

# TECHNOSPHERE

Innovation Services at Izmir Institute of Technology



**SPRING 2015**



**Horizon 2020: Finding Your  
Perfect Match**

**TUBITAK: New Incentives &  
Rewards**

**A Kinematically Redundant  
Planar Laser Cutting Machine**

**Importance of Human Resources  
in Science & Technology**

**How We're Doing: IZTECH &  
Atmosfer Report Card**

**IFTToMM Symposium on Theory of  
Machines and Mechanisms**

**International Porous & Powder  
Materials Symposium &  
Exhibition**

Presented By:

**ATMOSFER TTO**

**WHY WE  
DO WHAT  
WE DO:**  
Academician and  
Entrepreneur Success  
Stories

**Photo Contest**  
Innovation in Action



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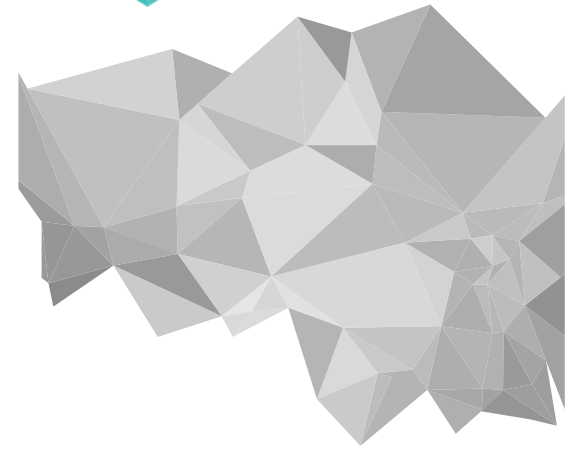
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## ACKNOWLEDGEMENT

*Atmosfer TTO is supported by TUBITAK Support Programme for Technology Transfer Offices 1513*

The goal of this program is to support the commercialization of knowledge existing in universities and transfer it to industry as products or processes. The top 50 Turkish universities based on the Entrepreneurial and Innovation University Index ranking were eligible for the program. IZTECH is one of twenty universities that received the grant to establish Technology Transfer Offices. The project is funded through 2018 with options to extend for up to 10 years.

## FROM THE DESK OF RECTOR PROF. MUSTAFA GUDEN

# 2015 Izmir Institute of Technology's Year of **KNOWLEDGE TRANSFER**

**T**here is something to love about every new year here at IZTECH, but with the recent investments to improve our research and development infrastructure, 2015 will be unmatched as the *Year of Knowledge Transfer*. As a technology institute, our mission has traditionally emphasised research and teaching. As our success in these areas has grown, IZTECH has become a significant source of knowledge for local universities and industries. We are now shifting focus to **how we can more effectively share and transfer our knowledge** to support and improve our relationships both here at home, and internationally.

Last year, with the opening of our dedicated Atmosfer Technology Transfer Office (TTO), we **began a new chapter** in our ability to take acquired knowledge and apply it in practical ways to improve our community, country, and continent.

This year, we will continue our commitment to new ideas and open communication, engaging and informing the local government and industry, while continuing to provide opportunities for researchers and entrepreneurs to succeed.

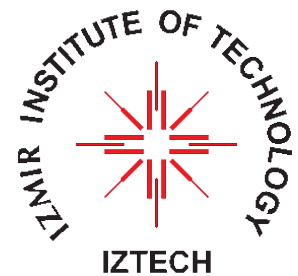
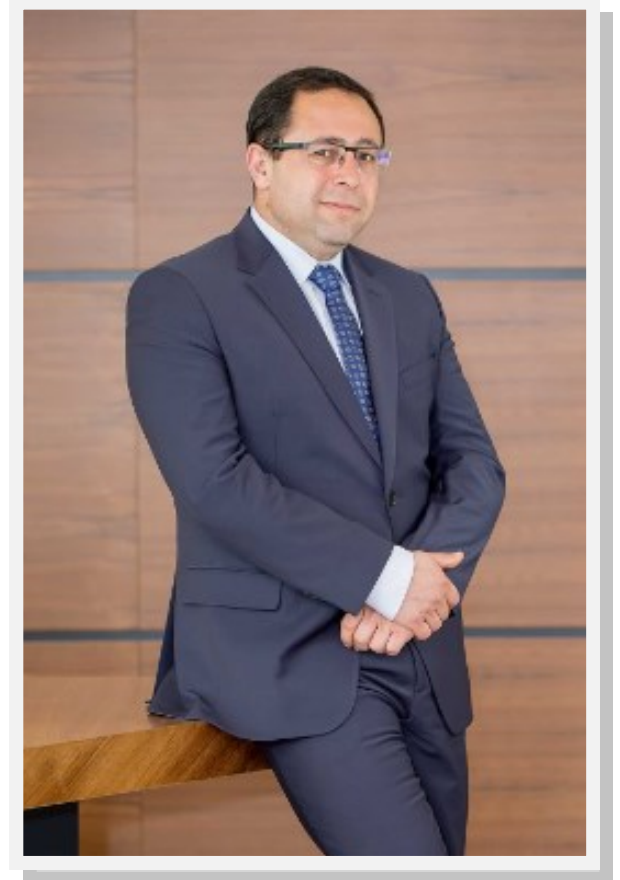
The **Knowledge and Technology Transfer process is a win-win**. Society benefits from economic growth and improvements to local businesses due to the knowledge transferred from our institution. Academicians benefit from closer connections to industry and the opportunities to tackle real-world problems. Students learn new skills and build relationships with future job prospects. Companies have greater access to laboratories and can work directly with multi-disciplinary experts to solve their greatest challenges. This cycle feeds directly back to the university by increasing our international competitiveness, thus attracting more faculty and students.

Solid foundations have already been laid, but we still have work to do. Now is the time to open yourself up to new ideas and begin to think creatively to develop the conditions necessary for technological innovations in Izmir and throughout Turkey. **Get involved in technology transfer...** read current events, attend conferences, encourage academic collaborations, meet with industry partners, patent an idea, submit a proposal, or even start a company.

If you need help getting involved, Atmosfer Technology Transfer Office is available to support you every step of the way. Please contact [atmosfer@atmosfertto.com](mailto:atmosfer@atmosfertto.com) or visit [www.atmosfertto.com](http://www.atmosfertto.com) and they'll be happy to discuss the benefits with you!

Sincerely Yours,

**Rector Prof. Dr. Mustafa Guden**



[www.iyte.edu.tr](http://www.iyte.edu.tr)





# THE ART OF KNOW LEDGE TRANSFER

**THE IMPORTANT  
THING IS NOT TO  
STOP  
QUESTIONING.**

*ALBERT EINSTEIN,  
PHYSICIST*

**AN INVESTMENT  
IN KNOWLEDGE  
ALWAYS PAYS THE  
BEST INTEREST.**

*BENJAMIN FRANKLIN,  
INVENTOR*

**HAYATTA EN HAKİKİ  
MÜRŞİT İLİMDİR.**

OUR TRUE MENTOR IN LIFE IS  
SCIENCE.  
*MUSTAFA KEMAL ATATURK,  
PRESIDENT AND FOUNDER OF THE  
REPUBLIC OF TURKEY*

**SHARE YOUR  
KNOWLEDGE. IT'S A  
WAY TO ACHIEVE  
IMMORTALITY.**

*DALAI LAMA, LEADER OF  
TIBETAN BUDDHISM*

**GERÇEKTEN EVRENİN  
SİRRİNİ ARIYORSANIZ,  
BENİM YAPTIĞIM GIBI  
SAYILARA GELİN.**

IF YOU ARE REALLY LOOKING FOR THE  
SECRET OF THE UNIVERSE, POINT TO THE  
NUMBERS AS I DO..

*CAHIT ARE,  
MATHEMATICIAN*

**KNOWLEDGE IS LIKE  
MONEY: TO BE OF VALUE  
IT MUST CIRCULATE, AND  
IN CIRCULATING IT CAN  
INCREASE IN QUANTITY  
AND, HOPEFULLY, IN  
VALUE.**

*LOUIS L'AMOUR,  
AUTHOR*

**COMING TOGETHER  
IS A BEGINNING;  
KEEPING TOGETHER IS  
PROGRESS; WORKING  
TOGETHER IS SUCCESS.**

*HENRY FORD, FOUNDER OF  
FORD MOTOR  
COMPANY*

**BÜTÜN BİLİMLER  
TEK FAYDADA  
ORTAKTIR.**

ALL SCIENCES ARE  
COMMON IN A SINGLE  
BENEFIT.

*İBNİ SİNA,  
PHILOSOPHER*

**POWER IS GAINED  
BY SHARING  
KNOWLEDGE, NOT  
HOARDING IT.**

*ANONYMOUS*

**A MAN CAN  
ONLY ATTAIN KNOWLEDGE  
WITH THE HELP OF THOSE  
WHO POSSESS IT. ONE  
MUST LEARN FROM HIM  
WHO KNOWS.**

*GEORGE IVANOVICH GURDJIEFF,  
PSYCHOLOGIST*



## GREETINGS FROM OUR GENERAL COORDINATOR

There's a lot of excitement here at Atmosfer Technology Transfer Office (TTO) as we publish our first issue of our new *quarterly* magazine. Here, we hope you'll find some interesting news about current and local projects, technology trends, and information to keep you notified about upcoming grants, training opportunities, and other updates to support your career development.

Our cover story "Why We Do What We Do" focuses on the *journey* of people just like you... insights about applying for European Union (EU) fellowships directly from our local Marie Curie fellows... experiences as an entrepreneur including the good and the bad right from our local Teknopark Izmir companies.

This magazine is also a resource to find information about *national and international support* available to you. In this issue, we highlight annual TUBITAK support programs and upcoming EU calls categorized by scientific area.

Inside the magazine, you will also find details about the Atmosfer TTO *Photography Contest* that we are sponsoring to celebrate our first issue! This issue's contest asks you to show us what "Innovation" means to you. The contest is open to anyone and everyone.

We would like to thank all of you for your support of our office and all who contributed to the development of this magazine. If you are interested in being a part of the next issue, have ideas for articles, or would like your events to be included, please contact Atmosfer TTO at [technosphere@atmosfertto.com](mailto:technosphere@atmosfertto.com). Enjoy the issue!



With my Regards/  
Saygılarımla,

**Dr. Emrah Tomur**  
General Coordinator  
Atmosfer TTO

### About Atmosfer Technology Transfer Office

Atmosfer Technology Transfer Office (TTO) is a small enterprise specializing in technology transfer, project development, patent consultancy, entrepreneurship, and grant support. Atmosfer TTO operates within the Izmir Technology Development Zone (Teknopark Izmir) in the scope of The Scientific and Technological Research Council of Turkey (TUBITAK) 1513 TTO Support Program. Located right on the Izmir Institute of Technology (IZTECH) campus, our team works to unite the knowledge and technology gained from academic studies to deliver real-world applications to industry partners.

Atmosfer TTO supports the Academy—Industry by acting as a liaison between researchers, companies and public authorities. Support includes:

- Project Development and Management
- Intellectual and Industrial Property Rights
- Legal & Research Contract Development
- Entrepreneurship and Incorporation
- Grant and Fellowship Programs
- Industrial Marketing
- Start-ups & Spin-offs
- Regional Development

Please visit our website [www.atmosfertto.com](http://www.atmosfertto.com) to learn more about our services and how we can help you with your next big step in your career!

## COVER STORY



## ACADEMICIAN & ENTREPRENEUR SUCCESS STORIES

It's a simple question for us. Whether you're an academician looking for funding assistance, an entrepreneur ready to start your company, or an innovator with an excellent idea, Atmosfer TTO is here to support you every step of the way. Your success is our success! We asked a few of our fellow academicians and entrepreneurs to reflect on some of their career moments that they are most proud of... Here is what they had to say.

### ACADEMICIANS

**Are you an innovative and experienced researcher thinking about the next stage of your career?**

Under Horizon 2020, *Marie Skłodowska-Curie Actions (MSCA)* has grants available to benefit your training and professional development, while enhancing European mobility and knowledge transfer. *Individual Fellowships (IF)* offer researchers relocating to a new country support for start-up funding, project management, and living allowances. To apply, you must have received your doctoral degree, have at least four years research experience, and not resided in Turkey in the three years prior to the submission deadline.

