

EXPERIENCE

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FUTURE

THE BULLETIN

OF THE SILESIAN UNIVERSITY OF TECHNOLOGY

ISSN 2956-7475

No. 7/8 (013/014) 2024

**SHOPPING FROM
A VENDING MACHINE**
p. 9

**IRONMAN WITH
A MUSICAL FLAIR**
p. 35

STUDENCKIE
CENTRUM
KREATYWNOŚCI
STUDENT CREATIVITY CENTER

Studenckie Centrum Kreatywności
Politechniki Śląskiej
UCZELNIA
Studenckie Centrum Kreatywności

**THE PLACE WHERE
INNOVATIONS ARE BORN**

p. 11





FROM THE EDITOR



The Silesian University of Technology is a university that is constantly changing, profoundly believing in the sense of constant improvement. In the anniversary, 25th edition of "Perspektywy" Ranking - the most significant national "test" of the quality of education, our university, confirming its first place in the Silesian voivodship also performed very well in the national Technical Studies Ranking, where twenty-two fields of study were assessed. As many as seven of those conducted at our university took to the podium. Biomedical engineering, mining, and geology were ranked second in the country, and architecture, automation, robotics, electrical engineering, power engineering, mechanics, and machine technology ranked third. This is, among other things, the result of changes introduced by the university in the education system, about which we write more in this issue. The Silesian University of Technology develops not only knowledge and qualifications but also the passions of its students. In July, the Student Creativity Centre was officially opened on the Gliwice campus, giving new life to the 19th-century stables and creating a space conducive to unconventional thinking and innovation. Judging by visitors' interest, the place has a chance to become a favourite "spot" for students.

In the summer issue of the Bulletin, our readers will also find a lot of information confirming the university's strong position on the map of higher education, including further medal proof of the university's strength in sports and the related proposal for the summer hot days. When the heat is pouring from the sky, it is worth looking for a cool place, e.g., under sail. The university has rich traditions and outstanding sports achievements, which we write about extensively in the July-August Bulletin of the Silesian University of Technology. And since 2024 is the year of the Summer Olympic Games in Paris, it is worth getting to know the sports talents developing their careers at the Silesian University of Technology. Who knows, they may win medals for Poland at the next Olympics.

Wishing you exciting reading and happy holidays, we will leave you till September.

On behalf of the Editorial Board
Iwona Flanczewska-Rogalska

THE BULLETIN OF THE SILESIAN UNIVERSITY OF TECHNOLOGY

No. 7/8 (367/368) 2024
July/August

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Printing: Columbus Printing House, Chorzow

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TABLE OF CONTENTS

The Silesian University of Technology is the best university in Silesia	4
The Middle Kingdom is an important partner of the Silesian University of Technology	5
Challenges of higher technical education	7
Shopping from a vending machine	9
The place where innovations are born	11
New life of former stables.	14
The Talent Hub initiative brings results	17
Transporters from all over the world met in Katowice	19
Future Transport Week – summary	21
Mobile laboratory for special tasks in the energy industry	27
The Silesian University of Technology stands for sport!	29
Medal winning odds	32
Ironman with a musical flair	35
The voice of the Student Council	37
In brief: Events	38
In brief: Successes	42
In brief: Projects	43
Publishing news	44
Positions, degrees, and academic titles.	45

THE SILESIAN UNIVERSITY OF TECHNOLOGY IS THE BEST UNIVERSITY IN SILESIA

text: Editorial office

IN THE 25TH EDITION OF THE PERSPEKTYWY 2024 UNIVERSITY RANKING, THE SILESIAN UNIVERSITY OF TECHNOLOGY WAS AGAIN THE HIGHEST-RANKED ACADEMIC UNIVERSITY IN THE SILESIAN VOIVODESHIP. NATIONALLY, WE ARE IN 11TH PLACE OUT OF OVER A HUNDRED RATED UNIVERSITIES, WHICH IS ANOTHER INCREASE COMPARED TO LAST YEAR.

The Perspektywy University Ranking is addressed primarily to university candidates. It is intended to help them choose their field of study and university. The ranking assesses not only the position of universities compared to other universities but also specific research fields and indicators such as educational conditions, internationalization, innovation, and scientific potential.

The Silesian University of Technology performed very well in the Technical Studies Ranking, where twenty-two fields of study were assessed. As many as seven of them, implemented at our university, were among the top three nationwide. Biomedical engineering, mining, and geology were ranked second, while architecture, automation and robotics, electrical engineering, power engineering, mechanics, and machine technology were ranked third.

– These are satisfactory results, much better than in previous years. I want to emphasize that we have been modifying the study program over the last three years. We tried to make it more flexible, giving young people a chance for individual development. We are open to their ideas and support them in acquiring professional competences - emphasized the Rector of the Silesian University



of Technology, Prof. Arkadiusz Mężyk.

These actions bring results. – University candidates received sixteen modified programs very well. We see a significant increase in registration in the recruitment system compared to last year. Last year, we also had several hundred more candidates than the year before – added the Rector.

The most significant increase in the ranking was recorded in the field of Automation and Robotics compared to previous years. One reason is obtaining ABET accreditation for the interdisciplinary field of control, electronic, and information engineering, having a high rate of publications, and having foreign students.

The power engineering field also noted an increase in ranking. This was influenced by, among other things, the high publication rate,

including publications with a foreign co-author.

It is worth emphasizing that all fields of study at the Silesian University of Technology received a higher position than in the previous year.

The high rating in the ranking is confirmed by the results of this year's recruitment to our university. In the summer recruitment, in the first round, over 10,000 candidates registered for the first-cycle studies at the Silesian University of Technology and participated in the recruitment process for first-cycle studies at the Silesian University of Technology. This is a better result than last year. The number of people interested in studying was twice as large as the available places in all fields of study (4,640). In the first round, the following fields were most popular: computer science (practical field) - 7 interested per place; mechatronics – 6 people per place; and aerospace engineering, mechanical engineering, machine technology, and architecture. In the case of second-cycle studies, architecture, cognitive technologies, and industrial computer science were most popular.

For the 25th time, the Perspektywy University Ranking has been prepared. The results were announced on June 26th, 2024, during a ceremonial anniversary gala in Warsaw. ■

THE MIDDLE KINGDOM IS AN IMPORTANT PARTNER OF THE SILESIA UNIVERSITY OF TECHNOLOGY

text: Marcin Lemanowicz
photos: Marcin Lemanowicz

SCIENTISTS FROM THE FACULTY OF CHEMISTRY CONDUCTED A JOINT TEACHING PROJECT WITH SHENYANG LIGONG UNIVERSITY. THE PROJECT INCLUDED A SERIES OF LECTURES ON ISSUES RELATED TO CHEMICAL TECHNOLOGY, ENVIRONMENTAL PROTECTION, CHEMICAL PROCESS ENGINEERING, AND THE MECHANICAL BASIS OF EQUIPMENT CONSTRUCTION. CHINESE UNIVERSITIES ARE TODAY THE LARGEST FOREIGN PARTNERS OF THE SILESIA UNIVERSITY OF TECHNOLOGY. THE COOPERATION, WHICH HAS BEEN ONGOING SINCE 2016, IS CONSTANTLY DEVELOPING.

The Faculty of Chemistry also participates in this program and has started cooperation with Shenyang Ligong University. So far, our university has had the oppor-

tunity to host several students from SLU. Unfortunately, our teachers couldn't travel to China due to the pandemic - classes were conducted remotely. However, this year, the situa-

tion has changed. As many as eleven lecturers from the Silesian University of Technology conducted classes at Shenyang Ligong University. They were: Prof. Dr Hab. Eng. Beata Orliń-





ka (RCh5), Dr Hab. Eng. Hanna Barchańska (RCh1), Dr Hab. Eng. Piotr Skupin (RAu3), Dr Hab. Eng. Krzysztof Piotrowski (RCh3), Dr Hab. Eng. Marcin Le-manowicz (RCh3), Dr Eng. Artur Maciej (RCh1), Dr Eng. Joanna Płonka (RCh1), Dr Eng. Dymitr Czechowicz (RCh5), Dr Eng. Robert Brzeski (RAu7), Dr Eng. Mateusz Tomczyk (RCh2) and MSc. Eng. Anna Smajdor (RJO5-SJO). The largest group of scientists, as many as five, had the opportunity to work at Shenyang Ligong University in China in May this year. Their lectures covered various issues related to chemical technology, environmental protection, chemical process engineering, and the mechanical basis of equipment construction.

The stay at Shenyang Ligong University was an excellent opportunity to exchange knowledge and teaching experiences and establish contacts with local scientists. Polish academics had the chance to visit impressive laboratories, including those equipped with VR goggles, which prepare students to

operate chemical equipment in natural conditions.

During the stay, a new research project was also initiated, which may lead to further scientific cooperation in the future. It concerns the use of modern solutions in chemical engineering in the adsorption of various metal ions. Polish scientists were also involved in smaller projects conducted by Chinese university students, including a project on using computational fluid dynamics (CFD) to optimize adsorber construction.

Apart from the scientific sphere, the trip's essential element was learning about Chinese culture. The university canteen offered such a variety of dishes that you could try completely different dishes from every corner of China every day. Students organized workshops for our scientists on calligraphy and making Chinese-style dumplings. We also had the opportunity to visit the Imperial Palace in traditional Chinese costumes, learn the secrets of making tea in a tea house, and taste

many regional dishes. Particularly memorable was a visit to a "hot pot" restaurant, where raw ingredients (several types of meat, mushrooms, vegetables, etc.) are cooked in aromatic broths in a pot on the table (hence the name of this type of restaurant). It is also worth mentioning "Zongzi" - a traditional rice dish with various fillings wrapped in bamboo leaves that create a characteristic triangular shape. "Zongzi" is prepared especially for the Dragon Boat Festival.

To sum up, the trip to Shenyang Ligong University was an extremely fruitful experience for Polish scientists. It allowed them to expand their knowledge and teaching skills, establish international scientific contacts, and learn about the rich culture of China. We hope that in the future, cooperation between the Silesian University of Technology and Shenyang Ligong University will be continued and developed and that more scientists will have the opportunity to visit this fascinating Middle Kingdom. ■

CHALLENGES OF HIGHER TECHNICAL EDUCATION

text: Editorial office
photos: Silesian University of Technology

PROFESSOR JANUSZ KOTOWICZ HAS BEEN APPOINTED THE HONORARY CHAIRMAN OF THE COLLEGE OF VICE-RECTORS FOR GENERAL AFFAIRS, ORGANIZATION AND CONTACTS WITH THE SOCIO-ECONOMIC ENVIRONMENT OF PUBLIC TECHNICAL UNIVERSITIES. IN POZNAŃ, 52 VICE-RECTORS OF PUBLIC TECHNICAL UNIVERSITIES FROM ALL OVER THE COUNTRY DEBATED ON THE FUTURE OF HIGHER EDUCATION AND COOPERATION WITH THE SOCIO-ECONOMIC ENVIRONMENT.

A prestigious conference was held on June 5-7, 2024, organized by the College of Vice-Rectors for General Affairs, Organization and Contacts with the Socio-Economic Environment of Public Technical Universities and the College of Vice-Rectors for Science and Development. This time, the conference participants were hosted by the Poznań University of Technology. The event gathered fifty-two vice-rectors of public technical universities from all over Poland, who debated the key challenges and the future of higher education and cooperation with

the socio-economic environment. Our University was represented by the Vice-Rector for Collaboration with the Civic and Economic Environment, Prof. Dr Hab. Eng. Janusz Kotowicz, as well as future vice-rectors of the 2024-2028 term: Prof. Dr Hab. Eng. Bożena Skołod, Dr Hab. Eng. Marcin Staniek, Prof. SUT, and Prof. Dr Hab. Eng. Sebastian Werle.

Prof. Teofil Jesionowski, His Magnificence Rector of the Poznań University of Technology, officially opened the conference. He emphasized the importance of cooperation between technical

universities and joint action for developing science and technology. The presidents of both colleges, Prof. Dr Hab. Eng. Janusz Kotowicz, and Dr Hab. Eng. Adam Bajger, Prof. of the Maritime University of Szczecin, also attended the ceremony.

Prof. Janusz Kotowicz reminded the conference participants about the College's beginnings and previous authorities, mentioning earlier conferences. He thanked the participants for their commitment and contribution during these meetings. This is the last year of Prof. Janusz Kotowicz's term as



president of the College. He has been the chairperson since the establishment of the College, i.e., since 2017.

During the first session of the conference, there were three main presentations:

1. Current work and Ministry of Science and Higher Education plans—Prof. Maria Mrówczyńska, Undersecretary of State at the Ministry of Science and Higher Education, presented the ministry's current initiatives and plans for supporting and developing scientific research and higher education in Poland.
2. Activities of the National Centre for Research and Development—Prof. Jerzy Małachowski, Director of NCBR, discussed the latest projects implemented by NCBR, which aim to promote innovation and support the country's technological progress.
3. Discussion Panel: The role of NCBR in shaping Poland's technological future - Panel moderated by Prof. Wojciech Sumelka from the Poznań University of Technology gathered outstanding experts:
 - Prof. Jerzy Małachowski - NCBR
 - Prof. Teofil Jesionowski - His Magnificence Rector of the Poznań University of Technology
 - Prof. Adam Woźniak - Warsaw University of Technology
 - Prof. Łukasz Albrecht - Lodz University of Technology
 - Prof. Rafał Wiśniowski - AGH University of Science and Technology

The discussion focused on the role of NCBR in promoting innovation and cooperation between univer-



sities and industry. Participants also discussed the challenges and opportunities of implementing modern technologies in the national economy.

