



## VISIT OF THE OSCE TO DONNTU



From left to right: Prof. I. Navka, Dr. S. Tkachenko, the interpreter, Mr. Lindner and Prof. V. Kalashnikov.

Photo: International Office of DonNTU.

The meeting of the university's administration with representatives of the Organization for Security and Co-operation in Europe took place on September 3, 2015. Otto Lindler (Austria) and A. Korotkov (the Russian Federation) were the delegation members. The event atmosphere was constructive, friendly and that of mutual understanding. The visitors were welcome by German Engineering Faculty (equipped and supported by the Siemens company) and the French Engineering Faculty (supported by the

grants from collaboration with the universities of Sergy Pontois and Versailles) where they were shown laboratories.

Vice-Rector on International Cooperation Prof. I. Navka told the guests about the university's history, its current state and expected outlooks. The issue of collaboration with European partners was paid special attention to.

The delegates saw the Gallery of Honoured Doctors of DonNTU and the ravages caused by the events of August 14<sup>th</sup> 2014.

The guests were also invited to attend the Days of German Science at DonNTU, the event which is going to take place on October 22<sup>nd</sup>.

## I INTERNATIONAL FORUM "TECHNOSPHERE -2015"

The great scientific and technical event we had been looking for took place in Sevastopol on September 14-20 2015. The Head of the Department of Mechanical Engineering Technology of Donetsk National Technical University Prof. A. Mikhailov was one of the organizers of the project ( we published A.N. Mikhailov's "Appeal" in issue №2).

It has become a tradition that the annual international scientific and technical conference "Mechanical Engineering and Technosphere of the XXI Century" takes place in September (on the eve of the Mechanical Engineer's Day). This year it has been the 22<sup>nd</sup> conference. The efforts of the universities of Donetsk, Lugansk and Sevastopol had been proposed to be united and thus 12 international conferences were held in the form of a forum. Researchers from Russia, Kazakhstan, Armenia, Abkhazia (we gave the information on the invitation of the staff of Abkhazia State University in issue №7 2015), Nagorno-Karabakh, the DPR, the LPR, Belarus and Ukraine were the participants. Why Sevastopol? Prof. Mikhailov's reply is as follows:

“First, it has already become a tradition (22 years of the conference holding). Second, according to L. Tolstoy when you are in Sevastopol your soul is full of pride and courage and the blood runs faster in your veins.

The Plenary Meeting marked the opening of the I International Scientific and Technical Forum on which DonNTU was represented by:

- the Head of the Organizing Committee with the presentation “Functionally Oriented Technologies in Engineering of the Machine Component Surface”;
- Prof. V. Gusev with the presentation “Engineering of the Component Surfaces Made of Polyceramic”.

“Technosphere -2015 had 5 breakup groups:

1. Practice and outlooks of creation and application of progressive and non-traditional

technologies; Integrated, complex, combined and hybrid technologies; Manufacturing process mechanization and automation; Progressive equipment.

2. Complex Automation of Production Design, Preparation and Management; Technosphere Economic Issues; Creation and Application of Progressive Tools and Tooling Material; Product Quality and Technical System Control; Engineering of the Machine Component Surface.

3. Modern Problems of Machine Components and Theoretical Engineering; Technical system calculations.



Honoured Doctor of DonNTU, Professor of Moscow State Technical University A. Suslov makes his presentation at the forum.

Photo: A. Mikhailov.

4. Material engineering, process and material science modern problems; nanomaterials and nanotechnologies; specializing technologies and mechanical engineering product covering.

5. Technosphere special technologies; Technosphere ecological problems; Engineering education modern problems; education integration and Euro-integration in education.

– Prof. Mikhailov shares his impressions:

*There were a lot of young people at the conference who go on moving on the thorny path of science and learning despite many problems. This gives the ground to state that science and progress will be always developed and activated. Participation of scientists and researchers from different foreign universities helped develop promising links and form the tradition of joint discussion of topical problems. The forum was also aimed at further consolidating of researchers, experts and heads of industrial companies to assist the process of technosphere development under the conditions of global economics changes.*



The panel of the I International Scientific and Technical Forum “Technosphere -2015”. ».

