

INFOCUS

## MiReKoc: A DYNAMIC HUB FOR SCHOLARLY RESEARCH ON MIGRATION

Starting its journey in 2004, the Migration Research Center at Koç University (MiReKoc) has become a well-known global hub for scholarly research on migration. The Center recently has been awarded critical international projects focusing on migration from diverse perspectives. We asked the Director of MiReKoc, Ahmet İçduygu, professor of International Relations and Sociology, and MiReKoc team members about this success story and their recent activities.



[READ MORE & WATCH THE VIDEO](#)

TOP STORIES

## FROM GENES TO THE EDGE OF CHAOS: HOW CHAOTIC ARE YOU?



[READ MORE](#)

When Alkan Kabakçioğlu, an associate professor, and Hamza Çoban, a graduate student, in the Department of Physics, compared the average activation rates and sensitivity levels of genes in gene network models, they came across a pattern that no one had noticed before. They discovered a fractal pattern hidden inside the complex interaction networks of cellular biology. Their study provides deeper insight into the interplay between mathematics and biology and nurtures further studies in both areas.

[FOR FURTHER INFORMATION](#)

RESEARCH ACCOLADES

## KOÇ UNIVERSITY FACULTY MEMBERS RECEIVED ERC PROOF OF CONCEPT GRANTS



**Assoc. Prof. Erdem Yörük's project** "Politus: AI-based Data Platform for Fair Social Policies," which will provide real-time, retroactive, and statistically representative data on society and politics by using social media and other big data sources, was the first project to receive this support in the field of sociology from Turkey. The project will verify the innovation potential of computational social science and policy-related novel methods from Erdem Yörük's ERC-funded Emerging Welfare Project.



**Assoc. Prof. Mustafa Erdem Kabadayı's project** examines radical land use and land cover segmentation from the 1940s to the present in the area including the cities of Istanbul, Edirne, and Plovdiv by associating them with population dynamics and predicts possible agricultural population loss, agricultural land abandonment, and deforestation in the 2040s.



**Asst. Prof. Mehmet Cengiz Onbaşlı's project** "SuperPHOTON (2D Topological Superconducting Single Photon Detector Devices)," aims to produce and commercialize highly sensitive new quantum light sensors, one of the most important research areas of the 21<sup>st</sup> century. These new sensors are of great importance for the success and diffusion of quantum computers and quantum internet technology.

## PRESTIGIOUS GRANTS AWARDED BY THE EUROPEAN COMMISSION WITHIN THE SCOPE OF THE HORIZON EUROPE PROGRAMME



**Prof. Ahmet İçduygu & MIREKOC Team's project** "FAiR (Finding Agreement in Return)" aims to generate new insights into the factors and processes that foster or impede the legitimacy and effectiveness of Europe's intergovernmental return and alternatives to return policies.



**Prof. Bertil Emrah Oder & KOÇ-KAM Team's project** "FIERCE (Feminist Movements Revitalizing Democracy in Europe)" focuses on the transformative contributions of feminist movements to pluralist and libertarian democracy in eight countries, including Turkey, with interdisciplinary, multidimensional, and multi-level research methods.



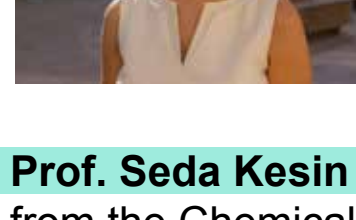
**Prof. Barış Tan's project** "AUTO-TWIN" aims to develop a data-driven method based on a process mining approach for Automated Digital Twin generation, operations, and maintenance in circular value chains.

## MiReKoc's project "MIG-AGE (Are Immigrants in Europe Ageing Well? A Mixed Methods and Intervention Study in Four Countries) RECEIVED A GRANT FROM THE VOLKSWAGEN FOUNDATION.

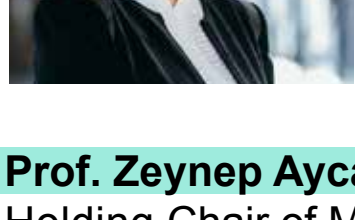
The project addresses the question of what it means for different groups of migrants in Europe to be old and age well, specifically for first-generation retired labor migrants from Italy and Turkey living in Germany and the Netherlands, and for the retired migrants from Germany and the Netherlands living in Italy and Turkey.



