

## Undergraduate Research Projects to be Supported by AdımODTÜ in 2020

Project Name	Advisor Name	Student Name
Polymerase Mediated Incorporation of Synthetic Fluorescence into RNA	Asst.Prof.Dr. Müslüm İlgü	Cenk Onur Gürdap
ASCE GeolInstitute Student Competition	Assoc.Prof.Dr. Nejan Huvaj Sarıhan	Satuk Buğrahan Sari/ Muhammet Durmaz
Hardware Design For Output Capacitance Characterization of Gan Transistors	Assist.Prof.Dr. Ozan Keysan	Göksu Kaval
Flexible Cognitive Science Research Front-End (FlexCog)	Asst.Prof.Dr. Müslüm İlgü	Faruk Eroğlu
Forecasting the Effect of Climate Change in Turkey Over Years	Assoc.Prof.Dr. Ceylan Talu Yozgatlıgil/ Asst.Prof.Dr. Fulya Gökalp Yavuz	Eda Yıldırım/İrem Üstek/ Mertcan Yükselsin
Treatment of domestic wastewater with an anaerobic fluidized bed membrane bioreactor (AFMBR)	Asst.Prof.Dr. Yasemin D. Yılmazel Tokel	Yeşim Kutluata/Berivan Tunca/Feride Ece Kutlar/Mustafa Yavuz Taş
Development of Data Based Dashboard for Decision Making in Underground Mining Drilling Operations (DRILL VISION)	Asst.Prof.Dr. Mustafa Erkayaoğlu	Artun Yıldız
Development of Electrically Conductive Nanopatterned Silk Fibroin Membranes for Tissue Engineering Applications	Asst.Prof.Dr. Batur Ercan	Negar Moradi
Trace element compositions of sulfide minerals from Gediktepe polymetallic Au-Ag-Cu-Zn deposit (Balıkesir, NW Turkey)	Asst.Prof. Dr. Ali İmer	Koray Taşbiçen
Decision Support Application for Service Levels of Fire Stations in Ankara	Prof. Dr. Sinan Gürel	Ozan Akın/Göksu Uzuntürk/Ahmet Yüksel
Protocol Verication Language	Asst.Prof.Dr. Ebru Aydın Göl	Alperen Keleş /Umut Şahin / Ozan Akın /Ozan Sazak/Emre Güllü/Ercüment Yıldırım
Enhancing Video Transmission Quality Using Generative Adversarial Models	Asst. Prof. Dr. Ramazan Gökberk Cinbiş	Muhammed Ekrem Odabaş/ İlkecan Bozdoğan
Discovering Furniture Assembly Plan using Deep Reinforcement Learning	Assoc.Prof.Dr. Erol Şahin / Assoc.Prof.Dr. Sinan Kalkan	İlter Taha Aktolga /Özgür Aslan
MENRVA	Prof. Dr. Ferda Nur Alpaslan	Beste Burhan /Beyza Bütün /İlkyaz Arabacı/ Kürşat Öztürk