Photo” A. Mikhailov.

The XVI congress of the International Union of Mechanical Engineers was also held within the frameworks of the forum (IUME). This international public organization unites representatives of 21 countries of the world. The main plans and outlooks of operation of the IUME were laid down. The Russian representation of the IUME set itself the task of fulfilling the forecast of the world development of mechanical engineering up to 2025. The Armenia representation was recommended to improve the work of their members in the frameworks of the organization.



Conference participants from Bryansk State Technical University and the Chairman of the Forum Organizing Committee.

Photo: A. Mikhailov.

The participants of the Plenary Meeting decided

- to hold a number of conferences in the frameworks of the II international scientific and technical forum “Technosphere 2016” in Sevastopol in 2016.

- to hold the IX international scientific and methodological conference “Modern Problems of Technosphere and Engineer Training” at Abkhazia State Technical University, Sukhumi in October 2016. This

was possible due to the presence of the Vice Rector of the University Prof. V. Delba and the staff. DonNTU used to hold

the annual conference in Tunisia. Unfortunately, due to the emergency situation in the country the forum has been suspended and cancelled this year.

According to the researchers, participation at the event is vitally important to scientists and experts from universities and companies as there is vacuum in exchange of the information on the latest achievements in engineering and definition of the vector of progressive development of technosphere and collaboration in it.

## INTERNATIONAL COLLABORATION IN PERSONS

### T. NEDJAT VEZIROGLU

**There is a strong desire to survive during the period of changes due to belief and support. DonNTU was ensured in the belief as to its future and thus supported. We told our readers about attention paid to us and the support gained from Honoured Doctors not once (issue №1 2015), but here is never too many kind and hearty words. Today we would like to thank the President of the International Association of Hydrogen Energy (the USA), the Honoured Professor of the University of Miami, the founder of the Journal on Hydrogen Energy, a member of 18 scientific organizations, a winner of many international prizes and the Nobel Prize nominee T.N. Viziroglu.**





The famous scientist was born on January 24<sup>th</sup> 1924. The future Doctor Veziroglu graduated from several colleges and London Technological University. He got his degree of Ph.D. in heat transfer.

In 1962 he was in the army and on coming back worked at the University of Miami. In 1965 he started the first doctoral program at the school of engineering and architecture. Then the researcher founded the Institute of Research of Problems of Pure Energy (1973) and was the assistant of the Dean on Research (1975-1979).

Many people remember March of 1974. The first conference on hydrogen energy was held then. Dr. Veziroglu proposed the hydrogen energy system to solve ecological problems caused by the mineral reserve depletion (fuel). That year he got the President Prize for science development (Turkey). The International Association of Hydrogen Energy was established in a year and the Director of the Institute of Research in Pure Energy was elected its head. The conferences and forums on the subject matter have been organized biannually since then. The events took place in Miami, Zurich, Tokyo, Pasadena, Toronto, Vienna, Moscow, Honolulu, Paris, Stuttgart, Beijing, Montreal, Buenos Aires, Yokohama and Cocoa Beach.

In 1976 he founded the international journal on hydrogen energy and has been its editor –in- chief for many years. The goal of the journal is to disseminate the information on achievements of the hydrogen energy all over the world. Now 36 issues come out every year.

Further on Dr. Veziroglu was awarded the degree of the Honoured Doctor of Xi'an Transport University (China, 1981), Kurchatov's medal (Kurchatov Institute of Nuclear Energy, the USSR, 1982), the Prize of "Global Energy" (1986). He also became a member of Argentina Academy of Science in 1988 and in 2000 he was a nominee of the Noble Prize in Economics for creation of the hydrogen economics and its popularizing.