Here, we present interviews with two IZTECH professors and their experience with the MSCA programme to provide insight into research opportunities available to you.

#### Dr. Selcuk Saatci | Civil Engineering

**2008-2012** *Numerical and Experimental Investigation of Reinforced Concrete Structures Subjected to Impact Loads (211092) (RCIMPACT)*

*Dr. Selcuk Saatci is an Assistant Professor of Civil Engineering at IZTECH. He received his Bachelor's and Master's of Applied Science in Civil Engineering from Middle East Technical University (METU). He then moved to Canada and completed his Doctorate degree in Civil Engineering at the University of Toronto. Originally from Elazig, he knew he wanted to return to Turkey. By the time he received the reintegration grant from Marie Curie, he was offered the position in Izmir. The Marie Curie fellowship assisted Dr. Saatci in his job search and afforded him the opportunity to land a position in his country of choice.*

#### What is your current field of study?

My research is in structural engineering focused on analysing and improving impact and blast resistance of reinforced concrete structures. Although my project is completed, my research of the impact behaviour of reinforced concrete slabs continues. My current research examines the shear reinforcement and steel fibres in concrete structures to help improve resistance from environmental attacks (e.g. tornado generated missiles) or terrorist attacks (e.g. bombs).

#### How did you hear about the Marie Curie fellowship?

When I made the decision to return to Turkey, one of my former colleagues in Ankara told me about the reintegration grant and that it would be a good fit for me. It was my first time writing a project so the experience was a new one, but I was very fortunate.

I was able to choose my Scientist-in-Charge based on a former professional relationship so that worked out but I didn't know what to expect or include so a sample successful project would have been very helpful to model after. I believe I was the first awardee in IZTECH during FP7 process so it was new for the university and me.



**DR. SELCUK SAATCI**

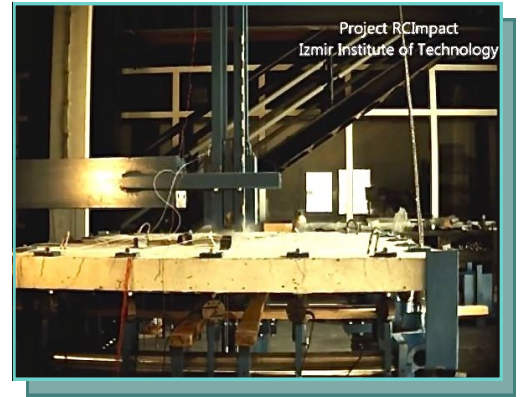
Marie Curie Fellow



### How was the application process?

In the beginning, it was very complicated for me. This was many years ago, but at the time, there were several forms with instructions laid out on many documents and some of the terminology was inconsistent. There were page limits that needed to be followed so it was hard to determine the level of detail that I needed to write for the proposal.

The university, especially the International Relations Office, was very helpful. Also, I worked with the TUBITAK to get feedback on my draft, recommendations on what needed to be emphasized, what details IZTECH should provide, and how to create the budget.



### What are the ways it has helped your career?

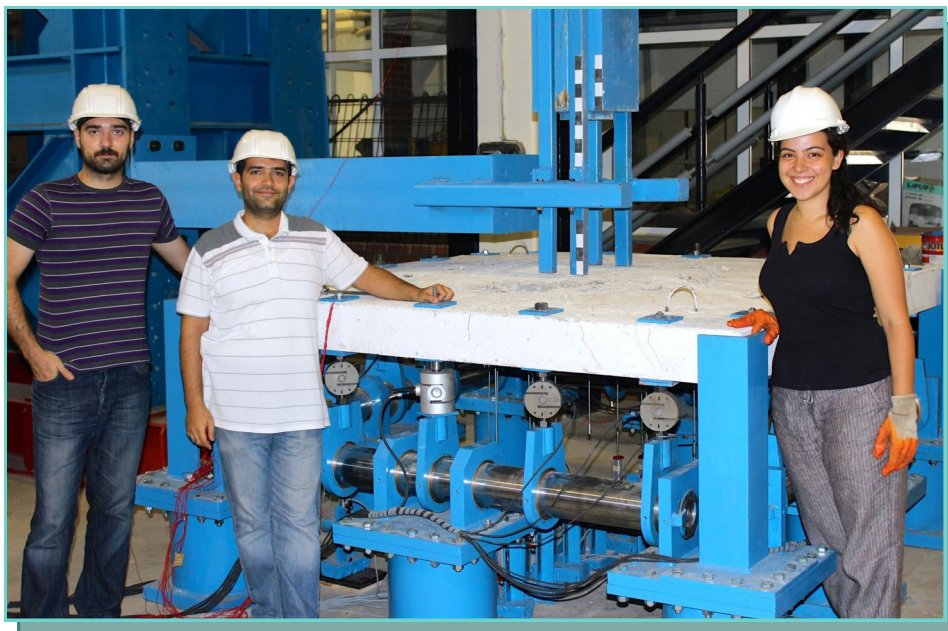
The overall experience was great; the project helped in so many ways. It allowed me to establish my lab, which then attracted students because I was able to offer funding. Financially, the Marie Curie program does not restrict the expenditures so I was able to spend the money on a variety of things, including equipment and office supplies. I purchased different types of electronic equipment for measurements testing reinforced concrete structures. I was even able to design and manufacture my own custom equipment. This is the type of innovative equipment that is not typically supported by other programs. I also attended several conferences and published conference papers, recently graduated three Master's students, and currently have two additional articles in preparation.

In addition to providing funds, the program also provided me a network in Turkey and the honour has been very well-received. There are some special events for Marie Curie fellows that awardees can attend too. I am also working with TUBITAK to mentor other applicants and offer support for the program.

**“APPLICANTS SHOULD EMPHASIZE INTEGRATION AND FOCUS ON HOW YOU WILL ESTABLISH YOUR LAB, RESEARCH GROUP, AND TRANSFER YOUR KNOWLEDGE.”**

### What advice would you give to other applicants?

If you have a good idea or a project you want to complete, I really encourage researchers to try. More important than the technical aspects of the proposal or success probability of the project, applicants should emphasize integration and focus on how you will establish your lab, research group, and transfer your knowledge. I attended meetings with EU officials after my award and they were mostly interested in the integration of the fellow to his/her country and institute, not necessarily the scientific outcome. Remember that the EU wants to see you active so be sure to include a plan for transferring knowledge back to the country or passing on to others by being involved.



## Dr. Can Dede | Mechanical Engineering

**2009-2013 High Precision Haptic Device Design (239320) (HIPHAD)**

*Dr. Can Dede is an Associate Professor in the Mechanical Engineering department at IZTECH. He received his Bachelor of Science from Istanbul Technical University (ITU) and Master of Science in Mechanical Engineering from Middle East Technical University (METU). After gaining industry experience while working with well-known defence contractor, Aselsan, he decided to pursue a doctorate degree in Mechanical Engineering from Florida International University (FIU) in Miami, FL. Originally from Izmir and with several grant opportunities available from European Union and TUBITAK, Dr. Dede made the decision to return to Turkey and utilized the Marie Curie fellowship to reintegrate to his home country after several years abroad.*



**DR. CAN DEDE**

Marie Curie Fellow

### What is your current field of study?

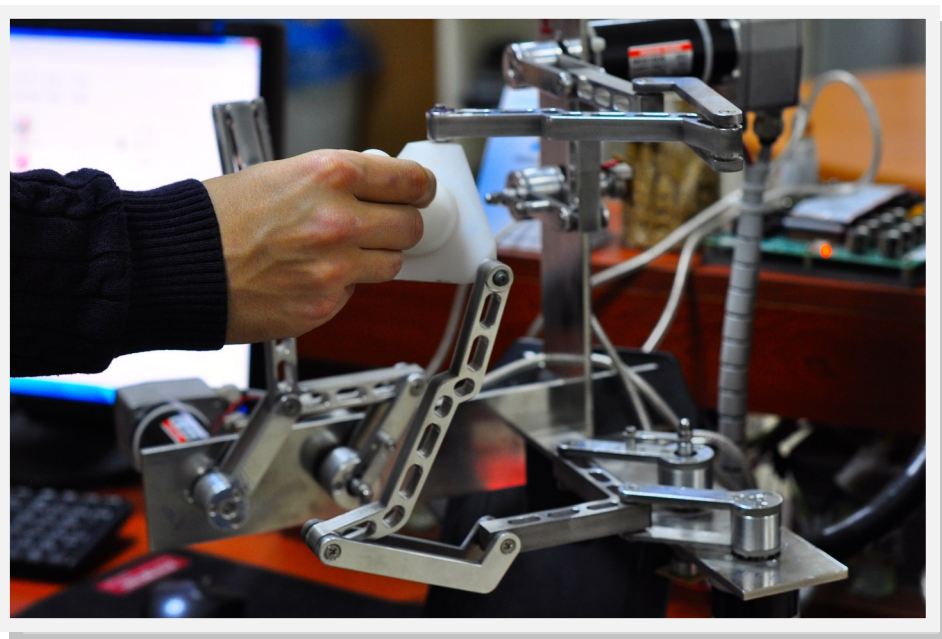
My research is in the field of haptics, teleoperations, robotic systems development, and control. This is applicable in a wide range of medical and battlefield environments or hazardous locations such as underwater, space, or even nuclear areas. In most of these tasks, remotely controlled robots (teleoperation systems) are used instead of autonomous robots. My Marie Curie project focused on the design of haptic devices that are commonly used in teleoperation systems to provide the sense of touch by applying forces, vibrations, and or motions to the remote, human operator. The main objective was to develop a system with a higher precision rating to be used in state-of-the-art applications such as telesurgery and control of unmanned vehicles. My future research is focused on improving teleoperations to make the human operators feel more involved in their virtual world from their remote environment by continuing to increase the sense of touch retrieved from the haptic devices.

### How did you hear about the Marie Curie fellowship?

I was familiar with several of the national and international grant opportunities and it was part of my plan for returning to Turkey. I approached my prospect employer, IZTECH, to request a host institution sponsorship. I reached out to several of the other Marie Curie winners in IZTECH to find out about their experiences as well. To identify my scientist in charge (or mentor), I invited my Department Chair, Metin Tanoglu to support me in the project.

### How was the application process?

The application process was pretty straightforward. I did reach out to TUBITAK services in Ankara for project support and I was very appreciative of their help. It was difficult pulling all of the information together for the host institution because there are a number of figures that need to be gathered about the size and objectives of the university so applicants should start early.





### What are the ways it has helped your career?

It supplied money for living expenses and my laboratory that was indispensable. When I joined IZTECH, there was not a lot of infrastructure for my research area and a laboratory that I wanted to establish, I was able to buy several types of expensive equipment required to do experimental work, such as stock parts, data acquisition cards, motors, drivers, and other essential things required to run a lab. Marie Curie was very flexible with the budget and allowed me to spend the funding freely. It operated like a starting fund for me which was necessary since such a thing was not offered at that time. I was also able to support several students' graduate theses as part of the work and with the equipment made available from the grant.

As a result of the project, my group had a number of publications and was able to attend several international conferences. I was able to meet and interact with more European experts which is good because our university and Turkey are primarily competing in Europe. Lastly, the title is very prestigious. When you're networking, it helps to provide potential partners confidence in your ability to write a proposal and perform a project.

### What advice would you give to other applicants?

I recommend that they review other recently funded projects to help identify possible trends. For example, successful proposals seem to be more application oriented rather than theoretically-based these days, so applicants should relate their research to some type of practical application. This has been found to be critical by EU. Also, be sure to link up with the national and local contact points for assistance from TUBITAK and now, Atmosfer TTO.

Also, keep in mind that EU projects emphasize the dissemination of knowledge, innovation and project visibility. I feel my project was successful according to EU because it led to several other networking initiatives and really did reintegrate me back to Turkey.

