



**PARTICIPATION OF DONNTU IN THE INTERNATIONAL EXHIBITION OF UNIVERSITIES OF UKRAINE**



The XV jubilee international exhibition “Modern Education of Ukraine 2012” took place in the national centre of business and cultural collaboration Ukrainian House on February 15-17<sup>th</sup>. The winners in all topical nominations were awarded.

The first Vice-President of the national Academy of Science of Ukraine, the Deputy Director of the Institute of Innovation Technologies and Education of the Ministry of Education of Ukraine, the President of the Exhibition Centre Carshe and the Director of the Exhibition took part in the celebrations.

The exhibition has been exhibiting displays of the best foreign and Ukrainian universities, regional and local education boards, publishing houses, international training centers and companies which develop innovation projects and produce equipment for education.

The winners of 6 nominations got their awards.

DonNTU got a silver medal in the nomination

“Integration of

Ukrainian Education into the European and World Educational Space”. Besides, the university got a diploma “The Leader of the Modern Education”, and the Rector was officially thanked by the Minister of Education.

Donetsk National Technical University was represented on 5 stands having detailed information on the international activity of the institution.



**THE VISIT OF THE REPRESENTATIVES OF THE AMERICAN COMPANY**

The delegation of the American company Modular Mining Systems Inc (Arizona) which is a structural subdivision of the Japanese company Komatsu visited our university in February. The company develops control automated systems for coal mining companies.

The company was represented by the graduate of DonNTU the project Architect General Mr. Seroukhov and the manager of the Department of Research and Innovations Mr. Van Latum. The parties discussed possible

collaboration issues in the field of principles of purpose-oriented control (POC) and modeling of control systems for open mining.

The representatives of the company made a number of presentations and seminars on modeling, architectures and technologies of the POC.

## THE UNIQUE PROJECT IN COMPUTER TECHNOLOGIES



The Faculties of Computer Science and Technologies of DonNTU and Minnesota University (the USA) are developing the unique Internet service for analysis of super big volumes of climatic data in the frameworks of the joint Ukrainian-American project.

It is the first ever service that allows to unite more than 700 characteristics into the single information system. The characteristics were collected by the NASA satellites, the National Climatic Center of the USA and the European Centre of Medium-term Weather Forecast on the Earth's surface during last 30 years. It is the first ever chance to visualize them in the real time and make them accessible to scientists for their interactive research.

The service gives the unprecedented possibilities to analyze storms, droughts, severe climatic conditions and the future climate.

This large-scale project is financed by the Fund of Civil Research and Development of the USA, the Agency on Science and Information of Ukraine, and DonNTU. It is supervised by Ukrainian and American professors G. Averin and Shashi Shekhar, the latter being known as the ex-Director (2005-2007) of the US Army Research Centre of Highly Productive Computations.

The Ukrainian professors Y. Bashkov and G. Averin visited the Super-Computer Institute of the University of Minnesota and the Institute of the Environment.

To work on the project the graphic processor super computer being one of the most highly productive in Ukraine has been installed at DonNTU. It is the second super-computer at DonNTU that makes our institution one of the absolute leaders in the area.

## THE FRENCH VECTOR OF COLLABORATION

DonNTU continues its collaboration with the University of Cergy Pontoise in the frameworks of the program MASTER. The students have been trained on the coordinated curricula since last November. Six students of DonNTU have already got student cards of the French university and are the candidates on getting Ukrainian and French diplomas. The scientist from the laboratory ETIS deliver on-line lectures on robotics and neuron network architecture for them.

The Associate professor of the HDR Patrick Enaff visited our university in January. He participated in the seminar to discuss the results of collaboration and research done by the DonNTU's students having student cards of the French university.

The oncoming practice work of our students at the laboratories of LISV (Versailles University) and ETIS (the University of Cergy Pontoise) which is to take place in summer was also discussed. The best Master's students will defend their diploma papers in France and get the French diploma and later on the diploma of DonNTU.

P. Enaff also worked with the post-graduate student V. Khomenko who is going to defend his candidate dissertation in June.

## SCIENTIFIC AND ACADEMIC COLLABORATION WITH THE CZECH REPUBLIC

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The Czech-Ukrainian Research and Technological Centre has been established according to the decision of the IV meeting of the Ukrainian-Czech Commission on Economic, Industrial and Research Collaboration of 23-24 September 2010 ( the order №30723/29/1- 08 of the Cabinet of Ministers of Ukraine of October 19<sup>th</sup> 2010). It will solve problems related to material science, the environment protection, labour safety and specialist training (see the photo of the delegations of both countries at the meeting).