In 2004 – 2007 he took part in establishment of the International Centre of Hydrogen Energy Technologies in Istanbul (Turkey). In May 2009 he was awarded the degree of the Honoured Doctor of the University of Miami.

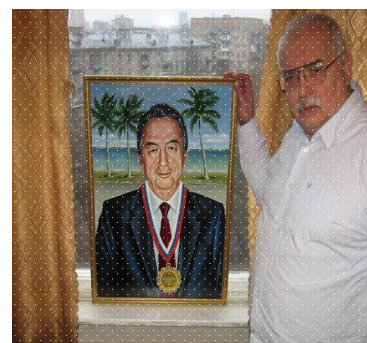
Dr. T.N. Veziroglu is the Honoured Doctor of DonNTU. *In May 2005 the Rector of DonNTU Prof. A. Minaev and Prof. Veziroglu exchanged letters and drove to the decision to conclude the agreement between the UNIDO-ICHET and DonNTU and on participation of DonNTU at the international congress on hydrogen energy which was going to take place in summer 2005. The Head of the Department of Physics Prof. Goltsov and the senior researcher of the Department L. Goltsova participated at the international forum "Hydrogen Technologies for Energy Making" in 2006. The forum was the official event in the frameworks of presidency of the Russian Federation in G8. Dr. Veziroglu was the Honoured Chairman of the forum and made his presentation "Energy of the XXI Century: Hydrogen Energy Systems"*

*which demonstrated the modern state of the ecosystem of Earth, the necessity of transferring to the new energy carrier –hydrogen which form only water when burnt.*

The administration of Donetsk National Technical University asked the opinion of Dr. Viziroglu on DonNTU's own diploma last year. The staff remembers the reply and tells about it to young researchers: *“DonNTU is to have its own diploma as it is a common practice at European universities.”*

Dr. Viziroglu published 350 papers and reports, 160 books including the one written in co-authorship with Nazim Muradov (*“Solar Hydrogen Energy: Power to Save Earth”*).

Our Honoured Doctor is a member of the British Institute of Mechanical Engineers, the American Association of Mechanical Engineers and the American Association of Assistance in Science Development. His hobbies are chess and the space.

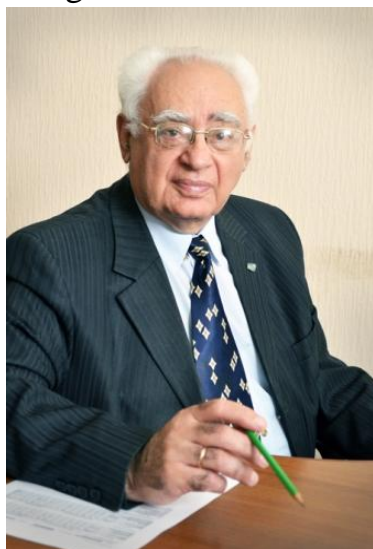


The Portrait of T.N. Viziroglu painted by the Honoured Artist of Russia A. Rezaev in honour of his 90th anniversary.

Photo: Internet-resource.

## **DONETSK NATIONAL TECHNICAL UNIVERSITY IN SEVASTOPOL**

**An academic from DonNTU made her presentation at the international scientific and technical conference “Information Technologies and Information Security in Science, Engineering and Education”.** The event took place at Sevastopol State University in September. Dr T. Vasyaeva made her presentation “Application of the Neuroevolution Approach to Improve the Quality of Medical Images”.



The Plenary Meeting started on September 7<sup>th</sup> and it was followed by three days of breakup group meetings (“Mathematical Software of Computers, Complexes and Computer Networks”, “Information Technologies and System Analysis in Management, Modeling and Production”, “Computer Systems, Networks and Components”, “Information Technologies in Education and Science”). There were 50 representatives from Russia, Ukraine and South Korea. At the second day of the event Prof. B. Likhttsinder (Povolzhski State University of Telecommunications and Information, Samara, Russia) delivered his lecture.