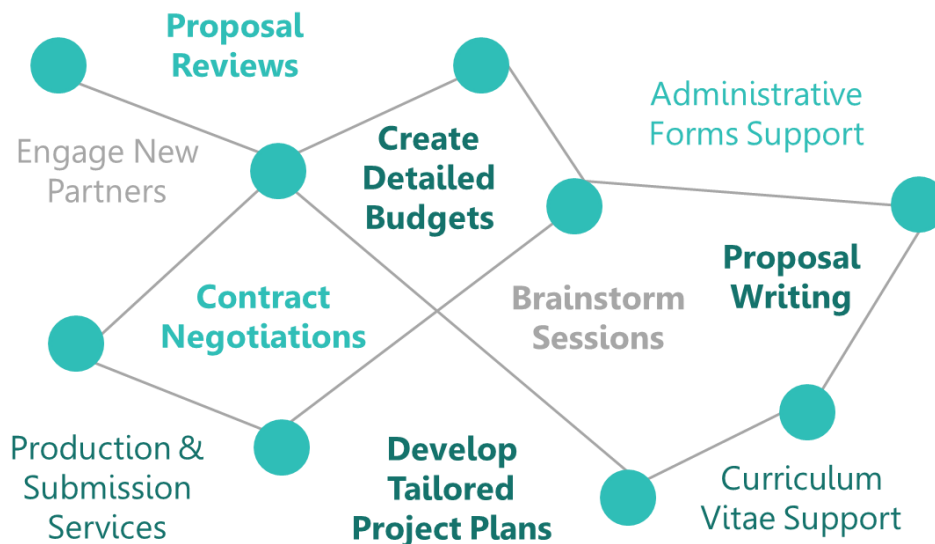
**“SUCCESSFUL PROPOSALS SEEM TO BE MORE APPLICATION ORIENTED RATHER THAN THEORETICALLY-BASED THESE DAYS, SO APPLICANTS SHOULD RELATE THEIR RESEARCH TO SOME TYPE OF PRACTICAL APPLICATION.”**

## HOW CAN ATMOSFER TTO SUPPORT YOU?

Horizon 2020 is a €80 billion European Union Framework Programme for Research and Innovation. If you are interested in applying for a Marie Skłodowska Curie Action or other calls within the Horizon 2020 programme, we can help! Please contact Atmosfer Technology Transfer Office ([atmosfer@atmosfertto.com](mailto:atmosfer@atmosfertto.com)) for more details.

**The next deadline for applications is 10 September, 2015.** More details of the scheme can be found at:

<http://ec.europa.eu/programmes/horizon2020/en/h2020-section/marie-sklodowska-curie-actions>



## ENTREPRENEURS

### Do you have an awesome idea for a project or a way to create efficiencies in existing products?

Located right on the IZTECH campus, *Teknopark Izmir is available to support budding entrepreneurs and small companies* with adopting new technologies and identifying and creating investment opportunities. Established in 2003, Teknopark Izmir supports collaboration between the university and local business firms so researchers and entrepreneurs can participate in various projects and even start a company to turn their projects into products. Students also have internship opportunities that allow them to take part in the projects of research and development (R&D) firms. Currently, 134 firms and 750 employees operate at Teknopark Izmir.

One of the entrepreneurship funding opportunities is under the *Ministry of Science, Industry, and Technology's Techno-Initiative Capital Support Program*. This 12 month call provides 100,000 TL funding for new technology start-ups to students that have graduated within the last five years.

The following interviews with two Teknopark Izmir companies as well as TUBITAK Entrepreneurship recipients discuss the ups and downs of being an entrepreneur.

### Mikroalg Inc. | Emre Caglar

*Emre Caglar is the Chief Executive Officer of Mikroalg Gıda Tarım San. AŞ (www.mikroalg.com). He wanted to explore new uses for microalgae production... the result, an organic fertilizer produced from algae. Born in Istanbul, he came to Izmir to complete his Bachelor's degree in Chemical Engineering and Master's degrees in Energy Engineering at IZTECH. Emre Caglar worked in the private sector as a Research & Development Manager investigating microalgae production as a biofuel source Prior to starting his own company. Mikroalg was established as part of Teknopark Izmir and established with the support of Techno-Initiative Capital Support Program in 2009..*

#### What service(s) or product(s) do you offer/manufacture?

Mikroalg performs applied research on microalgae development and production techniques. We produce a specific species of microalgae in three different forms, living solution in water, slurry in a concentrated form, and dried. The final product is a microbial fertilizer used in several innovative ways such as bio-fertilizer, functional feed, water treatment, and bioplastics. We are also experimenting with reducing coal emissions by using microalgae to increase carbon dioxide absorption. Our project was completed in 2014, and resulted in an innovative, low cost, and high efficiency microalgae reactor for



#### What kind of strategies did you use to get funded?

The idea of looking for alternatives to fossil fuels is very popular right now. With my industry background, I knew that microalgae was commonly used as a biofuel source but requires a lot of time and effort. I realized it could be used for so much more, especially agriculture. I learned about the Techno-Initiative Capital Support Program and applied with my idea to get the first year of funding, which was 100,000 TL. I was one of the first recipients of this funding and believe it is a very unique program. The grant allowed me to start my company without any investment or debt.

To gain some credibility for my idea, I started with market research and found that bio-fertilizer for agriculture is lacking across the EU and Turkey. I realized that no firms in Turkey are producing bio-fertilizers, and there was only one in Europe and two in United States. Even then, our technique is different because it doesn't require a light source or wide areas. We produce it in bio-reactors. After some research testing, I realized that our algae actually improved the soil so we began production of our commercial product, Emek Mikrobiyal Gübre to be used for plants. However, we still have a long road ahead because it takes significant time to realize the effects of our product and most people want immediate results. It is also hard to gain visibility and reach farmers who are our target customer, but look for quick visibility instead of an overall yield and quality increase.



Originally known as Çağlar Doğal Ürünler Limited Şirketi, we formed a limited liability company in 2009. Earlier this year, we changed legal status of our company to and incorporated as Mikroalg Gıda Tarım San. AŞ. With this recent development, the paid capital of our company also increased from 100,000 TL to 1,832,300 TL.

My mother and I are joint owners and we have two employees who support our research and production. I work on the technical side and my mother is managing the administration. We are looking to expand and currently recruiting employees with similar scientific backgrounds. Our company is headquartered in Alsancak, with an R&D office in Teknopark İzmir and a production area in Urla. Our next target is a public offering in the stock market; Borsa İstanbul GİP (Markets of Developing Enterprises) to raise capital for further commercialization of our research projects.

“YOU WILL DISCOVER NEW THINGS ABOUT YOURSELF AND WILL LEARN BOTH SIDES OF BEING AN EMPLOYEE AND AN EMPLOYER.”

### What kind of habits helped make you successful?

I have always liked to research and learn new things and I think that is important in entrepreneurship. As the business owner, it is up to you to stay on top of events related to your business. I make sure to follow the news, review the recent literature, and compare what other countries are doing. Also, you must keep checking for government funding options because there are several ways to get support.

One of the outcomes that I am particularly proud of is our company partnership in two recent FP7 projects for Small and Medium Enterprises (SME). I was able to work with a consortium of companies, research centres, and universities from different countries across the Europe. (Projects: [www.algadisk.eu](http://www.algadisk.eu) & [www.algaemax.eu](http://www.algaemax.eu) ). This is a rare opportunity for a company of my size and got me involved in the algae industry at an international level. These projects helped sustain our company, increase our paid capital, and bring us to where we are now.

### What advice would you give to potential entrepreneurs?

I would like to remind everyone that companies come in many shapes and sizes. Even if your business doesn't follow the traditional office routine in a big building with lots of desks, it can still be a viable company. Also, don't listen to those that say "If it is such a good idea, then why hasn't someone already done it." These types of people don't understand the meaning of innovation and evolution.

Also, be patient. Our product takes up to one year to start working so it is important to build relationships and get your company out there so people will know about it. Marketing is one of the hardest parts to handle as a small business. We visited agriculture fairs and appeared on the entrepreneurial reality television show "Dragon's Den" to meet with people and raise additional investments.

Although it is very risky to go into business by yourself, look for the different types of support available to help you along the way. If you have the chance, try it. You will discover new things about yourself and will learn both sides of being an employee and an employer.

### For more information, please contact:

**Emre Caglar**

[www.mikroalg.com](http://www.mikroalg.com)







## Emato Engineering | Partners, İbrahim Halil Karaca and Rahmi Şafak Arıcı

*İbrahim Halil Karaca is co-founder of Emato Engineering ([www.ematoengineering.com](http://www.ematoengineering.com)), along with his partner and good friend, Rahmi Safak Arici. Both students of Electrical Engineering at IZTECH, they were interested in applying their electronic and communications background to the medical sciences engineering field. Emato Engineering is now working on several major innovations in diagnosing and treating dental and jaw problems as well as collaborating with IZTECH for green campus projects to improve transportation using an electrically assisted bicycle. Emato Engineering launched in April 2014 after receiving funding from the Ministry of Science and Technology Industry Techno-Initiative Capital Support Program and support from Teknopark Izmir.*

### What service(s) or product(s) do you offer/manufacture?

Our company is very new and we are working several R&D projects. One of the main projects is the Micro-Orthodontist prototype, a diagnostic device used in telemedicine to reduce the time a patient must wear braces. It improves communication between the doctor and patient using a touch sensor and force protection. It allows doctors to monitor patients' usage of the equipment more accurately with a mobile application and offers instant and private conversations directly via SMS. There are a wide range of further applications across health and technology, especially using mobile applications and we will continue to look for more uses.

We are also working with IZTECH as part of the *Green Campus Project* to design an electrically assisted, three wheeled bicycle to provide quick and easy transportation on campus.



### What kind of strategies did you use to get funded?

As graduate students, we have the opportunity to work with several members of the community. The idea for our Micro-Orthodontist device came from a local orthodontist with a problem that needed a solution. We worked together under advisement from our Electrical Engineering Professor advisor and our industry mentor to develop the prototype and recently applied for a patent with the help of Atmosfer TTO, pending approval.

We applied for the Ministry of Science, Industry, and Technology program and received 100,000 TL to start our company. After being accepted into the program, Teknopark Izmir provided us an office to set up operations. We used the money to get the equipment to start building our prototype. We are now looking for ways to distribute our product.

### What kind of habits helped make you successful?

Fortunately, we have several mentors who have been extremely helpful in providing ideas and guiding us through the business. Whenever we get stuck or unsure what step to take next, we can reach out to our professors, businesses in the local community, and even our friends who have been around to help us.

It is very difficult to learn how to manage a company, but we are very committed to finishing our prototype and this requires lots of work hours. We use Asana software to track and assign project responsibilities. My partner and I are very different but we have strengths that complement each other. I concentrate on the engineering and research side of the business, while Rahmi Arici concentrates on the administration and management.

At the end of April 2015, our entrepreneurship program will end but we will continue to build customer relationships and model ourselves after other successful people. We are also going to work with Teknopark Izmir to mentor other entrepreneurs and help them apply to the Government program.

**“LEARN ABOUT THE NEEDS OF THE INDUSTRY AND WHAT EXISTING PROBLEMS REALLY NEED SOLVING. IF YOUR COMPANY CAN SUPPORT MULTIPLE SECTORS WITH A CROSS-DISCIPLINARY APPROACH, THEN YOU WILL HAVE A LARGER CUSTOMER BASE.”**

## What advice would you give to potential entrepreneurs?

Listen to those around you and consider alternative applications. You will learn more about the needs of the industry and what existing problems really need solving. If your company can support multiple sectors with a cross-disciplinary approach, then you will have a larger customer base.

Also, learn as much as you can before graduating. You can do internships and learn on the job while studying so you can get an idea about what kind of work you will actually be doing. The more experience you can gain before starting a business, the better. Look for someone to coach you or someone who has business knowledge that can provide you training.

## For more information, please contact:

### İbrahim Halil Karaca & Rahmi Şafak Arıcı

[www.ematoengineering.com](http://www.ematoengineering.com)



## HOW CAN ATMOSFER TTO SUPPORT YOU?

Atmosfer TTO offers many services for young entrepreneurs and academics from idea conception to the commercialization of your business, including legal, financial, administrative and consulting support. We offer access to our *Incubation Centre* and the upcoming *Innovation Centre* to provide R&D offices and promote the research environment necessary for techno-entrepreneurs to thrive.

