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THE BULLETIN

OF THE SILESIAN UNIVERSITY OF TECHNOLOGY

ISSN 2956-7475

No. 9 (015) 2024



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ECO WEEK AND MICRO-WORLD WEEK

Photos: Maciej Mutwil, Tomasz Stokłosa, Jan Szady,
Jolanta Skwaradowska, Martin Huć, Katarzyna Siwczyk

FROM THE EDITOR

Ladies and Gentlemen,

We are pleased to present to our readers the first issue of the Bulletin of the Silesian University of Technology after the summer break. This edition shows how many events took place at the University during the holiday period and how much our researchers contributed to national and global science development. It was a remarkably busy period. In the September issue of the magazine, we want to introduce you to the organizational changes that will shape the life of the University from the new academic year. The most important of them is the beginning of the term of office for the new rector authorities, who have been performing their function nominally since 1st September this year. Following the example of Prof. Marek Pawełczyk, Rector of the Silesian University of Technology, who has repeatedly stressed that people are the most important, we decided to publish profiles of the members of the Rector's College along with the scope of competences and responsibilities. It is not difficult to notice that the new authorities of the Silesian University of Technology are people with enormous scientific and organizational achievements, which shows that the bar has been suspended high. The pace of personnel and process improvement has accelerated. It seems that the Silesian University of Technology – one of the ten research universities in the country – is entering the 80th jubilee year with a brave vision, bold goals, and a conviction that together we can do more!

Wishing you an exciting reading

Greetings on behalf of the Editorial Board

Iwona Flanczewska-Rogalska

THE BULLETIN OF THE SILESIAN UNIVERSITY OF TECHNOLOGY

No. 9 (015) 2024

SEPTEMBER

Editorial address: The Promotion and Communication Centre,
2A/297a, Akademicka Street, 44-100 Gliwice

Tel. 32 237 18 62; e-mail: promocja@polsl.pl

Printing: Columbus Printing House, Chorzow

Editorial office: Iwona Flanczewska-Rogalska (editor-in-chief),
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Graphic design, cover design and layout: Maciej Mutwil

Translation: Roman Gardela

Editing and proofreading: Hanna Brdyś

On the cover: Rector's College of the Silesian University
of Technology in the 2024-2028th term

Author of the photo: Przemysław Bratkowski

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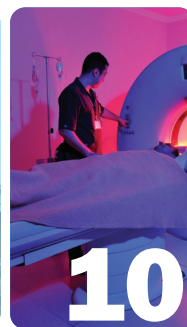
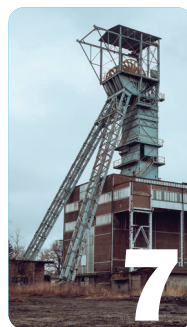


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CENTRE FOR TECHNOLOGY AND COMPUTATIONAL SCIENCES - THE KEY TO TRANSFORMATION AND DEVELOPMENT OF SILESIA

text: Anna Świdarska
Photos: istock

THE SILESIAN UNIVERSITY OF TECHNOLOGY IS ACTIVELY INVOLVED IN THE INDUSTRIAL AND SOCIAL TRANSFORMATION OF THE REGION TOWARDS A GREEN, DIGITAL ECONOMY – THE CENTRE FOR COMPUTATIONAL TECHNOLOGY AND SCIENCES IS BEING ESTABLISHED AT THE UNIVERSITY, WHICH IS TO BECOME A LEADING CENTRE FOR INNOVATIVE USE OF THE LATEST DIGITAL TECHNOLOGIES.

Silesia is facing a difficult challenge, which is a fair and effective transformation of mining subregions. The main objectives of this strategy include:

- The development of a competitive, environmentally neutral industry.
- Improving the inhabitants' quality of life.
- Transforming Silesia into an intelligent metropolis.

The region's industrial and social transformation program is a breakthrough in civilization, and its success depends on a bold combination of the intellectual potential of science

and industrial development centres using the capabilities of digital infrastructures, such as high-performance computing and data processing systems. The answer to these challenges is to establish the Centre of Technology and Computational Sciences at the Silesian University of Technology, which has its headquarters in Katowice. The University authorities invited Prof. Dr Hab. Marek Niezgodka, a specialist in applied mathematics and an expert in mathematical modelling of processes and large-scale calculations, to work on this project.

– “I saw how enormous the scale of challenges is. But I also saw the opportunities associated with the reconstruction of Silesia into a clean, green area distinguished by the innovation of industry and social solutions”, – explains Prof. Niezgodka. – “The local industry still needs transformation efforts to adapt to the requirements of the global sustainable development strategy, and this requires commitment on the part of both the economy and local government administration, as well as – what is particularly important – science.

Joint actions may lead to the transformation of Silesia into one of the reference areas in Europe, showing opportunities and achievements resulting from a consistent and coherent approach to transformation projects.”

Prof. Marek Niezgódka has developed the goals and assumptions of the Centre for Technology and Computational Sciences, of which he is the director, and conducts talks on cooperation with scientists not only from the Silesian University of Technology but also from leading research and scientific centres, for which the common denominator is digital transformation, the latest digital technologies, and solutions built on them.

– “The Centre is conceived unconventionally; our activity will not be exclusively scientific; we will initiate the implementation of programs aimed at supporting and creating completely innovative solutions for the needs of industrial and social transformation of Silesia. Our assumption is to engage in partnership projects from the so-called co-development, i.e., participation in the processes of development of modern technologies, because thanks to such diversity, we create solutions faster and – what is important – they

are often more courageous and original” – says Prof. Niezgódka.

The priority areas of activities of the Centre for Technology and Computational Sciences are the implementation of research, development, and implementation and operational programs, among others, in the fields of:

- design and process synthesis of advanced materials as the basis of competitive, innovative technologies, including energy, civil engineering, electronics, transport, environmental restoration, and biotechnology.
- designing innovative medical solutions for selected cancer and rare disease groups, from dedicated biomaterials to individualized therapeutic solutions.
- development and operational implementation of complex economic systems and social ecosystems, which are part of the Eu-

European Industry 5.0 Strategy, in the Upper Silesian-Zagłębie Metropolis (GZM) scale.

- development and implementation of operational multi-scale solutions for managing energy network systems with a high share of renewable technologies in conditions of significant dynamics of load changes.

“The essence of the concept of the Centre for Technology and Computational Sciences is that practically for every system of objects, a mathematical model can be created that allows reproducing the essential properties of these objects, predict the behaviour of the system in different conditions, with different external influences, with disturbances such as - for example - an emergency. One can try to predict such situations and construct solutions that allow mitigating the effects of sudden, unwanted disturbances.” – explains Prof. Niezgódka. – “We model both the physics of systems, their chemistry, and network behaviour. All these complex systems are a population of many objects, often remarkably diverse, which can function independently of each other. A complex holistic arrangement requires that we predict not only the behaviour of individual elements but their mutual relations,” adds the professor.

The Centre for Technology and Computational Sciences will focus on creating novel solutions, and its activities will be directed not only at large industries. Small and

medium-sized enterprises, which usually do not have the opportunity to invest in expensive computer modelling technologies, can get support there. In turn, for PhD students and students, cooperation with the Centre will be an opportunity to gain practical skills in modern digital methods, also thanks to solutions provided by global technology companies.

“The basis of our activity will be teams of competent ex-

perientific director of the company, author, and co-author of over 130 scientific publications, gave a lecture at the Silesian University of Technology, available online, entitled: “Multi-Scale Material Modelling in The Era of Machine Learning.”

“Material design in the past was based on trial and error, choosing different compositions of ingredients and trying what would come of it. Today, computer calcu-

Joint actions for transformation may convert Silesia into one of the reference areas in Europe, showing opportunities and achievements resulting from a consistent and coherent approach to transformation projects.

perits in the field of the most advanced mathematical methods and their applications, as well as appropriate infrastructure, enabling the implementation of secure calculations and data processing processes requiring adequate protection. The essence is software, which in such scope and for such purposes in Poland is not yet available, which is why the Centre of Technology and Computational Sciences of the Silesian University of Technology will be unique.” – emphasizes Prof. Marek Niezgódka.

The Silesian University of Technology has already established cooperation with Materials Design company, a world leader in software for modelling materials at the molecular level. Dr Erich Wimmer, co-founder and sci-

lations allow performing an incomparable number of experimental tests without the need for real experiments and the synthesis of material samples – in addition, they dramatically speed up the process. Modern materials are the basis for developing modern technologies in every industry field.” – explains Prof. Niezgódka.

The Centre for Technology and Computational Sciences will contribute to implementing modern technologies and solutions in industry and introducing new or improved climate-neutral products, services, and processes in Silesian enterprises, increasing their competitive advantage. The activities of the Centre will undoubtedly increase the international rank of the Silesian University of Technology. ■

THE ENERGY ENCLOSED IN A MINING SHAFT

text: Katarzyna Siwczyk
Photos: Maciej Mutwil

THE ENERGY TRANSFORMATION IS UNDERWAY, AND SILESIA WILL FACE THIS CHALLENGE THE MOST. SHUTTING DOWN MINES REQUIRES THE SEARCH FOR ALTERNATIVE ENERGY SOURCES, BUT IT WILL ALSO HAVE SOCIAL CONSEQUENCES FOR MANY PEOPLE WORKING IN THE MINING SECTOR. THANKS TO THE INITIATIVES THAT ARE ALREADY BEING CARRIED OUT AT THE SILESIAN UNIVERSITY OF TECHNOLOGY, THE DECOMMISSIONED MINES CAN BE TRANSFORMED INTO ENERGY STORAGE FACILITIES.

Silesia has immense potential. For several years, I have been working with a team that includes experts in the energy field, and we have ideas on how to use the existing infrastructure of quenched mines. One of the projects is the creation of energy storage facilities in these places” – says Prof. Dr Hab. Eng. Marcin Lutyński from the Department of Geoengineering and Resource Exploitation.

The initiative is important for many reasons.

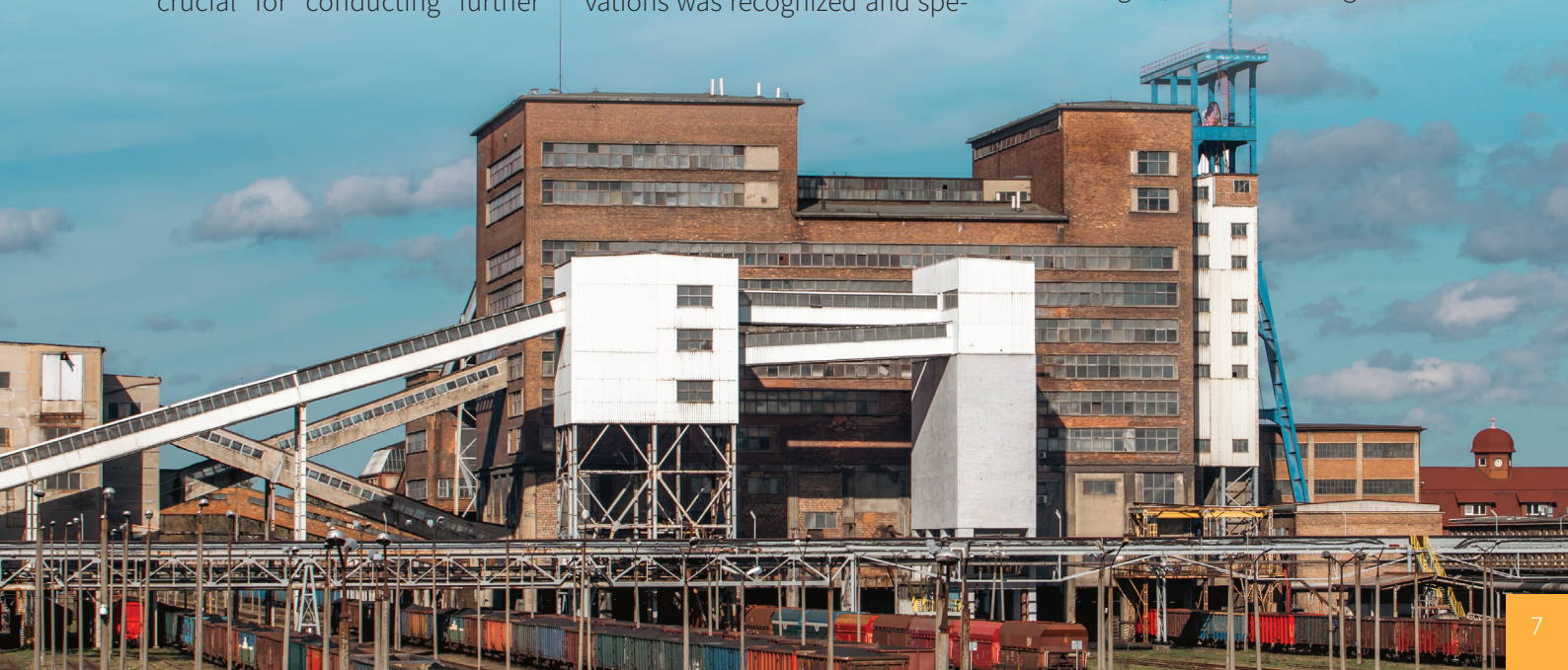
“It is energy storage systems with medium and large capacities, directly subject to the power system operator, that will be crucial for conducting further

decarbonization processes, to which we are obliged as a country, not only by international agreements but also by the state of exhaustion of coal deposits economically justified for extraction”, adds Dr Hab. Łukasz Bartela, Prof. of Silesian University of Technology

The scientist belongs to the employees of the Department of Power Engineering and Turbomachinery of the Faculty of Energy and Environmental Engineering, which began activities ten years ago in developing compressed air energy storage technology (Compressed Air Energy Storage).

Since the potential in the excavations was recognized and spe-

cialized knowledge in this field was needed, the cooperation expanded to include a group of scientists from the Faculty of Mining, Safety Engineering, and Industrial Automation (then the Faculty of Mining and Geology). In addition, cooperation was established with the most prominent national design company operating in energy technologies, Energoprojekt-Katowice SA. It is how GEST (Group for Energy Storage Technologies) emerged. The research activity of this team has been extended over time to the area of storage technologies in compressed carbon dioxide, hydrogen storage technology and hydrogen derivatives, hybrid technologies, and heat storage.



The team's first success was developing an innovative concept for integrating energy storage systems in hydrogen and compressed gases, for which it received the Nersta award.

Currently, the team is researching using excavations. The idea can become real, as evidenced by the location of mining plants, surrounded by access roads and all the infrastructure necessary to run the plant.

“What is important is that we know the geology of these areas well, which is important during any such investment. Starting from nothing, we would have had to devote much time and funds to this discernment. Here, we receive ready data; it is enough to adapt to them properly.” – adds Prof. Lutyński.

One of the ideas would be based on the storage of liquefied natural gas in post-mine shafts. Thanks to such an investment, Silesia could become a liquid gas transmission hub from the port of Świnoujście. Such a solu-

tion would ensure greater energy security in the country. Hiding tanks with hydrocarbons or compressed gases below the surface is much safer and cheaper than surface storage. Such warehouses are insensitive to changes in temperature, weather, and possible terrorist or military attacks.

