

Program of the English Language Conference 2017

Thursday, 04.05.2017 - time: 8.00 a.m., room 212

1. Tatiana Shkuro: "Artificial Intelligence in our Life"

What comes to your mind first when you hear about artificial intelligence? Most people are likely to answer "robots". However, although AI might seem like science fiction, you might be surprised to find that you are already using it. AI has an effect on our life, and its influence is likely to grow in the coming years. What opportunities does AI give us today and what should we wait from it in the future? You will find it out in this presentation.

English language consultant: Tatiana B. Kolesova

2. Anton Fedyashov: "Robots – a way to improve school education"

Microcomputers and robots are becoming more and more common. They are amazing examples of engineering, programming and physics being combined. What about using them in school education? What are the main benefits? The speaker's experience of teaching children in the robotics club will be described in the presentation.

English language consultant: Anna A. Andrienko

3. Viktoriya Redun: "Computer Animation: in the world of anime..."

The world around us is full of miraculous things. People constantly create something new: robots, smartphones, supercomputers etc. But cartoons seem to have become the most amazing "inventions" of humanity. Today the most popular cartoons are anime. However people's attitude to Japanese animation is ambiguous. On the one hand, anime is not just a Japanese cartoon for some people, it's a whole world, where heroes are divided into kind and evil, and choose the side which befits them most of all. On the other hand, there is a large amount of violence in anime. Why do people continue to watch these cartoons despite criticism? Some questions will be answered in this presentation.

English Language Consultant: Elena I. Grushko

4. Evgeny Taktarov: "Open Source in IT. Brief Past. Controversial Present. Dawning Future"

Dive into one of the most controversial topics of IT industry, the Open Source Ideology, and learn its humble beginnings and main figures as well as how it fights, works and helps commercial industry.

English language consultant: Tatiana B. Kolesova

5. Danil Rudnev: "Neural networks - the shadows of everyday life"

We use neural networks every day although we do not always know this. Neural networks are such artificial brains that can easily win the best players in chess, draw like famous artists, drive cars, be sellers in stores or write songs. The main basic principles of neural networks, where they are used and what makes them so interesting will be discussed in the presentation..

English language consultant: Anna A. Andrienko

6. Vlada Kriventsova: "Smart Card and Almost All about it"

The presentation is devoted to a smart card (a chip card or an integrated circuit card) which is a pocket-sized card that has embedded integrated circuits. We will talk about the history of the invention of this card, its types and design, finally about its application. Special attention will be also paid to security and information protection. At last we will discuss the advantages and disadvantages of a smart card.

English Language Consultant: Tatiana B. Kolesova

7. Artyom Belyaev : "Smart Home - Futuristic Wonders at your Place"

Something we could only imagine in our dreams couple of years ago, something predicted decades before by bravest minds of their time. Future becomes reality in its most mind-blowing ways. Smart, controlled by a computer house transforms from futuristic joke into a thing we can no longer ignore. But is it a classic utopia or another useless and dangerous feature, society is not ready for?

English language consultant: Elena I. Grushko

Program of the English Language Conference 2017

Thursday, 04.05.2017 - time: 9.50 a.m., room 120

1. Zoya Oboskalova: "Mobile app behavior often appears at odds with privacy policies"

Cell phones and other wireless electronic devices are vital communications tools that have become necessary for full participation in modern life. But they are also powerful tracking devices that can be used to infringe on individual privacy. Different mobile apps behavior often appears at odds with privacy policies. And automated analysis shows that apps do not always seem to do what they say. Unfortunately, they share user's information with third parties. However, a new automated analysis system has shown us true color.

English language consultant: Svetlana I. Mylnikova

2. Kseniya Brinikh: "Golden section"

The Golden section is a universal manifestation of structural harmony. It is found in nature, science, art – all that people deal with. We do not even notice it but the golden section exists almost everywhere around us. Once acquainted with the Golden rule, humans haven't changed it. You will learn about the great role of this ratio in the surrounding world, how it is related to the concept of harmony and how it is used in art, design, and other areas of our life.

English language consultant: Anna A. Andrienko

3. Diana Sheremyova: "Can we trust robots to make moral decisions?"

Robotics or the artificial intelligence are used in manufacturing, military, medicine and many other spheres. They are becoming a part of our everyday life whether we like it or not. But can a robot be designed to act morally? Which decisions should we trust robots to make and which ones humans should retain? Let's figure it out together.

