



## FROM COLUMBUS TO MAGELLAN



Mr. Antonio Fernando Crus-de-Melo, the Ambassador Extraordinary and Plenipotentiary of Brazil in Ukraine visited Donetsk on November 22. The distinguished guest was interested in development of links between Brazil and Donetsk in trade, investments and science.

The Ambassador visited DonNTU on the invitation of the Rector Prof. Minaev and met the university's administration: Prof. Bashkov, the Vice-Rector in Research, Prof. Bulgakov, the Vice-Rector in Science and Pedagogic, Dr. Dzhura, the International Director, Dr. Lebedev, the Deputy Dean of the Physical and Metallurgical Faculty and an official translator of the club

Shakhtar Dr. Lebedev and the Ambassador had worked in Angola for a long time.

As it was the first visit of the Ambassador to DonNTU, the Rector informed him about the links our university has with other foreign universities, companies and associations. He emphasized the links with Portuguese and Spanish institutions. Now DonNTU is working on the projects that were awarded by the grants of TEMPUS and ERASMUS MUNDUS programs. It is the leader among the educational institutions of the Donetsk Region in the work. DonNTU has been collaborating with the University of Lisbon (Portugal) and has a collaboration agreement with the University of Cadiz. Several years ago the Spanish mass media (three oldest newspapers) called Prof. Minaev Columbus of Ukraine as it was the first collaboration agreement of Cadiz University with a Ukrainian university).

During this meeting the Ambassador called Prof. Minaev the Magellan as he opened the way for the collaboration of DonNTU and universities of Brazil in science, culture, and education and approved the efforts.

He also was interested in studying of foreign students at DonNTUT and was informed on terms of studying and the range of specialities as well as companies the graduates work at. He was also told about such graduates as Mr. N. Khrushchev (during the governing of whose the first man flew into space) and the current President of Ukraine Mr. V. Yanukovich.

The Ambassador was pleased to see the gallery of Honoured Doctors of DonNTU, answered all questions and assured that the collaboration would develop for the benefit of both Ukraine and Brazil.

## A NEW PARTNER FROM THE UNITED ARAB EMIRATES

The Vice-Rector in International Links of DonNTU Prof. Navka has visited the United Arab Emirates and signed the Memorandum of Understanding with the University of Skyline from Schrage. Our universities will collaborate in economic specialities.

## THE JUBILEE OF COLLABORATION OF DONNTU WITH THE UNIVERSITY OF STUTTGART

The International and Scientific Seminar "The Problems and Technologies of Parallel Modeling" devoted to the 40<sup>th</sup> anniversary of collaboration of the technical universities of Stuttgart and Donetsk took place on November 4-5<sup>th</sup>.



The seminar was organized by the researchers of the Department of Computer Engineering and their colleagues from the University of Stuttgart and the Rector Prof. V. Ressel.

The participants of the seminar were greeted by the General Consul of Germany in Donetsk Mr. D. Walter, the representative of the DAAD Mr. Kukhler and Rectors of both universities, the initiators of collaboration Prof. Svyatni, the head of the Computer Engineering Department and Prof. Tsaits from Germany. They spoke about the beginning of collaboration, stages of its development and impressive results.

The concept of development of distributed parallel modeling environment was formed by the researchers of both universities in early 90s. Then they also formed new areas of the collaboration – parallel modeling of complex dynamic systems and model support of design of technological process automation systems. The support got from the German colleagues during those difficult years and the chance they gave to the scientists of the Faculty to do the research on the advanced facilities played the decisive role in preserving the scientific potential of the departments of the Faculty and integration of DonNTU into the European scientific and educational field. It was an international project. It met the world requirements and opened good perspectives for young researchers of our institution.



In 1998 the Institute of Parallel and Distributed Systems of the University of Stuttgart presented the Department of Computer Engineering the 12-unit system Intel Paragon. Since 2000 the academics and post graduate students of the Faculty have had the opportunity to use the parallel resources of the federal super-computer computing centre of the University of Stuttgart to implement universal and problem-oriented parallel modeling environment.