We are dedicated to start-up and early-stage companies and offer coaching services, exclusive trainings for business development, networking activities, and access to our mentor membership programme for help or advice from other entrepreneurs. So if you have an idea, concept, or design, Atmosfer TTO has the space and flexibility to support your company during this formative growth stage with:

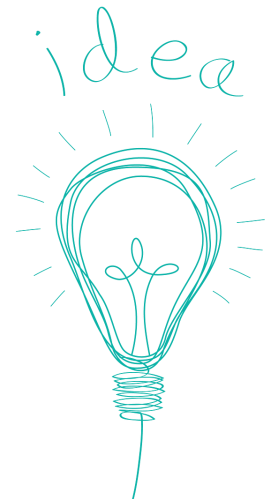
- Office space and equipment
- Business advice and mentorship
- Access to IZTECH Academicians and Teknopark Izmir staff
- Networking, events, workshops and training opportunities
- Being part of an innovative and creative community

We can also provide support for the Ministry of Science, Industry, and **Technology Techno-Initiative Capital Support Program** or other TUBITAK program to further promote technology-based entrepreneurship in our area.

### **From Concept to Reality.**

Please contact Atmosfer Technology Transfer Office ([atmosfer@atmosfertto.com](mailto:atmosfer@atmosfertto.com)) for more information and eligibility requirements on how you can join our innovative and inspiring environment.

OUR HUB FOR ENTREPRENEURSHIP ACTIVITY IS LOCATED RIGHT ON THE IZMIR INSTITUTE OF TECHNOLOGY (IZTECH) CAMPUS.





## TÜBİTAK: New Incentives and Rewards Available

The Scientific and Technological Research Council of Turkey (TÜBİTAK) grants fellowships to native and international candidates at all stages of their student and professional career. If you would like to learn more about any of these programs or verify your eligibility, please contact Atmosfer TTO for application support.

### National

#### 1000 – Enhancing Research and Development Potential of Universities Funding Program

Deadline:	Budget:	Project Duration:
Online: 15 May 2015 hard copy: 22 May 2015	Variant according to calls.	Variant according to call topics but can not exceed 36 months.
The purpose of this program is to support projects under determined call topics to increase universities R&D potential.		

#### 1001 - Scientific and Technological Research Projects Funding Program

Deadline:	Budget:	Project Duration:
First week of March and September each year	360.000 TL	Max. 36 months
The purpose of this program is to support research in Turkey for generating new information, interpreting scientific findings, or solving technological problems on a scientific basis.		

#### 1002 - Short Term R&D Funding Program

Deadline:	Budget:	Project Duration:
Open call	30.000 TL	Max. 12 months
The purpose of this program is to support short-term R&D projects with small budgets and immediate start requirements. Proposals are accepted from members of universities, research hospitals, and research institutes.		

#### 1003 - Primary Subjects R&D Funding Program

Deadline:	Budget:	Project Duration:
Last week of April and September each year	Small scale projects: 500.000 TL Medium scale projects: 500.001 TL – 1.000.000 TL Large scale projects: 1.000.000 – 2.500.000 TL	For small scale projects Max. 24 months For medium and large scale projects Max. 36 months
The purpose of the program is to support and to coordinate national R&D projects which are result oriented, have traceable targets and observe the dynamics of related scientific and technological fields within the scope of National Science, Technology and Innovation Strategy.		

#### 1005 - National New Ideas and Products R&D Funding Program

Deadline:	Budget:	Project Duration:
First week of March and September each year	200.000 TL	Max. 18 months
The purpose of the program is to support and grant projects which aim to create new features and new products by making additions to frequently used technological products and develop frequently imported devices and materials nationally, without violating the patent rules.		

#### 1007 - Public Institutions Research Funding Program

Deadline:	Budget:	Project Duration:
Variant throughout the year	No upper limit	Max. 48 months
The purpose of the program is to solve the R&D based problems or satisfy their R&D based requirements by means of result oriented R&D projects and to create awareness of R&D in public institutions.		





### 3001 - Starting R&D Projects Funding Program

Deadline:	Budget:	Project Duration:
Open call	60.000 TL	Max. 24 months
The purpose of the program is to support the projects proposed by researchers who are from university, government institution and private R&D firms and do not participate in a project as a principal investigator granted by TÜBİTAK ARDEB.		

### 3501 - Career Development Program (CAREER)

Deadline:	Budget:	Project Duration:
First week of march and september each year	225.000 TL	Max. 36 months
The purpose of this program is to encourage scientists with PhD degrees and who are at the beginning of their scientific careers by supplying project funds for their studies.		

### 1501 - Industrial R&D Projects Grant Program

Deadline:	Budget:	Project Duration:
Open call	18.750.000 TL	Max. 36 months
The purpose of this program is to support R&D projects of companies established in Turkey and increase the R&D capabilities of companies established in Turkey.		

### 1503 - R&D Project Brokerage Events Grant Program

Deadline:	Budget:	Project Duration:
Open call	National event: 15.000 TL International event: 20.000 TL	No time duration
The purpose of this program is to support events focused on collaboration and development of joint national and/or international technology development projects between universities, research institutes and industry.		

### 1505 - University-Industry Collaboration Grant Program

Deadline:	Budget:	Project Duration:
Open call	1.000.000 TL	Max. 24 months
The purpose of this program is to commercialize the know-how and technology developed at universities, research institutes, public research centers via transferring it as products/processes based on the needs of industry established in Turkey and promised to apply the project outcomes inside Turkey.		

### 1507 - SME RDI (Research, Development & Innovation) Grant Program

Deadline:	Budget:	Project Duration:
Open call	500.000 TL	Max. 18 months
The purpose of this program is to support first 3 projects (with partnership up to 5 projects) focused on developing new products/processes, developing and/or improving an existing product/processes, developing quality or standards of new technologies as well as increasing R&D capacities, innovation and competitiveness of SME's established in Turkey.		

### 1511 - Research Technology Development and Innovation Projects in Priority Areas G. P.

Deadline:	Budget:	Project Duration:
Variant according to call	10.000.000 TL	Max. 36 months
The purpose of this program is to support projects that are focused on goals and needs of priority areas of Turkey.		

### 1512 - Entrepreneurship Multi-phase Program

Deadline:	Budget:	Project Duration:
First phase in July each year	150.000 TL	18 months
The purpose of this program is to support the entrepreneurs to migrate their technological and innovative business ideas into high potential enterprises that create value added and qualified employment and support the activities from idea phase to market phase.		

### 1513 - Technology Transfer Offices Grant Program

Deadline:	Budget:	Project Duration:
September each year	1.000.000 TL/year for 5 years	Max. 10 years
The purpose of this program is to support higher education institutes TTO's so that commercialization of knowledge and technology; creating economical/social/cultural value; establishing university and industry collaboration; creating successful spin-outs, supporting start-ups and managing IP will be provided.		

### 1514 - Venture Capital Funding Program

Deadline:	Budget:	Project Duration:
Variant according to call	No direct budget	Max. 144 months
The purpose of this program is to support venture capital funds so that seed capital and start-up capital of SME's that develop innovative products, processes, knowledge and technology development projects can be provided.		

### 1515 - Frontier R&D Laboratory Support Program

Deadline:	Budget:	Project Duration:
Open call	10.000.000 TL	Max. 5 years. Can be increased by 5 more years
The purpose of this program is to support national/international enterprises that will establish R&D laboratories in Turkey so that research capabilities of Turkish scientists will be increased and transformation of Turkey into global attraction center for science and technology will be provided.		

### 1601 Capacity Building for Innovation and Entrepreneurship Grant Program

Deadline:	Budget:	Project Duration:
-	-	Max. 36 months
The purpose of this program is to support trainings, mentorships, business networks, clustering, project and technology management, project market, investor market and such mechanisms focused on innovation and entrepreneurship so that awareness and capacity of innovation and entrepreneurship ecosystem will be increased.		

### 1602 - TÜBİTAK Patent Support Program

Deadline:	Budget:	Project Duration:
Open call	-	-
The purpose of this program is to give financial support to real and legal entities for their national/international patent applications and approval process for the applications.		

### 5000 – Digital Content Open Course Sources Funding Program

Deadline:	Budget:	Project Duration:
Variant according to call	120.000 TL	Max. 24 months
The purpose of the program is to provide Turkish open sources for undergraduate and graduate level courses so that course material pools will be enlarged and equal opportunity for students will be provided.		

## International

### 1509 - TÜBİTAK International Industrial R&D Projects Grant Program

Deadline:	Budget:	Project Duration:
Open call	No upper limit	No limitation

The objective of the program is to create market focused R&D Projects between European countries and to increase cooperation between Europe wide firms, universities and research institutions, by using cooperation webs such as EUREKA.

### 2216 - Research Fellowship Program for International Researchers

Deadline:	Budget:	Project Duration:
Open call	2.250 TL	Max. 12 months

The program aims to promote Turkey's scientific and technological collaboration with countries of the prospective researchers by providing fellowships for international highly qualified PhD students and young post-doctoral researchers to pursue their research in Turkey in the fields of Natural Sciences, Engineering and Technological Sciences, Medical Sciences, Agricultural Sciences, Social Sciences and Humanities.

### 2221 - Fellowships for Visiting Scientists and Scientists on Sabbatical Leave

Deadline:	Budget:	Project Duration:
Open call	3.000 – 3.500 \$	Max. 12 months

The program aims to promote Turkey's scientific and technological collaboration with countries of the prospective fellows by providing fellowships for international scientists/researchers who would like to give workshops/conferences/lectures, or conduct R&D activities in Turkey in the fields of Natural Sciences, Engineering and Technological Sciences, Medical Sciences, Agricultural Sciences, Social Sciences and Humanities.

### 2236 - Co-Funded Brain Circulation Scheme (Co-Circulation Scheme)

Deadline:	Budget:	Project Duration:
Open call	Experienced researcher: 4.167 € More experienced researcher: 4.792 €	Max. 24 months

The main objective of the proposal is to attract research talent to Turkish Research Landscape which is an integral part of the European Research Area. The Programme is a Co-Funding Scheme and supported by TÜBİTAK and The Marie Curie Action COFUND, of the 7th. Framework Programme (FP7) of the European Commission.

### 2215 - Graduate Scholarship Program for International Students

Deadline:	Budget:	Project Duration:
Open call	1.800 TL	Max. 60 months

The purpose of the program is to grant scholarships for international students seeking to pursue a graduate degree in Turkey. The scholarship covers fields of Natural Sciences, Engineering and Technological Sciences, Medical Sciences, Agricultural Sciences, Social Sciences and Humanities.

## HOW ATMOSFER TTO CAN HELP...

There are numerous project grants available in Turkey, most of them are funded by government organizations like TÜBİTAK, Science, Industry and Technology Ministry and other Ministries. In this issue, only TÜBİTAK grants are listed. However, there are several grants that we can help with project implementation support, application support and project execution support. Please contact Atmosfer TTO Project Grants Unit via email: [atmosfer@atmosfertto.com](mailto:atmosfer@atmosfertto.com) or via phone: (232) 502 0018.





## HORIZON 2020: HOW TO FIND YOUR PERFECT MATCH



Horizon 2020 is the European Union's ***new research and innovation programme valued at nearly €80 billion over seven years***. It is the successor of the Seventh Framework Programme (FP7) which ended in 2013. In FP7 the focus was on technological research; in Horizon 2020, the focus is on innovation. Horizon 2020 is organized across three major pillars:

- 1) **Support for "Excellent Science"** – including grants for individual researchers from the [European Research Council](#) and Marie Skłodowska-Curie fellowships (formerly known as Marie Curie fellowships)
- 2) **Support for "Industrial Leadership"** – including grants for small and medium-sized enterprises and indirect finance for companies through the European Investment Bank and other financial intermediaries
- 3) **Support for research to tackle "Societal Challenges"**. During negotiations between the European Parliament and Council it was decided to support research towards meeting seven broad challenges

Atmosfer TTO has experience with building consortiums, writing proposals, developing your budget. If you are interested in learning more about the program or need support matching calls to your research interests, please contact us. Horizon 2020 calls released through October 2015 are included here for your review. All information on the action, work programme and how to apply is available on the [H2020 website](#) and the [Participant Portal](#).

