

The Second International Scientific-Practical Conference "Underwater Technology, 2016" was held

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Abstract. The Second International Scientific Conference "Underwater Technology, 2016" dedicated to the 100th anniversary of corresponding member of NAS of Ukraine Yu. Vetrov was held in Kyiv National University of Construction and Architecture from 19 to 21 April. Already traditionally the problems of the water influence on the environment and innovative technologies were considered at it.

Key words: conference, underwater technology, water influence, environment

Over the past year the list of the organizers and co-organizers of the conference was greatly expanded. First of all there were the Ministry of Education and Science of Ukraine, Kyiv National University of Construction and Architecture, Polish Academy of Sciences (Representation in Kyiv), five leading institutes of NAS of Ukraine, Kyiv universities, Nikolaev, Dnipro, Kharkiv. KNUCA rector prof. Petro Kulikov, the vice-chairman prof. Mykhailo Sukach, Director Stacja Naukowa w Kijowie PAN (Poland) prof. Henryk Sobczuk, President of the Academy of Ukraine prof. Ivan Nazarenko were included to the organizing committee (Fig. 1).

The Scientific Committee were headed by prof. Mykhailo Sukach; the vice-chairman, academician of NAS of Ukraine professor Victor Grinchenko – director of the Institute of hydromechanics NAS of Ukraine; the

vice-chairman, Prof. dr hab ing. Carsten Drenstedt – Dean Technische Universität Bergakademie Freiberg (Germany); the vice-chairman, prof. Vladimir Blintsov – vice-rector for scientific work of the National University of Shipbuilding named after academician Makarov. The International Council consisted of representatives from 14 countries – Sweden, Poland, Canada, Germany, Israel, the Czech Republic, Hungary, Slovenia, the Virgin Islands and others.

The task of the international conference – deepening the integration of Ukrainian and foreign experts and scientific schools of development the theory, equipment and research methods of working processes, the creation of new underwater technology, the practical application of innovative energy-saving and ecologically friendly technologies in construction, search engine and mining works, environmental protection and other sectors of industrial activity.

It was the contest to the best scientific and practical work among the professionals and students in the nominations: "Presentation", "Innovation Project", "Publish". There were considered the original ideas and suggestions, innovative solutions and creative projects in the field of underwater technologies. During the conference the participants had an opportunity to present their scientific achievements and there was the poster area for exhibition designs.



Fig. 1. Invitation and work program

The participants of the conference received the greetings from KNUCA rector Petro Kulikov and from vice-rector for scientific work and international relations Vitaliy Ploskiy. Director of the Representative office of the Polish Academy of Sciences in Kiev prof. dr hab. Henryk Sobczuk addressed the audience with warm words about the importance of collaboration between scientists from Ukraine and Poland and wished the cre-

ative inspiration and fruitful work. President of the Building Academy of Ukraine Ivan Nazarenko told on the status and prospects of building education in modern conditions. Professor Mykhailo Sukach stressed the importance and prospects of transfer of innovative technologies and presented the program design and development of mineral resources of the World Ocean (Fig. 2).



Fig. 2. The opening of the Second International Scientific-Practical Conference "Underwater Technology, 2016"

Vice-rector for scientific work of NUS, named after admiral Makarov, professor Vladimir Blintsov attracted the audience's attention on the modern problems of development the underwater robotics in Ukraine and presented the NUS specialists' projects, that already applied and may be useful in the future. It is very important the question of communication between the banks of large rivers and extended water ponds. Docent of NTUU Kyiv Polytechnic Institute Gennady Gayko and head of the department of KNUCA prof. Petro Zakharchenko substantiated the possibilities of building tunnel junctions across the Dnieper River. Interesting innovation projects and prospects of the underwater Urban at the beginning of the XXI century were presented by the doctoral student of KNUCA Ludmila Ruban, whose report was enthusiastically listened both by experienced professionals and students (Fig. 3).

