

2022/23 FUNDS

Breakthroughs in Scientific Research

As one of the leading research universities in our country, Koç University continues to strive for excellence, placing particular importance on scientific education and research. Faculty members are recognized nationally and internationally for their research capabilities and receive significant grants from prestigious institutions such as the European Research Council (ERC) and Horizon Europe Framework Programme, for projects in a variety of fields.



Asst. Prof. Barış Yıldız
Department of Industrial Engineering

ERC Starting Grant 2022
EUR 1.5 million grant for five years

Asst. Prof. Barış Yıldız's project "GoodMobility: A New Perspective on City Logistics: Concepts, Theory, and Models for Designing and Managing Logistics as a Service" aims to design future urban logistics systems and the necessary theories, concepts, and models for the realization of these systems. The project is the first ERC project focused on logistics.



Assoc. Prof. Elif Nur Fırat Karalar
Department of Molecular Biology and Genetics

ERC Starting Grant 2022
EUR 1.6 million grant for five years

Assoc. Prof. Elif Nur Fırat Karalar's project "SatelliteHomeostasis: Spatiotemporal Regulation of Centriolar Satellite Homeostasis" focuses on understanding the evolutionary processes of the complex organization of mammalian cells, thus developing new diagnostic and treatment methods for diseases such as developmental disorders or cancer. Dr. Fırat Karalar received an ERC Starting Grant in 2015 for another project.



Assoc. Prof. Selim Erdem Aytac
Department of International Relations

ERC Starting Grant 2022
EUR 1.5 million grant for five years

With the "Affective Polarization and Democratic Attitudes- DEPOLARIZE" project, Assoc. Prof. Selim Erdem Aytac examines how the emotional polarization created by the antipathy, insecurity, and negative feelings developed by citizens in many countries against supporters of political parties they see as opposed to their own views affects people's democratic attitudes.

Among the 47 prestigious projects from Türkiye that have received ERC grants since 2012, faculty members from Koç University have obtained an outstanding number of 27.



Dr. Erkan Aydın
King Abdullah University of Science and Technology

ERC Starting Grant 2022
EUR 2.5 million grant for five years

Dr. Erkan Aydın received an ERC Starting Grant with “INPERSPACE,” a project hosted by Koç University. Dr. Aydın and his team develop highly efficient yet cost-effective solar cells that have become a necessity in the “new space age.” While INPERSPACE is the first project in Türkiye to receive an ERC fund in the field of photovoltaic technologies, Dr. Erkan Aydın is the first researcher to be awarded this project by writing a joint project with Türkiye from abroad.



Assoc. Prof. Mustafa Erdem Kabadayı
Department of History

ERC Proof of Concept 2022
EUR 150,000 grant for one year

Assoc. Prof. Mustafa Erdem Kabadayı’s project “UrbanOccupationsOETR”, which previously had received an ERC Starting Grant, is the first in Türkiye in the field of history and still the only one in the field of the economic history of Türkiye and the Ottoman Empire in the European Research Council. The project analyzes radical land use and land cover segmentation from the 1940s to the present in the area including the cities of İstanbul, Edime, and Plovdiv by associating them with population dynamics. He seeks to predict possible agricultural population loss, agricultural land abandonment, and deforestation in the 2040s.

ERC GRANTEES AT KOÇ UNIVERSITY

HAKAN ÜREY & AFSUN ŞAHİN

Department of Electrical and Electronics Engineering & School of Medicine

European Innovation Council (EIC) Fund 2021

Cataract Simulator Diagnostics Device Development Using Computational Holographic Displays

LEVENT BEKER

Department of Mechanical Engineering

ERC Starting Grant 2021

Development of Wireless and Biodegradable Implants for Continuous Cardiac Measurement

DİDEM UNAT

Department of Computer Engineering

ERC Starting Grant 2020

Beyond Moore: Pioneering a New Path in Parallel Programming beyond Moore’s Law

MEHMET CENGİZ ONBAŞLI

Department of Electrical and Electronics Engineering

ERC Starting Grant 2020

SKYNOLIMIT: Ultralow Power and Ultrawideband Spintronics near Thermodynamic Limits

SEDA ERTAÇ GÜLER

College of Administrative Sciences and Economics

ERC Consolidator Grant 2019

Improving Gender and Immigrant Outcomes through Social Malleability of Attitudes: Randomized Interventions on Peer Interactions in an Educational Setting

SEDA KESKİN AVCI

Department of Chemical and Biological Engineering

ERC Starting Grant 2017

COSMOS (Computational Simulations of MOFs for Gas Separations)