Another reason the scientists propose the investment is to reduce space in the already heavily urbanized cities of the Silesian Voivodeship. However, for the project to succeed, scientists must consider several factors.

– “The energy capacity of such systems can be very diverse and depends in particular on the type of gas being an energy carrier, on the storage pressure, as well as on the sheer volume of these underground workings, which are to act as pressure ves-



sels, and thus meet technical requirements, in particular tight and not susceptible to infarcts.” – explains Prof. Bartela.

Researchers used a reference shaft slightly less than 65 thousand m³ in the analyses. In the case of a compressed air energy storage system using a solution developed by the group, protected by the European Patent Office, the system’s energy capacity may exceed 220 MWh. A much smaller capacity, but also with features that are much more easily investable, is characterized by developed energy storage systems in compressed carbon dioxide.

“Here, using a reference shaft, depending on the pressure, we can store energy in the amount of a few to even more than 50 MWh, respectively,” adds Professor Bartela.

Considering that in the region of Silesia, we currently have more

than 200 shafts at our disposal, we can imagine that theoretically, the capacity we must install can be counted in tens of gigawatt hours, which would allow us to significantly improve the energy security of the country and use effectively the mining infrastructure that can still work effectively for our region.

Despite the many advantages, the mine infrastructure would have to undergo modernization before implementing such an investment. Analyses in this area are already being conducted.

“Even if the technological aspect could be adapted to the current needs, legal regulations, especially in the field of geological and mining law, still pose a problem with the real use of former mining plants,” - explains Prof. Lutyński.

Scientists see light in the tunnel. “We conduct engineering works and popularizing works to open

decision-makers eyes to unnecessarily blocked potential. It would be beneficial to formulate the process of liquidation of mines, which would secure selected mining excavations until the investment in the energy storage would be possible.” - suggests Prof. Bartela.

The Desire Energy Transformation Platform will soon launch. In it, scientists want to organize interdisciplinary activities supporting the liberalization of legal regulations wherever possible, justified by the need to support the country’s energy security.

Representatives of the Silesian University of Technology cooperate with many research institutions and energy industry representatives, including the Institute of Fuel and Energy Technology, the Main Mining Institute, and the Institute of Mining Technology KOMAG. We also cooperate with companies such as Tauron PE and SMG Silesia. ■



You can hear more on this topic in the podcast “Let’s Talk about Science.”



CONTRAST AGENTS USING IRON COMPOUNDS?

text: Jolanta Skwaradowska
Photos: istock, pexels

SCIENTISTS FROM THE FACULTY OF CHEMISTRY OF THE SILESIAN UNIVERSITY OF TECHNOLOGY, UNDER THE SUPERVISION OF NIKODEM KUŹNIK, PHD, DSC, ENG., PROFESSOR OF THE SILESIAN UNIVERSITY OF TECHNOLOGY, ARE CONDUCTING RESEARCH AIMED AT REPLACING GADOLINIUM, A HARD-TO-FIND ELEMENT USED IN DIAGNOSTIC TESTS, WITH IRON. GADOLINIUM IS A COMPONENT OF CONTRAST USED IN MAGNETIC RESONANCE IMAGING.

Today's medicine allows us to investigate the depths of the human body using, among others, tomographic techniques. One of them is Magnetic Resonance Imaging (MRI). This is a technique in which patients are introduced into a vast magnetic field. During such a procedure, 1/3 of them additionally have a contrast agent administered – intravenously or orally. It allows for better diagnosis

and identification of tissues somehow affected by disease. It works so that the contrast agent travels in the body and reaches certain areas to a greater extent - explains Dr Eng. Nikodem Kuźnik, Prof. of Silesian University of Technology. In contrast, in an angiography technique, the contrast agent remains in the circulatory system, allowing specific tests of blood flow through the blood vessels.

Diverse types of contrast agents are used in the studies. Some are intended for liver tests, others for breast or prostate tests for possible cancer cells. We also have contrast agents needed for brain and nervous system studies. It is worth emphasizing that magnetic resonance imaging is more accurate than computed tomography, a technique based on X-rays in brain studies.

Contrast agents have been used in research for more than 30 years. Their primary ingredient is the element gadolinium, which has unique magnetic properties. Unfortunately, it is rare and difficult to access. It occurs mainly in countries such as China or Afghanistan; therefore, its availability is so limited for distinct reasons that the European Commission has included this element on the list of critical raw materials for the EU economy, explains the researcher. The

Our research began 15 years ago and is unique globally. In the world, we have only three groups of scientists studying this issue; two work in the United States, and one at the Silesian University of Technology under my direction. We conduct the research in cooperation with partners from the National Institute of Oncology in Gliwice and scientists from the University of Osaka in Japan.” – said Dr Hab. Eng. Nikodem Kuźnik, Prof. of Silesian University of Technology.

price of gadolinium and its negative environmental impact raise additional concerns. This inspired the researchers to create contrast agents that would not contain this element but would have a similar visual effect.

“I suggested using iron. It is a common element easily obtained from raw materials

Three research teams are currently working on possibly replacing gadolinium with iron compounds.

“Our research began 15 years ago and is unique globally. In the world, we have only three groups of scientists studying this issue; two work in the United States, and one at the Silesian University of Technol-

can be brought to the level of gadolinium compounds.

“We have confirmed that we can create iron compounds that are as magnetic as gadolinium. We conducted preliminary studies on cells; these are, for the time being, in vitro studies, i.e. outside the living organism. They show that the iron compounds introduced



found in Europe. In this way, we can help patients without reaching for such exotic metals. In addition, scientists have extensive knowledge about the behaviour of iron in the body and its side effects because it is an endogenous element, that is, occurring in the human body,” - says Prof. Nikodem Kuźnik.

ogy under my direction. We conduct the research in cooperation with partners from the National Institute of Oncology in Gliwice and scientists from the University of Osaka in Japan.” - explains the professor.

Research at our University is at an early stage. Scientists recognize how much magnetic properties of iron compounds

into them are not toxic; on the other hand, we confirmed that for some cells, iron compounds show some specificity, that is, they reach cancer cells, allowing us to identify them.” - adds the profesor.

“Our researchers and partners from Japan also conducted the first studies on mice. They were injected with iron compounds.

These were iron nanoparticles associated with nanotubes, and we saw, during resonance studies, that this contrast occurs. So, the visual effect is what we expected. In addition, even many months after the study, the animal did not experience any pronounced side

share these concerns and encourages sincere consultation with the doctor.

“We are aware that any interference in the body, the introduction of foreign elements or compounds in the body, can cause undesirable effects. However, even taking

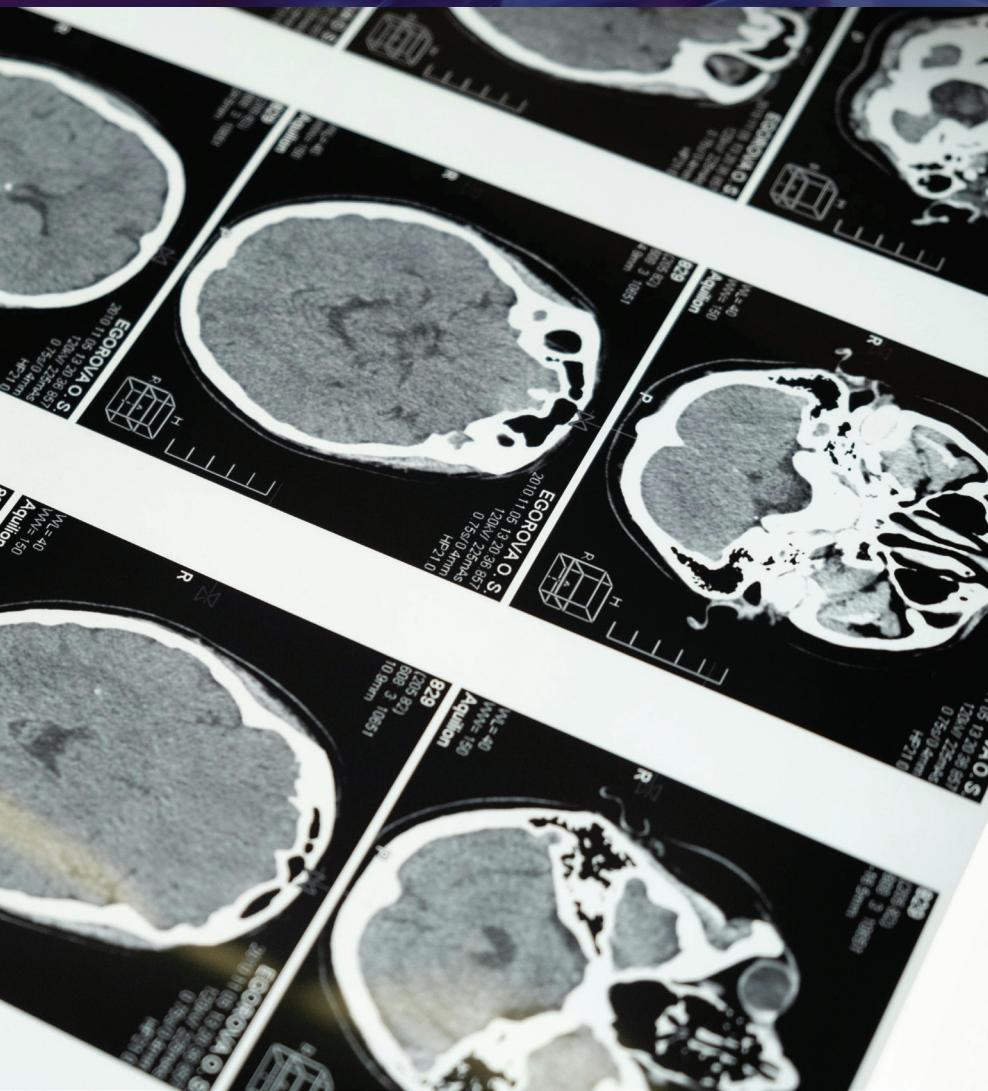
ingly rare, risk for patients with kidney disease, causing, e.g. redness on the skin. Returning to iron, however, I want to emphasize that it is an endogenous element, that is, occurring naturally in the body, so we can assume that it will cope better with iron than in the case of such an exotic element as gadolinium.” - explains the researcher.

Another advantage of iron, in addition to its minimal side effects and availability, is its price. “Gadolin is a rare, hard-to-reach element, while iron is easy to obtain, lowering its price. In Europe, there are many iron producers, thanks to which we will be able to become independent from uncertain sources.” - adds Prof. Kuźnik.

We must move forward with the subsequent stages of research. However, before these tests can be carried out on patients, they first need to be tested on animals.

“Medical research involving patients means that we must be cautious. Of course, we would like to help doctors diagnose problems and conduct therapy. However, experience shows we do not know much about the human body. So, before we can move on to human studies, we must meticulously conduct them on larger animals: rats, rabbits, or pigs. Until we go through all these stages, we cannot give the tested agent to patients.” - emphasizes our interlocutor.

Scientists at the Silesian University of Technology are seeking scientific and commercial partners with whom they could continue their research. ■



effects; the mouse is doing great, so it is a good prognosis that such compounds are relatively non-toxic to the living organism.” - stresses Prof. Kuźnik.

Some patients fear the side effects of gadolinium contrast agents, which causes them to hesitate to use magnetic resonance imaging tests. However, the scientist does not fully

the usual remedy and reading the leaflet will help us find information about the side effects. The same is true of gadolinium. This element and its compounds have some side effects, so their introduction compromises medical benefits - in this case, a better diagnosis - and side effects. In the case of gadolinium, it may carry some, although exceed-



A COMMUNITY OF GOALS AND IDEALS

*text: Anna Świdarska
photo: Przemysław Bratkowski*

ON SEPTEMBER 1ST, 2024, THE TERM OF OFFICE OF THE NEW RECTOR AUTHORITIES OF THE SILESIA UNIVERSITY OF TECHNOLOGY BEGAN. PROF. DR HAB. ENG. MAREK PAWEŁCZYK, ACTING VICE-RECTOR FOR SCIENCE AND DEVELOPMENT FOR THE TWO PREVIOUS TERMS, AS HIS MAGNIFICENCE RECTOR, IS RESPONSIBLE FOR THE FUNCTIONING AND DEVELOPMENT OF OUR UNIVERSITY. HE WILL MANAGE THE SILESIA UNIVERSITY OF TECHNOLOGY FOR FOUR YEARS WITH A TEAM OF VICE-RECTORS. WE WANT TO REMIND YOU OF THE MOST CRITICAL ASSUMPTIONS OF THE PROGRAM REGARDING THE NEW AUTHORITIES AND THEIR PROFILES AND COMPETENCIES.

Our Silesian University of Technology. Let's take care of it together."

It is the motto of the program of Prof. Dr Hab. Eng. Marek Pawełczyk, the new Rector of the Silesian University of Technology, who declares that he will harmoniously fulfil the three missions of the University, which are education, research, and activities for the benefit of society and economy. The program assumes, among others, the modernization of infrastructure, improvement of organizational culture, and creation of a friendly and creative atmosphere of work and learning conducive to development based on cooperation and mutual respect. The Rector wants to include the Silesian University of Technology in the most critical debates about the region's future, recent technologies, and social changes. He sets bold goals and encourages to learn from the world's best universities. He wants to create conditions that will make it possible for the academic community at the Silesian University of Technology to gain opportunities unavailable at other universities. The basis for success is people – their commitment and sense of responsibility, the strength of unity, and a broad spectrum of the University's activities.

Below, we present to our readers the profiles of the members of the Rector's College and the responsibilities of individual rectors.

**PROF. DR HAB. ENG. MAREK PAWEŁCZYK,
THE RECTOR OF THE SILESIAN UNIVERSITY OF
TECHNOLOGY**



Professor and head of the Department of Measurements and Control Systems of the Faculty of Automatic Control, Electronics, and Computer Science, he specializes in indus-

trial automation, digital signal processing, and vibroacoustics. He has held significant managerial positions at the University since 2006, including Vice-Rector for Science and Development from 2016 to 2024.

For ten years, he has been responsible for issues related to the modernization of education based on scientific research results. He created and modernized study programs, developed principles, and introduced the Project-Based Learning method and other innovative forms of education, such as problem-oriented education, the Harvard method of interactive teaching, and the Oxford method. He was the originator of the concept of creating the Student Creativity Centre. He initiated many activities at the University concerning the flexibility of education, the choice of subjects, the reduction of teaching duties due to research activity, the implementation of projects with secondary school pupils, and programs for the best students from Poland and abroad.

He heads strategic programs at the Silesian University of Technology: Initiative of Excellence Research University (IDUB) and the European University EURECA-PRO. He has also initiated numerous university projects and developed and introduced over 30 pro-quality programs. He is the coordinator of the in-NOVA project within the Horizon Europe program, has managed 17 projects financed from external sources, and has co-authored over 2000 implementations in the industry.