### Excellent Science

- **DP:** Doctoral Programmes
- **EF:** European Fellowships
- **ERC:** European Research Council
- **ESFRI:** European Strategy Forum on Research Infrastructures
- **FET:** Future and Emerging Technologies
- **FP:** Fellowship Programmes
- **GF:** Global Fellowships
- **IF:** Individual Fellowships
- **MSCA:** Marie Skłodowska-Curie Actions
- **PoC:** Proof of Concept
- **RISE:** Research and Innovation Staff Exchange

Call No	EXCELLENT SCIENCE Call Name	Deadline(s)
MSCA-RISE-2015	Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE)	4/28/2015
ERC-ADG-2015	ERC Advanced Grant	6/2/2015
MSCA-IF-2015-EF	Marie Skłodowska-Curie Individual Fellowships (IF-EF)	9/10/2015
MSCA-IF-2015-GF	Marie Skłodowska-Curie Individual Fellowships (IF-GF)	9/10/2015
FETOPEN-CSA-FETEXCHANGE-2015	FET Exchange Coordination and Support Activities 2015	9/29/2015
FETOPEN-CSA-FETTAKEUP-2015	FET Take-Up Coordination and Support Activities 2015	9/29/2015
FETOPEN-RIA-2014-2015	FET-Open research projects	9/29/2015
MSCA-COFUND-2015-DP	Marie Skłodowska-Curie Co-funding of regional, national and international programmes (COFUND-DP)	10/1/2015
MSCA-COFUND-2015-FP	Marie Skłodowska-Curie Co-funding of regional, national and international programmes (COFUND-FP)	10/1/2015
ERC-PoC-2015	ERC Proof of Concept Grant	5/28/2015



## Industrial Leadership

- BIOTEC: Biotechnology
- DRS: Disaster-resilience: safeguarding and securing society
- FTI: Fast Track to Innovation
- ICT: Information and Communication Technologies
- INSO: New Forms of Innovation
- IT: Innovation for Transport
- NMP: Nanotechnologies, Advanced Materials and Production
- PHC: Personalising health and care
- SC5: Growing a Low Carbon, Resource Efficient Economy with a Sustainable Supply of Raw Materials
- SFS: Sustainable Food Security
- SIE: SMEs and Fast Track to Innovation for Energy
- SMEINST: SME Instrument

Call No	INDUSTRIAL LEADERSHIP Call Name	Deadline(s)	Cut-off date(s)
FTIPilot-1-2015	FTIPilot-1-2015: Fast Track to Innovation Pilot	12/1/2015	29.04.2015 / 01.09.2015
BG-12-2015 (SMEINST)	Supporting SMEs efforts for the development - deployment and market replication of innovative solutions for blue growth	12/16/2015	17.06.2015 / 17.09.2015
BIOTEC-5b-2015 (SMEINST)	SME boosting biotechnology-based industrial processes driving competitiveness and sustainability	12/16/2015	17.06.2015 / 17.09.2015
DRS-17-2015 (SMEINST)	Critical infrastructure protection topic 7: SME instrument topic: Protection of Urban soft targets and critical infrastructures	12/16/2015	17.06.2015 / 17.09.2015
ICT-37-2015 (SMEINST)	Open Disruptive Innovation Scheme (implemented through the SME instrument)	12/16/2015	17.06.2015 / 17.09.2015
INSO-10-2015 (SMEINST)	SME business model innovation	12/16/2015	17.06.2015 / 17.09.2015
INSO-9-2015: (SMEINST)	Innovative mobile e-government applications by SMEs	12/16/2015	17.06.2015 / 17.09.2015
IT-1-2015 (SMEINST)	Small business innovation research for Transport	12/16/2015	17.06.2015 / 17.09.2015
NMP-25-2015 (SMEINST)	Accelerating the uptake of nanotechnologies, advanced materials or advanced manufacturing and processing technologies by SMEs	12/16/2015	17.06.2015 / 17.09.2015
PHC-12-2015 (SMEINST)	Clinical research for the validation of biomarkers and/or diagnostic medical devices	12/16/2015	17.06.2015 / 17.09.2015
SC5-20-2015 (SMEINST)	Boosting the potential of small businesses for eco-innovation and a sustainable supply of raw materials	12/16/2015	17.06.2015 / 17.09.2015
SFS-08-2015 (SMEINST)	Resource-efficient eco-innovative food production and processing	12/16/2015	17.06.2015 / 17.09.2015
SIE-01-2015 (SMEINST)	Stimulating the innovation potential of SMEs for a low carbon energy system	12/16/2015	17.06.2015 / 17.09.2015
Space-SME-2015-2 (SMEINST)	SME Instrument	12/16/2015	17.06.2015 / 17.09.2015



## Societal Challenges

- **BES:** Border Security and External Security
- **BG:** Blue Growth
- **DRS:** Disaster-Resilience: Safeguarding And Securing Society
- **DS:** Digital Security
- **EE:** Energy Efficiency
- **EURO:** New Ideas, Strategies and Governance Structures for Europe
- **FCT:** Fight Against Crime and Terrorism
- **GV:** Green Vehicles
- **ISIB:** Innovative, Sustainable and Inclusive Bioeconomy
- **ISSI:** Integrating Society in Science and Innovation
- **LCE:** Low-Carbon Energy
- **MG:** Mobility for Growth
- **REFLECTIVE:** Cultural Heritage and European Identities
- **SCC:** Smart Cities and Communities
- **SEAC:** Science Education and Careers Attractive for Young People
- **SFS:** Sustainable Food Security
- **YOUNG:** The Young Generation in an Innovative, Inclusive and Sustainable Europe

Call No	SOCIETAL CHALLENGES Call Name	Deadline(s)
SCC-01-2015	Smart Cities and Communities solutions integrating energy, transport, ICT sectors through lighthouse (large scale demonstration - first of the kind) projects	5/5/2015
SCC-03-2015	Development of system standards for smart cities and communities solutions	5/5/2015
LCE-04-2015	Market uptake of existing and emerging renewable electricity, heating and cooling technologies	5/5/2015
LCE-05-2015	Innovation and technologies for the deployment of meshed off-shore grids	5/5/2015
LCE-06-2015	Transmission grid and wholesale market	5/5/2015
LCE-09-2015	Large scale energy storage	5/5/2015
LCE-14-2015	Market uptake of existing and emerging sustainable bioenergy	5/5/2015
LCE-18-2015	Supporting Joint Actions on demonstration and validation of innovative energy solutions	5/5/2015
LCE-23-2015	Supporting the community in deploying a common framework for measuring the energy and environmental efficiency of the ICT-sector	5/5/2015
LCE-03-2015	Demonstration of renewable electricity and heating/cooling technologies	5/5/2015
LCE-12-2015	Demonstrating advanced biofuel technologies	5/5/2015
LCE-19-2015	Supporting coordination of national R&D activities	5/5/2015
LCE-21-2015	Modelling and analysing the energy system, its transformation and impacts	5/5/2015
REFLECTIVE-6-2015	Innovation ecosystems of digital cultural assets	5/28/2015
YOUNG-3-2015	Lifelong learning for young adults: better policies for growth and inclusion in Europe	5/28/2015
YOUNG-4-2015	The young as a driver of social change	5/28/2015
EURO-5-2015	ERA-NET on Smart Urban Futures	5/28/2015
REFLECTIVE-11-2015	Enabling Innovation - Creating Impact from Social Sciences and Humanities	5/28/2015
REFLECTIVE-2-2015	Emergence and transmission of European cultural heritage and Europeanisation	5/28/2015
REFLECTIVE-3-2015	European cohesion, regional and urban policies and the perceptions of Europe	5/28/2015
REFLECTIVE-4-2015	Cultural opposition in the former socialist countries	5/28/2015
REFLECTIVE-5-2015	The cultural heritage of war in contemporary Europe	5/28/2015
REFLECTIVE-8-2015	Communication and dissemination platform	5/28/2015
EE-06-2015	Demand response in blocks of buildings	6/4/2015





Call No	SOCIETAL CHALLENGES Call Name	Deadline(s)
EE-11-2015	New ICT-based solutions for energy efficiency	6/4/2015
EE-13-2015	Technology for district heating and cooling	6/4/2015
SFS-14b-2015	Authentication of food products	6/11/2015
BG-16-2015	Coordination action in support of the implementation of the Joint Programming Initiative on 'Healthy and Productive Seas and Oceans'	6/11/2015
ISIB-02-2015	Closing the research and innovation divide: the crucial role of innovation support services and knowledge exchange	6/11/2015
ISIB-12c-2015	Monitoring and mitigation of agricultural and forestry greenhouse gases (GHG)	6/11/2015
ISIB-12e-2015	Sustainable livestock production	6/11/2015
ISIB-12f-2015	Biomarkers for nutrition and health	6/11/2015
ISIB-13-2015	Coordination action in support of the implementation by participating States of a Joint Programming Initiative on 'A Healthy Diet for a Healthy Life'	6/11/2015
HOA-01-2015	Horizon Prize – Better use of Antibiotics	8/17/2015
FCT-01-2015	Forensics topic 1: Tools and infrastructure for the extraction, fusion, exchange and analysis of big data including cyber-offenses generated data for forensic investigation	8/27/2015
FCT-02-2015	Forensic topic 2: Advanced easy to use in-situ forensic tools at the scene of crime	8/27/2015
FCT-03-2015	Forensics topic 3: Mobile, remotely controlled technologies to examine a crime scene in case of an accident or a terrorist attack involving CBRNE materials	8/27/2015
FCT-04-2015	Forensics topic 4: Internet Forensics to combat organized crime	8/27/2015
FCT-06-2015	Enforcement capabilities 2: Detection and analysis of terrorist-related content on the Internet	8/27/2015
FCT-09-2015	Law Enforcement capabilities topic 5: Identity Management	8/27/2015
FCT-15-2015	Ethical/Societal Dimension Topic 3: Better understanding the role of new social media networks and their use for public security purposes	8/27/2015
FCT-16-2015	FCT-16-2015: Ethical/Societal Dimension Topic 4 - Investigating the role of social, psychological and economic aspects of the processes that lead to organized crime (including cyber related offenses), and terrorist networks and their impact on social cohesion	8/27/2015
BES-01-2015	Maritime Border Security topic 1: radar systems for the surveillance of coastal and pre-frontier areas and in support of search and rescue operations	8/27/2015
BES-02-2015	Maritime Border Security topic 2: affordable and easily deployable technologies for EU coastal border surveillance with reduced impact on the environment	8/27/2015
BES-03-2015	Maritime Border Security topic 3: Light optionally piloted vehicles (and sensors) for maritime surveillance	8/27/2015
BES-04-2015	Maritime Border Security topic 4: Detection of low flying aircraft at near shore air space	8/27/2015
BES-05-2015	Border crossing points topic 1: Novel mobility concepts for land border security	8/27/2015
BES-06-2015	Border crossing points topic 2: Exploring new modalities in biometric-based border checks	8/27/2015
BES-07-2015	Border crossing points topic 3: Optimization of border control processes and planning	8/27/2015
BES-08-2015	Supply Chain Security topic 1: Development of an enhanced non-intrusive (stand-off) scanner	8/27/2015
BES-10-2015	Information management topic 1: Civilian humanitarian mission personnel tracking	8/27/2015
BES-11-2015	Information management topic 2: Information management, systems and infrastructure for civilian EU External Actions	8/27/2015
BES-13-2015	Conflict prevention and peace building topic 2: Training curricula for Conflict Prevention and Peace Building personnel	8/27/2015
DRS-01-2015	Crisis management topic 1: potential of current and new measures and technologies to respond to extreme weather and climate events	8/27/2015