The second session of the conference was equally inspiring and covered topics related to metrology, artificial intelligence, and cybersecurity:

1. Polish Metrology and university cooperation with the Central Office of Measures considering the new Świętokrzyskie Laboratory Campus—Prof. Jacek Semaniak, President of the Central Office of Measures, and Dr Andrzej Kurkiewicz, Director at GUM (Central Office of Measures), presented new perspectives on cooperation between universities and GUM.
2. Threats of artificial intelligence – Prof. Andrzej Jaszkiwicz, Dean of the Faculty of Computer Science and Telecommunications, Poznań University of Technology, discussed potential threats related to the development of artificial intelligence and strategies for minimizing them.
3. Centre for Artificial Intelligence and Cybersecurity – Prof. Mariusz Głąbowski, Poznań University of Technology, presented the activities and goals of the Centre for Artificial

Intelligence and Cybersecurity of the Poznań University of Technology.

Due to Prof. Janusz Kotowicz's second term of office as chairman ending, conference participants elected the new chairman of the College of Vice-Rectors for General Affairs, Organization, and Contacts with the Socio-Economic Environment of Public Technical Universities. He is the Vice-Rector for Cooperation at AGH University of Science and Technology, Prof. Rafał Wiśniowski. At the same time, Prof. Artur Bejger was re-elected as the chairman of the College of Vice-Rectors for Science and Development.

Meeting participants, at the request of vice-rectors: Prof. Rafał Wiśniowski from AGH, Grzegorz Królczyk from the Opole University of Technology, Prof. Adam Woźniak from the Warsaw University of Technology and Prof. Artur Bejger from the Maritime University of Technology, presented a proposal to create the position of the Chairman of the Honorary College of Vice-Rectors for General Affairs, Organization and Contacts with the Socio-Economic Environment of public technical universities. Professor Janusz Kotowicz from the Silesian University of Technology was proposed for this position. The gathered vice-rectors unanimously supported this proposal. ■

SHOPPING FROM A VENDING MACHINE

text: Martin Huć
photos: Martin Huć

ON JULY 8TH, THE CEREMONIAL OPENING OF AN AUTOMATIC STORE THAT IS OPEN 24 HOURS A DAY, SEVEN DAYS A WEEK, TOOK PLACE IN SOŚNICOWICE. THIS STORE RESULTED FROM A PROJECT IN WHICH THE SILESIA UNIVERSITY OF TECHNOLOGY WAS A CONSORTIUM MEMBER.

The second machine was developed as part of the IMS project, i.e., Intelligent Automated Store Warehouse. The first was a self-service site located on the premises of the Faculty of Mechanical Engineering of the Silesian University of Technology. The project started in 2020 and was co-financed by the National

Centre for Research and Development. The consortium was responsible for the implementation, HemiTech sp. z o.o. was the leader, and the Silesian University of Technology was one of the partners.

The automated store was developed and constructed with the Dino supermarket chain. It was

opened at the supermarket's headquarters in Sośnicowice.

– We already know examples of autonomous supermarkets, without sales staff, where customers pick up goods from the shelves, pay for them, and leave. We wanted to create a fully automatic store solution in which a person does not need to go

The first purchase in the store was made by Michał Pajączek, president of HemiTech.





The first automatic grocery store was opened in Sośnicowice at the Dino supermarket - scientists from the Silesian University of Technology took part in the project.

inside to make purchases, said Michał Pajęczek, president of HemiTech. – In the case of an autonomous store, you should remember that you must ensure that the customer pays for the goods. In the case of an automated store, it is different. The customer must first pay to receive the goods. In addition, we make maximum use of the space inside our store. We also focus on saving money - there is less space to heat, no need to light it, and we do not have to clean inside. The device also independently forecasts the next possible sale and sends an order to the central warehouse for missing products.

The Silesian University of Technology, the Department of Fundamentals of Machinery Design, had the following employees participate in the project: Prof. Dr Hab. Wojciech Moczulski, project manager on behalf of the University; Dr. Eng. Wawrzyniec Panfil – head of research and development works; Dr Hab. Eng. Piotr Przystałka, prof. SUT; Dr. Krzysztof Ciupke, Dr Eng. Paweł Chrzanowski, Dr Eng. Sebastian Rzydzik, M.Sc. Eng. Daniel Pająk and M.Sc. Eng. Rafał Osadnik. Our scientists were responsible for substantive support.

– We have prepared software supported by artificial intelligence methods, which is used primarily to determine the inventory of an automated store. Using this software, we can determine what goods should be included in each sales period and how many should be to meet customer expectations as much as possible. At the same time, we try to maximize the profit from sales - explains Dr Eng. Wawrzyniec Panfil. – Participation in the project shows that our scientific work has practical applications. We deal with algorithms and artificial intelligence daily; this time, we can see and use the devices we worked on.

The project's primary assumption is that the store will be open 24 hours a day, seven days a week.

– The store contains generally known products; there is no need to check and familiarize yourself with them. These are, for exam-

ple, milk, a packet of chips or drinks. People don't have to see them up close before purchasing them. This made it possible to condense products on the shelves inside the device, which increased its storage capacity and the number of items we included in it - explains Łukasz Wawrzyńczyk, project manager at HemiTech. – The purchasing process is like that of an online store. We have product categories on the screen. We proceed to payment after selecting those that interest us and adding them to the virtual cart. After paying for the purchase, the machine completes the products, which we can track on the second screen, places them in the basket, and then the customer receives them.

The goods in the automatic grocery store will be changed depending on, for example, the current season or upcoming weekends and holidays. ■

Participation in the project shows that our scientific work has practical applications. We deal with algorithms and artificial intelligence daily, but we can now see and use the devices we created.

THE PLACE WHERE INNOVATIONS ARE BORN

*text: Jolanta Skwaradowska
photos: Tomasz Stokłosa*

THE STUDENT CREATIVITY CENTRE IS OFFICIALLY OPEN. THE CENTRE IS IN THE REVITALISED FORMER STABLES BUILDING AT AKADEMICKA STREET. THE CEREMONY WAS COMBINED WITH THE SUMMARY OF THE DESIGN THINKING SUMMER SCHOOL.

On July 12, 2024, the Student Creativity Centre was officially opened with the participation of the Deputy Minister of Science and Higher Education, Prof. Maria Mrówczyńska, the authorities of the University and Gliwice, and students. This is a place where students at the Silesian Universi-

ty of Technology can implement their projects and participate in workshops, trainings, meetings, and presentations.

– This place was not only created for students but also by them from the very beginning. At the design stage, students implementing PBL projects decided what technologies should

be included in this building, its functionality, and what activities should be conducted here, said the Rector of the Silesian University of Technology, Prof. Arkadiusz Mężyk.

The Student Creativity Centre was established as part of the Excellence Initiative – Research University program and





was inspired by “The Stanford d.school” at Stanford University, a place for creating modern projects and solutions for science and business. – We want the Student Creativity Centre at the Silesian University of Technology to be an inspiring and integrating place where student creativity will be stimulated – said the Rector-elect, Prof. Marek Pawełczyk.

The Deputy Minister of Science and Higher Education, Prof. Maria Mrówczyńska, who attended the inauguration, stressed that places such as SCK are necessary because they give young people a chance to develop their talents and creativity.

– The most important thing for the university is its students, which is why they should be allowed to pursue their passions and projects, whether through participation in scientific clubs or by creating places such as the Creativity Centre – emphasised the deputy minister.

- The students at our university need this place significantly, ac-

ording to Dr Eng. Agata Guzik-Kopyto, acting director of the Student Creativity Centre. - Students visit us here every day and invite their friends. They meet and learn together. And every day, we offer them something new. We are launching small working rooms where students can work, print, and perform minor electronic tasks. There is also a mini workshop, which we are equipping with professional tools that they can use soon. We will invite them to numerous workshops and training courses starting in the new academic year. We will work in a team of experts, academic teachers, and scientific club supervisors – said Dr Eng. Agata Guzik-Kopyto.

The SCK will also house student research groups, which have operated within their faculties until now, and there has been no space for joint project activities.

– We have been waiting for a place like this, mainly because it is a space created especially for us – said Aleksandra Kołodziej, a thir-

d-year architecture student and Student Creativity Centre Council member. – Already during the construction, we were curious about what was happening here and were happy that something was being created for students. At the Centre, we can work, develop our passions, and implement projects. Importantly, it is not only a workplace but also for recreation and integration. We have a café, ping-pong table, and comfortable pouffes here – adds the student.

The opening of the Student Creativity Centre was combined with the summary of the Design Thinking Summer School. During the ceremony, the effects of the week-long program were summarized, and students from various fields of study at the Silesian University of Technology and secondary school explored the secrets of the design thinking methodology while working on innovative solutions for Gliwice.

– The Silesian University of Technology Rector and the Stu-

dent Creativity Centre organized the Design Thinking Summer School. This event supports the development of talents and the acquisition of new competences and skills. Students and pupils worked on creating solutions needed by the residents of Gliwice. As a result of this work, four ideas were made on what could be done interestingly for the city and its residents – said Beata Michalska-Dominiak from the company Klientocentryczni, who runs the design thinking workshops.

The youth presented three applications and one project:

- A project for the residents of Kociam Gliwice intended to help them find interesting places and good restaurants.
- GlivINTO – an application that allows you to meet new people and discover where it is worth spending your free time.
- sPotter – an application that helps drivers find a free parking space.

- Hasiok – an application that will help you locate places where garbage is piling up in the city, how to segregate it, and how to give away unnecessary things.

The honorary patronage over the Design Thinking Summer School was assumed by Katarzyna Kuczyńska-Budka, Mayor of Gliwice, who took part in the final presentations of the participants.

The president emphasized that the students' diagnoses are genuine and concern us, the inhabitants of Gliwice, and the solutions they proposed are worth implementing. Some are more difficult to implement, others easier, but all are remarkably interesting.

Participating in the Design Thinking Summer School allowed students to gain experience and learn about contemporary design methods. According to Marcin Widuch, a computer science student at the Silesian University of Technology, who worked in

his group on an application that helps drivers find a free parking space, such projects generate particularly innovative ideas. We had people from architecture, management, and IT. The student emphasized that we had a unique perspective to exchange knowledge and experiences.

– The ability to design together, exchange ideas, or participate in brainstorming will be helpful to me in the future. What surprises me is how many ways there are to stimulate creativity, added Magdalena Michalak, an architecture student who took part in creating a tool that helps residents find places where they can interestingly spend their free time.

The students' work results were presented to the university and city authorities. As Mayor Kuczyńska-Budka announced, the first step may be implementing an eco-project, namely the Hasiok application. ■



NEW LIFE OF FORMER STABLES

text: Jolanta Skwaradowska
photos: Maciej Mutwil

OUR PROJECT IS A MODEL EXAMPLE OF SUCCESSFUL REVITALIZATION AND THE RESTORATION OF A BEAUTIFUL BUILDING TO BENEFIT THE CITY'S RESIDENTS AND THE ACADEMIC COMMUNITY. ON JULY 12, THE REVITALIZED FORMER STABLES BUILDING ON THE SILESIA UNIVERSITY OF TECHNOLOGY CAMPUS WAS OFFICIALLY OPENED. THE BUILDING IS HOME TO THE STUDENT CREATIVITY CENTRE AND WILL SERVE STUDENTS.

Situated on Akademicka Street in Gliwice, the former stables building was built at the beginning of the 20th century. The building was part of the fire station and served as stables for fire brigade horses. However, the building had been abandoned, neglected, and in danger of collapse for many years. With revitalization in mind, the Silesian University of Technology took over from the city in 2019. – The technical condition of the old stables deteriorated from year to year. The rear part of the roof collapsed, and during the measurement inventory inside the building, special precautions had to be taken – said Dr Hab. Eng. Tomasz Trawinski, prof. SUT, Vice-Rector for Infrastructure and Promotion.

A team of architects developed the building's revitalization project under the supervision of the Dean of the Faculty of Architecture, Dr Hab. Eng. Arch. Klaudiusz Fross, Prof. SUT. The





Dr Hab. Eng. Arch. Klaudiusz Fross, the author of the project for the reconstruction of the former stable building

University received permission for reconstruction in 2022, and work started a year later.

The side wings of the building were preserved in good condition; the middle wing was in much worse condition, explains Dean Fross. We proposed keeping only the external walls and rebuilding them in a new, raised form as a steel and glass structure that would match the rest with its appropriate proportions. The concept of the reconstruction was agreed with the Municipal Conservator of Monuments in Gliwice. Although the building is not entered in the provincial register of monuments or the municipal register of monuments, it is protected

under the provisions of the local spatial development plan. The reconstruction has undoubtedly saved this beautiful building from complete degradation. Interestingly, already in the mid-20th century, the idea of demolishing it appeared.