According to the agreement on cooperation with the Czech Research Institute Ostrava - Radvanitse and DNTU, two week's training of researchers to exchange experiences and to use the most advanced techniques and equipment for research in creation of reliable ways to improve safety in the workplace has been annually carried out since 2004. Mining Institute of Donetsk National Technical University is one of the co-founders and organizers of permanent international symposium "Geotechnika-Geotechnics". Scientists of the Faculty of Metallurgy and Materials have been taking an active part in the pan-European conference «Metall» since 1998.

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Cooperation of DonNTU with universities of the Czech Republic (VSHB Technical University of Ostrava) and Slovakia (Technical University of Košice) is a long tradition, started in the 60's of last century. At present it includes both incorporated study for one semester and the final stage of Bachelor training under the supervision of eminent scientists. The exchange is organized on the basis of reciprocity for the modern trends such as materials and geo-information technologies, advanced technologies of mining. In addition exchange educational and industrial practice of students of DonNTU and VSHB -TU Ostrava are carried out at the laboratories of the host universities and enterprises of Donetsk region of Ukraine and Moravia- Silesia region of the Czech Republic. For this direct agreements on cooperation with research institutes and renowned world manufacturers of machinery and equipment such as "Befra-Elektronik", "Ferrit", "Ostroj-Hansen", "TM-Maschinery", "Ferram" (photo: Introduction to modern models of mining transportation equipment at the company « Ferrit ») and the industry having unique technologies such as coal mining holding " OKD ", the firm " Dyamo " developing uranium deposits and technologies that meet global environmental requirements have been signed.

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Head of the Department of Production Management, Professor E.V. Martyakova has visited Technical University of Ostrava (Czech Republic) to implement scientific cooperation in the field of mining and geology. She was received by the Dean of the Faculty of Mining Prof. Slivka. (photo: Head of the Economics Department Prof. Dvořáček and the Dean of Mining Faculty Prof. Slivka).

The possibility of interaction between the Technical University of Ostrava, Moscow Mining Institute and DONNTU on ensuring safe production was examined. The preparations of joint monographs and articles for the journal «Scopus» and participation of the Czech party in the annual international scientific-production conference "Production Management" which is going to be held in October 2012 were discussed. During the meeting with Prof. Dvořáček reports and articles submitted by Prof. Martyakova were examined. The promising research directions with the Department "Geodesy and Mine Surveying" of the University of Ostrava were discussed at the meeting with Prof. Chernota. The research on coal production made by the staff of the Department of Economics at the Faculty of Mining was discussed. The lecture " University and Enterprise: cooperation in the region" was delivered with the following discussion on the subject and comparison of international experience on the subject of the report was made. The lecture "Global trends in the coal market and industry processes in Ukraine" was delivered for the students of 3-5 years of study. In conclusion, at a meeting with the Dean of the Faculty of Mining Prof. Slivka the priority areas of cooperation for joint publications and the possibility of preparing a monograph with the necessary resources and joint participation in the conference were discussed.

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According to the cooperation agreement between Donetsk National Technical University and the Institute of Health and Safety in the Mining Industry of the VVUU "Ostrava Radvanice" Prof. Kostenko and Assoc. Prof. Zavyalova have visited the Czech Republic. The purpose of the scientific training was evaluation of explosive mixtures of gas and aerosol properties in the laboratory.

Our scientists are studied the experience of the VVUU in fire and explosion prevention. A tour on the laboratories of the Institute such as those of flammability of materials, explosiveness of combustible dust, gases, vapors, liquids; explosives and blasting technology funds was organized. The demonstration tests on flammability of conveyor belts, the definition of the main parameters of the flammability of dust, gases, vapors were carried out. Prof. Kostenko and As/Prof. Zavyalova also visited the test tunnel in Shtramberg, where they took part in studies of flammability of methane-air mixtures. They were also hosted by the director of the VVUU "Ostrava Radvanice" L. Shtroha where the results of the internship and experimental research were summed up, the further cooperation in the prevention and containment of explosions of gas-aerosol mixtures at industrial enterprises was planned. The internship program also included a tour around Ostrava, a visit of the mine museum "Landeck", a trip to the mountains, sightseeing of the Moravian-Silesian Region, Prague sightseeing, visiting of the museum of nativity scenes in Shtramberg. The obtained results are used in the presentations made at the XXIV international scientific - practical conference on fire safety, dedicated to the 75th anniversary of FGBI EMERCOM Russia. The articles for the proceedings "Pozhezhna Bezpeka" (Lvov), Scientific Bulletin UkrNIIPB (Kiev), "Proceedings of the Donetsk Institute of Mining" are planned to be submitted. Assoc./Prof. Zavyalova will use the experiment results at her work on the doctorate dissertation, and also in the preparation of lecture notes on the subject "Extraordinary emergencies." The research results offer the prospect of mutually beneficial cooperation between Ukraine and the European Union to establish the means and methods of detection, prevention and containment of explosions of gas-aerosol mixtures at industrial enterprises.

