

XX Conference of Automaticians RYTRO' 2016 May

16 - 18, 2016 in Rytko, Poland

The annual Conference of Automaticians whose motto was "The use of automatics in energy and environment management" was held at the hotel Pearl of the South in Rytko, Poland, near Nowy Sącz on May 16 - 18. The organizers kept many traditional organizational elements of previous conferences in this series.

The aim of the Conference was the presentation of tendencies in development of measuring and control systems, mainly regarding the power effectiveness and environment saving, presentation new products in the automation branch, and common integration of persons engaged in the process of development of modern automation.

Professor Ryszard Tadeusiewicz (AGH) was the Chairman of the Conference. The Professor, a great authority among scientists, ensured the high level of the conference and the high-rating of all the events associated with it. Traditionally the company SKAMER-ACM was the initiator and main organizer of the Conference. Also the companies: ABB, DANFOSS, EMERSON PROCESS MANAGEMENT, JUMO, LIMATHERM SENSOR, POLNA, TECHNOKABEL, TURCK, WEIDMÜLLER, and WIKA POLAND were coorganizers of this year's conference. The Regional Fund for Environmental Protection and Water Management in Cracov, which assumed the honorary patronage over the conference and granted subsidies to it, and the Association ideaTECH from Cracov took part in organization of the conference as well.

The AGH University of Science and Technology in Cracov, the Automation and Robotics Committee of the Polish Academy of Sciences, the Association of Polish Electrical Engineers, the Malopolska-Podkarpacie Clean Energy Cluster and the S&P Group from Cracov participated in the conference organization. The conference was held under the auspices of: the international journal Measurement Automation Monitoring (formerly: Pomiar Automatyka Kontrola, PAK) as well as the national technical journals: Automation monthly, Control Engineering, Drives and Control, Measurement Automation Robotics and the Internet portals: automatyka.pl, automatykaOnLine.pl.

The conference was held under the scientific patronage of the AGH University of Science and Technology, the Polish Academy of Sciences (PAS) as well as the Warsaw, Rzeszow and Silesian Universities of Technology. Representatives of engineering staffs of large industrial plants and design offices of industrial automation and metrology profile from Poland, as well as the representatives of the organizers presidents, directors and chief power engineers, participated in the conference, together 270 participants from 106 firms.

Polish Ministry of Energy declares that new regulation on energy effectiveness results in full introduction in Poland the UE Directive obligating state members for achieving specified level of energy saving before the end 2020. The new regulation should increase energetic effectiveness of Polish economy, its competitiveness and improve the state of natural environment. It should also be contributive to economical and effective use of energy and should increase the energy-efficient investments.

During the Conference the role of measurements and control systems in environment management were discussed. The environment management, based on complicated information system, includes the management of use, protection and forming of environment.

The scientific presentations at the conference highlighted the tasks related to energy efficiency and environmental protection. The conference is of particular importance for Poland whose economy is still characterized by excessive energy consumption compared to the results achieved in other countries. Moreover, higher energy prices and increasing dependence on energy supply from outside the EU pose a threat to energy security and competitiveness of EU industry.

Each participant received the conference materials in electronic form containing invited papers worked out by professors and technical papers worked out by firms as well as the professional information on current measurement techniques, sensors and systems for industrial applications, automatic systems for industry, protection systems against fire, explosion threat etc. Detailed information on current activity and results of firms active in automation in Poland were also delivered.

The companies - organizers of the conference, presented their offer in the field of measurements and automation especially with a focus on energy efficiency and environmental protection.

The conference was chaired by Mr. Andrzej Turak Vice-President of the Board, Management Engineer of the Company SKAMER-ACM. In the conference, the following invited lectures were presented:

Prof. Ryszard Tadeusiewicz PhD, DSc, eng: Automatics for elders new challenges for technicians arising from approaching demographic situation.

The role of automatics and robots in life of elder or disabled peoples were presented. By use robots, information systems and Internet the life comfort of elder people in modern society can be significantly gained.

Prof. Leszek Trybus PhD, DSc, eng: Programs of control in graphic languages LD and FBD for CPDev environment.

Procedures of forming, verification, compilation and testing of several control programs written as circuits in graphic languages were presented.

Prof. Jan Maciej Koscielny PhD, DSc, eng: Threats by attacks against industrial control systems and means of risk reduction.

Threats are found in technological instrumentation, measurement paths, executive devices, controllers, supply sources, operator mistakes (SAFETY), as well as cyberattacks and internal or external sabotage (SECURITY). Advanced diagnostics on-line reduces the risk, in aspects, both SAFETY and SECURITY.

Prof. Tadeusz Skubis PhD, DSc, eng: Current practical approach to the result uncertainty assessment.

In the lecture formation of the uncertainty budget and its significance in measuring systems for reliability, safety, quality assurance, calibrating laboratories activity, as well as technical and legal results of assessment procedures were presented.

Prof. Ireneusz Solinski PhD, DSc, eng: The system for wise power management in bearing of environment.

The stores of energy and their role in energy effectiveness improvement were presented.

Waclaw Mukawa PhD, eng: Measurement, automatics and monitoring for environment management. Natural and non-industrial examples.

The lecture concerned a measurement of river flows, odours, and monitoring systems for slope failures, bird passages, tsunamis, and examples of imitation of the nature in technical solutions.

Jozef Kala MSc, eng: Subsidizing the tasks related to management of power management in bearing of environment, from the means of the Regional Fund for Environmental Protection and Water Management in Cracov.

Mr J. Kala presented possible in Poland current finance instruments supporting the development of solar collectors, photovoltaic panels, heat pumps, boilers supplied by biomass, modernization of installations improving the energy effectiveness.

In the conference was a time for each company to present its solutions. The presentations were dynamic, their forms were different (slides, photos, videos), there were many speakers, which resulted in constant interest among the participants. The idea of industry 4.0 as a close future reality there was presented. Its connections with predictive maintenance and production planning were pointed out.

At the stand of each company, the participants could talk to the representatives of the organizers, ask about technical details of products, download catalog materials or indicate a specific problem to be solved. In two conference halls, there were presentations of the companies organizers and discussion panels. The conference helped to rebuild the awareness of engineering environment in Poland in the issues related to efficient and clean use of energy, and to bring up to date the knowledge of participants in the area of industrial measurements, control systems, monitoring of processes, both for designers and process engineers.

Materials of the Conference are accessed at the address <http://www.skamer.pl/20ka/fscommand/materialy.pdf>

Developed by Tadeusz Skubis