ERDEM YÖRÜK

Department of Sociology

ERC Starting Grant 2017

Emerging Welfare: The New Politics of Welfare: Towards an “Emerging Markets” Welfare State Regime

ERDEM KABADAYI

Department of History

ERC Starting Grant 2016

Industrialisation and Urban Growth from the Midnineteenth Century Ottoman Empire to Contemporary Türkiye in a Comparative Perspective, 1850-2000

ALP ENVER ATAKAN

Department of Economics

ERC Consolidator Grant 2016

Informative Prices: Market Selection, Frictions and the Information Content of Prices

ELİF NUR FIRAT KARALAR

Department of Molecular Biology and Genetics

ERC Starting Grant 2016

CentSatRegFunc: Dissecting the Function and Regulation of Centriolar Satellites: Key Regulators of the Centrosome/ Cilium Complex

CORY DUNN

Department of Molecular Biology and Genetics

ERC Starting Grant 2015

Deciphering and reversing the consequences of mitochondrial DNA damage*

*June 2017; transferred to the University of Helsinki

ÖZGÜR BARIŞ AKAN

Department of Electrical & Electronics Engineering
ERC Starting Grant 2014

Communication Theoretical Foundations of Nervous System Towards
BIO-inspired Nanonetworks and ICT-inspired Neuro Treatment

SEDAT NİZAMOĞLU

Department of Electrical and Electronics Engineering
ERC Consolidator Grant 2021
Retinal Mesh Optoelectronics

ERC Starting Grant 2014

NOVELNOBI: Novel Nanoengineered Optoelectronic Biointerfaces

HAKAN ÜREY

Department of Electrical & Electronics Engineering
ERC Advanced Grant 2014
WEAR3D: Wearable Augmented Reality 3D Displays

ERC Proof of Concept Grant 2015

WEAR3D-POC: Commercialization of Wear3D - Wearable and 3D
Display Technology

ERC Proof of Concept Grant 2017

MIRAGE: Augmented Reality Wearable Platform and Screen: Proof of
Concept and Commercialization

ERC Proof of Concept Grant 2019

EYECAS: WEAR3D-POC:
Commercialization of Wear3D- Wearable and 3D Display Technology

KEREM PEKKAN

Department of Mechanical Engineering
ERC Starting Grant 2013

Vascular Growth: Bioengineering Prediction of Three-Dimensional
Vascular

ERC Proof of Concept Grant 2015

Kids Surgical Plan: An Internet Enterprise for Sketch-based
Cardiovascular Pre-surgical Planning

ERC Proof of Concept Grant 2019

Production of Artificial Heart Pump for Children

Koç University is recognized officially as
a research university by the Council of
Higher Education of Türkiye (YÖK).



Asst. Prof. Mehmet Cengiz Onbaşı

Departments of Electrical and Electronics Engineering and Physics

ERC Proof of Concept 2022

EUR 150,000 grant for one year

Asst. Prof. Mehmet Cengiz Onbaşı's "SuperPHOTON: 2D
Topological Superconducting Single Photon Detector Devices"
project aims to produce and commercialize highly sensitive new
quantum light sensors, one of the most important research areas of
the 21st century. These new sensors are of great importance for the
success and diffusion of quantum computers and quantum internet
technology. In 2020, Prof. Onbaşı received a Starting Grant from ERC
with the project "SKYNOLIMIT: Ultralow Power and Ultrawideband
Spintronics Near Thermodynamic Limits."



Assoc. Prof. Erdem Yörük

Department of Sociology

ERC Proof of Concept 2022

EUR 150,000 grant for 18 months

Assoc. Prof. Erdem Yörük's "Politus: AI-based Data Platform for
Fair Social Policies" project will provide real-time, retroactive, and
statistically representative data on society and politics by using
social media and other big data sources. It is the first project to
receive this support in the field of sociology from Türkiye. 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.

TYPES OF ERC GRANTS

- ERC Starting Grant for young, early-career top researchers (2-7 years after PhD)—up to 1.5 million euros for a period of 5 years.
- ERC Consolidator Grant for already independent excellent researchers (7-12 years after PhD)—up to 2 million euros for a period of 5 years.
- ERC Advanced Grant for senior research leaders with significant research achievements in the last 10 years—up to 2.5 million euros for a period of 5 years.
- ERC Proof of Concept Grants for ERC grant holders who want to test the market and/or innovation potential of research results from ERC projects—up to 150,000 euros for a period of 12 months.

10 Koç University affiliated projects have received funding from Horizon Europe since the launch of the new EU Framework Programme for Research and Innovation in February 2021.