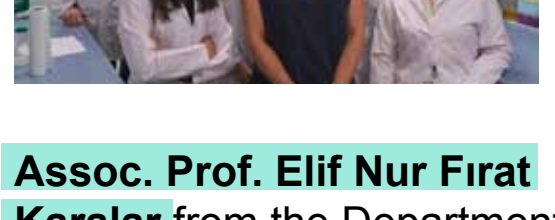
**Prof. A. Nazlı Başak** from The School of Medicine (KUTTAM-NDAL, Suna and İnan Kıraç Foundation) and **Asst. Prof. Hamza Syed** from KUTTAM examines ALS, a non-curable brain disease. **THEIR PROJECT WILL REVEAL THE ROLE OF SPECIFIC GUT MICROORGANISMS AND THEIR METABOLITES IN THE DEVELOPMENT OF ALS.** The project aims to establish a multinational collaboration to better understand the interaction of the microbiome and its relationship to ALS.



**Prof. Seda Kesin Avci** from the Chemical and Biological Engineering Department was **SELECTED FOR THE LIST OF "THE WORLD'S 20 MOST EXTRAORDINARY WOMEN OF SCIENCE"** by ChERD (Chemical Engineering Research and Design), one of the world's most distinguished journals in chemical engineering.



**Prof. Zeynep Aycan**, Koç Holding Chair of Management and Strategy at Koç University, has been **ELECTED AS THE PRESIDENT OF THE INTERNATIONAL ASSOCIATION FOR CROSS-CULTURAL PSYCHOLOGY (IACCP).** The IACCP, a prestigious science organization in the field of psychology with more than 800 members from 65 countries, focuses on the effects of culture on human behavior and develops models and methods to improve intercultural interaction.



**Assoc. Prof. Elif Nur Fırat Karalar** from the Department of Molecular Biology and Genetics received the **AYDIN DOĞAN FOUNDATION MOLECULAR BIOLOGY AND GENETICS RESEARCH AWARD**, dedicated to Prof. Üzlem Türeci and Prof. Uğur Şahin, for her outstanding international work on the biology of the mammalian centrosome/cilium complex and rare genetic diseases in the fields of cell biology and proteomics.

RESEARCH NEWS



## NEW MOLECULE IN THE FIGHT AGAINST SARS-COV2

Önder from the School of Medicine, postdoc researcher Alişan Kayabölen from the Koç University Research Center for Translational Medicine (KUTTAM), and their teammates designed a new molecule in the fight against SARS-CoV2, the cause of the COVID-19 pandemic. Their article about the research was published in *Advanced Science*, one of the most prestigious journals in the field.

## THE LANDSCAPE AND ROCK-CUT ARCHITECTURE OF MEDIEVAL THRACE



The BRIA Project had its first fieldwork trip from May 30 to June 7, 2022, funded by the Koç University Seed Fund. The 16 members of the international team – graduate students and scholars from different backgrounds and disciplines – travelled together, exploring 20 sites stretching from Constantinople/Istanbul to Thessaloniki across the historical region of Thrace, currently divided among three states (Turkey, Greece, and Bulgaria).

## NEW KOÇ UNIVERSITY EXCAVATIONS TO BEGIN IN HATAY AT TELL KURDU HÖYÜK

The newly established Koç University Excavations at Tell Kurdu Höyük in Hatay will shed light on the transitional period dating to the Chalcolithic Period of the sixth and fifth millennia BCE, which saw the emergence of regional centers, of which Tell Kurdu was one. In 2022, Koç University together with the Ministry of Culture and Tourism and the Netherlands Institute in Turkey began a brief preliminary season with a small team to understand how societies were organized in this period with the aim of sowing the seeds for a long-term multidisciplinary research project.