– In the 1950s, while creating the architectural design for the arrangement of today's Akademicka Street, the idea was born to erect new buildings instead of the neo-Gothic Fire Department buildings. Fortunately, as usual, life verified the architects' plans. The lack of funds only allowed the construction of the Faculty of Mining and, later, the Faculty of Architecture and Civil Engineering buildings. The beauti-

ful, neo-stylish brick building of the Fire Department was saved. Like the charming building of the former stables for horses working for the fire department, functionally connected with the fire station – says Ewa Pokorska-Ożóg, Municipal Conservator of Monuments in Gliwice.

The facility was not demolished but ceased serving its purpose, which could have led to its end. – There was a lack of people willing to renovate and thoughtfully adapt. This changed in 2019 when the city transferred the building to the Silesian University of Technology for 5% of its value (PLN 54,000) – adds Ewa Pokorska-Ożóg.

Several dozen people were engaged in the revitalization project, from design to supervision. Students from various faculties also participated in the event and designed the interiors of the building as part of the PBL (Project Based Learning) competition.

The idea was to involve students in the actual design process. Some of their ideas have been implemented, e.g., information and orientation in the facility. The information boards were made according to student designs, and their ideas inspired parts of the interior, says Prof. Klaudiusz Fross, a professor at the Silesian University of Technology.

The building presents a model of revitalization. – Thanks to this, the facility has already gained recognition, praise, and admiration. But this path was not easy. The Dean adds that the design process was long, required a lot of determination and perseverance, and occurred during the pandemic and many other difficulties.

The construction works were completed in April. In the following months, the building was evaluated based on variable equipment and adaptation to the current needs of students. Now, it will be equipped with furniture and multimedia. This is an innovative, participatory approach to the facility, which is intended to meet the expectations of its future users.

– The facility is not only functional but also modern. We used the most modern installations and technologies. Photovoltaic panels are embedded in the glass panes. Small architectural elements, designer benches, and the recognizable BenchMan brand appeared before the building. The red benches were created based on prototypes co-authored by Prof. Klaudiusz Fross and Dr Krzysztof Groń. The silhouettes of red horses placed on the side panels of the benches refer to the former stables and fire horses.

Further expansion was planned as a glass passage with a restaurant, café, and galleries. Unfortunately, the complicated and lengthy process of water law arrangements effectively stopped this idea and project. However, according to Dean Fross, there is a chance to build a rain garden and additional recreational space.

The Student Creativity Centre is already operating in the revitalized building. Students can conduct their projects there and participate in workshops and meetings.

The rooms have been designed so students or groups can implement their ideas, use the spaces for individual and group work, design and make a prototype, present their project to an investor, or show it at an exhibition. The Dean notes that the users will reserve the places they want to use.

In addition to workspaces, the building includes an exhibition space and a cinema hall, which enable the organisation of exhibitions and project presentations.

The design team for the former stables building consists of:

ARCHITECTURAL DESIGN; Dr Hab. Eng. Arch. Klaudiusz Fross, prof. SUT; CONSTRUCTION: MSc. Eng. Mariusz Czyszek, MSc. Eng. Wojciech Czyszek, M.Eng. Roxana Fross; CONSTRUCTION COOPERATION: Eng. Justyna Królikowska, Eng. Natalia Jaworska; DRAWINGS OF THE EXISTING ELEVATION: architecture students: Mateusz Grela, Adrian Pikorski, Jan Scelina, Piotr Szendera, Adam Zbroiński, ELECTRICAL INSTALLATIONS AND NETWORKS: M.Sc. Eng. Jan

Kostrzanowski; SANITARY INSTALLATIONS AND NETWORKS: MSc. Eng. Zygmunt Pierzchawka, MSc. Eng. Leszek Czyszek; TECHNICAL EXPERTISE: Dr Hab. Eng. Arch. Klaudiusz Fross, prof. SUT, MSc. Eng. Mariusz Czyszek; INVENTORY (during the COVID pandemic): Dr Hab. Eng. Arch. Klaudiusz Fross, prof. SUT, MSc. Eng. Roxana Fross; CONSULTATIONS: Dr Hab. Eng. Arch. Grzegorz Nawrot, prof. SUT, Dr Hab. Eng. Arch. Tomasz Wagner, prof. SUT; INSPIRING, CONCEPTUAL, AND SUPPLEMENTARY PROJECTS 2022: students of architecture and interior architecture and other fields of study of the Silesian University of Technology as part of PBL classes under the patronage of the teachers; TECHNICAL PROJECT 2022: BULANDA Architects, MSc. Eng. Arch. Karol Bulanda with a team of industry designers.

Construction contractor: Mostostal Zabrze GPBP.

Investment value: approx. PLN 15 million (Excellence Initiative – Research University (IDUB)). ■



THE TALENT HUB INITIATIVE IS BRINGING RESULTS

*text: Monika Bezak
Edited: Katarzyna Siwczyk
photos: Maciej Mutwil, Drim Robotics*

WE HAVE ALREADY COMPLETED A YEAR OF ACTIVITY UNDER THE TALENT HUB PROGRAM. THE PROJECT IS ADDRESSED TO STUDENTS AT THE SILESIA UNIVERSITY OF TECHNOLOGY ON THE INITIATIVE OF DR HAB. MAŁGORZATA DOBROWOLSKA, PROF. SUT - DIRECTOR OF THE BUSINESS SCHOOL OF THE SILESIA UNIVERSITY OF TECHNOLOGY, AND ŁUKASZ GÓRECKI - DIRECTOR OF THE SILESIA AUTOMOTIVE & ADVANCED MANUFACTURING CLUSTER.



Representation of KSSE companies and Dr Hab. Małgorzata Dobrowolska, Prof. SUT, during the debate at the Euro Science Open Forum

From October to June, eight companies belonging to the Katowice Special Economic Zone hosted workshops and training for students as part of the Talent Hub program. One hundred students took advantage of the program.

The initiative is a response to the needs of employers from the region who want to provide young people with practical knowledge and skills already at the study stage and thus help

guarantee them a secure job in the future.

Companies operating in Poland's automotive and modern technology sectors want to present new opportunities related to employee development, which result from changes and constant improvements leading to digitalization, robotization, and the use of the latest materials and technologies. At the same time, employers emphasize that

social and personal competencies such as self-confidence, self-presentation skills, fluent communication, the ability to cooperate, and creativity are becoming increasingly important. At the same time, HR departments of companies in the Cluster are happy to share knowledge and experience related to the labour market. They answer the questions on preparing for a job interview, planning one's career path,

and whether social media is essential in recruitment.

The following companies participated in the Talent Hub project: Boryszew SA Maflow Branch in Tychy, Drim Robotics Sp. z o. o., Johnson Matthey, KIRCHHOFF Automotive Poland, PROPOINT SA, Rockwell Automation Sp. z o. o., Seifert Polska Sp. z o. o., ZF Automotive Systems Poland Sp. z o. o. Electronics Department and Engineering Centre.

Companies implemented various initiatives addressed to students. These included workshops, training, and study visits. For example, there were classes on programming industrial robots, classes with cobots, critical thinking workshops, and an English-language online tour, enabling meetings with representatives of Maflow branches worldwide. Technical knowledge classes were also held, and as a reward, the best students could go to the company's branch in Spain.

The plants' workshops aimed to raise interest in working in the industry based on modern technologies, such as coordination. An exciting initiative was a tour of one of the most automated production lines in a Plant Tour and a workshop on creating fresh solutions and visualizing specific indicators and parameters related to technological lines. Students who take classes in an academic setting could practice everything they learn about at the Silesian University of Technology. This procedure was aided by visits to modern laboratories, access to which is often limited.

Students also visited ZF Automotive Systems Poland Sp. z o.

o Electronics Department and Engineering Centre in Częstochowa, where workshops on programming in Python were held. The Group of Engineers discussed the details of programming and improving cameras, radars, braking systems, and "supercomputers" for the automotive and advanced manufacturing sectors.

During the year, we also managed to create a community of students interested in the Silesian Talent Hub, the automotive sector, apprenticeships, internships, or work in companies associated with the SA&AM Cluster, run by the Katowice Special Economic Zone SA—we read in the summary of activities within the Talent Hub.

– Together, we took part in the international ESOF conference dedicated to the development of science, during which Prof. Małgorzata Dobrowolska led

the debate on future competencies and the Talent Hub initiative – summed up by Monika Bezak, labour market expert at KSSE SA – As a labour market expert in the Katowice Special Economic Zone, I am most pleased that students call and write, asking if there is a chance of employment in one of the eight companies that have undertaken to engage in the joint initiative – she added.

KSSE and the Silesian University of Technology will post information about further initiatives implemented in the Talent Hub on their social media and information channels. ■



Students, during a visit to the plant

TRANSPORTERS FROM ALL OVER THE WORLD MET IN KATOWICE

text: Aleksander Śładkowski, Grzegorz Wojnar
photos: Wojciech Kamiński

FOR THE 16TH TIME, THE INTERNATIONAL SCIENTIFIC CONFERENCE "TRANSPORT PROBLEMS 2024" AND THE 13TH YOUNG SCIENTISTS SYMPOSIUM WERE HELD AT THE FACULTY OF TRANSPORT AND AVIATION ENGINEERING. THESE EVENTS GATHERED POLISH AND FOREIGN SCIENTISTS WHO WERE RESEARCHING UNIVERSALLY UNDERSTOOD TRANSPORT ISSUES.

Transport Problems is not only the title of the scientific journal published by the Silesian University of Technology but also the name of international meetings of scientists organized by the Faculty of Transport and Aviation Engineering of the Silesian University of Technology at the faculty headquarters and attractive places in southern Poland. As in previous years, the symposium and conference were held in a mixed mode, i.e., on-site and on Zoom and YouTube platforms.

The 13th Symposium of Young Scientists researching understood transport issues was held on June 17-18, 2024, and the 16th International Scientific Conference "Transport Prob-

lems 2024" on June 19-21, 2024. These two events gathered 237 specialists from twenty countries, and eighty-six papers were published in a post-conference publication (conference proceedings) of approximately one thousand pages. This year, the Conference and Symposium were additionally held to celebrate the European City of Science - Katowice 2024.

Participants of the 13th Symposium of Young Scientists had the opportunity to visit the laboratories of the Faculty of Transport and Aviation Engineering of the Silesian University of Technology and independently control train traffic or drive cars on simulators.

The conference was attended by scientists from Europe, Asia,

and Australia, so it can be considered a significant place for intercontinental scientific discussion about transport - an important economic area. Before Russia attacked Ukraine, many conference participants also came from Russia and Belarus. After this event, the organizers excluded scientists from these countries from the scientific committee and did not allow the specialists representing these countries to participate in the deliberations.

The conference's plenary session was held at the Faculty of Transport and Aviation Engineering of the Silesian University of Technology. The conference coordinator, Prof. Aleksander Śładkowski opened

it. On behalf of His Magnificence, the Rector of the Silesian University of Technology, Prof. Arkadiusz Mężyk, patron of the conference, the Vice-Rector delivered welcome speeches, Prof. Bogusław Łazarz. The pa-



tron of the conference is also the Mayor of Katowice, Dr Marcin Krupa. On his behalf, the head of the Transport Department of Katowice, Bogusław Lowak, addressed the conference participants and presented the city's achievements in the development of bicycle transport. The third patron was the National Representation of Doctoral Students,

patronizing the Young Scientists Symposium "Transport Problems." The plenary session was attended by representatives of all transport sectors, leading scientists from Poland, and representatives of the Police Road Traffic Department and the Provincial Road Transport Inspectorate. Then, the conference proceedings were held in eight panels. The papers delivered by delegations from Lithuania, Belgium, Kazakhstan, Italy, Slovakia, and Bulgaria aroused particular interest.

Particularly noteworthy are also the presentations of scientists from Ukraine, who could participate in them online, free of charge, as provided by the organizers. Unfortunately, in some cases, power outages occurred in Ukrainian cities during the bombings. Nevertheless, the scheduled presentations took place anyway because they were sent to the organizing committee in advance.