English Language Consultant: Elena I. Grushko

4. Maria Rudenko: "DNA-computers are the future of information technology."

The presentation is devoted to a new kind of computers that can replace silicon-based and quantum computers. What is the advantage of DNA-computers? Are they able to solve the problem of alternative energy? What steps have been taken towards the computing system of the future? Find out in this presentation.

English language consultant: Tatiana B. Kolesova

5. Ella Korablina: "Mathematics of music"

All of you have definitely heard some pieces of music by the great composer Ludwig van Beethoven. But very few of you know that they are based on the basic laws and principles of mathematics. In this talk I will show the relationship between music and the key concepts of mathematics on the example

of the most famous his compositions called «Moonlight Sonata». You will also get to know which note corresponds to which graph and how their intersection reflects the phenomenon of resonance and dissonance.

English language consultant: Anna A. Andrienko

6. Vladislav Kulchitsky: “Wearable devices. Google and Levi’s Project Jacquard”

A wearable device is a technology that is worn on the human body. This type of device has become a more common part of the tech world as companies have started to evolve more types of devices that are small enough to wear. A wearable device is often used for tracking a user's vital signs or pieces of data related to health and fitness, location or even a person’s biofeedback indicating emotions. Wearable devices become our convenient companion from day to day. But do many of them have a real benefit? Are they really useful tools or a temporary cure?

English Language Consultant: Svetlana B. Mylnikova

7. Alina Zhinkina: “The history of complex numbers”

The history behind complex numbers is probably most complicated among other types of numbers. They were first mentioned in history as far as the 5th century BC. Mathematicians supposed that the system of equations that had no solutions in real numbers could be solved by means of the new types of numbers. In this talk I will tell you how complex numbers evolved.

English language consultant: Anna A. Andrienko

Program of the English Language Conference 2017

Thursday, 11.05.2017 - time: 8.00 a.m., room 212

1. Margarita Redun: «The incredible world of smart things»

It's hard to imagine our contemporary life without information technology. In fact, for a quarter of a century people used simple maps or tourist brochures, they even didn't try to think about navigators and digital devices. Today most of them are equipped with intelligence, which makes it possible to control them without human intervention. For example, automatic switching of lighting, heart robot as an artificial simulator, dynamic bicycle path on asphalt at night or special glasses that monitor the physical condition of the patient after surgery. But what about their role in students' life? Will they make it easier, more fascinating and productive?

English language consultant: Elena I. Grushko

2. Andrey Patseev: "How does the Internet Work?"

The Internet has become a large part of our lives and continues to develop. This short presentation will give you a good understanding of how the internet works in just six minutes - because it is really that simple!

English language consultant: Tatiana B. Kolesova

3. Olga Imedashvili : “The impact of virtual reality on humans”

In this age of highly realistic computer games and increasingly popular social networks, social exclusion in virtual worlds is becoming more and more socially significant, as is demonstrated by the growing number of "cyber mobbing" cases. However, up until now, very little research has been carried out into the impact of social exclusion in the digital world upon real-life social behavior, and hardly any that addresses the latest developments such as Virtual Reality (VR) glasses.

English Language Consultant: Elena I. Grushko

4. Andrey Romanovskiy: "Machine Translation and its Improvement"

A lot of people nowadays (you too, I suppose) sometimes have to use foreign languages to find some information, to meet new friends etc. We do not have to use unhandy old dictionaries any more - there is a lot of software which can help us with it. But how does it work? Do translation programs always translate correctly? What are the ways of improving the translation quality of these programs? You will find the answers in this presentation.

English language consultant: Tatiana B. Kolesova

5. Yulia Korablina: "Amazing hyperbolic paraboloid: the view of Erik Demaine"

Many people think that analytical geometry is lines, planes, surfaces and nothing else. But this isn't so! There are objects that not only attract the attention of millions of mathematicians around the world, but also serve as inspiration for the creation of works of art. One of them is a hyperbolic paraboloid, which became the basis of the famous sculptures by Erik Demaine.

English language consultant: Elena I. Grushko

6. Darya Popkova: "The Internet of Things".

How IoT can change our life? History of development, areas of application, some problems of this technology are discussed in the presentation.

English Language Consultant: Tatiana B. Kolesova

7. Ivan Parkhomenko: "Acquiring Memory: Hybrid of Neuronet and Turing's Machine"

Google Deepmind researchers have introduced an AI system of a new kind called a Differentiable Neural Computer, DNC. This system is able to learn to use its memory to answer questions about complex, structured data, including artificially generated stories, family trees, and even a map of the London Underground.

English language consultant: Elena I. Grushko