*Prof. B. Likhttsinder is the Honoured Worker of the Highest School of the Russian Federation. He teaches at the Department of Multiservice Networks and Information Security. He has more than 350 publications, 16 books and 70 inventor's certificates. Prof. B. Likhttsinder established a new scientific school in the measurement theory called “Theories of Measuring of Multiply Connected Objects” and created a new class of measurement instruments “Multivariable Measurement Devices” recognized by international congresses*

*IMEKO. All theoretical results obtained by Prof. B. Likhtsinder always have practical implementation.*

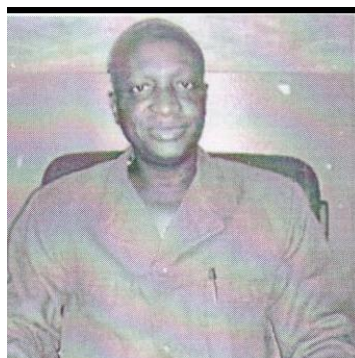
All the events in the frameworks of the conference assisted in information and achievement exchange and discussion of the scientific potential of the Donetsk Region and DonNTU.

## **STUDY COURSE AT THE HIGHEST SCHOOL OF THE REPUBLIC OF GUINEA**

**The Associate Professor of the Department of Finance and Economic Security of DonNTU L. Sorokina has come back from her business trip to Conakry (the Republic of Guinea).** She was there from October 2014 till July 2015 and had her scientific and pedagogic study course at the Highest School of Tourism and Hotel Business.

*The Republic of Guinea is a state in Western Africa. Wet summer lasts for 3-5 months in the north-west and for 7-10 months in the south of the country. Guinea is rich in mineral, hydroelectric and agricultural resources. There are also deposits of iron ore, diamonds, gold, uranium and bauxites there. The city of Conakry is the capital of the Republic of Guinea and it is situated on the island of Tombo and Kaloum Peninsula. There are a railway station, and the international airport in the city, a number of bus routes connect the capital with the neighbouring regions. There is a taxi service there.*

*Conakry is the main economic centre of the country where the main enterprises of the manufacturing industry are accumulated. Metal processing, fishery, food, chemical, textile industries are developed. Bauxites, bananas, coffee, pine-apples, apples, oranges, strawberry fish and other products are exported through the city's port.*



Doctor Diallo Mamadu  
Photo: L. Sorokina

Dr. Sorokina arrived to Guinea when there was the epidemic of Ebola Haemorrhagic Fever there. The emergency situation was declared then and classes started only in January 2015. Dr. Diallo Mamadu is the head of the Highest School of Tourism and Hotel Business. The general policy and development program of the School are defined by the Directors Board. It is oriented on the orders issued by the government and the plan of the national economic and social development.

There also is a Students Board which is composed of the commissions in sports, culture and organizational problems.

The Highest School of Tourism and Hotel Business was founded in 2005 and trains international level managers for hotel and restaurant networks on Bachelor's and Master's programs.



The arms of the Republic of Guinea



The Highest School has two departments: that of the Hotel and Restaurant Business and Tourism Management and Organization. Each of the departments is in a separate building. There are five academic buildings, two libraries and two amphitheatres on the territory of the School. Each of the classrooms seats up to 250 students.

Only 4-5 disciplines are taught each semester, one of them being taught for 3 hours a day. The students study from Monday till Saturday, some additional courses are taught on Sundays. Dr. Sorokina delivered lectures on Service, Money and Financial Institutions, Research Marketing for the students of the second and third years of study. She worked with an assistant who helped the students adapt themselves to studying at the Highest School.

