the last 30 years will come to the market within 4 years. In the gas markets, the seller countries are currently in a strong position, and the buyers are in a less powerful position, and this will completely change. In other words, buyers' hands will be stronger because there will be serious gas in the markets. This may cause some balances to be redefined both economically and geopolitically.

## **“There is a tremendous revolution in the field of renewable energy”**

There is a tremendous revolution in the field of renewable energy. More than 80 percent of all power plants built in the world this year are renewable energy. Especially the solar, but then the wind and others follow. There's a little bit of nuclear. In other words, the share of fossil fuels, coal, and natural gas, is gradually decreasing. The solar growth is truly impressive all over the world. Renewable energy is coming not from the west, but from the east, with China, India, and Brazil coming quite quickly in this regard. Very good steps are being taken in this regard in Türkiye.

## **“I hope Türkiye will build other nuclear power plants as well.”**

Regarding nuclear energy, when we had this meeting years ago, one of our former energy ministers asked me such a question: What do you think about nuclear energy? I said that nuclear energy is an indispensable technology for Türkiye. When I look at Türkiye's current energy situation and geographical situation, I think it is an indispensable technology. There has been a rapid return to nuclear energy in the world in the last two years, even within 1.5 years. There was a decline in nuclear energy after the last Fukushima accident, now countries are rapidly returning to nuclear energy. Japan, Korea, and China are already one of the leading countries in this regard. When we look at Europe, Sweden, Finland, France, England, and Canada, many countries, as in our country, are experiencing rapid construction in nuclear energy and a renewed interest in nuclear energy. There is an appetite.

However, you need to choose the partner country with which you will build the nuclear power plant very carefully. It is necessary to choose this carefully in terms of technological competencies, the country's foreign policy, energy security, and energy diversification. Türkiye has now started working on nuclear power plants, I hope that Türkiye will further increase its work on this issue and build other nuclear power plants.

On the other hand, electric cars are growing so fast that this leads to changes in policies and production policies, especially in oil-exporting countries. Three years ago, 1 in every 25 cars sold in the world was an electric car. We were talking about this as important news. 1 in every 5 cars sold this year is an electric car. According to the most conservative estimate, in 2030, one in every 2 cars sold in the world will be an electric car. This will have serious repercussions, both on the oil markets and the car industry. In this regard, we need to follow the developments in electric cars closely if we want to understand the oil markets. In summary, in the current world energy markets, we see a slowdown in the growth of fossil fuels. There is also a rapid increase trend in clean energy technologies, renewable and nuclear."

## Versatile opportunities for the development of green hydrogen in Türkiye and 7 IICEC recommendations

IICEC Director Bora Şekip Güray, who made the launch presentation of the IICEC Türkiye Green Hydrogen Future 2023 Report at the conference, made the following statements: "IICEC Türkiye Green Hydrogen Future 2023' is the fourth of our reports that we have published, working with the vision of contributing to a safer and cleaner energy future. The use of green hydrogen will be prominent in sectors that are difficult to decarbonize through electrification. We assess that the Carbon Border mechanism will



be an important factor. As a country, we have strengths and advantages in green hydrogen. Policy goals and strategies lay the groundwork for growth. Our strong renewable energy potential is an important advantage. With our National Energy Plan, technological development and localization opportunities, as well as trends in the sector, will be able to develop along with the growth in the green hydrogen ecosystem.

According to our analysis covering a perspective towards 2050, our country will reach a share of around 2 percent in the electrolyzer capacity, which forms the basis for green hydrogen in the world, and in green hydrogen production. Growth in this direction requires large amounts of electricity input and planning. In the future perspective, we see a strong demand potential, especially in some industrial branches and some transportation areas. We expect demand in industry and transportation to constitute 90% of total demand by 2050. Our analysis shows that green hydrogen could account for 6% of final energy demand in 2050.

In this future perspective, when viewed on the axes of reducing fossil fuel dependence and reducing greenhouse gas emissions, we can save twice the current annual energy consumption of sectors that are difficult to decarbonize. A decrease equivalent to 3.5 times the annual greenhouse gas emissions of these sectors can be achieved. The cumulative economic benefit of import and emission savings reaches 55 billion dollars by 2050 in 2022-dollar terms."