In 2010 the 100-unit supercomputer parallel cluster NEC 5800 presented to DonNTU by the HLRS from Stuttgart was started up. Now it is being modernized by widening the number of units up to 140 and replacement of the unit connection system by a more powerful one.

The Computing Center of Stuttgart presented DonNTU with all the facilities necessary for the modernization. Director of the HLRS Prof. M. Resh makes presentations on new topical developments and outlooks in supercomputing in front of the students and academics of DonNTU every year.

The program of the German Board of Academic Exchange “Scholarships named after Leonard Euler” within the project of “Parallel Modeling and Distributed Modeling Environment for Automated Systems” has been functioning since 2001. The scholarships are given by the University of Stuttgart and awarded to students, post-graduate students and young academics at the final stage of doing their Master’s and candidate’s work. During the years 52 scholarship holders from the Department of Computer Engineering had their study course at the University of Stuttgart. 6 scholarships were awarded for the academic year of 2013-2014.

The scientific program on engineering cybernetics Pro3 initiated by Prof. Gilles has been functioning since 2001. According to it 2-3 12 month scholarships are awarded annually. 22 Master’s students some of them being post graduate students and assistant professors of the Department got them. The pro3 Commission offered 3 more scholarships for the academic year of 2013-2014. The scholarship holders do the research at the Institute of Dynamics of Complex Technical System of the Association of Max Plank (Magdeburg) and the universities of Stuttgart and Hamburg. As a result of the research more than 80 joint papers were published in Germany and Ukraine. Two Doctoral (V. Svyatni in 1986 and A. Dmitrieva in 2013) and 12 Candidate dissertations were defended on the subject-matter of the collaboration. Five more are at their final stage.

The European professors assisted in establishment of German and English subdivisions at the Department which meets the requirements of training of specialists of European level and integrates DonNTU into the world community of technical universities. The best students of the German-language groups and the best post graduate students have their study course and do their Master’s projects (there were 5 of them last



year) at the institutes of the University of Stuttgart. At present 4 graduates of the Department are taking their study course at the HLRS. They are working at the projects on efficient application of parallel computer systems. The graduates I. Stepanov, M. Krasnik, M. Dosta have defended their dissertations at the University of Stuttgart and P. Skvortsov is finishing his one.

Currently we are collaborating with the IPVR on modern data bases, parallel computation and large-size system modeling. In the academic year of 2008-2009 the Department, the German Engineering Faculty and the company Siemens set up the German language taught group with the orientation on FPGA. The graduates work at the Faculty and companies in Ukraine and Germany.

Professors Resh, Lauber, Roiter, Gyoner, Rottermel, Zavodni, Kinli and Elers made their presentations on the results of cepy collaboration and new tendencies in the development of computer science and technologies. The majority of them had been awarded the title of Honoured Doctor of DonNTU for their long-



term work and valuable contribution into training of engineers of the European level at the Faculty of Computer Engineering. At the end of the seminar there was a ceremony of awarding the title to Prof. Zavodni from the University of Stuttgart. .

All the German colleagues were awarded honorary diplomas, medals "For Merits", souvenirs, and diplomas from the Governor of the Donetsk Region for fruitful collaboration and contribution into training of Ukrainian specialist.

## **ON GOING COLLABORATION WITH THE FRENCH UNIVERSITY OF LAUREN, NANCY**



The delegation of the School of Mining which is one of the subdivisions of the University of Lorraine, Nancy (France) visited DonNTU in early November. The new mega-university consists of the Highest National School of Electricity and Mechanical Engineering, the Highest School of Engineers, the national Polytechnic University Lorraine.

The Director of the International Department of the School of Mining Ms Fick was the head of the delegation. She was accompanied by our French partner from the universities of Cergy Pontoise and Versailles and since 2013 the University of Lauren Prof. P. Enaff.

The collaboration agreement between DonNTU and one of the subdivisions of the University of Lorraine signed several years ago is practically expired. Now the issue on its prolongation is being discussed. Prof. Enaff had initiated the arrival of Ms Fick to discuss the further collaboration.