*Dr. Sorokina developed the joint course “Enterprise Economics” based on the results of the study course. She took into account the specific methods of teaching adapted to the mentality of the students from Guinea.*

## **TRIALS DURING THE BUSINESS TRIP OF THE RESEARCHER FROM DONNTU**

**A DonNTU’s researcher has come back from Mamou (the Republic of Guinea).** This was Dr V. Sazhin who had his scientific and pedagogic study course at the Technological Institute. He had to face some changes in the academic process because of the Ebola Haemorrhagic Fever. *To fight with Ebola a special campus was built on the territory of the hospital in Conakry. The representatives of the organization Médecins sans Frontières worked there and then the campus was closed. When Dr. Sazhin came back to Conakry in July 2015 there was the information on an infected person to be taken to hospital.*

*To fight the epidemics the government informed the population through the mass media and SMS on precautions to stop the fever. For example, the SMS explaining that it is prohibited to eat bats, rats and monkeys were sent at mobile phones of the inhabitants. Before flying to Conakry he had to take sanitary examination.*

During the emergency situation the company TechnoStroyExport (Moscow, Russia) organized the French language courses for academics. They had their classes three times a week and finished with an exam taking. The academic year in Mamou was interrupted because of the rain season (July-August).

– *As the Institute is within 5 km from the town and there is no transport service the students are unable to attend the classes. Rain lasts for 20-30 min. and you are wet to the skin in one minute. That is why the second semester was over on July 20<sup>th</sup>. Heavy rains fall in Conakry not as often. That is why the semester there lasted till the end of August.*

*There is one interesting peculiarity of the town of Mamou: “All town roads are equipped with the rain sewage – two concreted ditches. The local population also uses it as a trash removal. The sewage is cleaned continuously. The local government*



Special campus to fight the Ebola fever on the territory of Conakry

Photo: V. Sazhin

*allocates money and hires people for it, who are mainly women. The rubbish from the ditches is stored next to the sewage. There often is not enough time to remove it and when the next rain falls it comes back to the sewage. The ditches often cause accidents. The loads are transported in delivery trucks and it is rather difficult for them to turn on the narrow road and their wheels often appear in the ditch. The accident is an event for the natives. A crowd gathers to have a look and discuss it”.*

How do the academics get to the Institute under the conditions? The Institute orders a taxi for them. These are old Renault cars transformed to take 9 people (inside) and a load (on the roof).

Dr. Sazhin delivered lectures on Tool Electrical Equipment to the fourth year students. The discipline is analogous to the one taught at DonNTU.

He had 18 students and there were no laboratories. The academics had to prepare visual aids and think at many practical examples for better understanding of the material.



Departure of the academics from Mamou to Conakry  
Photo: V. Sazhin

## FRUITFUL WORK AT THE UNIVERSITY OF ST. PETERSBURG

**Prof. Y. Skobtsov has delivered a lecture course on digital system testing at St. Petersburg Polytechnic University.** He spent 5 months at the Department of Computer Systems and Programming Technologies. He taught the students of the 4<sup>th</sup> year of study (the total amount of the teaching load was 108 hours). The course is based on original monographs and his own tutorials. Besides, Prof. Skobtsov organized scientific seminars on evolution calculations.



The cover of the journal  
Scientific and Technical  
Bulletin of StPPU  
Photo: Internet resource

Because of the planned transition of Donetsk State Technical University to the programs of the Russian standard Prof. Skobtsov attended lectures and laboratory classes and adopted methods of his colleagues. *He says there is good laboratory base that exists due to collaboration with the leading western companies in the field of information technologies.*

He also was present at the defense of candidate's dissertations. Prof. Skobtsov finished working at his tutorial on evolution calculations and published it and developed the video course. Besides, he published a joint paper "The System of Segmentation of Medical Shots by the Method of Formic Colonies" at the journal "Scientific and Technical Bulletin" (StPPU).

The Newsletter is prepared by the International Office of DonNTU.

Should you have any questions or offers as to the publication material, please address us at: 1<sup>st</sup> building of Donetsk National Technical University, office 220; tel.: (062) 301 – 08 – 25; (062) 337 – 32 – 66; fax: (062) 304 – 12 – 78; web-site: <http://iic.dgtu.donetsk.ua/>; e-mail: [ovs@pop.dgtu.donetsk.ua](mailto:ovs@pop.dgtu.donetsk.ua)