Thanks to the hospitality of Fiat Chrysler Automobiles

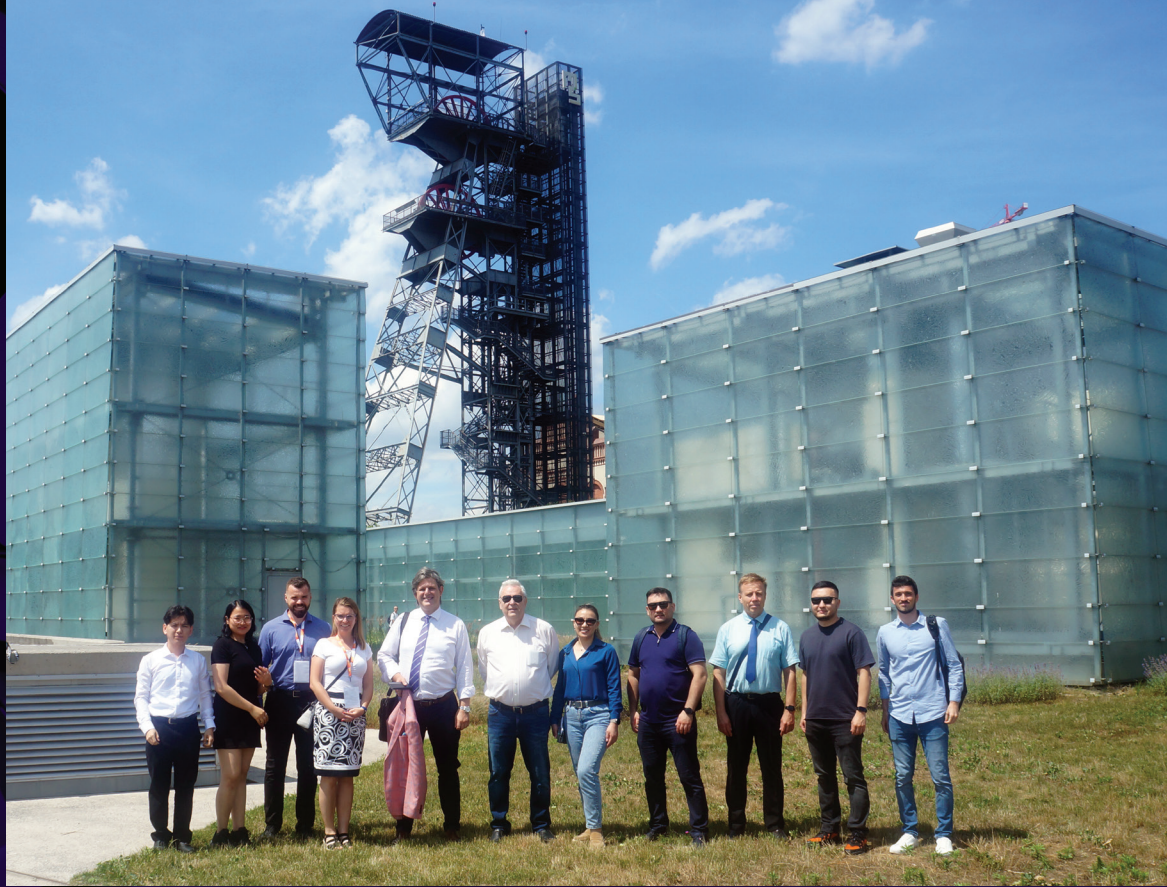
Poland, the conference participants in Katowice were able to visit the car factory in Tychy, where twelve million cars of various brands were produced until 2019. Currently, Fiat Chrysler Automobiles and Groupe PSA constitute the global Stellantis concern. During the plant presentation, conference participants could also see the Alfa Romeo Junior car, which will be available in Poland in September 2024.

The symposium and conference's cultural program was extensive. Scientists worldwide could visit the Astronomical Observatory of the Jagiellonian University in Krakow and the Benedictine Abbey in Tyniec.

Moreover, the symposium and conference participants gained experience of Poland's culture and history, particularly the Silesian Museum in Katowice, the seat of the Polish National Radio Symphony Orchestra, and the attractions of the Ojców National Park.

For a long time, the Faculty of Transport and Aviation Engineering of the Silesian University of Technology has had a special friendship with colleagues from the nearby Karol Szymanowski Academy of Music in Katowice. An exciting place for the symposium participants was the organ museum, which is located under the roof of the Academy. This university boasts a recently installed modern organ in the concert hall. Their incredible sound was presented to scientists personally by the Rector of the Academy, Prof. Dr Władysław Szymański.

The organizers and participants concluded that the 16th International Scientific Conference and the 13th Symposium of Young Scientists, held under the common name "Transport Problems," were undisputed successes. The organizers invite all scientists and practitioners interested in exchanging experiences in this discipline to the next edition, which will take place on June 23–27, 2025. ■



FUTURE TRANSPORT WEEK

Edited by: Jolanta Skwaradowska
photos: Katarzyna Siwczyk, Jan Szady, Maciej Mutwil

THE FUTURE TRANSPORT WEEK, HELD AT THE SILESIAAN UNIVERSITY OF TECHNOLOGY, INCLUDED TRANSPORT SIMULATORS, DRONES, AND MOBILE ROBOT SHOWS, VIRTUAL WORKSHOPS, COMPETITIONS, AND DEBATES WITH SCIENTISTS AND EXPERTS. IT WAS ORGANIZED AS PART OF THE EUROPEAN CITY OF SCIENCE KATOWICE 2024.

The Future Transport Week was an opportunity to share the passion for modern means of transport and to engage participants in interactive learning about the latest and future solutions in road, rail, and air transport. The event occurred at the Faculty of Transport and Aviation Engineering; some events were planned at the Market Square in Katowice. Scientists, experts, students, and pupils attended it.

- Future Transport Week is one of the Science Weeks as part of the European City of Science Katowice 2024. It promotes the City, and the science conducted in this City, and one of the essential scientific centers there is the Silesian University of Technology. The event is an opportunity for scientists and practitioners to exchange experiences but also to show the science behind the scenes - said Dr Hab. Eng. Grzegorz Sierpiński of the Silesian Uni-

versity of Technology from the Faculty of Transport and Aviation Engineering at SUT

On Monday's first day of the event, the Road Transport Day took place, and on subsequent days, interested parties could learn the secrets of other transport industries. - On Tuesday, we will present rail transport, and on Wednesday, we will present air transport. On Thursday, we will show what a traffic engineer and urban mobility is. On Friday and Saturday, we will leave the walls

of the Silesian University of Technology and show up on the Katowice Market Square, where we will show the work of our employees and students, their achievements, and the effects of PBL projects - announced by Dr Eng. Adam Mańka.

During the Road Transport Day, a Job Fair—A Day with an Em-



ployer in Motor Transport—was held, during which students could get acquainted with job offers in the industry. One of the employers was Volvo Trucks Polska, which presented simulations using VR goggles in addition to job offers for young engineers. Those interested could also remotely control a truck near the Faculty's square.

- Job fairs are an opportunity for us to talk to potential candidates about their experiences, expectations, and needs - said Joanna Wojtach, People&Culture Business Partner at Volvo Trucks Polska. - We are looking for people with a passion for motoring and trucks, who like challenges and are development-oriented, and for whom a work culture focused on innovation is a natural environment in which they would like to function every day, added Joanna Wojtach.

The Motor Transport Knowledge competition results were also announced during Monday's events. - Almost thirty secondary school pupils took part in it. The competition questions concerned universally understood issues related to road transport, the transport of hazardous materials, and electromobility - said Dr Hab. Eng. Damian Hadryś, prof. SUT, vice-dean for education at the Faculty of Transport and Aviation Engineering.

The Road Transport Day ended with a debate with the participation of scientists from the



Silesian University of Technology and representatives of the automotive industry entitled Transport of the Future. - The debate was entirely devoted to trends and novelties in road transport and the prospects for the coming years. We discussed novel solutions in this industry, electric vehicles, and alternative fuels such as hydrogen - said Dr. Hab. Eng. Łukasz Konieczny, Prof. SUT, Vice-Dean for Infrastructure and Organization.

In parallel to Future Transport Week, the 16th International Transport Problems Conference and the 13th Symposium of Young Scientists were held at the Faculty of Transport and Aviation Engineering of the Silesian University of Technology. These events gathered Polish and foreign scientists to research and understand transport issues. The conference was also an opportunity to immerse yourself in the world of simulators: cars, trains, planes, drones, gliders, and urban traffic. The event made it possible to share the

passion for modern means of transport and interactively learn about the latest transport solutions.

One of the topics discussed during our meetings was ecology. Transport is known to be one of the sources of environmental pollution. We discussed experiences and novel solutions in this area. Such an exchange is beneficial for all conference participants, said the conference coordinator, Prof. Aleksander Sładkowski.

As part of the 16th International Scientific Conference Transport Problems, scientists also visited the FCA SA factory in Tychy for a study visit. They highly appreciated the level of robotics in the factory.

The Rail Transport Day took place on the second day of the Future Transport Week. Visitors to the Faculty of Transport and Aviation Engineering in Katowice could become enthusiastic about railways and this type of transport.

We present the best equipment that students and our Faculty scientists can use dai-



ly. We show what a driver's job looks like, how to drive a train, how to control railway traffic, and what rules apply, explained Dr Eng. Adam Mańka, coordinator of the Week.

The students presented the simulators themselves. Among them, I am a first-year student of railway transport engineering and have been a railway enthusiast for years.

- I built this simulator myself. I tinkered, and it worked. Today, it serves not only me but also other faculty students. The university allowed me to develop this project, for which I am grateful, said Józef Świder.

The student's simulator is in the same room as other Silesian University of Technology equipment. The laboratory also has a model created by another student in the same field, Miłosz Cogiel.

- This model is the apple of my eye. My dad and I have been putting it together for seven years. It grew so large that there was no room for it in the house. The Silesian University of Technology allowed me to move the model here, and I hope it will be possible to expand it with further solutions, said Miłosz Cogiel.

By presenting the laboratories, scientists and the Silesian University of Technology students wanted to raise interest in railways and present developing technologies in this field.

Entrepreneurs who participat-

ed in the so-called "A Day with the Employer" talked about the next phase of development of the railway industry. At the stands of companies from the railway industry, interested parties could learn about internships and job offers in companies that offer attractive development conditions in this industry that are already at the stage of their studies.

- Rail transport is a type of communication that will develop in the coming years, at least due to ecological aspects. We believe that young people choosing education in this field are making the right choice - admitted Sebastian Wiśniewski, head of the tram driver training centre at Tramwaje Śląskie SA.

There were lectures, workshops, and company presentations during rail transport day. The lecture on solutions for the transport market in Morocco, the topic of challenges, and research on rail transport in the region attracted great interest.

As part of the City-Region-Academy section, a debate was held on "Katowice—a city of science and education for modern rail transport—goals, challenges, current research, new technologies."

The Faculty of Transport and Aviation Engineering hosted Air Transport Day on Wednesday. The event included classes on aviation simulators, a wind tunnel show, and workshops related to air transport. Scientists, experts, students, and pupils of the last years of primary and secondary schools attended.

- The Silesian Voivodeship and the Silesian University of Tech-

nology are slowly becoming leaders in aviation education - pilots, mechanics, and soon air traffic controllers. Through events such as the Future Transport Week, we want to reach public awareness with the information that we have such an offer, educating in very elite and prestigious professions that guarantee young people to find a decent job - said Prof. Bogusław Łazarz, Vice-Rector for General Affairs.

During the Air Transport Day, Dr Eng presented all topics and issues related to aviation. Adam Mańka - Droniada Junior and the international scientific conference Transport Problems were held simultaneously, and the scientist was added.

The most popular among young people visiting the Faculty of Transport and Aviation Engineering was the glider simulator, constructed by students of the Faculty.

Our simulator is based on a real glider we bought after an air accident. We have adapted it to the role of a simulator and built a particular program into it. When getting into our glider, we put on Google VR, and thanks to this, we can feel like a real pilot—says Michał Sujkowski, a third-year student.

The Air Transport Day ended with a debate of experts on aviation-related topics.

- There were three speakers during the debate. Dr Małgorzata Żmigrodzka from the Polish Air Force Academy raised issues related to the organization of air transport and air alliances. The next speaker was Dr Eng. Natalia Drop from the Maritime University of Szczecin. This lecture may come as a

surprise, but remember that air transport cannot function independently, which is why we are discussing integrity with other transport industries. The scientist spoke about the development strategy of European air carriers in the aspect of the EU's sustainable development policy. The last speaker was Prof. Piotr Niedzielski from the University of Szczecin, who raised issues related to the impact of digitalization on the air transport sector - said Dr Eng. Robert Wieszała from the Department of Air Transport.

During the Air Transport Day, simulators of unmanned aerial systems adapted to the needs of aviation training at the Silesian University of Technology were also presented. The Unmanned Science Club, led by Prof. Marek Marcisz from the Department of Air Transport, prepared the simulators. The final of the Air Transport Knowledge Competition also took place.

The fourth day of Future Transport Week was devoted to Traffic Engineering and Mobility of the Future City. There were classes on simulators, demonstrations of robots, and laboratories related to traffic engineering, job fairs, competitions, virtual workshops on public transport organization, and a debate entitled Katowice—a city with a modern transport system.

- Transport is one of the most critical areas of research. It is difficult to imagine a city where there is no need to move or transport cargo. The specificity of infrastructure and transport, as well as the increasingly emerging traffic control centers, intelligent transport systems, video detection, and advanced systems with variable message signs, resulted in a constant increase in market interest in traffic engineers. We are happy about this because we have been implementing the teaching pro-

cess in this area at the Faculty for many years - said Dr Hab. Eng. Grzegorz Sierpiński, prof. SUT from the Department of Transport Systems, Traffic Engineering and Logistics.

Visitors to the Faculty of Transport and Aviation Engineering on Thursday could learn what traffic engineering is, and simulators were waiting for those interested.

The Traffic Engineering and Mobility Day of the City of the Future ended with a debate entitled Katowice, the City of a modern transport system, led by Dr Hab. Eng. Grzegorz Sierpiński, - Representatives of the Katowice City Hall and

The Road Traffic Department of the Provincial Police Headquarters in Katowice, the Metropolitan Transport Authority, and the Silesian University of Technology participated in the debate. They talked about how Katowice has changed in recent years regarding transport and the City's development plans, said Prof. Grzegorz Sierpiński.

During the Day of Traffic Engineering and Mobility of the City of the Future, a job fair and the Final of the Modern Traffic Engineering Competition were held.

On Friday, the events of the Future Transport Week moved to the Market Square in Katowice. City residents could see two racing cars designed by the Student Science Clubs of the Silesian Universi-



ty of Technology, and the stand of the Faculty of Transport and Aviation Engineering was a point of discussion about the vehicles of the future.

