

O R T A K Ö Y

İTÜ MTAL

Marine, Electric-Electronic, informatics

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Unity is
strength



We're teaming up!

As İTÜ Vocational and Technical Anatolian High School, we're teaming up within the framework of our objectives such as entrepreneurship, fraternity, sharing responsibility and gaining the sense of responsibility, having a common sense, learning the culture to be planned and organized, fostering our self-confidence and reaching success so that we are attaining a strong sense of team spirit. We believe that the ones who have a common objective and work in teams can reach success. Despite the fact that communication technologies are improving, lack of communication is growing worldwide and that creates big problems for human-being to handle. For İTÜ Vocational and Technical Anatolian High School, problems are not complaints but new projects to be figured out. In this sense, we are teaming up and work on our projects in teams. We are improving team and organization culture. Our students are gathering around a common sense. They are sharing responsibilities within their teams and combining different talents and perspectives so that they are creating a synergy. They are taking the famous Turkish proverb meaning "unity is strength" as a reference. With the synergy created by having a team, each member is experiencing the excitement of developing a product, achieving a goal or solving a problem by turning the differences into richness. The 2023 Educational Vision sees education as a maturation, development, progress, change and moral beauty that encompasses all universal, local, material, spiritual, professional, moral and national values. Rapid change in science and technology, globalization, increasing competition conditions require countries, societies and businesses to come together to enrich and strengthen effective and productive works. Hence, one of the issues that businesses take into consideration first while providing human resources is the team culture and human values of the people they will employ. As stated in the 2023 Education Vision, "The only measure of success in education cannot consist of lecture notes, exam results, intelligence tests and salaries of professions acquired after graduation." The exam success-oriented perspective that is urged by families and a big part of the society is actually an important weakness of us in education. We should try to change the point of view of education, which starts almost at the age of infancy and continues as a "race horse", so to say. Every human being finds herself among her peers. We can give a hand to our children to move forward to the peer variety and to their goals together in order to find themselves. Otherwise, we are likely to encounter with the wrong career choices and youths who are socially immature. As already stated in the Educational Vision, "one of the main reasons why our education system cannot find a ground is the tradition of discussing education on a basis that everyone justifies. Every unit of the society tries to prevail its own understanding over the whole society. As a result, the mature progress in the journey from being a physical entity to being a conscious human-being is interrupted as consequence of a triumph to dive the truth. (Continued on page 6)

İTÜ Ortaköy and Industry Collaboration

We will have our first graduates in 2024. Our students will graduate from university in 2028. Our students who will always be raised up with the national, spiritual values and global perspective of our country will shape the world in science, art and entrepreneurship. For this reason, sectors are our important stakeholders. In this sense, "SCHOOL-INDUSTRY COOPERATION ISTANBUL MODEL" protocol was signed with Beşiktaş District Governorship, Beşiktaş District National Education Directorate, İTÜ Vocational and Technical High School and some institutions and organizations.



İTÜ VAKFI

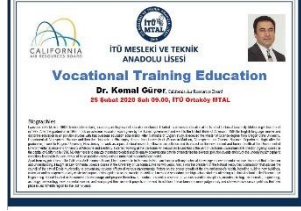
İTÜ FOUNDATION

- Established on April 4, 1984 to make financial and moral contributions to Istanbul Technical University to become stronger and reach a modern level, İTÜ Foundation has taken important steps in line with its goals since its foundation; İTÜ defines its prior aims as to establish economic enterprises that will serve its students, students and alumni and to make all investments on İTÜ campuses. Social Facilities, Educational Facilities, Sports Facilities, Dormitories Business and R&D Business, which are prestigious sources and strengthen the social structure, have been established and they have been provided to serve the targeted audience and thus, resources have been created. In time, these facilities were handed over the university in accordance with the law, and today some of them are operated provided that they can be rented from the university through Foundation companies. Since its foundation, the İTÜ Foundation has provided support for scientific, social, cultural, sports events and personnel working at various levels, and has given science and technology awards, it has provided an average of 600 students with free education and housing scholarships; has given awards to successful students, student athletes, top-scoring students, schools, teachers, and established the Social Club, where over 4000 İTÜ members and graduates are participators. Many of the books published by the İTÜ Foundation, among the 90 some of which are textbooks and reference books, reached the 9th, 10th editions. Through the İTÜ Foundation Magazine, which is published quarterly, it created a bridge between the university and the graduates. İTÜ Foundation supports R&D activities and contributes to university-industry cooperation thus to the scientific and technological development of the society through the companies like RGEM A.Ş., 3M ARGE A.Ş., İTÜNOVA Teknoloji A.Ş. and OTAM A.Ş. some of which were established on its own or with some of which it has a partnership in order to expand the scope of its activities. Istanbul Technical University Foundation is proud to contribute to the scientific, social and cultural environment of İTÜ, as a pioneering institution established to support our university, for 36 years. Continuing its activities in line with the objectives in 2019, the contributions of İTÜ Foundation to our university have reached the highest levels in recent

years. The scholarship contribution made in 2019 has increased by 75% compared to the previous year and has reached the highest contribution made in the last 7 years. We believe that the experience which İTÜ MTAL students have gained thanks to İTÜ FOUNDATION's certificate training programs will come true at İTÜ Ortaköy Vocational and Technical Anatolian High School and with the donations made, it will be even stronger.