The foreign guests were welcomed by the Vice-Rector I. Navka, Vice-Rector A. Levshov, the Dean of the Physical and Metallurgical Faculty Prof. S. Saphyants, Prof. Ryabtsev, A/Prof. Gorin (Head of the French Language Department), Prof. G. Klyagin (the Dean of the French Engineering Faculty), Prof. A. Anoprienko (the Dean of the Computer Engineering Faculty), Prof. Y. Bulgakov (the Director of Mining Institute), Prof. Pashinski (the Director of the Research Board). The delegation was accompanied by Prof. V. Borisenko, the coordinator of the agreements with the universities of Versailles and Cergy Pontoise and the programme MASTER.

The guests were informed on the international links of DonNTU, faculties with deep learning of foreign languages, international achievements of the university and the range of joint international research.

The necessity of having the academics-language bearers at DoNNTU during the all academic year and sending our academics to have their study course at the partner-university during three-six months was emphasized.

In return Ms Fick spoke on the history of founding of the mega-university Lorrain, its separate subdivisions and research areas. Foreign students make up 35% of the whole number of people studying there.

Then Ms Frick and Prof. Enaff met students and academics of the French Engineering Faculty and the French language Department.

The French colleagues gave detailed answers to the questions as to accommodation, transportation, having practice at work, tuition fees at Nancy. All the numbers are much lower in Paris which explains why foreigners choose the University of Lorrain.

Ms Fick was impressed by DonNTU and the hospitality the administration and students showed towards her. On coming back she will start working on the collaboration agreement between our universities.

Prof. Enaff stayed in Donetsk till November 17<sup>th</sup>. He consulted Master's students studying on the MASTER program and the post graduate student A. Melnik.

## COLLABORATION WITH GERMANY

The delegation of DonNTU (the Vice-Rector Prof. A. Troyanski, the head of the Department of Mechatronic Systems of Mechanical Equipment Prof. V. Gusev, Prof. A.Khorkhordin) visited Otto-von-Guericke University (Germany) in late October.

Our scientists took part in the DAAD conference "20 years of the German Language Specialities in the Regions of Eastern Europe and Middle Asia. Balance and Outlooks" ([www.gsi-bonn.de](http://www.gsi-bonn.de)). It took place at the specialized educational centre in Bonn.

The participants were greeted by the Secretary General of the DAAD, the Head of the Department of Culture and Communications of the DAAD, the representative of the Ministry of Foreign Affairs of Germany.

There were four breakup groups at the conference: Education, Marketing, Double Diploma in the Cooperation Network, Outlooks of Professional Education. The proceedings of the conference can be found at the German Engineering Faculty.

Our delegation met the academics of the Technical University of Braunschweig that train Master's students on the related speciality Telecommunication Networks and Systems. The professors became interested in collaboration with DonNTU.

At the University of Magdeburg our researchers met Prof. K. Ditrich, Prof. S. Palis, and Dr. Zimmer and discussed the further collaboration on the program "Double Diploma" and studying of DonNTU's students at the University of Magdeburg. They also met our students and discussed the issues related to the accommodation, training and plans.

Our delegation visited the Mechanical Engineering Faculty of Otto-von-Guericke University and coordinated curricula for our students studying in Magdeburg in autumn and Master's projects. Our professors were impressed by the laboratories having all modern facilities such as the processing centers and industrial robots. The curricula for DonNTU's Bachelor's program on mechatronics is planned to be coordinated.



### THE VISIT TO GERMANY IN THE FRAMEWORKS OF THE COLLABORATION AGREEMENT

The Head of the Department of Electric Systems, the Dean of the Electrical Engineering Faculty Prof. Grebchenko



has visited the University of Otto-von-Guericke (Germany) in the frameworks of the collaboration agreement.

In June 2011 Prof. Grebchenko visited the university as a member of the delegation of DonNTU and received Prof. Stychinski in Donetsk in June 2013.