During the lecture, we discussed electromobility and hy-

during the Student Scientific Session, which took place at the Kato Science Corner.

It was an excellent opportunity to talk about your first research results and gain experience in presenting research results,

The Future Transport Week, part of the celebration of the 50 Weeks of Science in the European City of Science Katowice 2024, ended over the weekend with the Day of Mechatronics in Transport and the Day of

Recommendations for the Future of Transport in the Region. Event participants could, among other things, try their hand at a road traffic simulator.

On Saturday morning, the inhabitants of Ka-



drogen. The automotive, rail, and aviation industries admit that hydrogen fuel is the future. In electric cars, instead of batteries, hydrogen tanks will eventually produce energy or electricity, explained Dr Eng. Adam Mańka, coordinator of the Week.

Students of the Faculty of Electrical Engineering presented a laboratory stand to evaluate the quality of processing various energy sources to power a vehicle.

- We assessed a combustion engine powered by fuel and an electric motor powered by a battery or fuel cell. We checked how much energy was needed in each case on the same route to develop a certain speed - explained Dr Hab. Eng. Rafał Setlak, Prof. SUT from the Faculty of Electrical Engineering.

Students and PhD students also boasted about their achievements and knowledge

both on your own and based on a literature review. About a hundred people, including visitors from abroad, participated in the session. Their presentations were watched by, among others, Dr Eng. Magdalena Letun-Łątka - director of CIIT of the Silesian University of Technology.

- These are novice scientists, so I am glad I could prepare a short presentation on intellectual property for them - said the director of CITT. - All products of our knowledge are the most outstanding and excellent, and young scientists should learn this at the very beginning of their adventure with science. She added that they should ensure that their intellectual property is respected and that of their colleagues and other scientists.

Presentations by young scientists included the airport in Katowice or ecological drive systems, e.g., solar systems.

towice could not help but hear about Future Transport Week because the capabilities of the car's sound system were presented on the market square.

- During the Mechatronics in Transport Day, all interested parties could hear the music from the tuned Audi A4 B5 car speakers. The model has various modifications; it has a sound system and air suspension, and the engine power has been increased - explained M.Sc. Wioletta Cebulska, a PhD student at the Faculty of Transport and Aviation Engineering of the Silesian University of Technology, whose PhD thesis examines the level of noise and vibration emissions in electric, hybrid, and combustion cars.

On this day, daredevils could also feel like a Formula 1 driver.

- We have prepared a driving simulator built from a Formula Student car, with which our

students won awards and appeared, among others, in Australia. This car will be remembered thanks to their work and idea, explains Dr Eng. Adam Mańka, coordinator of the Week. - In transport, we have a lot of elements related to mechatronics, and we wanted to present them.

At the next stand, an opportunity was to assess a road traffic simulator. This educational game requires you to design a road network between fictional cities.

Saturday's events as part of the Day of Mechatronics in Transport ended with the Inter-School Team Mobile Robot Construction Competition for secondary school students from Katowice and the region, who in April received parts to build a robot and could now present it.

- This is the culmination of the work of students we invited to build robots. They could make them under our supervision as part of mechatronics workshops held at our university.

versations with residents and debates regarding road, air, and rail transport, traffic engineering, and mobility in the City of the future. We want to develop recommendations for the region in transport development, explains Dr Eng. Adam Mańka.

Future Transport Week took place from June 17th to 23rd, 2024.

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



- It's learning through play. The game has several levels - from primary with hints - to advanced, in which you must build viaducts. This procedure should be done in an optimal way to avoid road congestion. I hope that people who faced this task liked it - explains M.Sc. Eng. Krystian Szewczyński, PhD student at the Faculty of Transport and Aviation Engineering.

The next stage of the competition will be races of these robots on an obstacle course, which will take place in November as part of Robot Week - says Dr Eng. Adam Mańka.

The Future Transport Week ended with Sunday's Recommendation Day for the Future of Transport in the Region.

Together with a team of scientists, we analysed all the issues raised during six days of con-

The Future Transport week 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 Silesian Voivodeship - Co-organizer of the European City of Science Katowice 2024 also co-financed the event.

MOBILE LABORATORY FOR SPECIAL TASKS IN THE ENERGY INDUSTRY

text: Sylwester Kalisz
 editor: Katarzyna Siwczyk
 photos: Sylwester Kalisz

THE ENERGY TRANSFORMATION FORCES THE INTRODUCTION OF MANY CHANGES IN INDUSTRIES, INCLUDING THE ENERGY SECTOR. MOST EXISTING ENERGY FACILITIES ARE BEING MODERNIZED TO REDUCE EMISSIONS OF HARMFUL COMPOUNDS INTO THE ATMOSPHERE USING VARIOUS TECHNOLOGIES—BOTH COMMERCIAL AND INNOVATIVE. SUCH SOLUTIONS SHOULD UNDERGO APPROPRIATE TESTS AND MEASUREMENTS BEFORE BEING IMPLEMENTED. THE MOBILE BOILER PROCESS LABORATORY SUPPORTS THIS, A SPECIALIZED MEASURING VEHICLE USED IN WORK ON NATURAL OBJECTS IN THE ENERGY INDUSTRY.

The Boiler and Steam Generator Team employees from the Department of Power Engineering and Turbomachinery have completed further field tests at industrial partners in the energy sector. The research will help implement innovative solutions in enterprises that will become more environmentally friendly.

Such studies are often multi-day measurement campaigns in power plants or other energy facilities scattered throughout Poland and sometimes abroad. They usually pose a measurement, logistic, equipment, and human challenge. They are simply burdensome and must usually be adapted to the requirements of the production process, with particular

emphasis on occupational safety rules, explains Dr Hab. Eng. Sylwester Kalisz, Prof. SUT.

This method obtains unavailable measurement data using laboratory methods, and the research results implemented directly at the industrial partner are doubly pleasing.

In research on large-scale nat-

ural objects, the possibility of using a mobile Boiler Process Laboratory - a dedicated measuring vehicle equipped with the necessary instrumentation and measurement equipment allowing for autonomous work at the research site, which is sometimes conducted in remote locations not equipped with the essential



Mobile Boiler Process Laboratory - a specialized measuring vehicle used to work on real objects in the energy sector.

infrastructure, is also important. The measuring vehicle has been retrofitted over the years thanks to the efforts of the entire Team and with the financial support of the University (including a grant obtained from the Ministry of Science for equipping a particular research station and funds allocated from the profits of the International Boiler Conference ICBT organized cyclically for many years by the Team). It includes unique measurement probes for exhaust gas sampling, exhaust tracks, gas composition analyzers, conditioners, portable workshops, power generators, etc.

One of the latest projects we conducted was research for

PGE Energia Ciepła related to the use of a combined method of reducing emissions of sulphur and nitrogen oxides in peak-load water heating boilers. This method uses dry sodium and urea sorbents fed into high-temperature zones without installing expensive reduction installations. Prof. Kalisz explains that the results obtained will soon be presented in scientific publications.

SUT professors Sylwester Kalisz and Robert Wejkowski supervise doctoral theses, and their recent doctoral students, Dr Eng. Joanna Wnorowska and Dr Eng. Przemysław Garbacz, a research worker, participated in the industrial research.

This is not the only research conducted with the support of a mobile laboratory. Recently, field tests of a similar environmental nature have also been completed for Tameh Polska sp. z o. o. Blachownia Power Plant. The research aimed to determine the characteristic exhaust gas temperature window for correctly installing the SCR catalytic converter to reduce nitrogen oxide emissions into the atmosphere from power boilers.

Another vital field work recently conducted by the Team was the analysis of the causes of problems related to the media-publicized case of launching a new power unit of the Jaworzno Power Plant for Tauron Wytwarzanie SA. A distinctive feature and challenge in implementing the work was the installation and use of a unique, non-invasive, acoustic AGAM exhaust gas temperature monitoring system in the combustion chamber of the BP2450 supercritical boiler manufactured by Rafako SA. After monitoring, the idea of practical use of object tests for high-load boiler operation and guidelines for optimizing boiler operation were proposed.

We are convinced that examples of already completed fieldwork indicate our team's research potential in modernizing and transforming conventional energy to new environmental standards. This allows you to participate directly in implementing innovative ideas into industrial practice, which is what Prof. Kalisz says. ■

From the left: supervisors of doctoral dissertations, professors of the Silesian University of Technology: Sylwester Kalisz and Robert Wejkowski and their recent doctoral students, Dr Eng. Przemysław Garbacz and Dr Eng. Joanna Wnorowska



THE SILESIA UNIVERSITY OF TECHNOLOGY STANDS FOR SPORT!

text: Martin Huć
photos: Krzysztof Szydło, Joanna Malanowicz

IN THIS YEAR'S EDITION OF THE POLISH ACADEMIC CHAMPIONSHIPS, STUDENTS FROM THE SILESIA UNIVERSITY OF TECHNOLOGY TOOK TO THE PODIUM FOUR TIMES IN THE GENERAL CLASSIFICATION, AND IN THE CLASSIFICATION OF TECHNICAL UNIVERSITIES THEY WON TWENTY-FOUR MEDALS. THE GREAT SPORTING EMOTIONS ARE ALREADY BEHIND, BUT WE WANT TO TAKE A CLOSER LOOK AT SOME OF OUR ATHLETES' ACHIEVEMENTS.

Our swimmers, led by Joanna Malanowicz, won eight medals at the swimming pool in Lublin.

– There were over 900 competitors at the start, including even national representatives who have already secured qualification for the upcoming Olympic Games in Paris – says Joanna Malanowicz. – The level of these competitions is remarkably high every year, and the people we can watch on TV screens are, this time, standing next to the students on the starting posts.

Our university team consisted of 22 swimmers. They returned with three individual gold medals and a silver medal won by the women's relay team consisting of Weronika Fira, Karolina Kaleta, Kalina Kaleta, and Lena Gryżewska. In the classification of technical universities, summing up all the results, women took second place, and men took fourth place.

– I am incredibly pleased with



22 students of the Silesian University of Technology took part in the Polish Academic Swimming Championships

the result achieved, which will certainly motivate our team to continue working because - as we know - appetite grows with eating. Combining learning and daily training is quite a challenge. Therefore, the students

deserve huge congratulations for the effort they put in, says Joanna Malanowicz. – It is not easy to find talented swimmers, but the "Silesiada" competition for first-year students is helpful, during which we can find gems who will represent our university in academic competitions.

Among the achievements, Małgorzata Włodarczyk's success in sports climbing is also worth mentioning. The athlete

Combining learning and daily training is quite a challenge. Therefore, the students deserve huge congratulations for their efforts.

also performed excellently last year. Students competing in judo and table tennis players gave their coaches pleasant surprises. Medals were also won in demanding and less media-friendly disciplines such as sailing (described in the following pages) and equestrianism.

Participating in horse riding is difficult because you must have your horse for a given compe-

als. This was also the case with the students of the Silesian University of Technology, who returned from the AMP (Polish Academic Championships) in Białystok with five medals, including a bronze medal for Eryk Baranek in the classification and two gold medals in the competition for athletes from technical universities, won by Paulina Brzęk and Adam Paździerz.

field supervisor. – The role of the university is, above all, to find these students and create conditions for them to train. Although we do not have an athletics stadium, we organize motor and muscle strength training for students at our facilities. They form the foundation for specializing in other competitions, for which students often prepare at facilities in their residence, in clubs where they previously trained, or with the support of the Piast Gliwice stadium.

Let us also add that, for the eleventh time in a row, the Silesian University of Technology won the general classification of the Silesian Academic Championships series. The students' successes also ensured that our university won the medal classification.

In the twenty-first century, the Silesian University of Technology failed to take first place in the general classification of the Silesian Academic Championships only three times. Remember that last year, our university was recognized as the most successful in the 50-year history of the Silesian Academic Championships.

This year's season, the Silesian University of Technology athletes took the podium in 34 out of 45 disciplines. They won 14 gold medals, 12 silver medals, and 8 bronze medals.

"I am happy that we have won medals in individual and team competitions. The basis of this success is the excellent work of teachers from the Sports Centre with students, who inspire them and encourage them to train and participate in competitions, says Prof. Krzysztof Czapla, director of the SUT Sports Centre". ■



The silver medal in the triple jump was won by Krzysztof Ludwiczak (first from the left)

tion. My task is to recruit athletes and manage formal issues related to the start. Although students train individually, in the competition in Radzionków, we managed to win a medal as a team and individually for Emilia Wiśniewska—explains Piotr Wysocki, section supervisor.