İTÜ Ortaköy Conferences

- A seminar on “Vocational Training Education” was given in English by Kemal GÜRER. On February 25, 2020. Kemal GÜRER graduated from İTÜ in 1983 from meteorological engineering. In 1984, YL and Dr. He went to the USA with a scholarship to study. He completed his master's degree at Oregon State University - Atmospheric Science. He completed his PhD at University of Wisconsin-Madison - Atmospheric and Oceanic Sciences. He did post-doctoral research at Rutgers University - Environmental Science Department and University of Medical and Dentistry. In 1998, he started working at the California Air Resources Board of California Environmental Protection Agency in Sacramento, the capital of California. He also advises students on science and mathematics at Sacramento Science and Engineering School in Sacramento, specialized in science and technique. He has been a jury member in many competitions for 19 years.



- On Friday, February 28, 2020, Understanding “Speed Reading Techniques” seminar was given by İTÜ Maritime Faculty member Dr. Lecturer Muhsin KADIOĞLU. Muhsin KADIOĞLU who is also a journalist and writer, graduated from Istanbul University Faculty of Literature and Department of Geography. He completed his master's degree at the Institute of Social Sciences of the same university. He worked in various newspapers. He worked as a department manager in some magazines. He took on the duty to be the Turkey representative reporter of a foreign radio. He works as a Faculty Member at Istanbul Technical University Maritime Faculty. (Prepared by: Şevval KARTAL, Prep A)



the unique Bosphorus scenery. As we fill our lungs with fresh air, we also spend time with the cute animals accompanying us. We feed them, show compassion and play games with them.

In addition, our language and diction courses that take place after school continue at full speed. Our new friends also joined our German courses and the number has increased a little more. We are getting better day by day thanks to the English and diction courses. In addition to the lessons, we pay attention to get involved in social-educational activities.

- In this context, when the weather is warm, we spend time in our winter garden, we take care of the plants that we grow and learn how to approach nature by cleaning and maintaining it.



Visits

We were back at school with a refreshed and stronger mind just after the semester break. We went to NETAŞ Headquarters in the first week following the holiday. After getting informed about the activities of the institution, we closely supervised how the devices work in laboratories and machine rooms.

- On Thursday, February 6, we set off for our NETAŞ trip from our school to Pendik. When we arrived at NETAŞ, we listened to NETAŞ's resume, what kind of jobs they are engaged with, the jobs they have done so far and the professions of the future. Then we got into the A and B laboratories and saw what kind of processes are implemented here. Coming back to the conference hall, the clubs of NETAŞ, its activities, voluntary work and the NETAŞ Foundation were presented to us. Finally, we took a photo, ended our tour and set off towards our school.



Courses -Lectures

Our respectable teachers support the lessons with visual and audio tools in order to make the lessons more efficient for the students. In this way, our students enjoy the lessons a lot and as a result, the information becomes more permanent. In addition to the lessons, our teachers advise us to always be nature-lover people, respecting and protecting the environment, and that our moral aspect should be strong. In this sense, we teach some of our lessons in our garden against

- On Monday, February 17, we attended the İTÜ Career Summit on the campus of Istanbul Technical University. We participated in a conference by Hüseyin GELİS, the CEO of Siemens Turkey, and then we visited the booths of the companies around to collect information. We attended the lecture of ITU Professor and TÜBA member Doctor Ahmet GÜL from the department of Chemistry and participated in a lecture delivered in English by Professor Dr. Yücel KADIOĞLU from the department of Mathematics Engineering , and we ended our trip.



Interviews

We had an interview with Derya ÇAYIRGAN

Interviewer: Kerem Arslan DEMİRTAŞ, Prep D

- Can you please talk about your childhood and education?

I am Derya ÇAYIRGAN. I was born in Istanbul on 9th October, 1987. My family is from Gaziantep. I started playing volleyball thanks to my teacher, when I was in 2nd grade of primary school. I wasn't chosen during the volleyball elections as I was short. But afterwards, they watched me play from the teacher's room. It started like this. I'm a graduate of famous Şehremini High School. I was in the same class with Arda TURAN and other famous football and basketball players on playing the league, for 3 years. I studied at Istanbul University Physical Education department. Now I



am studying Logistics at Bahçeşehir University, but because I am busy, I cannot continue.