Prof. Grebchenko and Dr. Tkachenko (the Dean of the German Engineering Faculty) visited the laboratories of the IFF such as Smart Grid, Hydrogen Elements, and Solar Energy.

They discussed the results of the project done by the company Siemens, the IFF Institute and the University of Otto-von-Guericke.

In 2014 a new project in which a part of work is to be done by DonNTU is being planned.

German professors offered assistance in organizing practical courses for our Master's students.

Prof. Grebchenko also visited the University of Dresden and its laboratory of power supply and high voltage engineering where there is the unique (the only in Germany) physical model of the electric system with the voltage of 220 kilovolts.

He also participated in the exhibition «2. Tag der Elektromobilität» where electric cars of different manufacturers including the functional model of Smart Grid and means of their control and charging were demonstrated. The on following discussion was related to the ways of further development of the electric cars.

There also was an excursion by the Smart Grid electric car around the city of Deidesheim which is the centre of application of the renewable energy sources (the sun and wind). The visitors saw the Smart grid centre, wind power station with the capacity of 66 MW and substation that sends electricity with the voltage of 100 kV to the network.

Prof. Grebchenko improved his knowledge on application of the renewable energy sources and the Smart Grid organization.



## **STUDENTS FROM GERMANY AND UKRAINE STUDY INTERNATIONAL INVESTMENT IN OUR COUNTRY**



The collaboration with Otto-von-Guericke University of Magdeburg which is one of the most important strategy partners of DonNTU has its long history. The Summer Institute on international investment was organized in the frameworks of the collaboration in Sevastopol in September.

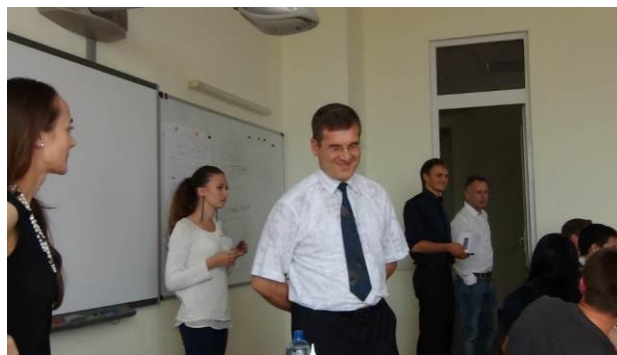
DonNTU, Otto-von-Guericke University of Magdeburg, Sevastopol Institute of Banking, Sevastopol National Technical University, and Kharkov National Technical University were co-organizers of the event. The graduate of DonNTU Ms V. Zaichuk that is an entrepreneur in London and one of the founders of a marketing company attended the international program in

her free time. Thanks to it the participants had a chance to learn about the British approach to business running.

50 students of the above-mentioned universities participated in the Summer Institute. There had been a multi-staged selection process based on academic performance, motivation, economic, mathematic and English knowledge. All the classes, business games, presentations and solving of applied tasks based on real statistics of the share market were in English. The participants spoke the language outside the classrooms and during the project preparation.

The structure of the Summer Institute included the aspects of cross-cultural business running, marketing research, finance, investments and international economy.

The participant had to develop 10 investment projects that had started long before the Summer Institute. The projects were discussed and evaluated by the international jury. Each of the participants got the certificate



for 6 ECTS credits that will be transferred at the university in the frameworks of the common European educational space. All the students of the international program expand and improved their professional practice and skills and continued the tradition of efficient collaboration of Ukrainian and German universities on the international level.

## INTERNATIONAL CONFERENCE ON RELIABILITY OF METALLURGICAL EQUIPMENT

The International Scientific and Technical Conference “Reliability of Metallurgical Equipment” rme-2013 WAS HELD AT National Metallurgical Academy of Ukraine, Dnepropetrovsk on October 28-31. It was devoted to the 100 anniversary of Prof. V. Grebennik, the founder of the school of reliability of metallurgical equipment.