The Rector of the Silesian University of Technology is an active member of the Polish Academy of

Sciences, including being a member of the Presidium of the Polish Academy of Sciences Branch in Katowice and the Chairman of the Metrology Committee. He was the chairman of the Scientific Policy Committee at the Ministry of Science and Higher Education. For 15 years, he has been a member of the International Institute of Acoustics and Vibration. Prof. Marek Pawełczyk is also the Vice-President of the Conference of Rectors of Polish Technical Universities (KRPUT), as well as the Chairman of the Commission for International Cooperation, and a member of the Presidium of the Conference of Rectors of Academic Schools in Poland (KRASP).

He was the promoter of 3 honorary doctorates (Bertrand Piccard, Juriy Bobalo, Brian Kobilka), is the author or co-author of over 250 scientific publications, and has won many awards. He is active in national and foreign scientific and organizational bodies.

**PROF. DR HAB. ENG. ANNA CHROBOK,
VICE-RECTOR FOR STUDENTS AND EDUCATION**



Professor in the Department of Chemical Organic Technology and Petrochemistry of the Faculty of Chemistry is a specialist in organic chemical technology and chemical catalysis, a member of the Senate of the Silesian University of Technology and the Committee of Chemical Engineering of the Polish Academy of Sciences. She was the head of the Department of Chemical Organic Technology and Petrochemistry, and in 2016-2020, she was the Vice-Dean for Science and International Cooperation at the Faculty of Chem-

istry. She was a Main Council of Science and Higher Education member, director of the College of Studies, and President of the Education Council.

She has collaborated with many companies and national and global leaders in the chemical industry. She is the author of the implementation of ϵ -caprolactone production technology in Grupa Azoty S.A. and a laureate of the individual award of the Minister of Science and Higher Education for significant achievements in implementation activities.

She was the Vice-President of the Education Council in the European University EURECA-PRO program. She has developed numerous new didactic classes, both in Polish and English. She researches sustainable development with a group of young scientists (www.chrobokgroup.com). She is the author of over 200 scientific papers and 50 patents. She has held research internships at the University of Vienna, Monash University, Queen's University Belfast, University of California, and Chongqing Jiaotong University.

Prof. Dr Hab. Eng. Anna Chrobok, Vice-Rector for Student Affairs and Education, actively cares about the quality of education by supervising key areas such as student recruitment, conducting student affairs at the University, study programs, and courses of education, and evaluating its quality. She is responsible for implementing and improving modern educational methods and constantly improving the potential of teaching staff. She cooperates with and supports the student self-government and student organizations in the scientific and cultural fields.

**PROF. DR HAB. ENG. ZBIGNIEW PASZENDA,
VICE-RECTOR FOR INFRASTRUCTURE AND
INVESTMENT**



Professor in the Department of Biomaterials and Medical Device Engineering of the Faculty of Biomedical Engineering is a specialist in metal, ceramic, and polymer biomaterials, as well as implants used in orthopaedics, traumatology, and the circulatory system. His scientific interests also include issues related to the properties of materials for surgical instruments and the design of robotic rehabilitation devices.

He was the Dean of the Faculty of Biomedical Engineering and the head of the Department of Biomaterials and Medical Devices Engineering. He is a member of the Committee of Biocybernetics and Biomedical Engineering of the Polish Academy of Sciences, the Scientific Council of the Institute of Metallurgy and Materials Engineering of the Polish Academy of Sciences, and the Centre of Polymer and Carbon Materials of the Polish Academy of Sciences. Since 2024, he has been the President of the University Council of the Medical University of Silesia in Katowice.

He is the author of over 230 publications and has won many awards for scientific, didactic, and organizational activities. He participated in establishing the Faculty of Biomedical Engineering and the European Health-Tech Innovation Centre (EHTIC).

Prof. Dr Hab. Eng. Zbigniew Paszenda, Vice-Rector for Infrastructure and Investment (formerly Vice-Rector for Infrastructure and Promotion), is responsible for the University's property, develops investment

and renovation plans, deals with raising funds, and implements infrastructure projects. He creates the University's energy and media consumption policy and develops and supervises IT infrastructure.

**PROF. DR HAB. ENG. BOŻENA SKOŁUD,
VICE-RECTOR FOR GENERAL AFFAIRS**



Professor in the Department of Engineering Processes Automation and Integrated Manufacturing Systems of the Faculty of Mechanical Engineering is a specialist in production engineering, organization of production systems, and their management. She conducts research in production optimization, scheduling, multi-assortment planning of rhythmic production, production planning in non-heterogeneous production systems, modelling of discrete systems, and balancing and sequencing of assembly lines.

She was a deputy head of the Department of Engineering Processes Automation and Integrated Manufacturing Systems, deputy director for general affairs of the Institute, and head of the Department of Integrated Management and Manufacturing. She was Vice-Dean for Science at the Faculty of Mechanical Engineering and the director of the Doctoral School of the Silesian University of Technology. She was a member of the Polish Academy of Sciences Production Engineering Committee. Prof. Bożena Skołud is a member of the Polish Accreditation Commission PAKA, which works to ensure and improve the quality of education.

Prof. Bożena Skołod is the author of 260 scientific publications. She has participated in scientific internships at the Università di Bologna. She has taught many times at ICAM Nantes, ICAM Toulouse in France, Trnavská Univerzita Trnava in Slovakia, and the University of Stavanger in Norway.

Prof. Dr Hab. Eng. Bożena Skołod, Vice-Rector for General Affairs, is responsible for recruiting University employees, social policy, and the safety of academic community members. She also performs tasks related to promoting the University, popularizing science, and supervising the university's library and publishing activities.

**DR HAB. ENG. MARGIN STANIEK,
PROF. SUT, VICE-RECTOR FOR COLLABORATION WITH
THE CIVIC AND ECONOMIC ENVIRONMENT OF SUT.**



Professor in the Department of Transport Systems, Traffic Engineering and Logistics of the Faculty of Transport and Aviation Engineering, specializes in identifying and describing road infrastructure, travel comfort, traffic control systems, and processing and recognition of road space images. He was Vice-Dean of the Faculty of Transport and Aviation Engineering, Chairman of the Council of Discipline Civil Engineering, Geodesy and Transport, and a member of the Transport Committee of the Polish Academy of Sciences and the Senate of the Silesian University of Technology.

He manages numerous projects, including environmentally friendly means of transport, support for people with special needs in implementing trips in mountain areas, and the devel-

opment of a specialized off-road trolley. He also supervises scientific and research works related to Silesian voivodship roads for the Marshal's Office and public transport for the Metropolitan Transport Board of GZM.

He has made nearly 70 speeches at national and foreign seminars and conferences, including in Lithuania, Hungary, England, Austria, Greece, the Netherlands, Spain, Germany, Portugal, Scotland, Turkey, and Italy.

Dr Hab. Eng. Marcin Staniek, Prof. SUT, Vice-Rector for Collaboration with the Civic and Economic Environment of SUT, coordinates the university's cooperation with administrative institutions, local governments, social organizations, and business representatives. He implements the practical effects of scientific and research work conducted by the university's employees.

**PROF. DR HAB. ENG. SEBASTIAN WERLE,
VICE-RECTOR FOR SCIENCE AND INTERNATIONAL
COOPERATION**



Professor in the Department of Thermal Technology of the Faculty of Energy and Environmental Engineering, head of the Laboratory of Renewable Energy Sources, specializes in environmental and energy engineering. From 2019 to 2024, he was vice dean of cooperation and development and a member of the Environmental Engineering, Mining and Energy Discipline Council of the Silesian University of Technology. He is a member of the Senate of the Silesian University of Technology, the Thermodynamics and Combustion Committee of the Polish Academy of Sciences,

the Environmental Engineering Committee of the Polish Academy of Sciences, and the Energy Committee of the Polish Academy of Sciences in Katowice. The professor coordinated the Priority Research Area Climate and Environmental Protection, Modern Energy.

He is a scholarship holder of the Minister of Science and Higher Education for outstanding young scientists and a manager of international research projects implemented under European funds and national projects. He is ranked among the top 2% of the world's most influential scientists in 2021, 2022, and 2023 and includes a career-wide profile.

He has completed international scientific internships at the Norwegian University of Science and Technology, Technical Research Centre of Finland, Institute for Studies, and Power Engineering in Romania. He is the author or co-author of over 400 publications, including a patent.

Prof. Dr Hab. Eng. Sebastian Werle, Vice-Rector for Science and International Cooperation, is responsible for creating the university's policy in the scientific development of staff, scientific research, and development works. He supervises, among others, the Doctoral School, develops and implements pro-quality programs, and coordinates the work of the boards of disciplines. He is also responsible for foreign cooperation, implementation of international agreements, and mobility. He supervises the implementation of projects at the University. ■

NEW ACADEMIC YEAR, NEW OPPORTUNITIES

text: Katarzyna Siwczyk
photos: Przemysław Bratkowski

THE NEW ACADEMIC YEAR AT THE SILESIAN UNIVERSITY OF TECHNOLOGY WILL START WITH CHANGES. THE NEW UNIVERSITY AUTHORITIES SET BOLD AND AMBITIOUS GOALS AND ANNOUNCED NEW INITIATIVES TO BENEFIT STUDENTS, PHD STUDENTS, SCIENTISTS, AND THE ENTIRE STAFF.

I will continue to implement what has been announced in the election program. I also do not intend to withdraw from the declarations that have been made and what I have carefully noted during many pre-election meetings.” – confirmed in the podcast inaugurating the academic year 2024/2025, the Rector of the Silesian University of Technology Prof. Dr Hab. Eng. Marek Pawełczyk.

“However, let us not limit ourselves to what was written on paper. The world is constantly facing us with new challenges and opportunities. I want to react to them continuously, observe good practices, and use the best solutions that also appear at other universities,” added the Rector.



The whole conversation with the Rector, Prof. Dr Hab. Eng. Marek Pawełczyk can be listened to in the “Let’s Talk about Science” podcast.



Some changes came into force on 1st September and concern, among others, the launch of a new unit – the Centre for Modern Education. Students will benefit from this, although the services of this unit will mainly benefit scientists and educators who conduct classes with them. Here, the staff will gain valuable tips and help in modern forms of conducting classes and transferring knowledge. We will promote the Blended Intensive Programs (BIPs) method to the already known forms of teaching, e.g., through implementing PBL projects. The new offer will be addressed primarily to master’s students to respond to the declining number of people interested in second-cycle education.

Studying at the Silesian University of Technology will offer even more advantages in the coming months, among other things, thanks to the continuation and extension of activities resulting from implementing the Excellence Initiative—Research University and EURECA PRO programs.

– “As one of ten universities in Poland implementing the IDUB program, we give our students, already at the stage of their studies, a chance to implement scientific projects, gain valuable professional experience, which will pay off in the future, and perhaps open the way to a scientific career. The Commission, which evaluated how the Silesian University of Technology implemented the IDUB project, was overly impressed that so many students participated in the projects. Finally, their names appear

in scientific publications,” – explained the Rector Pawełczyk.

Activities within the framework of EURECA PRO will also continue in the new year. After the first years of project implementation, the European Commission assessed the activities of the European University, of which the Silesian University of Technology is a member. It gave the green light for the continuation of tasks. As a result, we will offer the opportunity to obtain a double degree and do part of our education abroad to establish scientific contacts in several European countries and acquire international projects more effectively.

– “There are many benefits, but there is also a certain obligation imposed on us by the European Commission – in the coming years, at least half of students, doctoral students, and employees of our university should benefit from the universally understood exchange. It is a fantastic opportunity for development; I encourage you to contact the EURECA PRO office and ask how you can join these activities.” – added Prof. Pawełczyk.

Opportunities for applying for international projects and building partnerships will soon be opened under THE ERASMUS+ program. Therefore, the Rector appealed to scientists at the beginning of his term for the courage to reach for international projects. “Of course, this is difficult, and maybe you won’t manage to get a grant the first time, but if it happens, your career will accelerate, and your successes will be much greater.”

Prof. Marek Pawełczyk also hopes for the development of the university in the programs that will be implemented in the region, among others, in the Research Program for Silesia. Together with six public universities operating in the Silesian Voivodeship, scientists of the Silesian University of Technology will create research teams and expand them with external partners, thus achieving valuable research results. Talks are also ongoing with the Ministry of Science and Higher Education to add funds to this package, hence multiplying the chances of implementing scientific and research projects in the region, which is still in the transition phase.

To this end, the University authorities also sought financial support for the projects from the Marshal's Office of the Silesian Voivodeship. They are about the development of future industries.

“One project is for materials technologies for aviation, the other for technologies and computational sciences, and the third for hydrogen technologies. We intend to implement the projects based on partnerships with profoundly serious companies operating on the global market.” – explained Rector Pawełczyk.

Soon, a cumulative campaign promoting all the advantages of the Silesian University of Technology will be launched to encourage young people to study at our university.

It is worth adding that the Rector of the Silesian University of Technology will

perform other essential functions in the new academic year in institutions supporting the organization of universities in Poland – in CRASP, the Conference of Rectors of Academic Schools in Poland, he became a member of the presidium and chairman of the international cooperation committee, and in KR-PUT, i.e., the Conference of Rectors of Polish Technical Universities – Vice-Chairman. The Rector hopes this will translate into a continuous increase in the importance and recognition of the Silesian University of Technology nationally and internationally. ■



WINGED SUCCESS

text: Katarzyna Siwczyk
photos: Tomasz Stokłosa, istock

ARTUR TOMASIK, PRESIDENT OF THE UPPER SILESIAN AVIATION GROUP AND THE UNIVERSITY COUNCIL OF THE SILESIAN UNIVERSITY OF TECHNOLOGY, BELIEVES THE GOLDEN AGE OF AVIATION IS AHEAD OF US. KATOWICE PYRZOWICE AIRPORT WILL BE EXPANDED IN THE COMING YEARS, CREATING THOUSANDS OF NEW JOBS.

Aerospace engineering is among the most challenging fields to study but is also very well-paid, according to a report by the Oxford Royale Academy. Based on the collected data, the authors estimate that graduates of this specialty earn an average of PLN 8100 gross per month.

Despite the difficulty of studying, excellent job prospects for the future also attract students to the Silesian University of Technology. This is confirmed by the data collected after the first round of recruitment for first-cycle studies. This year, four people competed for one place in Aerospace Engineering.

– That is good news. I can applaud the young people for putting on aviation. The

decisions of the Silesian University of Technology authorities cause the infrastructure to develop, which allows for even better practical training of skills needed in future work in the aviation industry – comments Artur Tomasiak.

Complementing these words is the announcement that graduates of aviation faculties and many specialized engineers will find a jobs at the airport in Pyrzowice in the coming years. It is estimated that about eight new jobs will be created there.

These are not empty statements. Every million passengers we serve at the airport generates 700 new jobs. This applies only to servicing air operations. In addition, there are other forms of airport activity – air freight ser-

vice or a service base, where almost 800 mechanics work,” explains Tomasiak.

The investment plan of Pyrzowice Airport is to increase



The whole conversation with the President, Artur Tomasiak, can be heard in the podcast “Let’s Talk about Science.”



The investment plan of Pyrzowice Airport is to increase passenger traffic to 7.5 million per year in 2028, 10 million in 2033, and 15 million passengers in 2043.

passenger traffic to 7.5 million per year in 2028, 10 million in 2033, and 15 million passengers in 2043.