- Do you have any idols who motivated you or any admirers on your way to success?

I don't have any idol so admirers. I have always worked hard. I have never given up. I always have good intentions, tried to be positive. I learned to stand up by myself when I fell. As a result, if you work hard, never give up and are patient, everything will be fine. You need to be determined and ambitious. Then, God will help you.



- What is the role of your family in your success?

My family didn't know what a sort was then. At first, they didn't want me to participate. But then my teachers at school didn't send me home. I'm grateful that I have them.

- How do you define "success" in general?

What you get after you work hard is success.

- What is your next career plan and your dream?

I don't like talking about my plans and dreams. Of course I have one or two things to achieve, a done of them is holding the cup with Galatasaray. And the rest is mine

- What is the hardest part of being a volleyball player?

You can't be socially active very much. You need to rest while everybody is having fun. You need to be organized. You need to be careful about your sleep and meal schedule. For example, when your friends invite you to hang out together, of course you can join them but on one condition: you need to leave early.

If you spend the whole night with them and have a training in the morning as well, you need to wake up early when they sleep. You need to be prepared mentally and physically.

You don't get enough sleep if you go to bed late, and naturally your training won't be easy. Your body gets tired. As hard as it looks, this is my lifestyle.

I try to see everything positively and live and organized life. That makes me happy. Otherwise, I wouldn't be here today.

• **I think that there were some times in your career when you thought about quitting and giving up. So, you always need to be motivated. How did you get over those obstacles?**

I am an ambitious person, and patient, too. I don't like giving up. Of course there were times that I said "enough", but I had my dreams. So, I never gave up.

• **What is the place and importance of self-discipline in your life?**

As I mentioned earlier, as long as you are disciplined, success will always be with you. It's the first thing, and should be so. Not exactly in a sports career, but everybody should be disciplined.

• **What are the thing that you would like them to be changed in volleyball?**

Volleyball has recently become well known thanks to the Sultans of the Net, and it continues to be so. There is no need to change anything. I just want it to be talked about more and more on TV, magazines etc. I want it to be as dear as football is.

• **What are your hobbies and passion apart from volleyball?**

I love walking by the seaside and cycling. I do shopping. I like reading book by the sea. As I am from Gaziantep, I love eating, so I always look for good things and places to eat, and I go there. I spend time with my family and loved ones. I love taking photos and being photographed. I don't have too much free time but I try to these things. Season is very busy.

Turkish Scientists reached Antarctica!

Prepared by: Kayra Koray YILMAZ

Our scientists who participated in the 4th National Antarctica Science Voyage reached Antarctica with the help of presidency and under the responsibility of the Ministry of Institute and Technology, and TÜBİTAK MAM Polar Research Institute. Our team of scientists will be working on Horseshoe Island. The team of 24 scientists will run 15 projects in the fields of geology, marine science, etc. **Resource** : Türk Bilim İnsanları Antarktika'ya Ulaştı! (AA, Ayşe Böcüoğlu Bodur, 18.02.2020)



Antarctica is melting rapidly!

Prepared by: Kayra Koray YILMAZ

Antarctica is one of the places that the effects of global warming can be observed clearly and the temperature raised up to 20,7 degrees Celsius as breaking the record and the icebergs decreased by 9,8 %. Scientists reported that polar zones are exposed to the rapid increase of temperatures. The average temperature of Antarctica increased by 3 degrees Celsius in the last 50 years.

Resource: Küresel ısınma: Antarktika'daki 'Kıyamet Günü' buzulu neden hızla eriyor? (BBC, Justin Rowlett, BBC Çevre Muhabiri, 2 Şubat 2020)



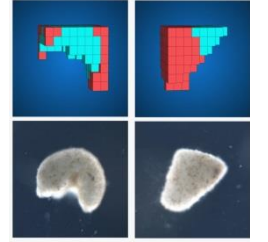
The First Programmable Living Organism: Xenobots

Prepared by: Kayra Koray YILMAZ

American scientists developed the first "alive robot" of the world by using the root cells of a special kind of frog (*Xenopus laevis*). Xenobots are artificial tissues with less than 1000 μm length. This programmable alive organism is developed by the engineers of Vermont University Informatics and Genetics department. In this study, there is completely new and alive organism after cutting the heart and skin cells of *Xenopus* leaves. But, why do we call these organisms "programmable"? The key is the design of the organism. Scientists designed the organism with a super computer from computer engineering department. These computers designed the organism with specific functions (Photo 1), and tested thousands of designs. What these super computers do with artificial intelligence is called evolutionary algorithm. Sadi Evren Şeker states that evolutionary algorithm is a subject of computer sciences and artificial intelligence studies; also it can be understood as the application of change in the nature to computer algorithms. So, how can these robots help humanity? Due to their programmable designs, Xenobots can only live for 10 days, but their effect to human life lasts for years. For example, to clear the vascular congestion, to prevent the micro and macro plastic pollution in the sea, to fight against cancer, as a vessel to transport medicine, in cell renewal, these Xenobots can be used for the sake of humanity.