## ENVIRONMENTAL ARCHAEOLOGY AT ANAMED

The first of its kind in Turkey, ANAMED's Environmental Archaeology Online Program was held with the participation of 336 people at the beginning of summer 2022. The program was designed to introduce participants to environmental archaeology broadly, including a survey of research questions and methods, and to explore three important subfields in-depth: archaeobotany, zooarchaeology, and bioarchaeology.

## A DIGITAL EXHIBITION BRINGS COMPLEX MEDIEVAL RELATIONS INTO LIGHT

The Koç University Stavros Niarchos Foundation Center for Late Antique and Byzantine Studies (GABAM) has collaborated with the Swedish Research Institute in Istanbul (SRII) together with Per Demervall and Patric Nyström, authors of *Siri the Viking*, a series of graphic novels for children, to design a new virtual exhibition. "Nordic Tales-Byzantine Paths" explores and presents the interactions between the Byzantine and the Nordic worlds via a collection of objects, sources, and essays. To explore the virtual exhibition, please go to the website ([nordictalesbyzantinepaths.ku.edu.tr](http://nordictalesbyzantinepaths.ku.edu.tr)).



[WATCH THE VIDEO](#)

FROM OUR DOCS AND POSTDOC

Koç University has once again received the largest number of projects in the **TÜBİTAK 2236 CO-FUNDED BRAIN CIRCULATION SCHEME FELLOWSHIP PROGRAM.** Fellowship Recipients are:

- ASST. PROF. GÖZDE GÜL** (College of Engineering, supervisor: Deniz Yüret)
- VISITING FACULTY KIYUMARS JALILI** (College of Engineering, supervisor: Seda Kızıllı)
- POST-DOCTORAL RESEARCH ASSOCIATE SAIRA AİMAL** (Koç University TÜPRAŞ Energy Center, supervisor: Sarp Kaya)
- POST-DOCTORAL RESEARCH ASSOCIATE DANIEL GEISZLER** (College of Sciences, supervisor: Nurhan Özlü)
- POST-DOCTORAL RESEARCH ASSOCIATE PALANI NATARAJAN** (College of Sciences, supervisor: Önder Metin)
- POST-DOCTORAL RESEARCH ASSOCIATE MOSTAFA SHOJAEIAN** (College of Engineering, supervisor: Savaş Taşoğlu)



**DR. DUYGU AYDEMİR** was granted **2<sup>nd</sup> Place** in the **TÜBA Teknofest Ph.D. Science Awards** in the field of Health and Life Sciences for her thesis, "Investigation of the Biochemical Parameters in the Pre-symptomatic and Symptomatic SOD1 Mutated Rat Model of ALS."

The research, titled "Machine Learning-Enabled Prediction of 3D-Printed Microneedle Features," by **MISAGH REZAPOUR SARABI, M. MUNZER ALSEED, AHMET AGAH KARAGÖZ, and SAVAŞ TAŞOĞLU**, was published in the *Journal of Biosensors*.



[WATCH THE VIDEO](#)

## KUISCID RESEARCHERS presented the story of the timeline in a video for their TÜBİTAK 1001 project.

"We Are Chasing after the Fatal Pseudomonas aeruginosa Infection."

SPOTLIGHT ON RESEARCH PROFESSORS

## TÜBİTAK 2247-A PROGRAM VIDEO SERIES

### OMIC-NET PROJECT

Koç University once again has received the largest number of projects in the TÜBİTAK 2247-A National Leader Researchers Program. The work of Dr Nurcan Tunçbağ, an associate professor in the Department of Chemical and Biological Engineering and the School of Medicine, one of the recipients, focuses on improving human health and quality of life.



[WATCH THE VIDEO](#)

PODCAST

## KUCAST REALISTIC TRAVELERS OF MIXED REALITY



Augmented reality, virtual reality, mixed reality... How real are they? What do these technologies promise? In what areas are they used besides the entertainment sector? Do they have negative effects on health? In this podcast episode, our guests are Prof. Hakan Ürey from the Electrical and Electronics Engineering Department, and Assoc. Prof. Evren Yantaç from the Media and Visual Arts Department, Director of Karma Lab, who hold various patents in the subject area.

[LISTEN TO PODCAST](#)