The new investments include, among others, connecting the main passenger terminal with the tunnel to the railway station, building a new road system and a transfer centre, building a multi-level car park, and building a multimodal hub for cargo and fuel transshipment based on a railway siding. The plan also includes building a fourth hangar for

aircraft maintenance and a second cargo terminal.

Among the specialists who will be most in demand in the coming years to work at the airport are logistics specialists, aviation mechanics, e-commerce specialists, and experts for operating information systems. In addition, the Silesian University of Technology educates graduates in three first-and second-cycle studies fields, where they can find jobs in the Polish Air Navigation Services Agency. Here, you will

find pilots and specialists in-flight services, flight control, and air navigation.

Aviation experts are confident about the flourishing industry. Their vision of development is not disturbed even by the environmental constraints associated with carbon dioxide emission into the atmosphere.

“Only 2 per cent of the pollution pool is generated by the aviation industry, but the fact that aviation has been stigmatized in the media has resulted in the most ways of reducing CO2 emissions being introduced in this sector. For example, airlines will have to use ecological fuels from 2025, so I am confident about the further development of aviation – adds President Tomasik. ■



SMALL BUT BIG

text: Katarzyna Siwczyk
Photos: Maciej Mutwil

THE SILESIA UNIVERSITY OF TECHNOLOGY ACQUIRED A NEW AIRCRAFT IN AUGUST, PROVIDING AN EVEN BETTER OPPORTUNITY TO EDUCATE FUTURE PILOTS AND AVIATION INDUSTRY EXPERTS. THE AIR TRAINING CENTRE WAS EQUIPPED WITH A P-MENTOR TECNAM AIRCRAFT.



The Silesian University of Technology Aviation Training Centre's new acquisition will be the most modern aircraft. The machine purchase, worth about PLN 2 million, will be covered by the University's funds.

The P-mentor Tecnam aircraft was officially presented on August 1st in the Silesian Univer-

sity of Technology hangar.

"It is a single-engine piston aircraft, certified for flights according to instruments. We were missing such a plane. Two years ago, we bought a multi-engine Tecnama 2006 for IFR flights" —said Dr Hab. Eng. PLT Jarosław Kozuba, Prof. SUT, head of the Academic Aviation Training Centre of the Silesian

University of Technology—ATO POLSL—during the presentation of the aircraft.

The aircraft is intended for the aviation training market. It has been certified by the European Aviation Safety Agency (EASA), and its new wing design complies with EASA CS-23 regulations.

The purchased aircraft is equipped with modern avion-

Now, the smallest aircraft can do everything a standard Boeing 737 can do regarding avionics. Although the aircraft is smaller, it offers excellent training opportunities.

ics technologies and new software in the aircraft cabin.

“On such aircraft, our students perform about 1200-1400 hours of flights a year. This aircraft will meet half of the annual requirements for pilot training. We are remarkably close to our independent abilities, and we are happy with that,” explained Prof. Jarosław Kozuba

At the Faculty of Transport and Aviation Engineering, students of the following specialties will use the equipment:

- Air navigation (pilotage).
- Mechanics and aviation operation.
- New specialties – air traffic management and operation of ground-based air security devices, as well as students of the interfaculty course, conducted jointly with the Faculty of Mechanical Engineering – aviation and space engineering.

“It is a plane for the basic training of students. Each piece of equipment in our hangars increases the quality of didactics and gives new opportunities. In addition to pilots, students of other majors and specializations will also benefit. For mechanics, it is an opportunity to gain experience with modern technologies used in this aircraft, engines, parameters, and solutions in the field of safety systems used by the manufacturer” – said Prof. Dr Hab. Eng.

Bogusław Łazarz, Vice-Rector for General Affairs of the Silesian University of Technology.

Piotr Grodzki, Bartolini Air representative, a Tecnam aircraft dealer, ensures that the vehicle will meet the highest training requirements. “At the moment, it is the most miniature aircraft that can do anything that a standard Boeing 737 can do regarding avionics. Although the aircraft size is smaller, it has excellent training opportunities” – explained Piotr Grodzki.

The manufacturer of this aircraft assumed that it would

provide training opportunities in the primary phase of PPL or integrated training, after which students could switch to Tecnam 2006, which the Silesian University of Technology already owns. In the next training phase, students could study on simulators and eventually sit in the control column of larger passenger aircraft.

For example, choosing to study at the Faculty of Transport and Aviation Engineering can pave such a path.

Let us remind you that the Silesian University of Technology has a certificate that authorizes the ATO POLSL Academic Aviation Training Centre to conduct training to obtain a pilot's license. ATO POLSL educates future pilots, among others, at the airport in Gliwice. ■



STUDENT COUNCIL - SCHOOL OF LIFE

text: Anna Świdarska
Picture: Maciej Mutwil

MOST GRADUATES WILL SAY THAT STUDIES ARE UNDOUBTEDLY THE MOST BEAUTIFUL PERIOD— ESPECIALLY AFTER YEARS. HOWEVER, FOR PEOPLE JUST STARTING THEIR ADVENTURE WITH A UNIVERSITY, THE BEGINNING OF THE ACADEMIC YEAR IS OFTEN ASSOCIATED WITH STRESS AND UNCERTAINTY. EVERY YEAR, THE STUDENT SELF-GOVERNMENT COUNCIL OF THE SILESIA UNIVERSITY OF TECHNOLOGY ENSURES THAT FIRST-YEAR STUDENTS QUICKLY SETTLE IN OUR UNIVERSITY. STUDENT COUNCIL OFFICIALS ENCOURAGE FIRST-YEAR STUDENTS TO ENGAGE IN THE ACTIVITIES OF THEIR ORGANIZATION FROM THE BEGINNING OF THEIR STUDIES.

Before the academic year is officially inaugurated, first-year students can get to know each other, familiarize themselves with the campus and faculties of the Silesian University of Technology and student organizations, and above all, ask students from higher years any questions bothering them. Such an opportunity arose during the annual adaptation camp organized by the Student Council. “Gryfno Rajza ino in Gaul,” as every year set in a different universe, this time refers to the world known from the series

of comics and films about Asterix and Obelix.

– We have prepared surprises, competitions, team competitions, and a lot of fun, which will undoubtedly help the participants get to know their peers on the threshold of this fantastic adventure, which is studying – says Błażej Brudny, Vice-President of the Student Council of the Silesian University of Technology, a student of the Faculty of Electrical Engineering. – And we, a little more experienced in the academ-

ic world, will always give them advice so that first-year students will get to know the University from our perspective, understand how it works, what structure it has – it will undoubtedly encourage them – he adds.

“Adapciak,” as every year, was officially opened by the authorities of the Silesian University of Technology and began with a visit to the campus. The time for integration into the Spiral Student Club was planned in the evening, and the camp participants spent the



first night in the dormitory. The next day, they took part in a trip to Międzybrodzie Żywieckie and a weekly program full of attractions.

– We are aware that people starting their studies have experienced many difficulties related to the lack of full-time education about the COVID-19 pandemic in secondary school and are indeed facing their consequences – emphasizes Dawid Mordarski, President of the Student Council at the Silesian University of Technology, a student of the Faculty of Organization and Management. “We want the “Adapciak” to help the participants break down barriers and make new acquaintances, which can turn into long-term friendships.

For several years, the adaptation camp took place in a holiday resort in Głuchołazy. However, the catastrophic flood that struck southern Poland in mid-September forced the organizers to change their location. Głuchołazy was one of the places that suffered the most during the event—water broke bridges and destroyed buildings and infrastructure. The Student Council and the Volunteer Centre at the Silesian University of Technology organized a collection of gifts for flood victims.

“The losses are devastating; some people have lost everything, so we encourage you to help. We collect the most necessary things such as bottled water, food with a long shelf life, cleaning and personal hygiene products, and power banks – enumerates the chairman.

– The Student Council is also there to unite the academic community in the face of crisis or, for example, to initiate charity actions.

The adaptation camp is an excellent opportunity to make first-year

students aware of the Student Council and its vital role in academic life. The representation of students constitutes 20% of the composition of the University Senate, has the same percentage of votes in the Rector’s election, takes part in the work of the Scholarship or Disciplinary Committee for students and PhD students, and, in short, can make fundamental changes. In addition to cooperation with the University authorities, the activities of the Student Council include comprehensive support for students, taking care of their rights, organizing events such as Igry, and representing the student community in Poland and abroad. In addition, students operating in the Council can improve their competences by participating in numerous training courses. Recruitment to this student organization lasts throughout the year, regardless of organized elections to the Student Council bodies operating at all Silesian University of Technology faculties and student houses. You can join one of the four committees operating within the organization: Image, Projects, Teaching and Benefits, and External Cooperation. Every student is welcome.

– We also invite students in the first year; they can try their hand, and they bring a valuable fresh perspective to us. We do not have any specific requirements for how much time should be spent on council-related activities. We

care about people full of enthusiasm and ideas on changing the world for the better – encourages David. I swear, it is addictive! I started by blowing balloons at the Ball of the Mechanics, then became involved in the activities of the Faculty Student Council, where we supported the science clubs, and ended up – successfully – in the election of the chairman – he adds.

– For me, joining the Student Council was natural because since I was a child, I worked in this type of school organization, and I like to do it – says Błażej. – Older colleagues have made the Student Council my home; I have friends I love spending time with. Thanks to many trainings, I face situations and problems that once seemed impossible. I put a lot of time and heart into the activity, but the people surrounding me and the experience I gained made it worth it.

Students learn creativity, complex problem-solving, team cooperation, people management, and effective communication at the Student Council. They make new acquaintances, which pay off in the future scientific and professional life. In addition to the impact on academic life and the future of the University, activity in the Student Council gives them a chance to acquire and develop soft skills – those that employers will particularly appreciate for future engineers. ■

We want the “Adapciak” to help participants break down barriers and make new acquaintances that can turn into long-term friendships. It is also an excellent opportunity to make first-year students aware of the Student Council and its essential role in academic life.

THE VOICE OF THE STUDENT COUNCIL

RESTRUCTURING THE UNIVERSITY BOARD OF THE STUDENT COUNCIL

The 6th Ordinary Meeting of the Student Parliament of the Silesian University of Technology, which took place on 15th May 2024, made significant changes in the structure of the University Management Board of the Student Council. As a result of the vote, Wiktor Kordala was appointed a new member of the Board for projects. His experience and involvement in the current local government activity will allow for the dynamic development and implementation of crucial student initiatives at the Silesian University of Technology.

Another change occurred during the 7th Annual Meeting of the Student Parliament, which took place on 26th June 2024. Parliament appointed Emilia Lapeta to the Management Board for External Cooperation then. Her role will be to strengthen the relationship between the Student Council and external partners, both at the academic and business levels, to increase the benefits for the student community. ■

text: Błażej Brudny

Contact via **social media** or by e-mail to biuro@samorzad.polsl.pl.



From left: Michał Szymanowski, Błażej Brudny, Emilia Łapeta, Dawid Mordarski, Emilia Skwarek, Wiktor Kordala, Grzegorz Król.



SUMMER SCIENCE WEEKS AT THE SILESIAN UNIVERSITY OF TECHNOLOGY

*edited: Jolanta Skwaradowska
photos: Jolanta Skwaradowska, Jan Szady*

THIS YEAR'S HOLIDAYS AT THE SILESIAN UNIVERSITY OF TECHNOLOGY WERE EXCEPTIONAL. THE UNIVERSITY OPENED ITS LABORATORIES AND LECTURE HALLS, PRESENTING ITS POTENTIAL AND INVITING EVERYONE INTERESTED IN ACQUIRING KNOWLEDGE AND LEARNING HOW OUR SCIENTISTS WORK DAILY. ALL THIS IS PART OF SCIENCE WEEK, AN EVENT ORGANIZED AS PART OF THE EUROPEAN CITY OF SCIENCE KATOWICE 2024 CELEBRATIONS.

There were the Microworld Week in July and the Eco Week in August. Scientists organizing these events prepared workshops, meetings, popular science lectures, photography exhibitions, and competitions.

MICROWORLD WEEK

During this Science Week, participants learned what lives inside plants, whether a kitchen can be



A young participant in the workshops during the Microworld Week

a small laboratory, what lives in our intestines, what is inside a cancer cell, and how to professionally take traces at the crime scene. Issues related to, among others, the construction of animated and inanimate microworlds were discussed. The participants could get to know and look at them using microscopic techniques.

Prof. Dorota Kwiatkowska from the Faculty of Natural Sciences of the University of Silesia inaugurated Microworld Week with a lecture entitled "The Vegetable World Becomes Increasingly Micro."

– "One of the duties of university employees, apart from scientific research and classes with students, is to popularize knowledge. We mustn't close ourselves; we must transfer our knowledge outside the university and show what scientists do. It is important at a time when many phenomena can be incomprehensible. We want everyone, not just scientists, to be aware of the world around us and to be able to understand it," said Professor Kwiatkowska.

During Microworld Week, there were lectures and workshops where participants could examine microorganisms more closely and apply chemical reagents to identify vari-

ous substances—that is, learn about science in practice.

– “The aim of this week is, first of all, to make each of us aware that science is not so terrible, and secondly, it is beneficial to us in life.” – said Dr Justyna Michalska from the Faculty of Energy and Environmental Engineering at the Silesian University of Technology.

On the first day of the event, the youngest, but also the slightly older ones, listened to a lecture combined with demonstrations entitled “Nature as a constructor – biomimetic solutions from micro to macro scale,” conducted by Marek Ples, a PhD student at the Faculty of Biomedical Engineering.

“I think organizing events like the Microworld Week is significant. There is a common view that science is something that not everyone has access to. We, starting with such interesting events, can present our work.” – emphasized the scientist.

On the second day of Microworld Week, participants could play the role of forensic laboratory employees, find out if the kitchen could be a scientific laboratory, and examine the cells of various beneficial microorganisms.

Classes were held in Gliwice, Katowice, and Chorzów. At the Faculty of Science and Technology of the University of Silesia in Chorzów, workshops “Colourful secrets of cells” took place. The participants could see what was inside the cancer cells.

In Gliwice, the Department of Environmental Biotechnology held a workshop entitled “Microworld in our kitchen.” The



Scientists at a chemical show

participants learned that the kitchen is a small laboratory where various chemical reactions and physical phenomena occur daily. In turn, the Biotechnology Centre of the Silesian University of Technology invited crime fiction lovers to a workshop entitled “CSI: Gliwice.” During the workshops, the interested could be forensic laboratory employees.

On Wednesday, the theme was “Wanted! Beneficial bacteria and their prominent features,” “Microworld in my body and around me – should all microorganisms be feared” and “Intestinal microcivilization” – were the workshops led by Paulina Sowik, a PhD student at the Department of Environmental Biotechnology at the Silesian University of Technology.

The knowledge passed on at such workshops will undoubtedly be helpful in everyday life. “Not everyone knows that there are more microorganisms in our body than there

are people in the world,” said Dr Eng. Anna Byczek-Wyrostek from the Biotechnology Centre at the Silesian University of Technology.

On Thursday, the participants of Microworld Week learned what lives inside plants, then learned about the “Cool adventures of flying bacteria,” and participated in the “Microworld of macro possibilities” workshop.