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Foreign press about DonNTU: Director of the Institute of Occupational Safety in the Mining Industry of the VVUU «Ostrava Radvanice» L. Shtroha about the international cooperation with DonNTU.

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## DOBŘE PODMÍNKY PRO KVALITNÍ START V ROCE 2011

Vytvořili jsme si tak velmi dobré podmínky pro kvalitní start v roce 2011, a teď je jen na nás, jak tyto skvělé startovací podmínky využijeme a zhodnotíme. Věřím, že letošní rok bude neméně úspěšný, jako ten předchozí, a že pracovní nasazení lidí bude minimálně na stejné úrovni, ne-li vyšší. Při tvorbě plánu roku 2011 jsme proto

mysleli i na odměny pracovníkům formou platového navýšení. O pár procent hodláme navýšit průměrné mzdy, ale zaměstnanci budou mít nově možnost získat odměnu na základě přesně vypsanych hodnotících kritérií, v rámci nichž budou měřitelným způsobem posuzovány účasti jednotlivců na projektech a grantech, jejich zapojení do rozvojových programů podstatných pro firmu a dalších. Tyto odměny nebudou zanedbatelné a mo-

hou činit až 3 % z přínosu pro společnost. Hospodaření firmy úzce souvisí s pracovním nasazením zaměstnanců a s jejich loajalitou. Chtěl bych proto poděkovat všem, kteří se zasloužili o tyto dobré výsledky v roce 2010. A věřím, že do nového roku jsme vstoupili tou správnou nohou...

Ing. Libor Štroch, Ph.D., ředitel VVUU, a.s. (vlevo) při jednání s ukrajinskými partnery

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ředitel VVUU, a.s.

## FREE SOFTWARE IN HIGH SCHOOL



The VII International Conference "Free Software in High School" was held at Pereslavl University named after A.K. Ailamazyan (Russia) in the end of January 2012. The Concern "Sirius" – the main co-organizer of the conference – took an active part in it. The company Microsoft (the general partner), "Informatica" and Huawei (partners) also participated in the conference. The Informational support was provided by

Linux Format magazine and website LinuxRSP. The conference was attended by experts in the field of software from the universities of the CIS countries. Our school was represented by the delegation headed by Prof. Alexeev of "Computational Mathematics and

Programming” Department and students Gorbenko and Phil. IM The Rector of the host university Prof. Abramov greeted the participants. He noted that all the university students participate in real projects to develop new information technologies (IT). Only in this way - the Rector thinks - you can learn fast moving object, which is the area of IT - moving along with this subject with its own speed. That is, training of students is to be combined with maximum participation in the development of new IT. Most of the IT things made at Pereslavl, according to the Rector, are made by the hands of students. The conference participants learned about the prospects of development of free software and its application at the universities of the CIS. The reports submitted by the participants were of great interest for the development of higher education, which today can not do without the introduction of innovations in the field of free software.

## STUDY COURSE OF THE INSTITUTE OF ECONOMICS AND MANAGEMENT IN MOSCOW

As a result of cooperation of the “Higher School of Economics and Management” of DonNTU and the National Research University “Higher School of Economics” (Moscow) nineteen students got an opportunity to have educational training at the Faculty of Economics at Moscow University at the end of last year.

The internship was preceded by competitive selection the criteria of which were progress in studies, active participation in social activities, participation in scientific conferences and motivation of students. Within two weeks, the trainees attended regulatory training courses, thematic lectures, which they chose themselves, conferences, got acquainted with the capabilities of the HSE. Master classes of the company PwC (PricewaterhouseCoopers), as well as lectures the base department Ernst & Young that are regularly performed at this university by the heads of various business units of companies were of particular interest. We also want to mention the active operation of the HSE Training Center, which staff help students acquire the skills necessary for their further development through such training as “Learning to learn”, “Stress management”, “Successful negotiations” and other themed activities. The students were particularly impressed by conferences and scientific seminars. I Moscow International Finance Conference (The First International Moscow Finance Conference), held on 18 - 19 November 2011 and the Scientific Seminar Center for Civil Society Studies and the nonprofit sector of the HSE reflect dominant scientific development environment for students, faculty and staff of the HSE. In their free time the students attended a library reading room and worked with electronic resources. Summing up the internship, the expert for the cooperation with the countries of the CIS and Baltic of the HSE EG Shabanova noted that all trainees were very independent, efficient, active and disciplined, that characterizes both the students and the university sent them for training to Moscow. The students expressed their gratitude to the staff of the Dean's office of the Faculty of Economics for the opportunity to be in the new educational environment, learn about educational opportunities at the HSE, meet interesting people, go sightseeing in Moscow and get a lot of positive emotions.



The Newsletter is prepared by the International Office of DonNTU.

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