Project Name	Advisor Name	Student Name
Blockchain Based Security in UAV Networks	Asst.Prof.Dr. Pelin Angın	Muhammed Süha Demirel
Segmented Mask to MRI:Synthesizing Realistic Prostate MRIs using Generative Adversarial Networks	Asst.Prof.Dr. Ramazan Gökberk Cinbiş	Ufuk Cem Birbiri
A Smart IoT Framework for Precision Agriculture	Asst.Prof.Dr. Pelin Angın	Furkan Göksel /Ceren Gürsoy /Asaf Büyükgülcü
Moderation of Perceived Social Support in Relation between Ambiguous Loss and Posttraumatic Growth	Prof. Dr. Özlem Bozo Özen	Semiha Çoban /Esra Kayırmaz/Ezgi Deniz Yılmaz
Chronotype, Self-Compassion and Bedtime Procrastination Among College Students	Prof. Dr. Özlem Bozo Özen	Merve Timuroğulları/ Feyzanur Yön
Comparison of Lexical Diversity/Sophistication and Syntactic Complexity of English High School Textbooks and English University Entrance Exams in Turkey	Dr. Xiaoli Yu	Yağmur Su Kolsal/ Tan Arda Gedik
Language Shift & Language Death: Crimean Tatar Example	Asst.Prof.Dr. Müge Gündüz	Yiğit Can Akbay/İrem Naz Akkuş
Effects of the Mogadishu Port and the Related Logistic Development on the Regional Economy	Assoc.Prof.Dr. Pınar Derin Güre	Mehmet Aykutlu Özlü
Turkey Goes Quantum	Asst.Prof.Dr. Hande Alemdar and Arş.Gör. Zeki Can Seskir	Berat Yenilen/ Utku Birkan/ Umut Kızılyamaç /Elif Çetiner
Magnetic Cellulose Microspheres	Asst.Prof.Dr. Serhan Türkyılmaz	Başak Burçak Demir/ Doğan Akbulut / Ozan Yılmaz /Kaan Öner
Design and Synthesis of NIR Absorbing Photosensitizer as Highly Efficient Photodynamic Therapy Agent	Assoc.Prof.Dr. Görkem GÜNBAŞ	Çağlayan Kizileniş / Osman Karaman
Optimization of Transparent Zinc Oxide Electron Transport Layer in Colloidal Quantum Dots Solar Cells	Asst.Prof.Dr. Demet ASİL ALPTEKİN	Bensu Balıkoğlu / Firdevs Aydın/ İpek Terzioğlu
Distributed Ammonia Synthesis on Ru/C	Prof.Dr. Deniz Üner	Sıla Alemdar
Regenerated Cellulose Membranes for Organic Solvent Nanofiltration	Assoc.Prof. Dr. Pınar Zeynep ÇULFAZ EMECEN	Onur Kaan Aydın
Detection of the Essential Phosphorylation Sites on the $\beta$ 2 Adrenergic Receptor ( $\beta$ 2AR) for Binding of $\beta$ Arrestin 2 to $\beta$ 2AR	Assoc.Prof.Dr. Çağdaş Devrim Son	Zeyneb Vildan Çakıl /Tolgahan Suat Sezen/ Ali Akyol

Project Name	Advisor Name	Student Name
Effects of Climate, Geography, Genetic Properties of Honeybees, and Demographic Structure of Beekeepers on Bee Losses	Prof.Dr. C. Can Bilgin	Selen Akçakoca / İrem Harmancı /Selin Candır / Nergis Yasav / Nergis Bilge Karabulut/ Mert Kükrer
Discovering the Nature of Turkey		Tunca Deniz Yazıcı / Gözde Atağ Vildan Acar / Mert Kükrer
Local and Targeted Drug Delivery Systems for the Treatment of Glioblastoma	Prof. Dr. Vasıf Hasırcı Dr.Tuğba Dursun Usal	Özlem Neyişçi / Gülce Işıl Gökçe
The Effect of Setd3 on Neuroectoderm Differentiation in Mouse Embryonic Stem Cells (mESCs)	Asst.Prof.Dr. Nihal Terzi Çizmecioğlu	Altar Özbıyık / Gözde Güven
Another Potential Cancer Signature Alternative PolyAdenylation (APA)	Prof.Dr. A.Elif Erson Bensan	Didem Naz Döken
Identification of Potential Proteins Involved in the Ubiquitination/Deubiquitination of CXXC5	Prof.Dr. Mesut Muyan	Hazal Ayten / Pelin Toker
Establishment of a Green Fluorescent Protein (GFP) Reporter System for Real-Time Imaging of Cellular Autophagy	Prof.Dr. Sreeparna BANERJEE	Ekin Su Erdem/ Ezgi June Olgaç / İsmail Güderer
Rethinking Concrete	Instructor Mehtap Öztürk Şengül	Nilra Zoraloğlu
The Heritage that We are not Aware of	Prof.Dr. Ali Uzay Peker	Hayriye Hilal Polat
Enhancement of Mechanical Properties of Epoxy Matrix Composites by the Reinforcement of MWCNT (Multi-walled Carbon Nanotube)	Prof.Dr. Demirkan ÇÖKER	Tutku Ilgın Özcan / Kevser Yüceer
ORDOT-II	Prof.Dr. Ahmet ORAL	Alpcan Tunç / Murat Özüm Duru/ Ozan Tamer Yiğit/ Muhammet Tekin / Çağatay Yıldırım /Elif Bilge Çelik / Göksu Kaval / Ali Kaya / Atakan Timal Çiğirim / Berkhan Karadede / Beyza Nur Uysal / Emirhan Artık/ Metin Onat Çukur
Sustainable Plastic - Converting Plastic Waste Into A Sustainable Building Material	Prof.Dr. İsmail Özgür Yaman	Leon Muchugia
Protection of Food Without Additives by Packaging		Ayşe Aybike Kaya / Eylül Korkmaz / Hakan Azder
DoyDoy Powder	Assoc.Prof.Dr. Halil Mecit Öztop	Dilşad Altay /Serap Bozoğlu/Tamer Yiğit Alemdar /Meliha Sena Gülener