– “This lecture and workshops were addressed to children. We wanted to talk to them about microorganisms, whether they are bad or good. We also talked about viruses and their use as an alternative to antibiotics. Children actively participated in the classes and looked at microorganisms under a microscope.” – explains Dr Justyna Michalska from the Department of Biotechnology. During the Microworld Week, Saturday morning at the Silesian University of Technology looked unusual. In the gardens near the polymer build-

The aim of this week is to make each of us aware that science is not so terrible and that it is especially useful in our lives, said Dr Justyna Michalska from the Faculty of Energy and Environmental Engineering at the Silesian University of Technology.

ing, there was a breakfast on the grass and a unique lesson in the field, during which the youngest, together with their parents, could listen to exciting stories about microorganisms and take a closer look at what squeaks in the grass.

Grzegorz Lankosz, who deals with microfilm and can be met on Saturday evening, did not hide that we have no idea about this world, which could affect our daily lives.

“I was interested in this case myself. Today, looking for various microorganisms and samples near my home, I make extraordinary discoveries,” said the author of the film “Microscopic Hollywood – the role of “micro” organisms in human life.”

During the film, you could get to know organisms invisible to the eye daily, which can revolutionize the world. It was also interesting to see photos on a micro-scale. The presentation was prepared by a world-renowned expert in this field – Marek Miś.

Viewers could see that soy sauce, ointment for fingerprints, or air bub-

bles observed with the microscopic eye acquire completely assorted colours and characters. With the right light and polarization, they create real works of art.

Dr Hab. Eng. Anna Gnida and Dr Justyna Michalska from the Faculty of Energy and Environmental Engineering were the curators of the Microworld Week, and Dr Eng was the producer. Anna Byczek-Wyrostek.

EKO WEEK

Eco Week at the Silesian University of Technology’s motto was “The World of Ecology and Sustainable Development.” The program included extraordinary workshops, meetings, and popular science lectures,

which showed the diversity and multi-faceted nature of ecological issues in almost every discipline of life.

“The Eko Week within the European City of Science Katowice 2024 is a unique time in which we wanted not only to promote ecological attitudes but also to realize how important it is to take care of our planet”, – said the curator of the event, Dr Hab. Eng. Ewa Brągoszewska, Prof. of Silesian University of Technology.

On the first day, workshops and meetings were held. At the Katowice Creativity Centre SPINplace, workshops for the youngest were organized under the slogan “Be Eco with EcoBot!” Slightly older participants could take part in an on-line discussion entitled “Ecology in education—ecological awareness of Poles.”

Unusual Hasiomaszketnik Workshops were held in the Centre of New Technologies of the Silesian University of Technology. “Hasiomashketnik means that in the top of waste, we are looking for treats, which



Workshops in the laboratory during the Microworld Week

is something that has value, that we can transform and give such a thing a new life,” said Dr Eng. Monika Czop.

The first day of the Eko Week ended with two events in Katowice. First, at Kato Science Corner, a dozen participants participated in the Zero Waste Plant Kitchen workshop led by Olaf Józefoski from the Free Tea Association. Next, in the Square of the Council of Europe in front of the Silesian Library, a meeting occurred with Jacek Hugo-Bader, a journalist and reporter who refers to his work to ecological themes. The journalist talked about sensitivity, the disappearance of nature, and nomadic peoples.

On the second day of Eko Week, the workshop “We create Eco-toys” took place. During the classes, the kids made toys from waste, such as egg packaging, shoes, caps, or plastic bottles. Also, on Tuesday in Kościuszki Park in Katowice, there was a mindful EkoWALK, led by Patrycja Stukator from Czuje Las – a website dedicated to health and well-being. The intergenerational group – mothers with children, people with disabilities, and seniors – participated in the walk.

The second day of the Eko Week ended at Kato Science Corner, where Joanna Bronisławska, acting under the artistic pseudonym of Asia Mina, conducted the Ekoband – Recovered Music workshop.

– “I prepared workshops for children, during which we wondered what ecology in music is. We tried to create instruments from seemingly unnecessary things, giving

a second life to objects that would soon end up in the rubbish.” – explained Joanna Bronisławska.

On the third day of the Eko Week, workshops on making natural cosmetics and an author’s meeting with a reporter, Wojciech Jagielski, took place. The topic of how the environment can affect our health was discussed during the lecture “Clean Air – a Healthy Future” in the Department of Air Protection laboratory at the Silesian University of Technology. In this way, the devices we use to collect air pollutants and how we evaluate them were

“Organizing such events is especially important. There is a standard view that science is something that only some have access to. Starting with such exciting events, we can present our work,” – emphasized Marek Ples, a PhD student at the Faculty of Biomedical Engineering.

presented. The event was led by Dr Hab. Eng. Anna Mainka, Prof. of the Silesian University of Technology.

The author’s meeting with Wojciech Jagielski occurred in the Eco-Reading Room of the Silesian Library. The reporter was a correspondent during the war. He reported on the situation in the Middle East and Africa. He witnessed the degradation of the natural environment. He knows from his experience that the climate crisis and environmental destruction lead to the need for migration and migration.

On the fourth day of Eko Week, participants could face the

Canmagedon obstacle course and participate in planting flowers. There was also a discussion panel with the region’s inhabitants and representatives of local governments.

The day began with the workshop “Clean air—Eco-ways to fight micro pollution,” which occurred at the Centre of New Technologies of the Silesian University of Technology. At the Katowice Creativity Centre, SPINplace held a panel discussion titled “10 things you can do for clean air.” The inhabitants of the region and representatives of local governments attended.

In the Silesian Park, daredevils could face off on the obstacle eco-track – Canmagedon, prepared by the Recal Foundation for the Recovery of Aluminium Packaging.

– “We built a track as part of the project. “Everything can be valuable.” We wanted to show that recycling is not difficult.” – said Artur Loboeki from the Recal Foundation for the Recovery of Aluminium Packaging.

On the fifth day of Eko Week, an extraordinary meeting took place. During this time, scientists and residents of the region could see photographs of Silesian nature under the

slogan “Silesian nature—more exotic than you think.”

Nature photography can bring a lot to the world of science. We can capture some unique habits of animals in the photographs – explained Tomasz Scansny, who has been taking nature photography of the Silesian Voivodeship for years. It convinces us that it is easy to find birds of paradise here, whose colours are delightful, with an assortment of colours. On the same day, a hefty dose of knowledge about ecology was also waiting for visitors to Kato Science Corner Spin-Plane and the CINIbA library in Katowice, where lectures and ecological workshops were held. During the workshops, participants gained experience with varied species of bees and their role in the environment and made candles on their own.

On Friday, the debate “The Future of the Circular Economy: Challenges and Opportunities” was hosted and moderated by Prof. Balal Yousaf from

the Silesian University of Technology, a leading expert in bioenergy innovation.

As part of EKO Week, Saturday was marked by honey, bees, and recycling workshops. The day started with EkoW-ALK: “Meetings with nature—Wyrchczadeczka,” organized by the Forest District from Wiśła. Among other places, a dozen interested people had the opportunity to visit Wolier Kennel of Western Capercail-lies or the highest-located apiary in the Beskidy Mountains.

In Kato. werk – the Silesian social workshop in Katowice, the Water Duck Association held a workshop called “Precious Plastic.” Participants could learn what plastic is, its types and properties, and how the recycling process takes place step by step.

The day ended in Gliwice in the inner courtyard of the Faculty of Mining, Security Engineering, and Industrial Automation of the Silesian University of Technology, where Dr Eng. Jacek Nowak, a scientist at this

faculty, prepared the stand and lectured on “Ecomission – between blocks and flowers. Learn the secrets of bees in the big city.”

The Eko Week ended with an exhibition of eco-toys and a film eco-show. On Sunday morning in the Centre of New Technologies of the Silesian University of Technology, you could see eco-toys created during Tuesday’s workshops. The little creators built a robot, a rocket, a dinosaur, and even a cardboard guitar. Eko week ended with EkoSEANS at the KOSMOS cinema in Katowice. The participants saw a film about Simon Kossak – a legendary researcher, living surrounded by animals in the Białowieża Forest.

The curator of the Eko Week was Dr Hab. Eng. Ewa Brągoszewska, prof. SUT, the producer, was MSc. Eng. Ewa Głuszek.

Jolanta Skwaradowska prepared the text. Anna Świdarska, Katarzyna Siwczyk, Martin Huć, and Jolanta Skwaradowska reported the events. ■



Young participants of the Eco Week

The Event was financed by the EU. The views and opinions expressed are solely those of the author(s) and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). The European Union and the REA are not responsible for them.

The event was also co-financed by the Silesian Voivodeship - Co-Organizer of the European City of Science Katowice 2024.

WELCOME TO SCOTTISH CAFE!

text: *Jolanta Skwaradowska*
photos: *Tomasz Stokłosa*

THE SCOTTISH CAFE WILL BE A PLACE OF MEETINGS, DISCUSSIONS, AND MATHEMATICAL INSPIRATION. IT WILL OPERATE IN THE SILESIAN UNIVERSITY OF TECHNOLOGY LIBRARY FROM THE NEW ACADEMIC YEAR. THE NAME REFERS TO THE TRADITION OF THE SCOTTISH CAFE, WHICH EXISTED BEFORE WORLD WAR II IN LVIV. IT WAS A PLACE WHERE OUTSTANDING MATHEMATICIANS MET AND CREATED NEW MATHEMATICAL THEORIES.

The Scottish Cafe at the Silesian University of Technology was officially opened on 12 July, and students, scientists, and residents of the region will be able to use it from the new academic year. The ceremony was attended by the Deputy Minister of Science and Higher Education, Prof. Maria Mrówczyńska, University authorities, authorities of Gliwice, and Prof. Zbigniew Marciniak, who witnessed the famous passing of the live goose as a reward for solving a mathematical puzzle.

The Café refers to our university's tradition at the Lviv Pol-

technic. After World War II, many scientists, PhD students, and students of this university settled in Gliwice, and they formed the first scientific staff of the Silesian University of Technology.

– Lviv employees brought with them not only study programs or concepts of scientific research but also many exciting stories that influenced the development of Polish scientific centres. One is the Scottish Café, which was in Lviv and was a meeting place for Lviv mathematicians. Coffee and cookies were tasted and eaten in this place, and scientific topics were

discussed – said the Rector of the Silesian University of Technology, Prof. Arkadiusz Mężyk.

The Scottish Cafe operated in Lviv before the Second World War. It was a meeting place of outstanding mathematicians who worked out mathematical theories during many hours of social meetings. Initially, they wrote them on the tabletop of a coffee table; finally, the wife of one of them – Stefan Banach – bought them a thick notebook, and since then, all the puzzles and mathematical problems have been written in this book. It was named the Book of Scottish Cafe, and it has more than



Guests of the opening ceremony of the Scottish Café at the Silesian University of Technology

Lviv employees brought programs of studies or concepts of scientific research and many exciting stories that influenced the development of Polish scientific centres. One of them is the Scottish Cafe, which was in Lviv and was a meeting place for mathematicians from Lviv," said the Rector of the Silesian University of Technology, Prof. Dr Hab. Eng. Arkadiusz Mężyk.

190 tasks and issues, some of which are still unsolved today.

The researchers, who wrote mathematical puzzles in the book, set prizes for their solution: a mug of coffee, a bottle of wine, lunch, and even a live goose. With Goose, a unique story, which Prof. Zbigniew Marciniak witnessed from the University of Warsaw, is connected. In 1972, Swedish mathematician and pianist Per Enflo solved one of the puzzles left in the book by Stanisław Mazur in 1936. The reward for its solution was a live goose. The young scientist was invited to Warsaw, where he met with Prof. Mazur to collect his prize.

– I was then a student in the second year and a witness of the award presented by professor Stanisław Mazur, who, after the war, was at the University of Warsaw – recalled Prof. Zbigniew Marciniak. “The whole event was moving; there was a crowd of mathematicians, and this young scientist Per Enflo, happy that he managed to solve this mystery after 36 years, but also embarrassed: what to do with the prize of a Goose? said Prof. Marciniak.

Since the young scientist could not take the living goose abroad, her fate was doomed. And according to the story, it ended as the main dish.

The Scottish Café at the Silesian University of Technology is called the Lviv one. “We want to recreate this spirit, this atmosphere of creating science, discussion, and cooperation. The Scottish Cafe was a special place. Mathematicians met there for many hours, talked little, solved mathematical problems more, solved puzzles, and played chess. I want to transfer all this here to Gliwice, to our University, primarily to activate young people and show them that you can develop your passions in the spirit of cooperation – said Dr Hab. Renata Frączek, Director of the Library of the Silesian University of Technology.

A book of riddles appeared in the Scottish Café at the Silesian University of Technology, in which our scientists will write down tasks. The prize for their solution will be books and small goose figurines.

The library director emphasized, “In this way, we want to encourage students and school youth to become interested in mathematics.”

“When two talented students meet, start discussing, and then another one joins them, there is already a chance that together they will create something revealing and new—which I wish to the Silesian University of Technology,” added Prof. Zbigniew Marciniak.

In the Scottish Cafe, you can solve mathematical puzzles, play chess, and eat a meal.

“We want to organize a chess circle and a chess corner, like the one that once existed in Lviv. Anyone who visits our Cafe can solve a mathematical puzzle or play chess, have a good breakfast, lunch, or cake, and have a cup of coffee and tea. Here, you will be able to organize meetings with exciting characters, invite a guest, and, in a unique atmosphere, bring our scientific heritage closer,” added Director Frączek.

The Scottish Café is located on the ground floor of the renovated building of the Silesian University of Technology Library and the Faculty of Applied Mathematics. ■



Prof. Zbigniew Marciniak

BIG UNKNOWN IN ASSUMPTIONS

text: Marek Gabzdyl
photos: mat. arch. autora

THE COOPERATION BETWEEN THE SILESIA UNIVERSITY OF TECHNOLOGY AND THE CITY OF GLIWICE HAS A LONG TRADITION DATING BACK TO THE START OF THE UNIVERSITY'S EXISTENCE. THERE HAVE BEEN MORE FRUITFUL PERIODS IN ALMOST EIGHT DECADES, BUT THERE HAVE ALSO BEEN TIMES OF "DROUGHT." THE COOPERATION GAINED A PARTICULAR DIMENSION IN THE 50S; ITS EFFECT WAS THE "X" CINEMA THEATRE. FOR SEVERAL DECADES, THE CHARACTERISTIC NEON SIGN WITH THE LETTER "X" DEFINED THE CORNER OF KRAKOW SQUARE, BECOMING ONE OF THE CITY'S SYMBOLS. CURRENTLY, THE CONTACTS OF THE MAGISTRATE AND THE UNIVERSITY HAVE ENTERED A NEW, PROMISING PHASE, WHICH THE PRESIDENT OF GLIWICE EMPHASIZED DURING THE OPENING CEREMONY OF THE STUDENT CREATIVITY CENTRE.