The queen of sports, athletics, is always a chance to win med-

– Results in academic events are mainly determined by the level of training in previous years. It is impossible to build fitness and achieve high sports results in such a high-ranking competition by training for a year or two, says Dr Krzysztof Szydło, deputy director for teaching at the Silesian University of Technology Sports Centre and the track and

MEDALS OF STUDENTS OF THE SILESIAN UNIVERSITY OF TECHNOLOGY IN THE POLISH ACADEMIC CHAMPIONSHIPS IN THE 2023/2024 SEASON

GENERAL CLASSIFICATION

Sport climbing (supervised by Jolanta Krzyszkowska)

Małgorzata Włodarczyk – 3rd place in the bouldering competition

Fencing (Piotr Wysocki)

Kinga Zgryźniak – 2nd place

Horse riding (Piotr Wysocki)

Emilia Wiśniewska – 2nd place, show jumping – amateur

Athletics (Dr Krzysztof Szydło)

Eryk Baranek – 3rd place in discus throw

CLASSIFICATION OF TECHNICAL UNIVERSITIES

Judo (Bronisław Wołkowicz)

3rd place in the team classification

Laura Jaśniak – 3rd place in the category 57 kg

Table tennis (Piotr Zemła)

2nd place in the women's team classification

Swimming (Joanna Malanowicz)

Karol Popiela – 1st place in 100 m butterfly style

Weronika Fira – 1st place in 200 m individual medley style

Jessica Pawłowska – 1st place in 50 m butterfly style

Bożena Fic – 2nd place in the 100 m butterfly and 2nd place in the 100 m individual medley

Paweł Kwiecień – 3rd place in 50m breast-stroke and 3rd place in 50m.

butterfly style

4x50 m freestyle relay – 3rd place

Sport climbing

(Jolanta Krzyszkowska)

Małgorzata Włodarczyk – 1st place in the bouldering competition, 1st place in the time trial competition, and 3rd place in the difficulty competition

Athletics (Dr Krzysztof Szydło)

Paulina Brzęk – 1st place in the women's 400 m race

Adam Paździerz – 1st place in the men's 400 m race

Eryk Baranek – 2nd place in discus throw

Krzysztof Ludwiczak – 3rd place in triple jump

Mountain biking (Ryszard Madaj)

3rd place in the team classification

Fencing (Piotr Wysocki)

Kinga Zgryźniak – 2nd place in epee

Patrycja Frystacka – 3rd place in epee
2nd place in the team classification

Horse riding (Piotr Wysocki)

1st place in the team classification

Sailing (Wojciech Moskwiak)

3rd place in the team classification

MEDAL-WINNING ODDS

*text: Martin Huć
photos: Michał Szypliński – NTN Snow & More, Wojciech Moskwiak*

WILKASY WAS LUCKY FOR SAILORS FROM THE SILESIAN UNIVERSITY OF TECHNOLOGY. AT THE POLISH ACADEMIC SAILING CHAMPIONSHIPS, OUR CREW TOOK THIRD PLACE IN THE CLASSIFICATION OF TECHNICAL UNIVERSITIES. IT TURNS OUT THAT SUCCESS UNDER SAIL IS ALSO A GOOD LESSON IN HUMILITY TOWARDS NATURE.

The student sailing section of the Silesian University of Technology, led by Wojciech Moskwiak, was represented in the current season by three crews: the first - Jan Gocki (helmsman), Jerzy Bieniek, Michał Gocki; the second—Hanna Koczar (helmsman), Karol Głąbik, Tomasz Procek; and the third—Patryk Winiarczyk (helmsman), Maciej Perek, Mikołaj Heras, and Stanisław Podwojski.

In this year's Academic Championships of Silesia on Żywiec Lake, Jan Gocki's crew, winning eight races, unquestionably won the individual and team

classification. However, the most important thing was the Polish Academic Championships. In Wilkasy, on Niegocin Lake, our representatives took third place in the classification of technical universities and ninth in the "general ranking" out of thirty-nine universities from all over Poland and in the competition of as many as eighty-eight crews.

These successes have returned to the exemplary achievements we recorded a few years ago. Our university's sailors have stood on the podium of the Polish Academic Cham-

pionships many times. In the past, we won medals in the classification of technical universities and the "general"—says Wojciech Moskwiak.

The final rank in the AMP (Polish Academic Championships) is determined by the sum of the results of the two best teams from a given university.

– All crews work for the university's final rank in the competition. Breakdowns or collisions often occur on the water for reasons beyond the crew's control. In such a case, the next team takes over the burden of competition. In our case, fortunately, all three





Sailors explain that superior results in this sport are determined by, among other things, a good start, tactics, and physical fitness.

crews survived the competition unscathed.

The competition is challenging because several universities field four teams, and the Gdańsk University of Technology even six. This fact "stretches" the entire field, making it more difficult to reach the top. Even more applause for our students because they could compete in such a demanding company.

Freedom and self-confidence

Our crew includes one woman, the helmsman - Hanna Koczar, a second-year student of applied linguistics at the Faculty of Organization and Management. In this year's AMP, she took eighth place among women-led crews.

– Sailing became my passion when my parents signed me up for sailing camps at age seven. This event was one of my best holidays. I was very fascinated by this sport, says Hanna Koczar. – At the helm, I feel incredible freedom and self-confidence. Being a skipper comes naturally to me, as I have been racing single-per-

son boats in the Optimist classes for ten years. My crew - Karol and Tomek - have known each other for many years; we were in friendly Silesian sailing clubs - I in TS Kuźnia Rybnik, and they in LOK Garland Gliwice. We understand each other well, and our cooperation is seamless and natural.

Michał Gocki is a PhD student at the Silesian University of Technology and conducts research in materials engineering. He has been competing for our university since starting his studies in 2017. During this time, he has already won three bronze medals in the technical universities'

classification in the AMP and the Silesian Academic Championship in the individual classification five times.

– My adventure with sailing began thanks to my father, who took me and my brother Jan to sailing training in the Optimist class (the smallest class of yachts) on Międzybrodzkie Lake. His coaching guidance accompanied us during our twenty years on the water. We took part in regattas - first Optimist, then the two-person 420 class, and later Omega class boats - recalls Michał Gocki.

Most of the students in our crews represented the Silesian Univer-

Character traits predisposing you to this sport include courage, the ability to cooperate in a group, and anticipation - you need to predict where the favourable wind direction will come from. During regattas, even the smallest details play a crucial role. You must have extensive knowledge of yacht construction, meteorology, sailing tactics, and sailing regulations.

sity of Technology once again. They had previously gained experience in sailing clubs, sailing in the Omega Standard and Laser or Optimist classes.

– My brother introduced me to the sailing team of the Silesian University of Technology. This introduction was essential to me. Thanks to this, I could go to the gym daily and participate in yearly university competitions - recalls the doctoral student. – Sailing allows you to combine physical activity and thinking about regatta tactics and sail trim. In addition, I love contact with water and wind. The aspect of competition is also important to me. It is important to remember that competition significantly drives innovation and progress in science and technology.

HUMILITY TOWARDS NATURE

The trip to the Central Academic Sports Centre competition in Wilkasy is a significant logistical challenge because you must take a special trailer with a boat. Sailing competitions are important and prestigious. They last as long as four days. They fall at the end of the Polish Academic Championships season, so it is the last chance to give the university additional points in the general classification. According to the regulations, helmspersons must have a valid amateur or sports competition license. There is no place for random people here.

– You can learn sailing by participating in a several-week course, but regatta sailing is more complex. It is impossible to convey complete knowledge in a brief period of study. These are hundreds of hours spent on the water, and experience is the greatest asset of a good crew -



With this year's successes in the Polish Academic Championships, the Silesian University of Technology representatives referred to the achievements from several years ago.

says the coach of our section. – All helmspersons representing our university in academic competitions have extensive regatta experience. The helmsmen command the boat; they direct all the crew's actions, whose competences are lower, but they perform more physical work on the boat.

The race usually lasts about an hour. Its crucial element is the start.

– In regatta sailing, we say this is up to 80 percent of success. Afterward, it would help if you stayed focused on driving the boat. Usually, we consult the crew on regatta tactics and opponents' position during this time and observe the wind - says Michał Gocki.

– Not everyone will find their way in sailing. Character traits predisposing you to this sport

include courage, the ability to cooperate in a group, and anticipation - you need to predict where the favorable wind direction will come from. During regattas, even the most minor details play a significant role. You must have extensive knowledge of yacht construction, meteorology, sailing tactics, and sailing regulations. Contrary to appearances, physical fitness, the ability to swim in the water, and even knowledge of water rescue issues are also crucial - says Wojciech Moskwiak. – Weather conditions on the water can be quite different. Boat capsizes during regattas in high winds are standard. We have dealt with such situations before. A skilled sailor knows what to do in such situations; he must show self-control and cunning because sailing is also the art of humility towards nature. ■

IRONMAN WITH A MUSICAL FLAIR

text: Martin Huć
photos: Tymoteusz Zębik, Conceptpro.pl

WHAT DID THE TALENTED MUSICIAN DO AT THE AGE-GROUP POLISH TRIATHLON CHAMPIONSHIPS? HE WON! MAREK WOJTYNEK, A STUDENT AT THE SILESIAAN UNIVERSITY OF TECHNOLOGY, WON IN RZESZÓW IN THE M20 AGE CATEGORY AT THE BEGINNING OF JUNE. DESPITE THE DIFFICULTIES IN COMBINING BOTH PASSIONS, SPORTS, AND MUSIC CREATE A PERFECT HARMONY, WITHOUT WHICH HE CANNOT IMAGINE LIFE.

Age group is an amateur triathlon category in which competitors swim, cycle, and run without breaks. Competitions are held in various age categories, and there is also an open classification for everyone.

– Group is the same as elite competitions, i.e., the fastest wins. Anyone who feels capable can take part in the championship. It is worth noting that the level among amateurs is high, and during the competition - as they say - "there is no soft game," - says Marek Wojtynek, a first-year student majoring in industrial mechanics at the Faculty of Mechanical Engineering.

This year's Age-Group Polish Triathlon Championships over the sprint distance took place in Rzeszów. The competitors swam 750 m in the "Żwirownia" reservoir, raced through the streets of Rzeszów on bicycles for twenty-one kilometres, and finally had to run five kilometres along the Wisłok River.

– I competed in the M20 age category, i.e., for people aged 20-25 – says a student at our



university. – We started with swimming. Due to my unfortunate start, five people separated from me. I finished this competition in sixth place.

Then, it was time for cycling, and I was only in ninth place at some point.

Fortunately, I got the situation under control, and with allowed drafting, i.e., using the wind tunnel behind the competitor's wheel, I started to regain the lost seconds.

Everything was decided in a murderous race, and the Silesian University of Technology student was the best. This achievement allowed him to compensate for the loss and finish the competition in first place in his age category and fifth place in the open classification.

In the open competition, he was only 52 seconds behind the winner and only sixteen seconds short of the podium. The student managed to set the best time in the race. After exhausting, he covered five kilometres in sixteen minutes

A student at the Silesian University of Technology became the Polish triathlon champion of Age Group in the M20 age category

and two seconds. He finished the entire competition in one hour and two minutes.

– The run is the most challenging moment in the entire competition – says the athlete. – We are exhausted after the previous stages, and this stage often determines the final position. Maintaining a high pace until the end is often a struggle with your thoughts. This challenge is not easy. You can't give up in any of the three disciplines. Weakness will always be exploited. Details are also important. Much time can be saved in the transition area or when putting on your helmet or shoes properly.

This season, Marek Wojtynek also had the opportunity to represent the Silesian University of Technology in the Silesian Academic Championships and the Polish Academic Championships, including in swimming and mountain biking. Currently, the athlete is preparing for the next event in the Polish championship series, this time in cross triathlon, i.e., in mountain terrain, on an MTB bike, and in a diversified terrain run.

I train every day. One day, I focus on cycling, and the next, I focus on swimming and running. Triathlon is genuinely diverse, and I love its lack of monotony, says Marek. Anna Wer, my trainer from the Tomica Coaching team, writes down all my activities, which greatly helps me. However, running is not Marek's only passion.

Maintaining a high pace until the end is often a struggle with your thoughts. This is challenging. You can't give up in any of the three disciplines. Weakness will always be exploited.

From an early age, he also loved singing and playing the guitar. He doesn't create only in the privacy of his home—"to a drawer." He has already performed on big stages.

– I started my adventure with music by learning to play classical guitar and playing in a local guitar orchestra. Only later did I "touch" the electric guitar and immediately fell in love because I am a fan of rock music - says our interlocutor. – In the meantime, I also sang at home, in school choirs, and other places. Later, my first band was formed, where I was the guitarist. Currently, with Roch Czerwiński, the drummer

from the band at that time, we create our music as Roch Czerwiński and Marek Wojtynek.

Under the names of these two musicians, you can find and listen to songs on streaming platforms.

– We have already had the pleasure of giving concerts - we played on quite large stages in front of artists such as LemOn and Organek - says the student. – It's not easy to be fully involved in these areas, but I think I'm coping so far. If I stopped, I would feel terrible. What I do gives me self-esteem and helps me find harmony. ■



Marek Wojtynek's great passion is music. His songs can be found on streaming platforms under the aliases of Roch Czerwiński and Marek Wojtynek.

THE VOICE OF THE STUDENT COUNCIL

3RD CONGRESS OF THE FORUM OF TECHNICAL UNIVERSITIES IN LUBLIN

On June 20-23, 2024, the 3rd Congress of the Forum of Technical Universities of the 2024 term was held at the Lublin University of Technology. Our university was represented by the chairman of the University Management Board of the Student Government of the Silesian University of Technology, Dawid Mordarski, Member of the Management Board for External Cooperation, Emilia Łapeta, Member of the Management Board for Teaching and Benefits Michał Szymanowski and Chairwoman of the Student Government Council of the Faculty of Mining, Safety Engineering and Industrial Automation Wiktoria Bańczyk.

During the meeting, our local government officials participated in training on creating projects in the student government, study programs, and external cooperation. The event program also included a city tour, ballroom dancing workshops, and training on creating graphic materials.