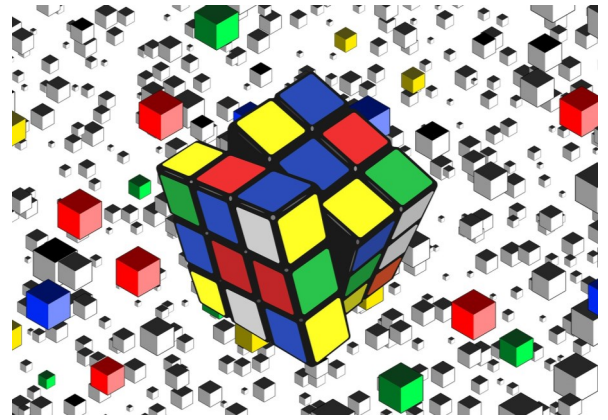
Call No	SOCIETAL CHALLENGES Call Name	Deadline(s)
DRS-03-2015	Crisis management topic 3: Demonstration activity on large scale disasters and crisis management and resilience of EU external assets against major identified threats or causes of crisis	8/27/2015
DRS-06-2015	Crisis management topic 6: Addressing standardisation opportunities in support of increasing disaster resilience	8/27/2015
DRS-09-2015	Disaster Resilience & Climate Change topic 1: Science and innovation for adaptation to climate change: from assessing costs, risks and opportunities to demonstration of options and practices	8/27/2015
DRS-10-2015	Disaster Resilience & Climate Change topic 2: Natural Hazards: Towards risk reduction science and innovation plans at national and European level	8/27/2015
DRS-11-2015	Disaster Resilience & Climate Change topic 3: Mitigating the impacts of climate change and natural hazards on cultural heritage sites, structures and artefacts	8/27/2015
DRS-12-2015	Critical Infrastructure Protection topic 1: Critical Infrastructure "smart grid" protection and resilience under "smart meters" threats	8/27/2015
DRS-13-2015	Infrastructure Protection topic 2: Demonstration activity on tools for adapting building and infrastructure standards and design methodologies in vulnerable locations in the case of natural or man-originated catastrophes	8/27/2015
DRS-14-2015	Critical Infrastructure Protection topic 3: Critical Infrastructure resilience indicator - analysis and development of methods for assessing resilience	8/27/2015
DRS-15-2015	Critical Infrastructure Protection topic 4: Protecting potentially hazardous and sensitive sites/areas considering multi-sectorial dependencies	8/27/2015
DRS-18-2015	Communication technologies and interoperability topic 1: interoperable next generation of broadband radio communication system for public safety and security	8/27/2015
DRS-22-2015	Ethical/Societal Dimension topic 3: Impact of climate change in third countries on Europe's security	8/27/2015
DS-03-2015	The role of ICT in Critical Infrastructure Protection	8/27/2015
DS-04-2015	Information driven Cyber Security Management	8/27/2015
DS-05-2015	Trust eServices	8/27/2015
DS-07-2015	Value-sensitive technological innovation in Cybersecurity	8/27/2015
SEAC-1-2015	Innovative ways to make science education and scientific careers attractive to young people	9/16/2015
SEAC-4-2015	EURAXESS outreach to Industry	9/16/2015
ISSI-1-2015	Pan-European public outreach: exhibitions and science cafés engaging citizens in science	9/16/2015
ISSI-3-2015	Knowledge Sharing Platform	9/16/2015
ISSI-4-2015	On-line mechanisms for knowledge-based policy advice	9/16/2015
ISSI-5-2015	Supporting structural change in research organisations to promote Responsible Research and Innovation	9/16/2015
MG-3.6b-2015	Safe and connected automation in road transport	10/15/2015
MG-5.5b-2015	Demonstrating and testing innovative solutions for cleaner and better urban transport and mobility	10/15/2015
MG-8.3-2015	Facilitating market take up of innovative transport infrastructure solutions	10/15/2015
MG-8.4b-2015	Smart governance, network resilience and streamlined delivery of infrastructure innovation	10/15/2015
GV-6-2015	Powertrain control for heavy-duty vehicles with optimised emission	10/15/2015
GV-8-2015	Electric vehicles' enhanced performance and integration into the transport system and the grid	10/15/2015

# HORIZON 2020 PRIZE CHALLENGE

## CAN YOU CRACK THE CHALLENGE?

<http://ec.europa.eu/research/horizonprize/index.cfm>

Horizon Prizes are rewards presented by European Commission to solve challenges important to Europe and surrounding countries. The goal of the program is to draw attention to our most important societal issues, stimulate innovation and attract a wide range of thinkers to improve our community. Prizes range from €500,000 to €3 million.



## The Prizes for Solving Technological or Societal Challenges

### Better use of antibiotics: €1 million:

Awarded for a rapid test to identify, at the point of care, patients with upper respiratory tract infections that can be treated safely without antibiotics.

### Breaking the optical transmission barriers: €500,000

Awarded to a solution that maximises the fibre capacity per channel, spectrum range and/or spectral efficiency and reach to overcome the current limitations of long-distance optical transmission systems to meet the imminent bandwidth-demand explosion.

### Materials for clean air: €3 million

Awarded to the most affordable, sustainable and innovative design-driven material solution that can reduce by the greatest amount the concentration of particulate matter in urban areas.

### Collaborative spectrum sharing: €500,000

Awarded to an innovative and disruptive approach which will improve the usage of scarce spectrum resources to enable a significant increase in spectrum sharing and re-use, beyond the currently applicable spectrum sharing methods and centralised techniques.

### Food scanner: €1 million

Awarded to a non-invasive mobile solution that will enable users to measure and analyze their food intake that analyses precisely, quickly and efficiently food composition, nutrition facts and potentially harmful ingredients such as allergens.

## Rules & Eligibility

The contest will be open to any single person and legal entity or groups of legal entities established in EU Member States or in countries associated to Horizon 2020, the EU's research and innovation programme.

There are no specific rules on how to achieve the solution, and contestants (companies, organizations or individual persons) are free to submit any development of a technological solution that meets the criteria of the challenge.

The winner receives a financial reward, in the form of a cash prize, and will also benefit from media coverage and the possibility to attract investors.

**For more information, contact Atmosfer TTO to see how we can support you.**



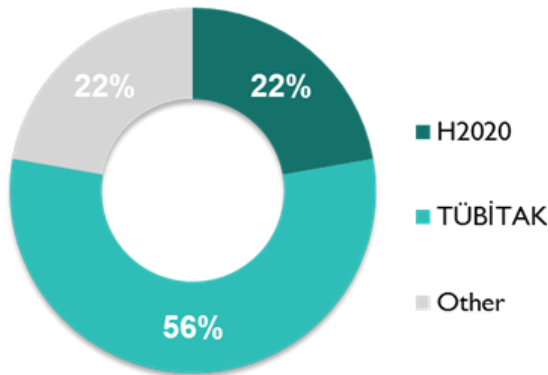


## HOW WE'RE DOING

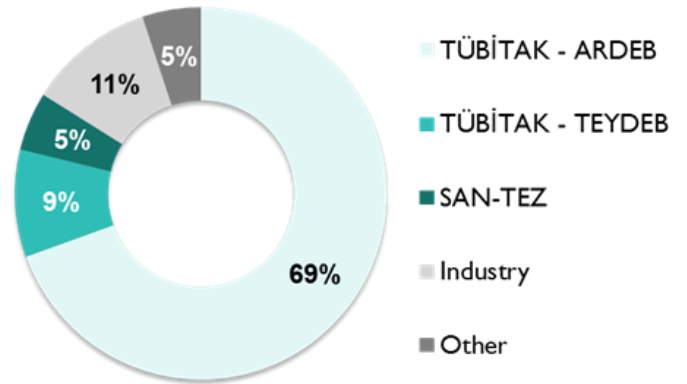


## IZTECH RESEARCH FUNDS

**IZTECH Total International Research Funds by Sponsors 2014**



**IZTECH Total National Research Funds by Sponsors in 2014**



## WHERE WE'VE BEEN

### Enriching Trainings Previously Organized by Atmosfer TTO — 2014

- Creativity and Development of Business Idea: *Jan 7*
- Creativity and Innovation Culture: *Mar 26*
- Preparation of TUBITAK-TEYDEB Projects: *Apr 2*
- Management of TUBITAK-TEYDEB Projects: *Apr 25*
- Preparation Proposal for Techno-Entrepreneurs: *May 9*
- Preparation R&D Projects: *May 16*
- Creativity and Development of Business Idea: *May 28*
- Development of Business Models for Incubation Centres: *May 30*
- Basic Technology Transfer: *Jun 26*
- Development of Business Model: *Jul 7*
- National and International Fund Programs: *Jul 7*
- Intellectual Property Rights: *Jul 9*
- Technology Transfer and Commercialization Models: *Oct 17-18*
- Patent Search: *Oct 23*
- Preparation Proposal for Techno-Entrepreneurs: *Oct 23*
- Microsoft Azure: *Oct 24*
- Patent Strategies and Evaluation: *Oct 24*
- Finance for Entrepreneurs: *Nov 4*
- Influencing Skills for Leaders: *Dec 12*
- Technology Management and Commercialization: *Dec 18-20*
- Innovation in Sales and Marketing Process: *Dec 24*
- Creativity and Design Thinking Workshop: *Dec 29-30*

Watch for future trainings or join our mailing list to hear about every event first! If you have recommendations or trainings you'd like to see, we would love to hear from you. Please contact [atmosfer@atmosfertto.com](mailto:atmosfer@atmosfertto.com).

### Building Partnerships with Industry

Akdeniz Kimya  
Bak Ambalaj  
Cevher Döküm  
CMS Jant  
Dirinler Makine  
Ege Suni Deri  
Ekopan  
Ericsson Türkiye

EuroGıda  
GE  
IFADENT  
İnci Akü  
Kintech Engineering  
Megatron  
Microsoft Türkiye  
Molümer

Norm Cıvata  
Opet – Kuantag  
Öz-kan/Hawle Makine  
Pınar Et  
Petkim  
Polinas Ambalaj  
Pozitif Enerji  
Tezcan Un

Tiryakiler Grup  
Tofaş  
Turkcell  
Türk Telekom  
Vestel Elektronik  
Weber  
*And more ...*

If interested in collaborations or learning more, please contact [atmosfer@atmosfertto.com](mailto:atmosfer@atmosfertto.com).



## ON THE HORIZON

### Upcoming Events Handpicked for You — 2015

These events are expected between April and October 2015 in Turkey and throughout Europe. If interested in attending, Atmosfer TTO may be even be available to support your trip. For more information about these events or available financial support, please contact our office.

WHAT?	WHERE?
EU R&I Project Management and Financial Reporting	7-8 May 2015, Vienna - Austria
HORIZON 2020 Program Info Day	12 May, 2015 Urla– Turkey
2015 International Conference on Chemical Materials and Process	12-13 May 2015, Warsaw - Poland
Nature and Urban Wellbeing - Nature-Based Solutions to Societal Challenges - an International Conference	18-20 May 2015, Ghent - Belgium
The ASTP-Proton Annual Conference “New horizons, new opportunities”	20-22 May 2015, Istanbul - Turkey
EU R&I Master of Finance and Administration	21-22 May 2015, Brussels - Belgium
EuroNanoForum 2015 Conference	10-12 June 2015, Riga - Latvia
Workshop 'How to Prepare and Write Successful Proposals in H2020'	11 June 2015, Karlsruhe - Germany
TrC-IFTtoMM Symposium on Theory of Machines and Mechanisms (TrISToMM)	14-17 June 2015, Urla - Turkey
EU Sustainable Energy Week 2015	15 -19 June 2015, Europe
Graphene Week 2015	22-26 June 2015, Manchester - UK
Successful International Project Management II (Advanced)	25-26 June 2015, Karlsruhe - Germany
Future and Emerging Technologies (FET) at the Science & Information (SAI) Conference 2015	28-30 July 2015, London - UK
Advanced Materials World Congress 2015	23-26 August 2015, Sweden
International Porous & Powder Materials Symposium and Exhibition	15-18 September 2015, Cesme - Turkey
Kentsel ve Bölgesel Araştırmalar Sempozyumu	17-19 September 2015, Izmir, Turkey
ICT 2015 - Innovate, Connect, Transform	20-22 October 2015, Lisbon - Portugal

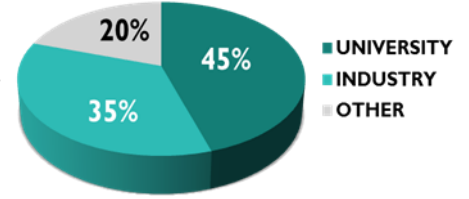


## EVENT SPOTLIGHT

### Atmosfer TTO hosts “Köprü Günleri | Collaboration Days” Conference in Izmir

**Köprü Günleri 2014** was organized on **October, 15-16, 2014** by Izmir Institute of Technology Atmosfer Technology Transfer Office. The goal was to bring together academicians and industry and provide an opportunity for the exchange of the latest information, knowledge, developments and future trends on technology transfer models and innovation.