Information about the investment appeared in the local press, i.e. in the "Nowiny Gliwickie" published in 1956. A note published in the issue of 12th October 1958 informs: "The renovation, which has been going on since 1st July, will be smooth, fast and almost over soon. One thousand two hundred thousand PLN processed so far, coming from the funds of Voivodship Presidium of the People's Council, the Rector of the Silesian University of Technology, and the ZSP have been used wisely, rationally, and usefully." The author of the text, after a short presentation of what future users of the building can expect and after drawing the attention of readers to what more interesting details (wall coverings made of plastic!), concludes the article with an appeal to the institution and society for help (probably financial) in completing the works on the intended date.

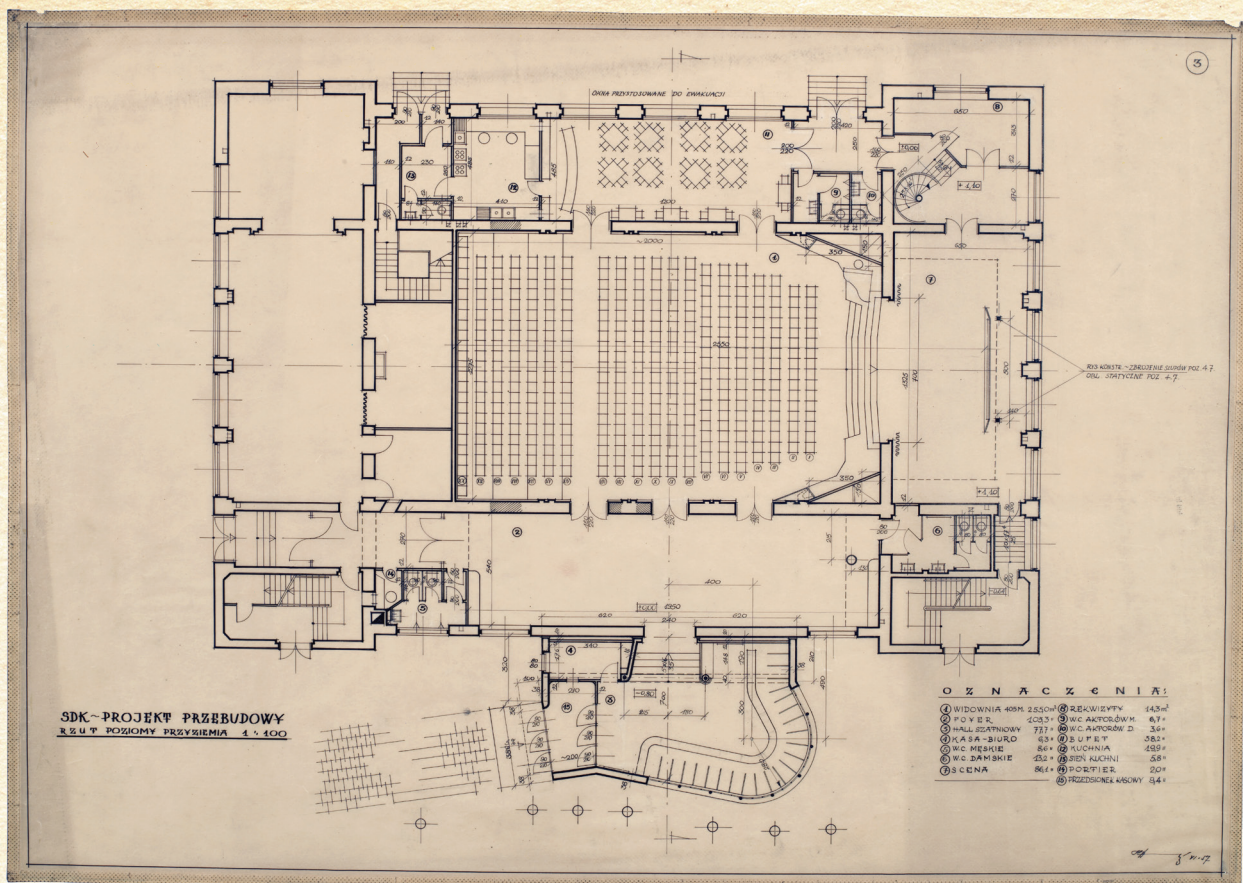
So much in "Nowiny." After another reconstruction and change of functions, there is



Entrance to Kinoteatr X.

no trace of the implementation of Professor Todorowski's project. Fortunately, the author detailed the investment in an article published in the monthly "Architektura," No. 11-12 from 1959. The description suggests that the scope of works initially conducted in the building differed from what was improved to accommodate several building rooms at the intersection of Zwycięstwa and Strzody Streets for the needs of the International Press and Book Club. The professor lists several defects in

the central part of the building, i.e., the auditorium, which – in his opinion – could not perform its function correctly for the following reasons: "a defective functional solution of the audience's premises, highlighted by the lack of an entrance hall and an adequate number of door openings, an inadequate stage dimension of 4.10 m high, a floor raised above the floor of the hall by 0.70 m and a stage opening of 3.5 m high and 5.60 m wide, the lack of minimum stage facilities and adequate



Ground floor level view (from the collections of the Museum of Architecture, Wrocław. Ref. Mat IIIc-30/1/P)

clothing of artists, the lack of a cinema operator room, lack of mechanical ventilation, faulty lighting and heating installation, low architectural level of the whole and a significant percentage of wear and destruction of the rooms of the auditorium.”

Perhaps many participants of events or screenings in the X cinema theatre drew attention to the lack of tilt of the auditorium, forcing the need for an unnatural head-covering. Professor Todorowski explains this in the text: “In the first assumptions, the hall was supposed to be used not only for stage and theatre performances, cinema screenings and concerts but also for dance parties, which imposed the condition of leaving a larger part of the floor area of the hall horizontally. Unfortunately, the resignation of this postulate was too late to allow

for the conditions of proper visibility for theatrical performances to be fully considered in the longitudinal profile of the hall.” Perhaps the most characteristic element, which could not escape anyone who visited the cinema theatre for obvious reasons, was the addition from Strzody Street, which houses the ticket office and cloakroom. The fragment of the building was described in the following way by the designer himself: “To obtain a separate entrance to the building and to enlarge the insufficient area of the rooms intended for the public, it was designed from the courtyard open towards Strzody Street, one-story pavilion, housing a ticket hall, an administrative and booking office and a cloakroom for spectators. The irregular shape of the pavilion was created because of considering both the functions

and, above all, the existing state, and mainly the preservation of existing trees on the plot’s border, strongly leaning toward the SDK building and not forming a regular wall. (...) In The locker room, the texture of the raw concrete ceiling and the round column was emphasized with a colourful treatment of individual elements of non-planned and specially selected formwork, using white, lemon, and warm grey colours. Colour shifts were introduced on the joints of the boards, which resulted in the carpet softness of the ceiling plane with the simultaneous occurrence of different formwork widths.

The “extension” has been designed so that the form and the applied finishing materials are maximally compatible with neighbouring objects. An example of the alteration of the entrance to the Teatr Nowy in Za-

brze made in 1967 shows that attention was only sometimes paid to the architectural fit.

It is obvious that when designing a cinema or theatre hall, the right acoustics are the absolute priority. Professor Todorowski paid particular attention to this factor: "(...) Both the adopted interior materials and the way they are used, as well as the preliminary calculations and graphs, were made by the architect and then checked with the help of a specialist. Thanks to the new architectural and acoustic design of the room, the reverberation time in the old room for the frequency of 512 Hz was reduced to about 1 second, which should be considered the average optimum for a room with various uses and has been fully confirmed by the current practice of using the room 1.9. The same intensity of voice and sound in all places of the room, excellent hearing even whispered words, preservation of the tone of the sound – these are the undeniable advantages of the realized room, confirming the cost-effectiveness of conducting an acoustic study as an integral element of the design of the performance halls."

Elements of the equipment of other interiors were designed using readily available materials, such as metal, wood, or – at that time, a symbol of modernity – plastics. Due to impracticality, some elements were quickly replaced with more useful ones: "(...) the standing ashtrays are designed in a structure of oil-painted steel rods. Broken in a few days, used as appropriate ashtrays, plates made of folk ceramics – changed to

more resistant to managing by the audience and staff – to aluminium."

Equipped to the last detail, the building was delivered with a slight slip. It was not opened – as was planned – on 4th December, but on 17th January of the following year. The opening was loud and numerous – the management and scientific staff of the Silesian University of Technology, representatives of several ministries, provincial authorities, youth... "Nowiny Gliwice" informed about this, of course: "(...) the cutting of the ribbon and handing over of the X Kinotheater to its proper host – the Association of Polish students at the University of Technology, was performed by the Rector of the University, Prof. Dr Eng. Stanisław Ochęduszeko."

Interestingly, there was already a cinema "Attraction" in the building. This name is still in the note from 11th January, announcing the building's commissioning on 17th January ("Attraction" in an innovative design"). "Kinoteatr X" appeared only in the next edition

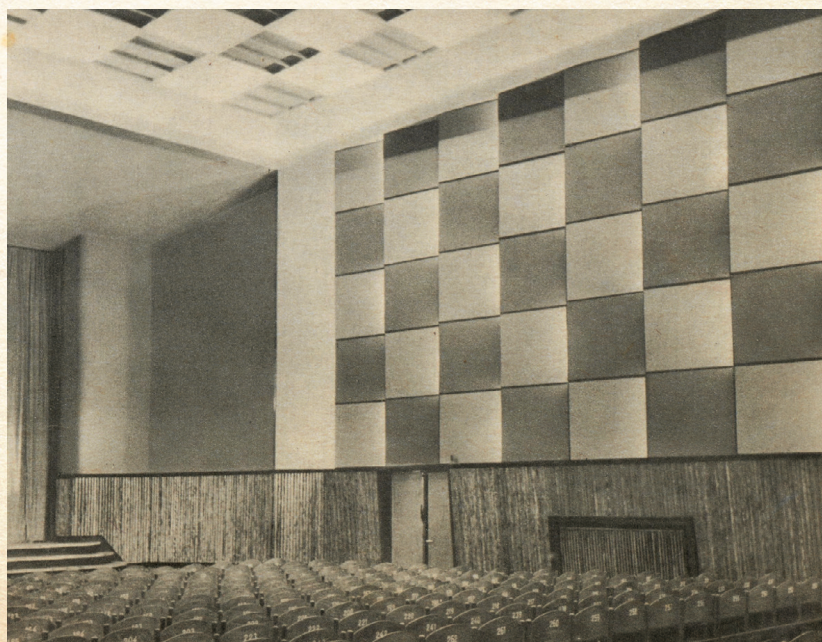
of the city weekly. It could have been Professor Todorowski's original idea, especially since the article in the monthly "Architektura" ends with these words: "(...) From the outside, the Cinema Theatre (Kinoteatr) "X" is advertised with the help of a set of neon compositions, the most important of which: the 2.5-meter-high letter "X", visible on four sides, invites you to the interior, where the viewer is waiting in the auditorium, as always and everywhere – a great unknown.

"Attraction" or "X"—for decades, this place has offered visitors "x" and maybe even "x2" attractions, both for the elderly and for the younger. The writer of these words confirms this; he has been using the Social Department of the Silesian University of Technology's offer addressed to the children of its employees for many years. ■

I used:

„Architektura”, nb 11-12, 1959 r.

“Nowiny Gliwice,” numbers from 1958 and 1959.



General view of the Main Hall ("Architektura," nb. 11-12, 1959)

EVENTS

TEN THOUSAND PEOPLE ARE WILLING TO STUDY AT THE SILESIAN UNIVERSITY OF TECHNOLOGY.

More than ten thousand people applied for recruitment for the first-cycle studies at the Silesian University of Technology, a better result than last year. The number of people interested in studying was twice as large as the number of places available in all fields of study (4,640).

In the first round, the most popular fields of study were computer Science (practical field)—7 people willing to take one place; mechatronics—6 people per place; Aerospace Engineering, Mechatronics and Machine Construction, and Architecture. In the case of second-cycle studies, the most popular fields were Architecture, Cognitive Technologies, and Industrial Informatics. ■

THE ORGANIZATIONAL REGULATIONS OF THE SILESIAN UNIVERSITY OF TECHNOLOGY.



photo Jan Szady

At its meeting on 26th August 2024, the University Council gave a positive opinion on the Silesian University of Technology Organizational Regulations presented by the Rector-Elect, Prof. Dr Hab. Eng. Marek

Pawełczyk. The Rector signed the Organizational Regulations on the first day of his office and became an act in force from 1st September 2024. ■

THE FIELD OF "ARTIFICIAL INTELLIGENCE AND ROBOTICS IN MEDICINE" AT THE SILESIAN UNIVERSITY OF TECHNOLOGY.

We invite you to postgraduate studies in the future and developing field of "Artificial intelligence and robotics in medicine." The Silesian University of Technology and the Medical University of Silesia jointly run the course. It is the free postgraduate study that the Medical Research Agency finances as part of the original project entitled "Innovative medicine based on facts, IT, AI and robotics."

The recruitment for the second edition of postgraduate studies will be conducted between the 13th and 31st of January 2025. Classes will be conducted in hybrid, online, and stationary modes at the Faculty of Medical Sciences in Zabrze and the Faculty of Biomedical Engineering of the Silesian University of Technology. More information at www.medycynainnowacyjna.sum.edu.pl/ai-i-robotyka-w-medycynie. ■

2ND FORUM OF RECTORS OF POLAND AND UZBEKISTAN

The Second Forum of Rectors of Poland and Uzbekistan took place in Warsaw in July. The event was attended by 13 universities from Uzbekistan and 18 representatives of Polish

universities. The Rector, Prof. Arkadiusz Mężyk, represented the Silesian University of Technology. During the Forum, Silesian University of Technology signed two agreements with universities from Uzbekistan: Toshkent Institute of Chemical Technology and Toshkent State Technical University. ■



photo Grzegorz Kłapyta

DR HAB. MAŁGORZATA DOBROWOLSKA, PROF. SUT, CHAIR OF THE ADVISORY TEAM FOR THE "SOCIAL RESPONSIBILITY OF SCIENCE" PROGRAM

In Warsaw, a ceremony of the swearing-in of the advisory team to the "Social Responsibility of Science" program took place. The team chair, Dr Hab Małgorzata Dobrowolska, Prof. of the Silesian University of Technology, was elected.



photo: of Silesian University of Technology

The subject of the "Social responsibility of science" pro-

gram is to support entities of the higher education and science system and other organizational units acting for the dissemination of science in the implementation of projects aimed at popularization of science or promotion of academic sport. The program aims to support scientific libraries by maintaining resources of significant importance for science and their development and making them available electronically. ■

EXCITED FOR THE NEW SCHOOL YEAR

For the seventh time, the Academic Secondary Comprehensive Schools of the Silesian University of Technology in Gliwice and Rybnik inaugurated a new school year. The Rector, Prof. Dr Hab. Eng. Marek Pawełczyk, the Rector of the Silesian University of Technology, and Prof. Dr Hab. Eng. Bożena Skolud, Vice-Rector for General Affairs, took part in the ceremonies in Gliwice school.

Fifty-two students began their education in the first classes of ALO (Academic Secondary Comprehensive School) in Gliwice – 26 each in a polytechnical and architectural profile class.



photo Maciej Mutwil

At the Academic Secondary Comprehensive School of the Silesian University of Technology in Rybnik, 26 students began their first-class education—thirteen on the technical and architectural profiles. Krzysztof Lazaj, director of ALO

in Rybnik and Dr Hab. Zygmunt Lukaszczyk, director of the Silesian University of Technology branch in Rybnik, welcomed all participants in the ceremony.