At the plenary session prof. Alexander Bezverkhy and Victoria Kornienko (Institute of Mechanics of NAS of Ukraine) also made a speech about the fluctuations of the buoy-moored systems of barrage on the waves. PhD Yuri Stelmahov (international non-governmental humanitarian and environmental organization "Inter-Chernobyl") introduced the project of the elevated road "Kapvey" and Dmytro Kokarev (Solar Energy System Amkortek-Ukraine, Israel) brilliantly presented the innovative energy-saving technologies and equipment for heating water.

Several presentations were planned as on-line-conference by using skype-communication (representatives KNURE prof. Andrew Tevyashev, Olga Matvienko, Vladimir Kobzev al., Alexander Kobzar from UkrNDPItsyvilbud, Oleg Primachenko, Nicholay Harnytsky from Intersectoral re-



Fig. 3. Participants of conference

search and technological collective enterprise "Lana", Kyiv). Unfortunately, the slow speed of Internet connection and a small traffic were not fully allowed to meet the needs of presenters and audience interest.

The guests from the National Transport University Alexander Hrodetsky, Alexander Gordiychuk, Kyi Danyleyko, Marya Slyzka started the work of section meetings with the interesting projects "Tourist submarine bathyscaphe", "Underwater Research Station," "Modular underwater vehicle tunnel" (curator - head of the department of computer, engineering graphics and design, doctor of technical sciences Nicholay Kuzminets). Julia Ulyanovska (University of customs and finance, Dnepropetrovsk) and Andriy Dmytrenko (LLC "PROINFO") were concerned about "Using artificial neural networks in today's information technology forecasting", Alexander Budya (KUTEL, Kyiv) spoke about "Water-information centres as the means of effective tourism activities" and Sergii Bilyk (KNUCA) – «Determination of critical load of elastic steel column based on experimental data».

National University of Shipbuilding presented the report of the postgraduate students and teachers Alexander Klochkov, Andrew Voytasyk and Andrew Sirivchuk. The doctoral student of the National University "Lviv Polytechnic" Alexander Blintsov together with the postgraduate student Victor Korytskym took care of "Architecture and constructive types of self-propelled tethered underwater vehicles with improved handling" and "Modern problems of control self-propelled tethered underwater technological platform".

A number of reports presented from Dnipropetrovsk region – National Mining University (Andrey Bondarenko Andrey Nebatov), Okeanmashenerho (Victor Cook, Vitaly Kuzminsky Olga Ovchinnikov), Institute of geotechnical mechanics of NAS of Ukraine named after N. Polyakov (Volodymyr Naduty, Valentina Chelyshkina, Sergey Kostyrya).

The most numerous group of speakers was from Kyiv National University of Construction and Architecture, postgraduate students

and doctoral students of the architectural faculty Nicholay Breyan, Veronica Golovach, Basil Hodos, Julia Smolenka, who presented the "Ecopolis and water innovative technologies". Did not remain without attention the postgraduate students Alexander Cooper, Alex Dvorko, Oleg Skoruk (curator prof. Nikolay Osyetrin) with presentations about the experience in organization of urban traffic.

Some reports were prepared with the expectation of publication in the next issue of the magazine "Underwater Technology". It should be noted an interesting analysis of mangrove ecosystems from the perspective of environmental safety «Assessment environmental safety for mangrove biome» (doctoral student Tetiana Kryvomaz). The postgraduate students of Sumy State University Sergei Kulinich, Natalia Semenova submitted a scientific work "Optimization the control system of hydraulic drives with proportional distributor"; Krishna Kayastha (Hydro Technical Commission, Nepal) – «Development of bell type water well with wide gravel filter».