#### Attendees



### 2014 Conference



### 2014 Industry Panelists



TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.



### Coming up in 2015

This year, **Köprü Günleri | Bridge Days 2015** will be held in October 2015. If you are interested in getting involved as a speaker or attendee, please contact Atmosfer TTO.



## EVENT SPOTLIGHT

### Atmosfer TTO attends “Influencing Skills for Leaders” Training in Izmir

“*Influencing Skills for Leaders*” Training organized by General Electric (GE), and hosted by Izmir Institute of Technology was held at the IYTE-SEM Tepekule Business Centre on December 16, 2014. The lecturer was Tim Highet, GE Europe Middle East and Africa Leadership Training Manager.

The training audience consisted of university and industry collaboration department managers and executives, technology transfer office managers, incubator managers, techno-park managers, and academicians. Training was structured in both interactive and lecture parts.

The objective of the training was to *help leaders communicate better* by identifying interaction styles based your social skills, emotional intelligence, and your ability to be influenced by others. The four styles are:

- **Relater:** One who is calm, approachable, and a great listener. Prefers to avoid the spotlight, confrontation, and lacks a sense of urgency.
- **Analyzer:** One who is reasonable, formal, and task focused. Prefers to work independently and is very cautious.
- **Expresser:** One who is hopeful, motivated, and flexible. Dislikes routine and craves recognition.
- **Director:** One who is determined, energetic, and take charge. Focus is on results and may appear rigid and demanding.

As a result of the training, Atmosfer TTO personnel developed personal influencing strategies by understanding how their behaviours can affect their four main types of people. By learning how to recognize another’s style, leaders are better able to tailor their interaction approach to reduce stress, provide support, and improve communications to achieve objectives.

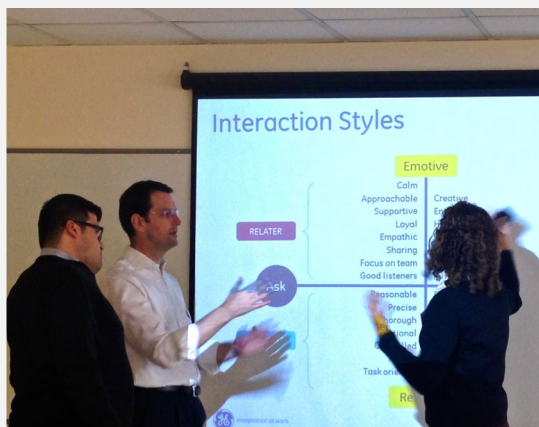
This Leadership Training was also an excellent opportunity of how technology transfer offices can facilitate collaborations in Izmir. Leaders from seven universities attended the training: Izmir Institute of Technology Atmosphere Technology Transfer Office, Dokuz Eylul University Technology Transfer Office (DETTO), Ege University Technology Transfer Office (EBILTEM TTO), Izmir University of Economics, University of Izmir, Gediz University and Yaşar University.

“THIS TRAINING HELPED ME BETTER UNDERSTAND MY OWN DOMINANT PERSONALITY TRAITS AND WILL HELP ME IN ASSESSING OTHERS TO IMPROVE COMMUNICATION AND INFLUENCE AS A LEADER.”

**Jens Almer**  
Izmir Institute of  
Technology

“THIS TRAINING TAUGHT KEY INFORMATION IN A SIMPLE AND PRACTICAL WAY, ESPECIALLY THE PERSONALITY MATRIX USED WAS VERY EFFECTIVE. I SHARED IT WITH MY MANY COLLEAGUES AND USE IN MY DAILY LIFE.”

**Handan Kilicasan**  
Izmir University  
Technology Transfer







## TECHNOLOGY PROJECTS & TRENDS

# SanTez Project: A Kinematically Redundant Planar Laser Cutting Machine by IZTECH and Coşkunöz

Submitted by: *Dr. M. İ. Can Dede; Dr. Gökhan Kiper; and Emre Uzunoglu*

- **Project Code:** 01668.STZ.2012-2
- **Grant Period:** December 2012 – June 2014
- **Principal Investigator:** Assist. Prof. M. İ. Can Dede
- **Project Partners:** Department of Mechanical Engineering, Izmir Institute of Technology & Coşkunöz Metal Form, R&D Department
- **Project Group:** Assist. Prof. M. İ. Can Dede (IzTech), Assist. Prof. Gökhan Kiper (IzTech), Assist. Prof. Dr. Erkin Gezgin (İzmir Katip Çelebi University), Emre Uzunoglu (IzTech), Dr. Tayfun Sığirtmaç (Coşkunöz), Ercan Master (Coşkunöz), Sinan Tangül (Coşkunöz)
- **Budget:** 1.070.000 TL

### Scope Designing a New Generation Machine

This study focuses on the design, production and verification tests of a new generation planar laser cutting machine. Conventional planar laser cutting machines cannot achieve high acceleration values while keeping desired positioning precision due to the inertial effects of large moving masses. Although developing laser cutting tool technology enables cutting machines to operate at high speeds with less reaction times, conventional cutting machines maximize this potential, only reaching up to 1.5-2g acceleration without loss of precision. In the last 5-10 years, various international companies configured kinematically redundant mechanisms by adding extra actuation systems and were able to reach 5-6g acceleration levels. This concept integrates an extra mechanism with relatively smaller workspace to the main mechanism. Due to the relative sizes of the mechanisms, the smaller one is called the micro mechanism and the bigger one is called the macro mechanism.

Conventional cutting machines do not possess the micro mechanism. In this hybrid structure, the macro mechanism moves along the global x and y axes while the micro mechanism moves along local x and y axes. A perfect analogy of this type of assembly would be the human arm and wrist. The hand cannot write fast enough with the required precision if the wrist is locked. However, with the aid of the wrist one can write much faster. Therefore, the positioning speed and acceleration characteristics are enhanced with the aid of the micro mechanism. Thanks to the relatively much more small inertia of the parts of the micro mechanism, the machine can reach higher accelerations. This project also requires a kinematically redundant robot controller to optimize the actuator motion for the highest acceleration that can be achieved by the mechanism.

THE GOAL OF THE PROJECT IS TO DEVELOP A NOVEL REDUNDANT MACHINE DESIGN, WHICH CAN REACH HIGH ACCELERATION LEVELS (>6G) WHILE PRESERVING THE SAME AMOUNT OF POSITIONING PRECISION AS THE CONVENTIONAL MACHINES.

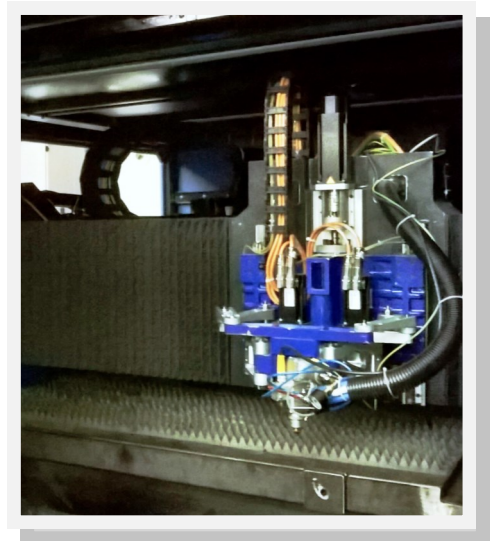




### Outcome: First redundant laser cutting machine in the Turkish Machine Industry

The micro mechanism design and the control algorithm were developed in IZTech, while the other conventional machine components were designed in Coşkunöz in Bursa. The prototype machine was manufactured; controller algorithms were developed and embedded in the machine; and finally the mechanical structure, electromechanical components, and the controller were integrated. Several tests were conducted resulting in minor modifications.

The outcome of the project is the first redundant laser cutting machine in the Turkish Machine Industry, and third of its kind in the world that can reach high accelerations using redundancy. The final tests provided that machine has 0,042 mm/m positioning accuracy and  $\pm 0,008$ mm repeatability with a maximum acceleration of 4g. Depending on the workpiece, the redundant machine can perform up to two times faster compared to a conventional machine.



#### To learn more, please contact:

For further information please visit the IZTECH Robotics Lab website:

[http://web.iyte.edu.tr/~candede/kinematically\\_redundant\\_laser\\_cutting\\_machine.html](http://web.iyte.edu.tr/~candede/kinematically_redundant_laser_cutting_machine.html)

For further queries, please contact:

Dr. Can Dede - [candede@iyte.edu.tr](mailto:candede@iyte.edu.tr)

Dr. Gökhan Kiper - [gokhankiper@iyte.edu.tr](mailto:gokhankiper@iyte.edu.tr)

## WOULD YOU LIKE YOUR TECHNOLOGY PROJECT TO BE HIGHLIGHTED IN THE NEXT ISSUE?

Please send your article ideas to [technosphere@atmosfertto.com](mailto:technosphere@atmosfertto.com) for consideration.

## TECHNOLOGY PROJECTS & TRENDS

# Importance of Human Resources in Science and Technology (HRST) in Technology Commercialization Activities: Trends and Future Prospects

Submitted by: *Miray Karakuzu, Atmosfer TTO IPR Coordinator*

### Investing in Human Resources to Increase Innovation Activities

In technology transfer activities, the main focus is on the final product or process subject to a licensing deal. It is a myopic point of view—from scratch to end—the main focus for success should be human resources, especially Human Resources in Science and Technology (HRST). R&D and innovation activities depend on three main foundations: research infrastructure, funding, and competent researchers. Until recently, it was believed that, insufficient research funding and infrastructure were the main problems in conducting R&D and innovation activities. As national R&D funds increases and research infrastructures become more abundant and accessible, the development of human resources is the main bottleneck in this triangle.

The time required to train and develop science and technology skills is lengthy and the costs are high. International mobility has been considered a permanent brain drain for Turkey. Since technological leaps are experiencing shorter life spans and being replaced by new technologies very quickly, predicting future HRST demand is, at best, an inexact art.

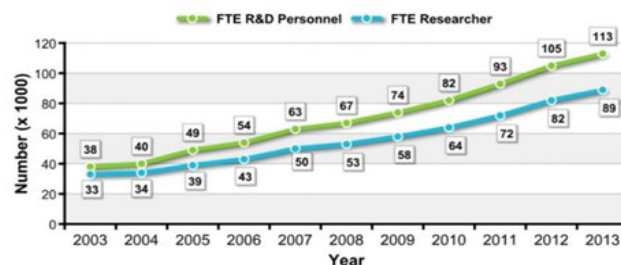
### Turkey has the lowest ranking of HRST employee

With the increasing number of universities and R&D centers, it becomes more important to manage HRST. The number of HRST has increased drastically in last decade. The total number of R&D personnel (researchers, technicians and other supporting staff) is 196.321 in 2013 based on the TURKSTAT statistics. Instead of headcount, HRST statistics are monitored in terms of "Full Time Equivalent" (FTE), meaning calculated based on ratio of their time devoted to R&D activities. In 1990, HRTS in university sector committed 30% of their time to research on the average, this ratio increased to 38% in 2013.