The event was an excellent opportunity to exchange experiences, establish new contacts, and acquire valuable skills that will undoubtedly contribute to the further development of our university and the student government. ■

Text: Błażej Brudny

Photo: Kinga Najzer.

SELECTION OF THE MAIN ORGANIZER OF THE 2025 IGRY GAMES

On July 10, 2024, at 6:00 p.m., the 3rd Extraordinary Meeting of the Student Parliament of the Silesian University of Technology was held to elect the Main Organizer of the 2025 Igrzy Games.

Mr. Wiktor Kordala, who will perform this role for the third time, was re-elected as the Main Organizer of



the 2025 Games. After the election presentation, there was a session of questions for the candidate, and then voting began, which led to Wiktor's election. ■

Text: Błażej Brudny
fot. Mat. PŚ

ADOPT ME - CHARITY EVENT AT THE SILESIAN UNIVERSITY OF TECHNOLOGY

On June 30, 2024, a charity event called "Adopt Me" occurred in the Igrzy Meadow. The cooperation of the Student Self-Government, the Silesian University of Technology,

the Animal Shelter in Gliwice, and local companies allowed us to create this important event for the entire community. It aimed to increase Gliwice students' and residents' awareness of the problems the shelter faced. Participants also talked to volunteers who were happy to answer questions, eat delicious ice cream, and drink good coffee. The youngest could slide down an inflatable slide or pet alpacas. The event was held under the honorary patronage of the mayor of Gliwice, Katarzyna Kuczyńska-Budka. ■

Text: Błażej Brudny

Contact via student self-government social media or by e-mail to biuro@samorzad.polisl.pl.



EVENTS

PROF. DR HAB. ENG. MAREK PAWEŁCZYK, WITH A KEY ROLE IN THE CONFERENCE OF RECTORS OF POLISH TECHNICAL UNIVERSITIES (KRPUT)

From September 1, 2024, the honourable role in the structures of the Conference of Rectors of Polish Technical Universities will be played by Prof. Dr. Hab. Eng. Marek Pawełczyk – rector-elect of the Silesian University of Technology, who became vice-chairman of the body. The new authorities of this institution were elected on June 20 during the KRPUT Plenary Meeting hosted by the Gdańsk University of Technology. ■

COMMITTEE ON DIGITIZATION, INNOVATION, AND MODERN TECHNOLOGIES AT THE SILESIA UNIVERSITY OF TECHNOLOGY

Members of the parliamentary committee held two external meetings at the Faculty of Organization and Management of the Silesian University of Technology in Zabrze. They talked to scientists about artificial intelligence and the concept of a Smart City—a smart city of the future.

The parliamentarians visited the Silesian University of Technology at the invitation of the dean of the faculty, Prof. Jan Kaźmierczak. They met with scientists representing the university's two Priority Research Areas: Artificial Intelligence and Data Processing and Smart Cities and Mobility of the Future. ■

THE SILESIA UNIVERSITY OF TECHNOLOGY SIGNED A COOPERATION AGREEMENT WITH MATERIALS DESIGN

The Silesian University of Technology has established cooper-

ation with Materials Design, a company that creates software and provides services in material testing. Prof. Arkadiusz Mężyk, the University's Rector, and Dr Erich Wimmer, the company's co-founder and scientific director, signed the contract on Wednesday, June 12.

Before signing the agreement, Dr Erich Wimmer delivered a lecture at the Education and Congress Centre on "Multi-scale modelling of materials in the era of machine learning." ■

MEETING OF THE RECTOR WITH WINNERS OF SCHOLARSHIPS FROM THE MINISTER OF SCIENCE AND HIGHER EDUCATION

The Senate Hall hosted a ceremonial meeting of the Silesian University of Technology authorities and students who received scholarships from the Minister of Science and Higher Education for significant scientific, artistic, or sports achievements. This year, 18 students of our university obtained them.

The Silesian University of Technology has the most students awarded this scholarship among all technical universities. – This is confirmation of the quality of education at our university. On the one hand, we have exceptionally talented and committed young people who want to study and develop outside the study program. On the other hand, such many winners show that our study programs are attractive and attract the most talented people – said the Rector of the Silesian University of Technology, Prof. Arkadiusz Mężyk. ■

CITY-REGION-ACADEMY

As part of the celebration of the European City of Science Katowice 2024, events taking place at the university can be submitted to the City-Region-Academy program. The program consists of initiatives such as popular science events, scientific conferences, congresses, musical and cultural events, festivals, social initiatives, and recreational events, including events that have been organized for years.

Reporting an event/initiative to the City-Region-Academy programme at the Silesian University of Technology is done via the form on the website: www.emnk2024.systemcoffee.pl. The principles of cooperation within the City-Region-Academy programme are discussed in detail at www.miastonauki.pl.

The substantive coordinators of the City-Region-Academy program at the university are Dr Hab. Eng. Aleksandra Kuzior and Prof. SUT (Aleksandra.Kuzior@polsl.pl) and Iwona Flanczewska-Rogalska (Iwona.Flanczewska-Rogalska@polsl.pl). ■

The Future Transport week 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 Silesian Voivodeship - Co-organizer of the European City of Science Katowice 2024 also co-financed the event.

DAY OF THE FACULTY OF MECHANICAL ENGINEERING

A Day of the Faculty of Mechanical Engineering is behind us. On June 19, students, employees, and companies cooperating with the faculty were thanked on this occasion.

There was also a ceremonial meeting of the Dean's Council, the Social Council, and the Council of Secondary School Directors from the last terms. The meeting was an opportunity to say thanks. Distinctions were given to course participants and outstanding students and scientists. The Dean of the Faculty, Prof. Dr Hab. Eng Anna Timofiejczuk, prof. SUT presented thanks to the Student Government and Student Science Club representatives operating at the faculty. ■

JUBILEE OF THE SCIENCE POPULARIZATION CENTRE

Popular science events, workshops, training supporting scientific communication, and networking of scientists and popularisers are just some of the activities undertaken by the Science Popularization Centre. The ceremonial summary of seven years of activity was an opportunity to thank the University Authorities for supporting the Centre's initiatives and to summarize the terms of office of the Council of Subject Matter Experts and the Program Council. Since 2017, the CPN (Science Popularization Centre) has conducted 146 popular science events, which attracted over 43,000 people. ■

THE ARCHITECTURE FESTIVAL INTEGRATES AND ENTERTAINS

The weather was good, and so was the audience. The festival atmosphere was outstanding again at the Faculty of Architecture of the Silesian University of Technology, where the "III International Silesian Festival of Architecture, Art and Crafts" took place on June 19. The event aimed to popularize universally understood art and promote the Faculty of Architecture of the Silesian University of Technology. ■

It is worth adding that the event has a different formula each year. The topic could be more precise, but this attracts interested people to stop at the square in front of the faculty. It should be noted that students mainly organize the festival, with some help from the staff of the Faculty of Architecture. The event's potential was also noticed by the mayor of Gliwice, Katarzyna Kuczyńska-Budka, who visited the festival. ■

"CHEMIKALIA" WITH SUCCESSFUL REACTIVATION

After a thirteen-year break, on Friday, June 21, the Faculty of Chemistry of the Silesian University of Technology organized "Chemikalia" again - an event combining science and entertainment. The charming place behind the Red Chemistry building attracted many people that day. The event was attended by, among others, Prof. Dr Hab. Eng. Anna Chrobok, prof. SUT, director of the College of Studies at the Silesian University of Technology.

The event was held under the slogan "Chemikalia: Your nuclear feast of knowledge!" The scientific part, i.e., learning about chemistry from the inside out, aroused great interest. These included workshops and two chemical shows presented by members of the Student Science Club of Chemists. In addition to colourful, impressive, but also safe experiments, there were also exciting presentations with roses and balloons. ■

TALENTDETECTOR2024 SCIENTIFIC CONFERENCE

The International Student Scientific Conference TalentDetector2024_Summer was held at the Education and Congress Centre of the Silesian University of Technology on June 17, 2024.

Over 140 participants from Poland and abroad attended the event.

The conference was an opportunity to present projects conducted as part of the activities of Student Science Clubs, doctorates, and teams implementing PBL (Project-Based Learning) projects as part of the Excellence Initiative—Research University program at the Silesian University of Technology. Projects conducted within the framework of EURECA-PRO and international cooperation between ERASMUS+ and the International Visegrad Foundation were also presented. ■

GUESTS FROM THE HASSELT UNIVERSITY AT THE SILESIA UNIVERSITY OF TECHNOLOGY

The university authorities, academic staff representatives, and the Belgian administration visited Gliwice. The Hasselt University is a Silesian University of Technology partner in the EURECA PRO consortium.

The visit aimed to strengthen relations and establish cooperation in the scientific field.

The Hasselt University in Belgium educates students in the exact sciences, social sciences, and humanities. At the request of the Silesian University of Technology, this university joined the consortium, creating the European University EURECA PRO, which today has nine partners. ■

A SCIENTIST FROM THE SILESIA UNIVERSITY OF TECHNOLOGY PARTICIPATED IN A VOLUNTEERING CAMPAIGN AT PAEDIATRIC ONCOLOGY DEPARTMENTS

Dr Eng. Adrian Kapczyński from the Faculty of Applied Mathematics took part in a volunteering campaign for young patients from oncology wards in Katowice and Zabrze. This is the first event conducted by

ING Bank Śląski, the Silesian University of Technology, and the Iskierka Foundation.

As part of the campaign, volunteers visited young patients in two paediatric oncology departments - the Upper Silesian Children's Health Centre in Katowice and the Clinical Hospital of the Medical University of Silesia in Zabrze. Our scientist told the children about cyber threats, modern technologies, and the benefits and threats they bring. ■

SUMMARY OF THE SEMESTER IN THE BALTIC UNIVERSITY PROGRAM

The Baltic University Program is an international network of approximately 100 universities located in 10 countries of the Baltic Sea Region. BUP supports cooperation between scientists, teachers, and students from participating universities.

The BUP authorities sent a letter to its member universities, including the Silesian University of Technology, informing them about the achievements of this semester, which reads, among others: "We see continued great interest among universities from the Baltic Sea region in joining the Baltic University Program (BUP). This year, 13 more universities joined - we now have 112 universities participating in BUP! In 2017, there were 59 of us. This event is a testament to the continued importance of BUP as a platform for academic cooperation in the Baltic Sea region." ■

THE DRONIADA JUNIOR COMPETITION HAS BEEN RESOLVED.

Droniada Junior 2024 has ended. Secondary school pupils competed at the Faculty of Transport and Aviation Engineering of the Silesian University of Technology in Katowice in the second competition, "Transport of the Future in the City

2050". The winner was the XERA-Cl team, represented by Dawid Miozga from the Communications School Complex in Gliwice.

Let us remind you that Droniada Junior is one of the tracks of Droniada GZM 2024. It took place under the auspices of the European City of Science Katowice (EMNK) and was addressed to primary and secondary school pupils. Among six teams, representatives from the Academic Secondary Comprehensive School of the Silesian University of Technology in Gliwice did tremendously and took second place. Their SpaceCoffee team comprised Kamil Moszumański, Paweł Bańczerowski, and Benjamin Kopiec.

The EU finances them. 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. ■

TRANSPORTERS FROM ALL OVER THE WORLD MET IN KATOWICE

At the Faculty of Transport and Aviation Engineering, for the 16th time, the International Scientific Conference "Transport Problems 2024" and the 13th edition of the Young Scientists Symposium were held. These events gathered Polish and foreign scientists to research and understand transport issues.

These two events gathered 237 specialists from 20 countries, and 86 papers were published in a post-conference publication (conference proceedings) of approximately one thousand pages. This year, the Conference and Symposium were additionally held to celebrate the

European City of Science - Katowice 2024.

The Future Transport week 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 Silesian Voivodeship - Co-organizer of the European City of Science Katowice 2024 also co-financed the event. ■

INTERNATIONAL STAFF WEEK

Being eco-friendly in a post-industrial environment is the International Staff Week program's motto at the Silesian University of Technology by the International Relations Office. Representatives of universities from Lebanon, Algeria, Jordan, Armenia, and Bosnia and Herzegovina, among others, came to Gliwice, as did a group of guests from Ukraine.

The visit aimed to network, build relationships, and share experiences. The program of the current edition of International Staff Week was prepared based on the history and transformation of Silesia. The meeting participants learned about the history of the creation of the academic district of the Silesian University of Technology in Gliwice, talked about the history of mining in Silesia, the green future of the region, the circular economy, and ways of using post-mining infrastructure as part of the energy transformation. ■

18TH COLLOQUIUM OF YOUNG SCIENTISTS IN FREIBERG

The 18th edition of the Colloquium of Young Scientists, part of EURECA-PRO, was held at the Technische Universität Bergakademie in Freiberg from June 3 to 7, 2024. The main topic was "Responsible consumption

and production using Earth's resources." Doctoral students from the Silesian University of Technology were awarded in the competition.