Stating that the report was based on the perspective of evaluating green hydrogen production opportunities primarily for the demands of the sectors in Türkiye, Güray said that evaluating export gains with a maximum benefit approach would also add to the economic benefits in import and emission dimensions. He continued, "For green hydrogen, electricity generation facilities, electrolyzer facilities, and other infrastructures in the value chain are needed. The report indicates that we can provide an average annual benefit of \$3.5 million at a cost of \$3 billion. In other words, cumulatively the benefit-cost multiplier reaches 1.2. In 2050, this value increases to 2.4 on an annual basis. Therefore, the economics and competitiveness of growth in green hydrogen are strengthening, especially in the medium and long term."

Stating that they collected their recommendations under 7 headings to support sustainable growth in green hydrogen, Bora Şekip Güray pointed out the importance of road maps, development in infrastructures and markets, technology opportunities, a large-scale sustainability perspective covering issues such as wind, sun, water and critical minerals, and human resources.

## IICEC Recommendations:

IICEC recommends the following to evaluate Türkiye's high potential, which offers versatile opportunities for energy security, clean energy transformation, competitiveness, localization, and technology-oriented industrial development, within the framework of its advantages in green hydrogen and related technologies:

1. Determining road maps regarding the development perspective in production, demand, and related infrastructures on the basis of priority sectors and regions,
2. Creating technical and regulatory infrastructures, preparing and implementing long-term master plans that will ensure optimal resource use and maximum security,
3. Establishing market and support mechanisms for efficient and predictable growth in the value chain, taking into account interactions with electricity, natural gas, carbon markets, and electricity supply security,
4. Evaluating opportunities in critical technologies, especially electrolyzers, storage and fuel cells, and developing localization and manufacturing capabilities,
5. Strengthening international and regional cooperation, utilizing export opportunities for Europe's increasing demand with maximum benefit,
6. Observing a broad-scale sustainability perspective throughout the ecosystem, in areas such as wind and solar resources and water use, critical minerals and supply chains,
7. Developing a qualified human resources and talent pool that will support sustainable growth and competitiveness and implementing a strong entrepreneurship ecosystem.

**“We are facing another serious problem such as the climate crisis in the shadow of geopolitical balances.”**



In his opening speech, Dr. Mehmet Doğan Üçok, Sabancı University IICEC Coordinator, noted that they held the 15th meeting of IICEC's traditional conference series and said: “The extensions of the issue in energy geopolitics are changing. In this context, energy security is at the point where national security, political economy, and foreign policy organically interact with each other. Today, our world is also changing, the sudden pandemic has rapidly changed our lives. Then the Russia-Ukraine war and the bitter war environment that is developing in the Middle East today. We are in a time when uncertainty increases and areas of predictability narrow. Analyzes are constantly being reshaped at every moment. We will see together whether there will be a

return to the old days when energy determined geopolitics. Globally, we are faced with another serious problem such as the climate crisis in the shadow of geopolitical balances. When we founded IICEC about 14 years ago, one of the aims of IICEC was to draw attention to the climate issue, raise awareness, and convey the importance of the issue to society. We observe that the climate becomes more urgent with each passing year. IICEC continues to work in this context."

### Important topics were discussed in the panel

At the end of the conference, in the panel moderated by Sabancı Holding Energy Group President Kıvanç Zaimler, Zorlu Enerji CEO Sinan Ak, ALJ - Toyota Türkiye Chair and CEO Ali Haydar Bozkurt, Ministry of Foreign Affairs General Manager of Energy and Environment and Ambassador Ayşe Berris Ekinci, SOCAR Türkiye CEO Elchin Ibadov, BP Türkiye Country President Tümkân Işıltan, and ING Türkiye Board Member Semra Kuran were among the speakers.

## Sabancı University High School Summer Schools Had the Highest Participation This Year



***This year, a total of 2142 students from Türkiye and abroad attended Sabancı University High School Summer Schools, which help students gain university life experience in a multicultural environment and determine their areas of interest.***

Sabancı University's High School Summer School programs for high school students hosted a total of 2142 students from 18 countries and 50 provinces across Türkiye this year. In the programs, designed for students between the ages of 13-17, participants received education on subjects they are interested in while having a university experience in a multicultural environment this year.

Sabancı University High School Summer School programs, which have been held since 2011 and had the highest participation this year, included a total of 2094 students from 50 provinces in Türkiye, especially Istanbul, Ankara, Izmir, Adana, and Trabzon, and a total of 48 students from abroad, especially Germany, the US, Canada, France, and Spain.

In the High School Summer School, Social Innovation and Entrepreneurship, Communication Skills for Academic and Professional Life, and Creative Coding on the Axis of Art and Design courses were included in the program for the first time this year.

In addition to the courses, activities such as orienteering, music parties, a sculpture workshop, personal development seminars, drama, circus, sports, dance and music workshops were also organized for the students.



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