### DEFINING HRST WORKERS

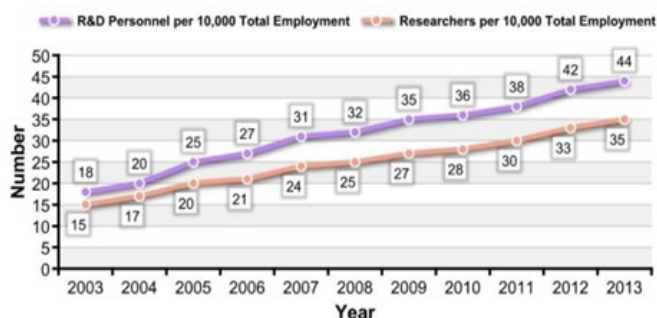
ACCORDING TO THE CANBERRA MANUAL (OECD AND EUROSTAT, 1995) AS PERSONS HAVING GRADUATED AT THE TERTIARY LEVEL OF EDUCATION OR EMPLOYED IN A SCIENCE AND TECHNOLOGY OCCUPATION FOR WHICH A HIGH QUALIFICATION IS NORMALLY REQUIRED AND THE INNOVATION POTENTIAL IS HIGH.

R&D Human Resources – FTE\* (Turkey)



\* Full Time Equivalent  
Source: TurkStat

R&D Human Resources per 10,000 Total Employment (Turkey)



This trend is also parallel with the increasing trend of R&D funding. When numbers are analysed in terms of ratio to total employment, 2013 saw 44 R&D personnel employed for every 10,000 employees and 35 of them were researchers. Even though the trend seems promising; comparing Turkey to OECD and EU countries shows a long way ahead. In 2013, the number of researchers per 10.000 employment of EU average (28 countries) is 76, almost double that of Turkey. In 2013, Turkey had the lowest ranking in this statistic among OECD countries.

Taking all these into account, developing and implementing effective national HRST policies are the basic foundations for a coherent and well-functioning R&D ecosystem.

<sup>1</sup> TURKSTAT, *Statistics on Research and Development Activities, 1990-2013*





SCIENCE AND TECHNOLOGY HUMAN RESOURCES STRATEGY AND ACTION PLAN 2011-2016" IS THE MAIN POLICY DOCUMENT IN THIS FIELD.

In the 16<sup>th</sup> meeting of Council for Science and Technology (SCST) in November 2007, the preparation of a strategy and action plan was finalized with TUBITAK's coordination. During the preparation stage, all stakeholders were included via 12 workshops, 2 ad hoc working committees and 5 working groups. More than 500 research personnel participated in the workshops from different sectors. Ad-hoc government committees developed strategy and actions stemming from the workshop results and working groups. "Science and Technology Human Resources Strategy and Action Plan 2011-2016" have five main strategic aims are:

- Increase the number of HRST and improve the sectoral distribution of HRST
- Develop skills and experiences of researchers
- Improve the working environment of HRST
- Increase mobility of researchers
- Increase the employment capacity for HRST

During the preparation and implementation phase of the strategy, new amendments to the regulations were made and new programs implemented. For instance, foreign researchers gained the rights for receiving Project Incentive Bonus (PIB) from TUBITAK projects and work permit requirement was removed for those studying in universities and public research institutes for maximum 2 years, and working in projects in the frame of EU Pre-accession programs.

### How can Turkey Improve

One of the main strategies and improvement is to make Turkey a center of attraction for both Turkish researchers living abroad and international researchers. Selected programs introduced or improved since 2010 are presented below.

Name of the Program	Brief Explanation	Target Group
<b>2221 - Fellowships for Visiting Scientists and Scientists on Sabbatical Leave:</b>	Given to international scientists/researchers who would like to give workshops/conferences/lectures, or conduct R&D activities in Turkey. It is possible to apply the program for short – term (up to 1 month), long-term (up to 12 months) and for sabbatical leave (from 3 months to 12 months).	International Researchers
<b>2236 - Co-Funded Brain Circulation Scheme (Co-Circulation Scheme)</b>	Program is partially supported by the EC-FP7 Marie Curie Actions-People-COFUND and coordinated by TUBITAK. The scheme offers incoming mobility of 100 Turkish and foreign experienced researchers for periods of 20-24 months (the 4th and last call will be 12 months).	Turkish Citizens and International Researchers
<b>2232 - Postdoctoral Reintegration Fellowship Program</b>	Scholarship dedicated for Turkish researchers willing to pursue their careers in Turkey. Support includes 24 months of scholarship and research fund.	Turkish Citizens
<b>2213 International Graduate Scholarship:</b>	Given in priority areas, 60.000\$ for the first 2 years of PhD studies, in universities among TIMES 500 ranking list.	Turkish Citizens

National science and technology policies devoted to increase the quality and quantity of HRST and targets for 2023 are both very ambitious. Looking briefly at the last decade and future targets in policies in R&D personnel provides insight into the possible mechanisms and programs that may evolve to reach the targets for 2023. Firstly, involving in R&D activities will be more important for academicians and private sector companies. Universities will be directed to have high quality PhD graduates or attract short-term or long-term Turkish or international academicians via programs or new regulations. Joint programs with private sector, industry thesis studies will increase in terms of number of total funding. Resources dedicated to inbound and outbound mobility will increase.

Indicator	2010	2023 Target
Number of FTE researchers	64,341	<b>300,000</b>
Number of FTE researchers in private sector	25,345	<b>180,000</b>
Ratio of private sector FTE researchers to total number of researchers	39%	<b>60%</b>
R&D spending per FTE researcher	150,000 TL	<b>280,000 TL</b>
Share of R&D spending in GDP (%)	0.84	<b>3.00</b>

### How Atmosfer TTO Can Support You

Atmosfer TTO supports all three target group (academy, industry and entrepreneurs) with current know-how about regulations, we can also provide insight about policies/sectors/trends. Monitoring policy developments is one of the best ways to understand the past and forecast the future. While managing research career, research strategies, choosing research topics, conducting research, engaging in relevant partners, this know-how can be vital for your future success.

<sup>2</sup> SCST is the highest ranking STI policy-making body in Turkey chaired by the Prime Minister with decision-making power for national S&T and innovation policy.

<sup>3</sup> Gross Domestic Product





## UPCOMING CONFERENCES



*National Symposium of Theory of Machines (UMTS) will be held in Department of Mechanical Engineering, Izmir Institute of Technology on June 14-17, 2015. The goal of UMTS is to gather researchers together and build up a Turkish literature in the theory of machines discipline. The 17th UMTS will have a large-scale international participation for the first time. Turkish and English discussions and collaborations.*

- *Who:* Over 250 Academic and Industry Leaders
- *What:* Events such as Topic Presentations with Invited Speakers (Oral, Poster, and Company), Industry R&D Session, Workshop on Haptic Teleoperation, Student Design Contest, and Group Boat Tour
- *When:* June 14-17, 2015 at Mechanical Engineering Department in IZTECH
- *For More Information:* Please visit the TrISToMM website for more information <http://umts.iyte.edu.tr/en>

### SYMPOSIUM TOPICS:

- Applied mechanics
- Biomechanics
- Computational kinematics
- Control of mechanical systems
- Dynamics of machinery
- History of MMS
- Industrial Applications
- Kinetic architecture
- Linkages and Cams
- Mechanical transmissions
- Mechanical vibrations
- Mechanism design
- Mechatronics
- Multi-body dynamics
- Nano/micro mechanical systems
- Robotics
- TMM education
- Haptic Teleoperation



*The International Porous and Powder Materials Symposium and Exhibition will be held in Izmir, Turkey on Sept 15-18, 2015. The goal is to facilitate exchange ideas between academia and industry on fundamental aspects of porous and powder materials widely used in construction, coating, waste treatment, metallurgy, pharmaceuticals, defense, and other applications.*

- *Who:* Over 800 Academic and Industry Leaders
- *What:* Events such as Topic Presentations with over 20 Invited Speakers and 30 Parallel Sessions, Industry Exhibition Hall with Product and Equipment Displays, Numerous Workshops, and Social Tours to Ephesus and Izmir City Center
- *When:* September 15-18, 2015 at Cesme Ilica Hotel Spa and Wellness Resort in Cesme - Izmir - Turkey
- *For More Information:* Reminder that early bird registration ends May 30. Please follow [www.ppm2015.org](http://www.ppm2015.org) for further information and future announcements.

### MAIN THEMES

- Development & Characterization
- Catalysis
- Environment & Energy
- Biological & Medical Aspects
- Transport & Surface Chemistry
- Modeling & Simulation
- Industrial Application

## UPCOMING EVENTS



### **HORIZON 2020 PROGRAM INFO DAY** **Hosted by Atmosfer TTO**

**Date:** 12 May 2015, Tuesday, 13:30 – 16:30

**Venue:** IZTECH Mechanical Engineering Seminar Salon

*We are pleased to invite you to H2020 Info Day. Hosted by Atmosfer TTO This workshop will provide you an opportunity to learn more about the structure of the H2020 Program, its opportunities, and important points for consideration.*

**PLEASE SEND AN E-MAIL TO [miray.sanli@atmosfertto.com](mailto:miray.sanli@atmosfertto.com) TO REGISTER FOR EVENT**

### **Program Schedule**

#### **Welcome**

#### **Framework of European Union Programs**

#### **Strategies of European Union 2020**

#### **Horizon 2020 Program**

Structure and Budget

What's New

Participant Rules and New Opportunities

Structure of Regulations in Turkey

#### **Horizon 2020 Projects**

What is call topic? & How to read call topics?

How to develop a project? & What are project preparation documents?

What are evaluation criteria?

#### **Important Points for Participation to H2020**

Consortium Databases, Profile Forms and Relevant Links

Tubitak- H2020 Support and Award Programs

#### **Questions & Answers**



## ARTICLE SUBMISSION

# TECHNOSPHERE

TechnoSphere promotes technology transfer and its goals through the publication of articles, reviews, and recommendations and is published by Atmosfer Technology Transfer Office (TTO).

## Submission Guidelines

Atmosfer Technology Transfer Office (TTO) is seeking author submissions of the following:

- Technology articles
- Career success stories (small business entrepreneurs, grant recipients, etc)
- Insights, opinion, and best practices of current technology issues
- Research projects and findings
- Knowledge about funding opportunities
- Marketing small business

We welcome submissions from all members of Izmir Institute of Technology (IZTECH), Teknopark Izmir, Industry, and our community any time during the year. TechnoSphere is distributed quarterly (Spring, Summer, Fall, Winter).

**If you would like to submit an article, please complete the attached Article Submission Form and return to [technosphere@atmosfertto.com](mailto:technosphere@atmosfertto.com).**

## General Rules

- Language: English
- Font: Arial, 10 pt font, single space
- Images: 300 dpi or higher
- Length: Short features on specific topics may range from 500–1,000 words; longer, investigative journalism pieces may range from 1,500–2,500 words.
- Deadline for Submission: 30 days prior to print (e.g, June 1 is deadline for July issue).

## PHOTO CHALLENGE | INNOVATION

*Atmosfer TTO is sponsoring a photography contest to celebrate our first annual issue.*

### About the theme:

*Innovation.* It's a technology and a science. It values not only creativity, but also emphasizes different and more efficient ways of performing. We at Atmosfer TTO recognize that innovation is at the heart of technological improvement and advancement. This issue's contest asks you to show us what "Innovation" means to you.

### Prizes:

- 1<sup>st</sup> Place: 100\$ Gift Card to Corners/Mutfaktakiler to single awardee, print and attribution in our Summer 2015 issue
- Honorable Mentions: Print and attribution in our Summer 2015 issue

### How to Enter

The contest is open to all, professional and amateur. Entry is limited to original works to which the entrant holds all applicable rights. Entries may be submitted via email to [technosphere@atmosfertto.com](mailto:technosphere@atmosfertto.com). Please put "photo contest" in the subject line. Deadline for entry is 15 June 2015. By submitting an entry, you permit Atmosfer TTO to your name and all rights to use, edit, or publish, and distribute the photograph. We will publish the finalists of our 1st Quarterly Photo Contest in the Summer (July 2015) edition of TechnoSphere.

***Deadline is June 15, 2015***







## High Technology Meets Industry

# ATMOSFER TTO

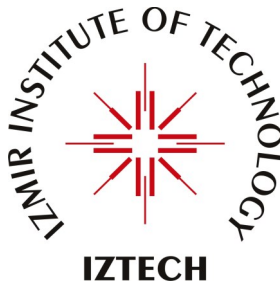


### Atmosfer Technology Transfer Office

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ATMOSFER TTO