Dr Hab. Eng. Anna Janina Dolata, ProfSUT Is the Chair of PTMK Dr Hab. Eng. Anna Janina Dolata, Prof. SUT became the president of the Polish Society of Composite Materials during the XXVI Scientific Symposium “Composites – Theory and Practice” organized by PTMK with the participation of the Committee of Materials Engineering and Metallurgy of the Polish Academy of Sciences and the Faculty of Materials Engineering of the Silesian University of Technology. Among the members of the current PTMK board are five employees in the Faculty of Materials Engineering. ■

THE AMBASSADOR OF THE SOCIALIST REPUBLIC OF VIETNAM IS A GUEST OF THE SILESIA UNIVERSITY OF TECHNOLOGY.



photo: Materials of Silesian University of Technology

In August, the Silesian University of Technology was visited by Dr Ha Hoang Hai, Ambassador Extraordinary and Plenipotentiary of the Socialist Republic of Vietnam in Poland, and Bach Van Nam, First Secretary responsible for culture and press. The guests of our University were welcomed by Prof. Dr Hab. Eng. Arkadiusz Mężyk, Rector of the Silesian University of Technology, and Prof. Dr Hab. Eng. Anna Chrobok, director of the

College of Studies of the Silesian University of Technology.

Ha Hoang Hai has been Vietnam's Ambassador to Poland since April 2024. Previously, he held positions at various levels in the Ministry of Foreign Affairs and the Vietnamese Embassy in Poland. It is the ambassador's first visit to the Silesian University of Technology. ■

VISIT OF A DELEGATION FROM TAIWAN TO THE SILESIA UNIVERSITY OF TECHNOLOGY

A 4-person delegation from Southern Taiwan University of Science and Technology visited the Silesian University in August. During the meeting, there was a presentation of both universities and a discussion on the principles and shared areas of cooperation.

The most critical objectives were implementing joint PBL projects and academic exchange. During the meeting, the Rector Elect of the Silesian University of Technology, Prof. Marek Pawełczyk, and Dr Te-Kuang Chou, Interim President of Southern Taiwan University of Science and Technology, signed a cooperation agreement. Universities have committed to cooperation in teaching and academic exchange—both student and scientific. ■

PROGRAMMERS FROM ALL OVER POLAND MET AT THE SILESIA UNIVERSITY OF TECHNOLOGY.

Silesian University of Technology hosted the 16th edition of the PyCon PL conference. It is the largest on-site conference in Poland dedicated to Python and part of the worldwide PyCon conference series.

The conference was attended by professionals who use Python daily and amateurs

and enthusiasts who wanted to expand their knowledge of this popular programming language. About 230 programming enthusiasts met at the Silesian University of Technology. ■

WE KNOW THE DATE OF THE 8TH EDITION OF THE SILESIAN SCIENCE FESTIVAL

The 8th edition of the Silesian Science Festival will take place on 7-9 December 2024 at the International Congress Centre in Katowice. Today, we invite you to participate in this event.

The next edition will let participants get acquainted with the latest research results and discoveries daily from the Academic Consortium Katowice City of Science 2024 universities.

Today, the Silesian University of Technology, one of the universities that will present its potential at this event, encourages you to plan a free weekend, visit the National Fund stands, and participate in shows, lectures, and workshops.



15TH EDITION OF START IT UP

The 15th edition of Start It Up will take place on 9th October in the Science and Technology Park Technopark Gliwice. It is an event dedicated to start-ups and addressed to entrepreneurs and all those who take their first steps in business.

In each edition, the organizers try to touch on topics close to entrepreneurs and introduce the latest business trends.

There will be exceptional meetings with speakers and expert advice. Participation in the event is free of charge. More information about the event can be found on the website: www.startitupgliwice.pl. ■

SILESIAN UNIVERSITY OF TECHNOLOGY INCREASES THE SPEED OF CONNECTION TO THE REGIONAL NETWORK.

The Silesian University of Technology was the first university in the region to launch a connection to the Silesian Academic Computer Network (SASK) using 100 Gbps Ethernet technology. The Silesian University of Technology's Computer Centre employees installed and configured the devices.

This change increases the speed of connection to the national network PIONIER, the pan-European computer network of the scientific community GÉANT, and to the Internet. In addition, increasing the speed of connections to SASK allows for a fuller integration of the internal computer network of the Silesian University of Technology campuses in Katowice, Gliwice, Zabrze, and Rybnik. Increasing the network's capacity also means greater access to scientific resources and the possibility of implementing projects in cooperation with other universities, including abroad. ■

YOUNG SCIENCE BEYOND BORDERS CONFERENCE FOR YOUNG SCIENTISTS

The Academy of Young Scientists of the Polish Academy of Sciences invites you to participate in the Young Science beyond Borders conference, which will take place on 24th October-25th October 2024 and aims to involve foreign young scientists of the Silesian University of Technology to share their achievements and

research. More information can be found on the event website: www.amu.pan.pl/ysbb. ■

THE 12TH INTERNATIONAL CONFERENCE EPAE 2024

Participation in the Environmental Protection & Energy Conference (EPAE) 2024, which will be held on 6th December at the Silesian University of Technology, offers opportunities to present projects and research results, introduce innovative ideas, and establish invaluable contacts with young researchers, scientists, and experts in environmental protection and energy.

The EPAE Conference has been developing since 2012 and has become the most critical event. It brings together young scientists, researchers, and professionals worldwide who share their insights and want to contribute to the global environmental protection and energy dialogue. Participation in the conference is open to both professionals and young scientists. It is important to note that students are exempt from fees. ■

SILESIAN UNIVERSITY OF TECHNOLOGY AT THE ISTSILESIAN FORUM OF MENTAL HEALTH

The first edition of the Silesian Forum of Mental Health, whose partner was the Silesian University of Technology, is ahead of us. The "Sound of Music Therapy" event will occur on 2nd November from 10:00 to 15:00 in Mrowisko at 85 Pszczyńska Street in Gliwice. The main goal of this event is to promote mental health prevention using music therapy. Participants will have the opportunity to explore this subject during psychoeducational lectures that will address issues related to music therapy and the neurobiology of music.

The lectures will be addressed to young people – students and parents, teachers, and elderly people. Participation in the event is free of charge. However, it is necessary to register in advance via the form: <https://forms.office.com/e/4gAiSNzNuH>. ■

TAKE PART IN THE NASA SPACE HACKATHON.

The Silesian University of Technology took over the academic patronage of this year's edition of NASA Space Apps Challenge Stalowa Wola 2024 – Europe's most significant space hackathon. The event will take place on October 5th and 6th in Stalowa Wola.

The event is aimed at space and space engineering enthusiasts. It is an excellent opportunity to meet space and innovation industry experts. Participation in this event guarantees the opportunity to take advantage of the expert care of mentors and specialists, such as Maciej Kawecki and John F. Hall from NASA. ■

NEW RACING CAR OF SILESIAN UNIVERSITY OF TECHNOLOGY

A new SW-05e racing car was presented at the Silesian University of Technology.

Eighty-four students and trainees developed it in seven technical and two marketing teams. The project took one year to complete.

The SW-05e car is the third electric vehicle constructed by the POLSL Racing Student Science Club, which operates at the Silesian University of Technology. The Club is made up of students from different faculties. The latest project is packed with modern solutions. ■

INTERNATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE ON DESIGN, RENOVATION INNOVATIONS, AND MODERNIZATION IN THE ENERGY INDUSTRY

We invite you to the XXII International Conference on Scientific and Technical Design, Renovation Innovations, and Modernization in the Energy

Sector. The conference will be held in Ustroń from 27th November to 29th November 2024. Details about the event are on the website: www.pire.polsl.pl/. ■

SOLIDARITY WITH THE TRANSPLANTATION MEDICINE

The Ministry of Health is conducting an information and educational campaign, "Solidarity for Transplantation," implemented as part of the National Program for the Development of Transplantation Medicine.

The campaign continues and develops activities started in 2015 under the slogan "Consent to Live". Its main objective is to increase transplant treatment availability in Poland and bring it closer to European indicators on the number of transplants performed. More information about the action can be found at: www.zgodanazycie.pl ■

SUCCESSSES

THE PODCAST "LET'S TALK ABOUT SCIENCE" WAS NOMINATED FOR THE SILESIAN SCIENCE FESTIVAL'S POP SCIENCE AWARD.

In the fifth edition of the competition for the POP Science Award of the Silesian Science Festival, KATOWICE in the podcast or radio broadcast category, the Silesian University of Technology "Let's Talk about Science" podcast was nominated for the award.

The Promotion and Communication Centre of the Silesian Univer-

sity of Technology has been running the podcast since February 2023. By July 2024, it had reached over 14 thousand listeners via streaming channels, including Spotify, Apple Podcasts, Amazon Music, and Transistor.fm.



We want to thank you for this nomination, which provides

additional motivation for implementing subsequent episodes. In the autumn, we will proceed to the second stage of the competition, i.e., online voting, which, together with the final votes of the Jury, will decide the result. We encourage you to support our initiative today! ■

BLUE WINGS 2023 FOR THE SILESIAN UNIVERSITY OF TECHNOLOGY

The Civil Aviation Personnel Training Centre of Central and

Eastern Europe of the Silesian University of Technology was honoured with the “Blue Wings 2023” award. This award is one of the most prestigious in the aviation industry. The award was received by Dr Hab. Eng. Jarosław Kozuba, Prof. SUT and the Director of CKKL (Civil Aviation Personnel Training Centre), during a gala related to the Polish Aviation Day at the 22nd Tactical Aviation Base in Malbork.

The Blue Wings have been awarded since 1964 for the most outstanding achievements in Polish aviation in the year preceding their award to representatives of Polish civil and state aviation. ■

“BRAND-ŚLĄSKIE” FOR “DĄBROWIACY” FROM THE SILESIA UNIVERSITY OF TECHNOLOGY

In the PreZero Arena Gliwice, the Gala of the Regional Chamber of Industry and Commerce in Gliwice was held, during which the fifteenth edition of the “Brand-Śląskie” competition was decided. Among the winners was the Academic Dance Ensemble of the Silesian University of Technology “Dąbrowiaci.” Barbara Lisiecka received the statuette in the region’s Cultural Heritage category on behalf of the ensemble.



photo Tomasz Żak

The “Brand – Śląskie” award is a sign of appreciation for a significant contribution to the development of the Silesian Voivodeship and is honorary. Among the awarded were representatives of the Silesian University of Technology staff – Dr

Hab. Małgorzata Dobrowolska, Prof. SUT, and Dr Hab. Eng. Anna Timofiejczuk, Prof. SUT, received the Crystal of the President of the Regional Chamber of Industry and Commerce in Gliwice. A special award in recognition of his invaluable contribution to building the position of Poland and Europe was given to Prof. Jerzy Buzek. ■

DR HAB. ENG. ARCH. AGATA TWARDOCH, PROF. SUT A CITY PLANNER OF THE CITY OF GLIWICE

From 1st September, Dr Hab. Eng. Arch. Agata Twardoch, Prof. SUT, will be the city urbanist and head of the City Urbanist Office, a new unit in the City Office in Gliwice.



photo Magda Kryjak

A scientist at the Silesian University of Technology has made herself known to the inhabitants of Gliwice as the author of a project for several public spaces, including a new arrangement of the European Square and the Chrobry Park in Gliwice. Daily, she deals with projects related to available housing and alternative forms of housing. She conducts scientific research, open popularising lectures, and design workshops. She writes for industry magazines. She is the author of the monograph “System for living space” and the book “Architektki. “Will women design a better city?” ■

GAME FROM THE SILESIA UNIVERSITY OF TECHNOLOGY AWARDED!

The Housing Estate Game, created at the Faculty of Architec-

ture, was appreciated at the International Design Educates Awards competition. It won first place in the category of Project of the Year 2024.

The team that developed the game is the Student Science Club Urban Model, which operates at the Faculty of Architecture of the Silesian University of Technology under the supervision of Dr Hab. Eng. Arch. Tomasz Bradecki, Prof. of Silesian University of Technology. The game was appreciated by a prestigious group of professionals from all over the world. ■



photo Tomasz Stokłosa

A SILESIA UNIVERSITY OF TECHNOLOGY STUDENT TOOK PART IN AN INTERNATIONAL PROJECT.

Agata Kołkowska, a student of the Faculty of Chemistry at the Silesian University of Technology, participated in the international project “I. fast—Challenge-based Innovation Accelerators to tackle healthcare challenges,” which was co-financed by the European Union.



photo: private archives

The project theme was “Interdisciplinarity.” The participants were divided into four groups of six people. One could find

a physics, medicine, or chemistry student in each group. Twenty-four people from 20 different nationalities participated in the whole project. Only 10 percent of the lucky ones were able to qualify. Students worked hard for ten days to produce a new application for particle accelerators in medicine and planned how to implement the plan. ■

A GRADUATE OF THE SILESIA UNIVERSITY OF TECHNOLOGY AWARDED IN AN INTERNATIONAL COMPETITION!

Dr Karol Duda, a Faculty of Applied Mathematics graduate at the Silesian University of Technology, received a distinction in the Stefan Banach International Award for his outstanding doctoral thesis in mathematical sciences.



photo: private archives

Dr Karol Duda is a mathematics graduate at the Faculty of Applied Mathematics. He also worked for a year at this faculty before moving to the University of Wrocław doctoral school. The title of the awarded doctoral dissertation is "Dynamics and Computability in Geometric Group Theory." Its promoters were Prof. Dr Hab Aleksander Iwanow and Dr Damian Osajda. The PhD deals with two areas of research in geometric group theory. ■

A STUDENT OF THE SILESIA UNIVERSITY OF TECHNOLOGY IN A PROJECT SAVING BEES

Irmina LEPIARCZYK, a student of Biomedical Engineering at the Silesian University

of Technology, participated in an international project that aims to save bees by fighting varroosis, a deadly disease among them.

A student of Biomedical Engineering was selected based on scientific achievements as one of 10 students from all over Poland to represent the country in the Huawei Seeds for The Future competition in Rome. ■

SILESIA UNIVERSITY OF TECHNOLOGY STUDENTS WERE AWARDED IN THE COMPETITION FOR CREATING COMPUTER GAMES.

In the competition for team computer game development, 2024 representatives of the Silesian University of Technology from the Student Science Club of Graphics, Vision, and Computer Games received TOP3 distinction in the Game Design category. They also won as many as three awards from sponsors.