Prof. Barış Tan
Department of Business Administration

Horizon Europe Framework Programme
13 partners from eight different countries / Total budget approx. EUR 7.2 million

Prof. Barış Tan's "AUTO-TWIN: Data-driven Method Based on a Process Mining Approach for Automated Digital Twin Generation, Operations, and Maintenance In Circular Value Chains" project addresses the technological shortcoming and economic liability of the development and usage of digital twins that are accepted as the accelerator and enabler of Circular Economy in businesses and production by conduction research.



Prof. Ahmet İçduygu and The MiReKoc Team
Department of International Relations and Department of Sociology

Horizon Europe Framework Programme
10 partners / Total budget approx. EUR 3.5 million

Prof. Ahmet İçduygu and the MiReKoc (the Migration Research Center at Koç University) Team's "FAiR: Finding Agreement in Return" project 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. FAiR will contribute to improving the measurement of return policies and enforced return outcomes and will enrich the analysis of the drivers of enforced return.



Koç University Center For Gender Studies (KOÇ-KAM)

Horizon Europe Framework Programme
11 partners from eight countries / Total budget approx. EUR 2.5 million

The "FIERCE: Feminist Movements Revitalizing Democracy in Europe" project, in which KOÇ-KAM is a partner institution, examines feminist and anti-feminist movements, actions, and discourses and their impact on the institutional arena and political outcomes.



Asst. Prof. Aslı E. Mert
Department of Sociology

Horizon Europe Framework Programme
10 partners / Total budget EUR 998,715 - Koç University EUR 36,100

Asst. Prof. Aslı E. Mert was chosen by the Horizon Europe Program as one of the partners of the "Twinning Research and Innovation Institutions to Design and Implement Inclusive GEPs (NEXUS) Project"



Prof. Nazlı Başak and Asst. Prof. Hamzah Syed

School of Medicine & Koç University Research Center for Translational Medicine (KUTTAM)

The Canadian Institute of Health Research
Total budget approx. EUR 1.5 million - Koç University EUR 500,000

Prof. Nazlı Başak and Asst. Prof. Hamza Syed received support from the Canadian Institute of Health Research for their project "The Oral and Gut Microbiome and Their Derived Metabolites in Sex Differences in ALS" to investigate the relationship between ALS, a debilitating brain disease, and microorganisms, especially in the gut.



Prof. Ahmet İçduygu and MiReKoc Team

Department of International Relations and Department of Sociology

The Volkswagen Foundation

Total budget EUR 1.2 million - Koç University EUR 231,000

The “MIG-AGE: Do Immigrants in Europe Aging Well? Mixed Methods and Intervention Study in Four Countries” project, by MiReKoc Team, led by Prof Ahmet İçduygu, has received a prestigious international grant given by the Volkswagen Foundation. A mixed methods and intervention study conducted in four countries 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.



Prof. Metin Sezgin

KUIS AI Center

1st TEYDEB 1711 Artificial Intelligence Ecosystem Call

Total budget approx. EUR 2 million - Koç University EUR 939,000

Prof. Metin Sezgin’s project “Artificial Intelligence Aided Detergent Formula Design and Performance Optimization” received funding out of a total of 10 funded projects. The partners of Koç University in this project are Hayat Kimya A.Ş., Albert Solino Danışmanlık ve Yazılım A.Ş., and TÜBİTAK BİLGEM.



Prof. Yücel Yemez

KUIS AI Center

1st TEYDEB 1711 Artificial Intelligence Ecosystem Call

Total budget approx. EURO 2 million- Koç University EUR 939,000

Prof. Yücel Yemez also received funding for his “Smart Monitoring of Human Motion and Activities in the Production Environment” project out of a total of ten funded projects. The partners of Koç University in this project are Tofaş A.Ş., Cognitiwe Bilişim Ticaret A.Ş. and TÜBİTAK BİLGEM.



Asst. Prof. Ceyhun Arslan

Department of Comparative Literature

Alexander von Humboldt Foundation

Asst. Prof. Ceyhun Arslan has been deemed worthy of the Alexander von Humboldt Foundation’s Georg Forster Research Fellowship given to experienced researchers, for his work analyzing literary studies, aiming to overcome the established geopolitical and cultural boundaries of the nineteenth century.



Prof. Demircan Canadıncı

Department of Mechanical Engineering

Alexander von Humboldt Foundation

Prof. Demircan Canadıncı received the Alexander von Humboldt Foundation’s Humboldt Research Award for his research on characterizing metallic materials using multiscale experimental and computational methods, designing microstructures and alloys using artificial intelligence, improving the performance of metals under monotonic and cyclic loads, and designing metallic biomedical materials.