Resources:

- 1-) Bu ROBOT Canlı! - XENOBOT, <https://www.youtube.com/watch?v=uvK36LaG79U>
- 2-) Yaşayan ve Programlanabilen Organizma Üretildi: Xenobotlar, <http://www.saglikteknoloji.com/xenobot/>
- 3-) Evrimsel Algoritmalar, <http://bilgisayarkavramlari.sadievrener.com/2011/05/17/evrimsel-algoritmalar-evolutionary-algorithms>.



We're teaming up!

(First part on page 1)...Therefore, in all our preparations for the challenges of the age we live in the issue of education should be freed from ideology and placed on a pedagogical ground." For successful young people who live humanly and enjoy their profession, gaining a team culture can be a good start.

On behalf of the Social Activity Team, Headmaster Prof. Dr. Hüseyin TOROS

DAGEM

İTÜ Ortaköy Vocational and Technical Anatolian High School is on the way to become a Digital Research and Development Education Center

Augmented / virtual reality studies,
Unmanned marine, land aerial vehicles,
Data mining studies,
3D printouts

LINKS

Midpoint of the ones who aim high: İTÜ Career Summit Held by İTÜ Career Center at 4 different campuses of our university, İTÜ Career Summit aimed that young people should be able to make right career choices. The link to the event: <https://haberler.itu.edu.tr/haberdetay/2020/02/25/zirveyi-hedefleyenlerin-bulusma-yeri-i-tu-kariyer-zirvesi>

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Eğitimi Sertifika Programları

Dijital Araştırma, Geliştirme ve Eğitim Merkezi



İTÜ VAKFI

Artırılmış Gerçeklik ve Sanal Gerçeklik (AR / VR) Temel Seviye Eğitimi

Proje-1 Unity Programı

Kurulumu

Visual Studio Kurulumu
Vuforia LogIn
Player Setting
Unity Menüleri
3 boyutlu objeler
Game penceresi
Temel uygulamalar
Temel Seviye AR
Vuforia Setting
Player Setting
Assets store

Proje-2 Zıplayan Kedi Uygulaması

Import Cat FBX
Image import
Vuforia Setting
DataBase File
Unity Setting
Built Setting
Player Setting
Built APK

Proje-3 Hayvanlar Dünyası

Libre Office ile kitap hazırlama
Vuforia setting
Unity Setting
Image Target'a TEXT ekleme
Built Setting
Player Setting

Proje-4 AR Okul Kitabında

Image Target background

Image Download
AR projeye ses ekleme
Birden fazla image animasyon
APK hazırlama

Proje-5 Mixamo tanıtımı

Login olma
İnsansı karakter tasarımı
Animasyon ekleme
FBX dowload
AR Karakter
Vuforia setting
ADD mixamo animation
Built APK

Proje-6 AR Karakter

Vuforia setting
Unity setting
Rig-Animation-Material
Birden çok karakter hazırlama
Built APK
Ses ekleme
APK hazırlama

Proje-7 3D tasarım programı

kurulumu
Menüleri tanıma
3D objeler
Kısa yol tuşları
Scale-Move-Rotate işlemi
Temel çizimler
Basit animasyon hazırlama
FBX export
Unity setting
Vuforia setting

3D animasyon import
APK hazırlama

Proje-8 Cep Telefonu menü

tasarımı
Buton ekleme
Sahnedan sahneye geçiş
Canvas setting
Sahne ekleme
Visual Studio
C# kodla sayfası
Kod yazımı
PC de test etme
Telefonda test etme

Proje-9 3D obje buton ekleme

Birden fazla obje buton ekleme
Sahnedan sahneye geçiş
Visual Studio
C# kodla sayfası
Kod yazımı
PC de test etme
Telefonda test etme

Proje-10 C# Kodlama

Void start
Game Object
GetComponent
Material Color
Destroy
PC de test etme
APK oluşturma
Telefonda test etme

Proje-11 C# Kodlama

OnMouseEnter
OnMouseExit
OnMouseDown
OnMouseUP
Restart komutu
Exit komutu
PC de test etme
APK oluşturma
Telefonda test etme

Proje-12 LeanTouch

Assets Store
Unity setting
Vuforia Setting
Built APK
Flip Book
Import Images on Google
Asset Store
Unity Setting
Vuforia Setting
Built APK

Proje-13 Virtual Reality

Google Cartboard import
Sample scene
3D Objeye Ekleme
Built APK
VR gözlük ile test
VR English Book
3D obje import
Ses kaydı hazırlama
C# kodlama
Objeye ses eşleştirme
APK hazırlama
Sanal gözlükte test etme