Our university was represented by Prof. Chentsov, A/Prof. V. Sidorov and A. Sotnikov and post graduate students N. Rodionov and A. Serebrov.

People from universities, research institutes, metallurgical plants and companies of Ukraine, Russia, Germany and Italy participated in the conference.

Our delegates visited the Centre of NC-machining Technique "HAAS" and negotiated with the academics and researchers working at the related departments and manufacturers on future collaboration and employment of our graduates.

## THE KICK-OFF MEETING OF THE PARTICIPANTS OF THE INFINITY PROJECT

DonNTU is a participant of the INFINITY project financed by the EU program Erasmus Mundus (Project ID № 545681-EM-1-2013-1-PT-ERA MUNDUS-EMA 21). The universities of Portugal, Czech Republic, Estonia and Slovenia initiated the project that was supported by 15 universities of the CIS, 5 from Ukraine being among them.

Donbass National Academy of Construction and Architecture (DonNACA) is the co-coordinator of the project and has organized the kick-off meeting at which Prof. Y. Bulgakov, the Director of Mining Institute of DonNTU and Prof.L. Butuzova, the head of the Department of Chemical Technologies were present.



The participants got to know the characteristics of the project, necessary documents and terms of their submission, and financial terms of the project. They were also shown the site of the INFINITY project INFINITY - <http://infinity.fa.ulisboa.pt/>

Our university is not a newcomer at the projects. 5 students of ours continued their studying in Italy and Portugal on the Tempo program in early autumn.

The INFINITY is a chance given to our students and young researchers to have their study courses abroad.

The students going to Lisbon will get paid tickets, medical insurance and scholarships (1000 Euros per month for students, and the sum multiplied by 1.5-2.5 for post graduates and academics).

The INFINITY is the unique project with 181 mobility grants including 50 grants for Ukrainian universities. The program is valid till 2017.

The application submission and student/academic selection will be organized according to Action 2 of the Erasmus Mundus and requirements of the INFINITY project. To make the selection transparent the applications will be submitted **on-line** on the INFINITY web-site.

**The applications are submitted from November 15<sup>th</sup> 2013 till January 15<sup>th</sup> 2014.**



## THE MINI-FOOTBALL MATCH IN MOSCOW

The sixth international match on mini-football between DonNTU and Moscow State Technical University named after N. Bauman was held in Moscow in late October according to the collaboration agreement between the trade union organizations of the two universities.



The delegation of academics and employees of DonNTU headed by Prof. Panasenko, the trade union's leader visited the friendly university.

The visits like this have been taking place since 2010. As a rule, the team from Moscow comes to Donetsk in spring, and our representatives go to Moscow in autumn.

The match was held in the

first day. The footballers were welcomed by Prof. Panasenko and Prof. Gavryushin, the head of Moscow's trade union. Despite all the effort of the Donetsk team, we lost. But next day the team of DonNTU won the return match but lost the match with the Physical Education Faculty. As a result, the team of DonNTU was the second in the tournament.

The leaders of the trade union organizations of both universities spoke on the results of the collaboration and emphasized many things they had in common. It especially concerns financing. They also exchanged their opinions on some issues of the trade union's life of the institutions.

The hosts organized an excursion around the university and the picture was and got to know the life of the capital.

The parties are sure in widening the links between the universities based on the agreements between the institutions and their trade unions.



## THE YOUTH PROJECT IN GEORGIA



The student of the Computer Engineering faculty I. Gukasyan took part in the program of the project Youth in Action «Create and cooperate for a Change» in Rustavi (Georgia). The subject matter of the event was “Stereotypes, Prejudices and Discrimination in Europe and South Caucasus”.

The project stipulates for non-forma training the goal of which is to pass a certain information package in an unusual way.

The program lasted for ten days and included training, courses, exercises, games, quests and creativity tasks.

The participants from Ukraine, the Czech Republic, Lithuania, Spain, Moldova, Azerbaijan, Turkey and Georgia made their presentations went sightseeing around Tbilisi and had a national Georgian party. During the presentations the participants discussed the state of education in the countries and formed the image of their native countries. They also spoke on the role of public organizations and possible ways of collaboration and joint participation in different projects.