Project Name	Advisor Name	Student Name
METU-CET	Prof.Dr. Erhan İlhan KONUKSEVEN	METU-CET Team
Anti-Theft Device with Facial Recognition for Vehicles		Barış Erol /Sertaç Timuçin /Alper Endeş/ Orkun Uluç
Comparing the Mechanical Properties of 3D Printed Nylon Parts Produced by Selective Laser Melting and Fused Deposition Modeling	Asst.Prof.Dr. Sezer ÖZERİNÇ	Sabit Hasçelik / Deniz Karanfil
IEEE METU ROVER TEAM	Assoc.Prof.Dr. Murat Göl	İsmet Baray Kaya / Ege Keyvan /Egemen Özen / Ebru Şahin / Mustafa Akbaba/ Aybars Ağaya / Furkan Kazanç
Fener: The Remote Controlled Car	Prof. Dr. Klaus Werner Schmidt	Şevval Belkıs Dikkaya /Muhammed İzzet Sezer /Volkan Arslan
The Effects Of Mutually Opposing Forces on Propulsion of Underwater Vehicles	Asst.Prof.Dr. Mustafa Mert Ankaralı	Atakan Durmaz / Firdevs Su Aydın/ Merve Zembil/ Furkan Kazanç /Mustafa Akbaba
Pulsar UAV		Enfal Çabuk /Mehmet Eren Tekelioğlu / Mehmet Utku Düzen /Barış Akış /Mert Kerem Ülkü
Autonomous VTOL Unmanned Aerial Vehicles UAVs	Asst.Prof.Dr. Mustafa Mert Ankaralı	Kurtuluş Kerem Şahin /Erhan Ege Keyvan / Adem Deniz Pişkin /Furkan Çitil
Age of Information Minimization of IoT Devices Using Peak Age Violation Probability	Prof.Dr. Elif Uysal	Anıl Kaya/ İlhan Can Avcu
Map Extraction and Position Estimation of a Robot Based on Magnetic and Physical Landmarks	Assoc.Prof.Dr. Lale Alatan	Mustafa S. Destegül/Burak Güler/ Emre Demirtaş/Ergi Çalışkan/ Mete Sözen
Calorimetric Measurement of High Efficient Devices	Asst.Prof. Dr. Ozan Keysan	Emre KARABAKLA
Smart Connected Cat Feeding & Monitoring System	Asst.Prof.Dr. Mustafa Mert Ankaralı	Ersin Tuna Atmaz /Onur Deniz Güler / Beril Günay /Feza Görgülü / Begüm Göktenay Güzel
Video Mapping	Prof. Dr. Kürşat Çağıltay	Tülay Yavuz
METU Rover	Asst.Prof.Dr. A. Buğra Koku	METU Rover Team