The Silesian University of Technology was represented by a team called "Place Holders," composed of Maksymilian Kisiel, Mateusz Górecki, Bartłomiej Gordon, Samir Abu Safieh, Wojciech Owczarek, and Julia Wróbel. The students belong to SKN Graphics, Vision, and Computer Games. In addition, Bartłomiej Gordon exhibited his application design for the VR platform in the Show Your Project category. ■

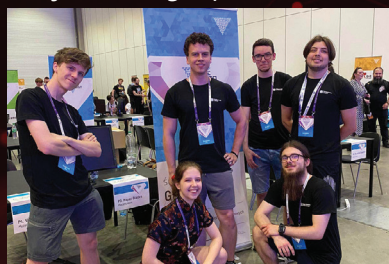


photo: private archives

AND THEY FLEW.



photo: private archives

19.9 meters – this distance was flown by a group of aviation and space engineering students of the Silesian University of Technology from the Pat & Mat Aviation Expedition team during the Red Bull Flight Competition 2024 in Gdynia. This result is the third in the flight length category for 40 teams from all over Poland.

Our students have designed and built a flying machine themselves. It consists of a car, a reference to the iconic Pat & Mat fairy tale, and a hang glider. The car is accelerated by rails on the roof of the vehicle, and the glider flies with the help of a wing with a string of about 2 meters and a span of 10 meters. ■

THE BEST IN THE COUNTRY, THE FIFTH IN THE WORLD



photo: private archives

Anna Krzak, PhD student at the Silesian University of Technology, and Barbara Koftun won the Polish Beach Volleyball Championships for the second time in Sulejów. This qualification for the World Championship in this discipline, held in Prague, was the most tremendous success in their career. After a fantastic fight, they took fifth place.

PUPILS OF THE ACADEMIC SECONDARY COMPREHENSIVE SCHOOL OF THE SILESIAN UNIVERSITY OF TECHNOLOGY IN RYBNIK ARE FINALISTS OF THE TALENT OPEN.

The team of ALO (Academic Secondary Comprehensive School) pupils, composed of Mikołaj

Mocek, Paweł Parma, and Jakub Gebel, reached the national finals. They were awarded in the Talent Open competition organised by the Advanced Technology Foundation.

The pupils' proposal was a service that allowed them to automate

the determination of available traffic routes, primarily for people with mobility disabilities. The solution is called IMINTI GO! It uses advanced IT technologies and artificial intelligence tools to download and automatically analyse panoramic photos from the web. ■

PROJECTS

SWISS GOVERNMENT SCHOLARSHIPS FOR POLISH CITIZENS FOR THE ACADEMIC YEAR 2025/2026

We invite you to take advantage of the Swiss government scholarship program for Polish citizens for the academic year 2025/26! The offer includes four places for research stays, doctoral studies, and postdoc scholarships. For more information, visit www.nawa.gov.pl ■

BCU SKYPORT INVITES YOU TO FREE TRAINING

We invite all interested people to participate in free training at the SKYPORT Skills Centre. It is the only education, training, and examination facility in Silesia focused on airport and terminal operations. Its scientific partner is the Faculty of Transport and Aviation Engineering of the Silesian University of Technology.

Autumn courses include training in drones, remote sensing, photogrammetry, transport of dangerous goods DGR, and courses in commodity and outsourcing. For more information, visit www.bcuskyport.katowice.pl ■

“FIT HERE, HEALTHY THERE, LET’S DO IT TOGETHER.”

Pupils of the Academic Secondary Comprehensive School of the Silesian University of Tech-

nology in Rybnik, together with colleagues from ELTE Trefort Ágoston Gyakorló Gimnázium in Budapest, have completed their participation in the project “Fit here, healthy there, let’s do it together.”

The pupils took part in workshops led by a dietician, tried their hand at climbing, did an energetic cardio walk on Janos Hill, spent an active afternoon in Aqua Park in Budapest, trained at the gym, and visited the Silesian University of Technology. ■

SCIENTIFIC COMPETITION FOR SECONDARY SCHOOLS WITHIN THE EUROPEAN CITY OF SCIENCE

The Silesian University of Technology announces a competition for secondary school pupils within the European City of Science Katowice 2024 concerning design solutions for the region in various areas of social and economic life, which will fit into at least one leading EMN path.

The competition consists of two stages. School directors submit applications to the College of Studies of the Silesian University of Technology in paper form (in person or by post to the following address: College of Studies, Akademicka 2A, room 287, 44-100 Gliwice) and electronically to the e-mail address RJO3@polsl.pl. They must be

submitted by the deadline of 11 October 2024.

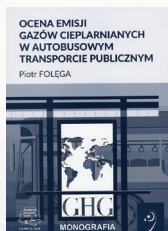
Financed by the EU. The views and opinions expressed are solely those of the author(s) and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). The European Union and the REA are not responsible for them. The Silesian Voivodeship - Co-organizer of the European City of Science Katowice 2024 co-financed the event. ■

ENERGY TRANSFORMATION – A SERIES OF ONLINE LECTURES

Eureka-PRO is launching its fifth free online lecture series of fourteen meetings led by leading professors and researchers. The overall theme of the module is an introduction to the Sustainable Development Goals with an emphasis on responsible consumption and production.

The lectures will take place from October to November 2024. A specific topic in the coming winter semester is “Energy Transformation.” Lectures are open to students, scientists, and academic staff. For more information, please visit <https://www.eurecapro.eu/eureca-pro-online-lecture-series-et>. ■

PUBLISHING NEWS



ASSESSMENT OF GREENHOUSE GAS EMISSIONS IN PUBLIC BUS TRANSPORT

PIOTR FOŁĘGA

Ed. I, 2024, PLN 24.15, p. 162

The monograph presents the application of the LCA life cycle assessment method to assess greenhouse gas emissions generated by public bus transport. It discusses the most prominent issues related to electromobility and its development prospects in the Polish market in terms of the development of public bus transport.

The monograph is a compendium on greenhouse gas emissions in public bus transport, the use of alternative fuels in urban transport, and legal and technical aspects of the development of electromobility in the EU and Poland.



ÉTICA, TERMINOLOGÍA, OPINIONES Y EL MERCADO DE SEXTech: UN ANÁLISIS MULTIDISCIPLINARIO SOBRE LOS ROBOTS SEXUALES

IDA SKUBIS

Wyd. I, 2024, 22,05 zł, s. 151

The monograph deals with the SexTech market and sex robots. This interdisciplinary work is divided into two main parts: theoretical and practical. In the first theoretical part, the disadvantages and advantages of sex robots in various aspects, such as interpersonal relations or objectification of women, are listed. The second part presents the subject of specialized language, neologisms, lexical relations, terminological clusters, and compound words.



MIGRATION OF HYDROGEN FROM UNDERGROUND STORAGE OF METHANE-HYDROGEN MIXTURES. PERMEABILITY AND DIFFUSION ISSUES

DAWID GAJDA, MARCIN LUTYŃSKI

Ed. I, 2024, PLN 23.10, p. 163

The monograph is devoted to issues related to using underground excavations as warehouses for hydrogen-methane mixtures. The considerations presented in the paper focus on using rock-drilled and inactive mining excavations by adapting them and using them as hydrogen storage. The topic is genuinely relevant, considering the move away from fossil fuels.

Edited by Małgorzata Mizera

OCTOBER REPERTOIRE OF THE STUDENT CULTURE CENTER "MROWISKO"

05.10.24 / 19:00

Rage Against the Machine by
RENEGADY tribute band / Moleskin
/ Rockoteka with the Hybrid
Conspiracy

08.10.24 / 20:00

PubQuiz

9.10.24 / 19:00

If you love / Artur Gotz / MrOFFisko

10.10.24 / 19:00

Antoni Syrek Dąbrowski / What
a beautiful catastrophe / Stand-up

10.10.24 / 21:00

Student's Toothies

11.10.24 / 19:00

Lukasz Kaczmarczyk / Technical break
/ Stand-up

12.10.24 / 10:00-20:00

Upper Silesian Comic Strip Party

15.10.24 / 20:00

PubQuiz

16.10.24 / 21:00

Student's Toothies

17.10.24 / 19:00

Canning / performance of the
theatre "Scena Poczekalnia" from
Łódź

17.10.24 / 21:00

Student's Toothies

18.10.24 / 20:00

Good Evening with a Vinyl Record

19.10.24 / 16:00

Punk Generation Festival

20.10.24 / 09:00-13:00

Gliwice Record Exchange

20.10.24 / 18:00

"You will be pleased" - the
performance of the Rawa Theatre

21.10.24 / 18:00

High School Musical
Actor's Studio of the Wit-Wit
Theatre

22.10.24 / 20:00

PubQuiz

23.10.24 / 18:00

Drum Workshops

24.10.24 / 21:00

Student's Toothies

25.10.24 / 18:00

Shanty Evening

26.10.24 / 19:00

Daniel Midas / Golden Thoughts /
Stand-up

29.10.24 / 20:00

PubQuiz

30.10.24 / 21:00

Student's Toothies

31.10.24 / 21:00

Student's Toothies

POSITIONS, DEGREES, AND ACADEMIC TITLES

AWARDED DOCTORAL DEGREES

Dr Eng. Adrian CZAJKOWSKI

Silesian University of Technology – PhD student. Supervisor: Dr Hab. Eng. Leszek Ramiarz, Prof. of the Silesian University of Technology Thesis topic: “Design, research and optimization of the stream measurement system operating in long-term use in hard water environments.” Conferring the degree of Doctor of Engineering and Technical Sciences. Discipline - environmental engineering, mining, and energy. Resolution of the Council of Discipline Environmental Engineering, Mining and Energy discipline 25.07.2024

Dr Eng. Piotr DUKALSKI

Lukasiewicz Research Network – Upper Silesian Institute of Technology. Supervisor – Dr Hab. Eng. Roman Krok, Prof. of the Silesian University of Technology Thesis topic: “System of design solutions for the design of electric motors with increased power density for electromobility applications.” Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline – automation, electronics, electrical engineering, and space technologies. Resolution of the Council of Discipline of Automation, Electronics, Electrical Engineering and Space Technologies 02.07.2024

Dr Eng. Dawid FRANKE

Silesian University of Technology – PhD student. Supervisor: Dr Hab. Eng. Tomasz Suponik, Prof of Silesian University of Technology Auxiliary supervisor - Dr Eng. Paweł Nuckowski. Thesis topic: “Eco-efficient metal recovery technology from printed circuit boards.” Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline - environmental engineering, mining, and energy. Resolution of the Council of Discipline Environmental Engineering, Mining and Energy 11.07.2024

Dr Eng. Emad HASANI MALEKSHAH FAZEL

Silesian University of Technology – PhD student. Supervisor – Prof. Dr Hab. Eng. Włodzimierz Wróblewski. Thesis topic: Numerical and experimental research on the influence of air on cavitation dynamics. Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline - environmental engineering, mining, and energy. Resolution of the Council of Discipline Environmental Engineering, Mining and Energy 25.07.2024

Dr. Mirosław MOCEK

Polska Grupa Górnicza S.A. in Katowice. Supervisor – Dr Hab. Eng. Grzegorz Moskal, Prof.

of Silesian University of Technology Thesis topic: “Certification of products and machines and devices used in underground mining excavations.” Conferring the degree of Doctor of Engineering and Technical Sciences. Discipline - mechanical engineering. Resolution of the Council of Discipline Mechanical Engineering 10.07.2024

Dr Eng. Ebrahim NADIMI KARAMJAVAN

Silesian University of Technology – PhD student. Supervisor: Dr Hab. Eng. Grzegorz Przybyła, prof. of Silesian University of Technology. Thesis topic: Experimental and numerical study on ammonia-fueled compression ignition engine. Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline - environmental engineering, mining, and energy. Resolution of the Council of Discipline Environmental Engineering, Mining and Energy 25.07.2024

Dr Eng. Arch. Mateusz PIEGZA

Habitat for Humanity Poland Foundation. Supervisor – Prof. Dr Hab. Eng. Arch. Jan Rąbiej. Thesis topic: “Transformation of post-industrial architecture objects into residential functions – trends, limitations, recommendations.” Conferring the degree of Doctor of Engineering and Technical Sciences. Discipline - architecture and urban planning. Resolution of the Council of Architecture and Urban Planning discipline 15.07.2024

Dr Eng. Wojciech PIOTROWSKI

LOSENTECH Sp. z o.o. Supervisor – Dr Hab. Eng. Robert Kubica, Prof of the Silesian University of Technology Auxiliary supervisor – Dr Eng. Maksymilian Gądek. Thesis topic: “Development and implementation of an improved, low-emission technology for the industrial production of ethyl acetate.” Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline– chemical engineering. Resolution of the Chemical Engineering Disciplinary Board 03.07.2024

Dr Eng. Aleksandra WALEWSKA

Silesian University of Technology – PhD student. Supervisor: Prof. Dr Hab. Eng. Janusz Kotowicz. Auxiliary supervisor - Dr Eng. Mateusz Brzęczek. Thesis topic: “Investigation of the methanol production system and its energy use.” Conferring the degree of Doctor of Engineering and Technical Sciences. Discipline - environmental engineering, mining, and energy. Resolution of the Council of Discipline Environmental Engineering, Mining and Energy 25.07.2024

AWARDED DOCTORAL DEGREES OF HABILITATED DOCTOR

Dr Hab. Eng. Małgorzata BACH

Faculty of Automatic Control, Electronics and Computer Science – assistant professor. Resolution of the Technical Information Technology and Telecommunications Discipline Council. Technical Information Technology and Telecommunications discipline - 25.06.2024

Dr Hab. Eng. Adam GUDYŚ

Faculty of Automatic Control, Electronics and Computer Science – assistant professor. Resolution of the Technical Information Technology and Telecommunications Discipline Council. Technical Information Technology and Telecommunications discipline - 25.06.2024

Dr Hab. Eng. Michał MAĆKOWSKI

Faculty of Automatic Control, Electronics and Computer Science – assistant professor. Resolution of the Technical Information Technology and Telecommunications Discipline Council Technical Information Technology and Telecommunications discipline - 25.06.2024

Dr Hab. Eng. Jacek STÓJ

Faculty of Automatic Control, Electronics and Computer Science – assistant professor. Resolution of the Technical Information Technology and Telecommunications Discipline Council Technical Information Technology and Telecommunications 30.07.2024

AWARDED DEGREES OF A PROFESSOR

Prof. Dr Hab. Eng. Radosław JASIŃSKI

Graduate of the Faculty of Civil Engineering of the Silesian University of Technology. Dr – 16.11.2005. Dr Hab. – 06.06.2018. Position of professor of the university since 01.12.2018. Employment at the Silesian University of Technology since 01.01.1998 The title of professor of engineering and technical sciences 27.06.2024

Prof. Dr Hab. Aleksandra Ziemińska-BUCZYŃSKA

Graduate of the Faculty of Biology and Environmental Protection of the University of Silesia. DR – 27.01.2009 r. Dr Hab – 16.09.2016 Position of university professor since 01.12.2018 Employment at the Silesian University of Technology since 01.11.2010 Title of professor of engineering and technical sciences 27.06.2024

Edited by Katarzyna Mryka

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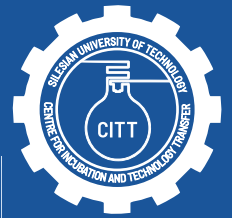
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ECO WEEK AND MICRO-WORLD WEEK

Photos: Maciej Mutwil, Tomasz Stokłosa, Jan Szady, Jolanta Skwaradowska, Martin Huć, Katarzyna Słwaczyk



Gliwice campus



Katowice campus



Zabrze campus



Rybnik campus

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