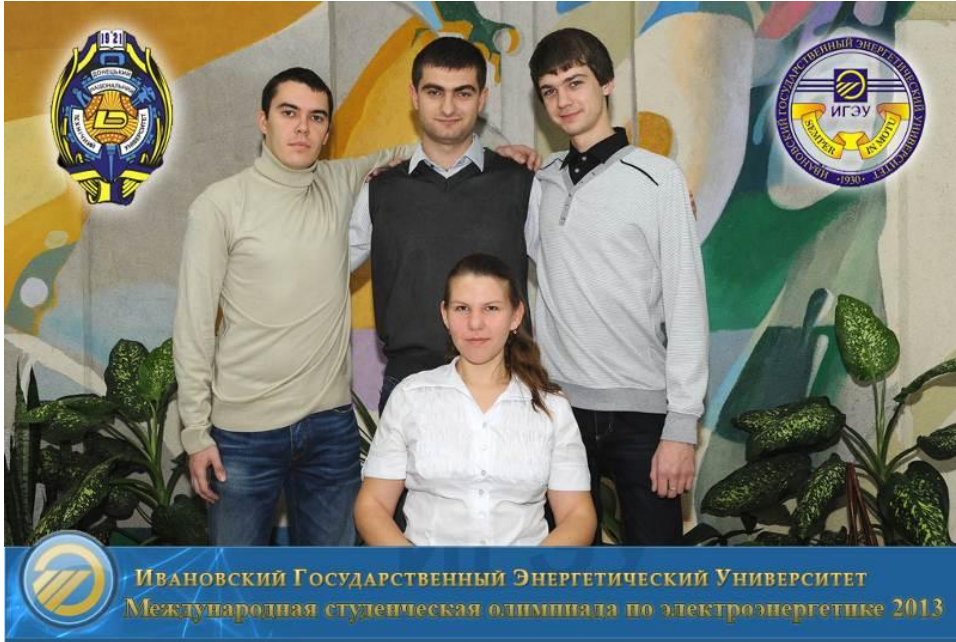
## THE INTERNATIONAL STUDENTS' OLYMPIAD ON POWER ENGINEERING

Ivanov State Electric Engineering University (ISEEU) and Russian National Committee of the International Council of Electric Systems of High Voltage hosted the International Students' Olympiad "Electric Engineering 2013".

It is the first ever event for Ivanovo. 120 students from 16 technical universities of Russia, Belarus, Kazakhstan and Ukraine took part in it. Our university was represented by the students of Electric Engineering Faculty E. Gorbenko, M. Kolot, A. Ulitko and V. Baryshev (see the photo).

The students were given four hours to solve twelve tasks on relay, electric networks, power supply, high-voltage engineering, electric engineering theoretical basics, and power stations.

The representatives of ISEEU and the heads of all the teams made up the jury that evaluated the work. The intrigue was kept till the moment of the work decoding.



The Vice-Rector of ISEEU and a member of the Organizing Committee greeted the participants and the winners. Our team was the fifth in the rating of the participants. The prize winners got the certificates, cups and badges.

The students had an excursion around ISEEU. They were impressed by the full scale control training simulator of the NPS block, its library and gymnasium. They also discussed the possibility of having their practice at the company EES System Operator. The participants also had a round

table meeting on electric engineering education problems and outlooks.

The students visited Kostromskaya HPS in Volgorechensk and talked on the history of the station, electric engineering of Russia, its topical problems and employment of university graduates. The students saw the switchover, autotransformer, turbines, generators and boilers. They were impressed by the station block of 1200 MW.

Participation in the international Olympiads improves training in engineering specialties, forms the students' interest in the chosen profession, discovers talented youth and creates personnel reserve for research, design and administrative activity. It is a pity that because of the lack of finance the students had to pay for the trips themselves which is the reason for decrease in number of students that represent DonNTU in such events.

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)