The direction of the mechanical and electrical engineering covered by 14-th reports of the representatives from the department of building machines and department of machines and equipment of technological processes, KNUCA. We were pleased with the activity of postgraduate students and doctoral students Bogdan Bolily, Alexander Dyachenko, Andrey Zapryvoda, Vadim Zaliznyak, Victoria Korol, Bogdan Matsyuk, Vladimir Martyntsev (curator prof. Ivan Nazarenko). It was also heard a number of presentations, which for various reasons were not stated in the program, but the desire of authors and the need to bring the information to a wide audience encouraged them to dialogue and debate on problematics of the conference.

It was a collective decision to initiate the request to the Kyiv city state administration with proposals to support the objects of underground construction and to develop the strategic plan of Kyiv underground area development (moderators Gennady Gayko, Petro Zakharchenko) and to use the renewable



Ludmila Ruban



Dmytro Kokarev

Fig. 4. Winners of competitions

alternative sources of electricity, heat, solar and mechanical energy located both on rivers and on the coast (moderator Nicholay Harnysky).

All speakers that directly took part in the Second International scientific and practical conference "Underwater Technology, 2016" received a certificate of personal participation in the forum with the date and place of approbation the results of scientific work. The most active participants were awarded with Gratitude of the scientific committee of the conference. Thus, KNUCA rector prof. Petro Kulikov and vice-rector for scientific work of NUS named after admiral Makarov prof. Vladimir Blintsov were awarded for the support of young scientists.

Director of the Representative office of the Polish Academy of Sciences in Kiev prof. Henryk Sobczuk and chairman of the automotive and energy department of the Lublin Polish Academy of Sciences prof. dr hab. eng. Eugeniusz Krasowski received the Gratitude for the support of Ukrainian science and international relations. Head of the department of structural mechanics professor. Viktor Bazhenov and head of the department of electroelasticity from the Institute of Mechanics named after SP Tymoshenko NAS of Ukraine professor. Alexander Bezverkhy were awarded with Gratitude for the support of scientific work and professionalism.

According to the decision of the contest commission, the winners 2015/16 were: in the nomination «Presentation» – the representative of the Israeli-Ukrainian company «Amkortec-Ukraine» Dmytro Kokarev; in nomination best "Innovative Project» – doctoral student of the Department of landscape architecture KNUCA Ludmila Ruban; the nomination «Publish» – doctoral student of the Department of labor safety and environmental KNUCA Tatyana Kryvomaz, who awarded the Diplomas (Fig. 4).

Summing up the work, we note that 60 reports from 90 authors were sent to the Second International Scientific and Practical Conference "Underwater Technology, 2016". 56 speakers took part with presentations and discussion, a part of presentations was carried out on-line. The representatives of 18 higher educational institutions, 6 institutions of NAS of Ukraine, 7 production organizations were engaged. Three international and 14 foreign institutions took part directly or as associate members.

It was confirmed the urgency of considered issues about the impact of the water area on the environment and development of innovative technologies, particularly in the fields of industrial and civil engineering. It was supported the initiative of the widest possible highlighting the problems of scientific and practical solutions on the pages of the same magazine, which was recently



Fig. 5. Photo in memory

based. It was established scientific and business contacts between the conference participants and outlined the prospects and ways of further cooperation (Fig. 5). The next event had been planned to prepare and conduct early 2017.

So, thank you all for your attention and participation in the international forum, held on the territory of Kyiv National University of Construction and Architecture. We wish you good health, success and new scientific achievements!

ПРОВЕДЕНА ВТОРАЯ МЕЖДУНАРОДНАЯ НАУЧНО- ПРАКТИЧЕСКАЯ КОНФЕРЕНЦИЯ «ПОДВОДНЫЕ ТЕХНОЛОГИИ, 2016»

Аннотация. С 19 по 21 апреля в Киевском национальном университете строительства и архитектуры прошла Вторая международная научно-практическая конференция «Подводные технологии, 2016», посвященная 100-летию со дня рождения Ю.А. Ветрова. Уже традиционно на ней рассматривались проблемы влияния воды на окружающую среду и инновационные технологии.

Ключевые слова: конференция, подводные технологии, влияние воды, окружающая среда.