Twelve PhD students from the partner universities of the EU-RECA-PRO consortium spent a week at the Technische Universität Bergakademie in Freiberg, where, among other things, they visited Siltronic AG - one of the world's leading producers of hyper pure silicon wafers and took part in a tour of the laboratories of the Technische Universität Bergakademie in Freiberg. ■

SUMMER MODELLING WORKSHOPS

The Aviation Modelling Centre of the Gliwice Aviation Modelers Association invites students, children, and employees of the Silesian University of Technology to modelling workshops. During classes, students make aircraft models and learn how to use various tools and fly models as part of training and competitions. They also know the theory related to the flight of airplanes and drones and learn how to adjust models. The club has hand and electromechanical tools, machines, and modern machines and devices (including a 3D printer, CNC milling machine, and CNC thermal plotter). It also has model flight simulators.

Modelling classes are free of charge and will be held at the Aviation Modelling Centre, at the airport in Gliwice, from August 26-30, 2024, from 9:00 a.m. to 1:30 p.m. Contact: e-mail jack@model.bmj.pl and telephone number 608 585 289. ■

BEAUTY IN ARCHITECTURE

The opening of the exhibition titled "Beauty in Architecture" by Prof. Dr Hab. Engineer Arch. Adam Lisik took place at the Faculty of Architecture of the

Silesian University of Technology in Katowice. Visitors could see several dozen works presented in connection with the 25th anniversary of John Paul II's visit to Gliwice.

25 years ago, during John Paul II's pilgrimage to Gliwice, an impressive altar designed by Prof. Adam Lisik was built. The main idea of the adopted architectural concept of the Papal Altar in Gliwice was the motif of the creation of man, presented by Michelangelo in the vault fresco in the Sistine Chapel. ■

PUSH-UPS FOR HEALTH

The participants of the World Pumping Day combined with the National Calisthenics Games Phoenix Games awaited many attractions. The event, co-organized by the Silesian University of Technology, occurred at the Mrowisko Student Culture Centre.

At one of the demonstration stands, scientists and students from the Faculty of Biomedical Engineering of the Silesian University of Technology presented the possibilities of conducting biomechanical tests of push-ups and calisthenics training. Many people came to them willingly to analyse the body's Centre of gravity position while performing push-ups. ■

THE SILESIA UNIVERSITY OF TECHNOLOGY SUPPORTS AN ANIMAL SHELTER

The event titled "Adopt Me" is behind us. On June 30, at the Igry Meadow, representatives of the Student Government, other Silesian University of Technology volunteers, and representatives of the Gliwice animal shelter promoted adopting homeless animals.

If you want to adopt a child, don't hesitate to contact the shelter volunteers. More infor-

mation can also be found on the facility's website: www.schronisko.gliwice.pl ■

THIS IS UNBELIEVABLE! THE 27TH SCIENCE PICNIC IS NOW HISTORY

The representation of the Silesian University of Technology took part in the 27th Science Picnic of the Polish Radio and the Copernicus Science Centre and presented almost 20 engineering and technical activities that attracted people fascinated by science.

Representatives of the Silesian University of Technology proved that science improves our quality of life. During the Picnic - in addition to SKN ALMETH supporting therapy and rehabilitation - the Bioinformatics Student Science Club, combining computer science and biology, was also present, working on a program to improve, for example, communication among people with disabilities. ■

CHESS OLYMPIAD AT THE SILESIA UNIVERSITY OF TECHNOLOGY

174 preschoolers competed on June 9 at the Faculty of Mining, Safety Engineering, and Industrial Automation of the Silesian University of Technology during the Chess Olympiad for the Youngest.

Prof. Dr Hab. Eng. Arkadiusz Mężyk, Rector of the Silesian University of Technology, grandmaster Radosław Jedynek, President of the Polish Chess Federation, and Prof. Dr. Eng. Franciszek Plewa, Dean of the Faculty of Mining, Safety Engineering, and Industrial Automation, took honorary patronage over the event. The Hetman Gliwice Chess Club Association organized the event.

VISITING THE MUSEUM OF DEPOSIT GEOLOGY AND THE "MINING TREASURES UNDERGROUND" EXHIBITION

The Museum of Deposit Geology, named after Czesław Poborski at the Faculty of Mining, Safety Engineering, and Industrial Automation of the Silesian University of Technology, invited all those interested to visit and see the exhibition "Rocks and Minerals of Upper Silesia—coal..." The museum contains extraordinary treasures hidden deep in rocks and minerals. The event is organized as part of Silesia Week, during the European City of Science Katowice 2024 celebration.

The EU funded the event. 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. ■

"CLOSED TIME" - NEW EXHIBITION AT GALLERY 2ND FLOOR

Time became the topic for the creators of the exhibition "Closed Time," devoted to reflection on time and its phenomena: Dominique Jerzak, Gabriela Piłat, Dobrawa Maria Radziwiłł, Stefania Skłodowska, Kacper Sobczyk and Marta Tokarz from the student collective of the Academy of Fine Arts in Katowice. The exhibition can be seen in Gallery 2nd Floor in the Centre of New Technologies of the Silesian University of Technology. ■

YOUTH OF THE REGIONAL WEIMAR TRIANGLE WITH A VISIT TO THE SILESIA UNIVERSITY OF TECHNOLOGY

Over 50 students and secondary school pupils, participants of the Regional Weimar Triangle

Youth Summit, visited the Silesian University of Technology. The visit was an opportunity to present the university's scientific potential and learn about its modern laboratories.

The Silesian Voivodeship hosted this year's Weimar Triangle Regional Youth Summit. Young people from France, Germany, and Poland visited Silesia until July 12. The summit motto was "Science and new technologies—a challenge for the future." During their visit to the Silesian University of Technology, the youth visited the Centre of New Technologies and the Institute of Physics—Centre for Science and Education. ■

SUCCESSSES

THE SILESIA UNIVERSITY OF TECHNOLOGY IS THE LEADER IN THE RANKING OF ACADEMIC UNIVERSITIES IN THE SILESIA VOIVODESHIP

In the 25th edition of the Perspektywy 2024 University Ranking, the Silesian University of Technology was again the highest-ranked academic university in the Silesian Voivodeship.

Additionally, Silesian University of Technology students made it to the podium in as many as seven fields of study. Biomedical engineering, min-

ing, and geology were ranked second in the country, while architecture, automation, robotics, electrical engineering, power engineering, mechanics, and machine technology were ranked third. ■

SCHOLARSHIPS OF THE MINISTER OF SCIENCE FOR OUTSTANDING YOUNG SCIENTISTS FROM THE SILESIA UNIVERSITY OF TECHNOLOGY

The Ministry of Science and Higher Education awarded scholarships to outstanding

young scientists, including nine Silesian University of Technology students. MSc. Eng. Jakub Bródka, Dr Ryszard Buchalik, Dr Krzysztof Kubiczek, Dr Andrzej Kubik, Dr Waldemar Mucha, Dr Bartłomiej Rutczyk, Dr Przemysław Snopiński, Dr Magdalena Stec and Dr Katarzyna Turoń.

The scholarship is awarded to young scientists who demonstrate significant achievements in scientific activity, such as authorship or co-authorship of a scientific monograph, an article published in a scientific journal,

managing a research project with a prominent level of innovation, or practical application of the results of scientific research or development work. ■

SCIENTISTS FROM THE SILESIAN UNIVERSITY OF TECHNOLOGY AWARDED

Dr Hab. Małgorzata Dobrowolska, prof. SUT and Dr Hab. During the Intelligent Development Forum Gala, Aleksandra Ziemińska-Buczyńska, Prof. SUT, received an award in the "Scientist of the Future 2024" category dedicated to people creating a better future.

Prof. Dobrowolska was also awarded the "Leader of Intelligent Development 2024" category. The Science Popularization Centre of the Silesian University of Technology was also distinguished and received the "Supporting Innovation and Competitiveness of the Economy" award. ■

DR HAB. RENATA FRĄCZEK IN THE EXECUTIVE COUNCIL OF THE CONFERENCE OF DIRECTORS OF ACADEMIC LIBRARIES OF POLISH SCHOOLS

Dr Hab. Renata Frączek, director of the Silesian University of

Technology Library, was elected to the Executive Council of the Conference of Directors of Academic Libraries of Polish Schools.

The Conference of Directors of Academic Libraries of Polish Schools represents Polish academic libraries. Its aim is, among others, to support, develop, improve, and promote university libraries for the public good and social benefit. ■

PROJECTS

ABOUT A PHD IN 3 MINUTES? IT IS POSSIBLE! TAKE PART IN 3MT® 2024

Applications for the Silesian edition of the Three Minute Thesis® competition are now accepted. This competition in scientific communication is aimed at university doctoral students. The participant's task is to give a 3-minute presentation about the activities conducted as part of the PhD and their importance for society. Scientific issues must be presented in a way that is understandable and accessible to a broad and diverse audience.

Registration lasts until October 31. The qualifying rounds will take place on November 16.

The registration form is available at www.polsl.pl/rj07-cpn/prezentacja-three-minute-thesis/ ■

INFORMATION ON FUNDS FOR FINANCING PROJECTS

The Ministry of Funds and Regional Policy presented information on the funds universities and research institutes can apply to finance projects. These include the National Recovery and Resilience Plan and the European Funds for Social Development program. ■

COMPETITION FOR THE AWARD OF THE PRESIDENT OF THE MANAGEMENT BOARD OF THE WARSAW STOCK EXCHANGE

The GPW Foundation invites students and graduates of the Silesian University of Technology to participate in the competition for the President of the Management Board of the Warsaw Stock Exchange award for the best diploma thesis. This competition is dedicated to

bachelor's, master's, and doctoral theses, including issues related to the capital market.

You can win prizes ranging from PLN 3,000 up to PLN 8,000. Works should be submitted by October 31, 2024, by sending an electronic version of the work and the required documents by post. Detailed information about the competition is available at www.gpw.pl/fundacja-gpw-konkurs-naprace-dplomowe. ■

THE RESULTS OF THE IITH COMPETITION FOR FINANCING PROJECT-BASED-LEARNING (PBL) EDUCATION

The results of the 11th competition for financing project-oriented education (PBL) under the Excellence Initiative—Research University program was announced.

As part of the 11th competition for financing project-oriented education - PBL, the Competition Committee awarded funding to 203 projects. According to Ordinance No. 55/2020 (as amended) of the Rector of the Silesian University of Technology regarding the Regulations for financing project-based learning - PBL, under the Excellence Initiative - Research University program, the projects received funding in the requested amount, not higher than PLN 5,000.00 gross. All

projects met the requirements specified in § 3 section 3 above ordinance and were placed in the appropriate place on the ranking list. ■

RESULTS OF THE SIXTH COMPETITION FOR FINANCING PROJECTS OF STUDENT SCIENCE CLUBS

The results of the sixth competition for financing student science club projects under the Excellence Initiative—Research University program was announced.

As part of the sixth competition for financing projects of student science clubs, the Competition Committee awarded funding to 189 projects following Ordinance No. 54/2020 of the Rector of the Silesian University of Technology on the Regulations for financing projects of student science clubs as part of the Excellence Initiative - Research University program. The projects received funding in the amount requested, at most PLN 9,000.00 gross. ■

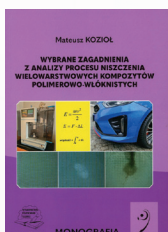
PUBLISHING NEWS

SELECTED ISSUES IN THE ANALYSIS OF THE DESTRUCTION PROCESS OF MULTILAYER POLYMER-FIBRE COMPOSITES

MATEUSZ KOZIOŁ

Ed. I, 2024, PLN 33.60, p. 242

The monograph is a platform for formulating, solving, and analyzing selected issues regarding the destruction process of polymer-fibre laminates. It presents the results of the author's original research, most of which have been previously published. The monograph introduces innovative and original concepts for assessing the destruction process of laminates based on the analysis of recorded acoustic and vibration signals. These concepts have enabled a precise description of the mechanisms of initiation of this process, marking a unique contribution to the field.

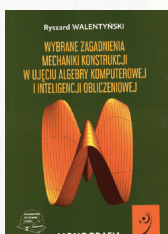


SELECTED ISSUES OF STRUCTURAL MECHANICS FROM THE PERSPECTIVE OF COMPUTER ALGEBRA AND COMPUTATIONAL INTELLIGENCE

RYSZARD WALENTYŃSKI

Ed. I, 2024, PLN 24.15, p. 190

The monograph addresses researchers, engineers, and students working on civil engineering issues, particularly those specializing in structural mechanics.



VALORISATION AND PROTECTION OF VILLAGE SETTLEMENT SYSTEMS IN THE RACIBÓRZ AREA

ELŻBIETA RDZAWSKA-AUGUSTIN

Ed. I, 2024, PLN 24.15, p. 166

The monograph examines the historical urban layouts in Racibórz, located on opposite banks of the Odra River. It explores the state of preservation of the village's historic urban layouts. Cultural, ethnic, and economic diversity is essential in selecting examples. The fundamental values of the discussed rural systems are valorised.



Edited by Małgorzata Mizera

POSITIONS, DEGREES, AND ACADEMIC TITLES

AWARDED PH.D. DEGREES

Dr Eng. Jakub BIŃCZAK

Grupa Azoty Zakłady Azotowe "Puławy" SA Supervisor: Prof. Dr Hab. Eng. Anna Chrobok Thesis topic: "Development of technology for the production of caprolactone and control of its oligomerization process along with optimization of the process carried out continuously on an industrial scale." Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline – chemical engineering. Resolution of the Chemical Engineering Discipline Council of June 12, 2024

Dr Eng. Maria BZÓWKA

Silesian University of Technology - Biotechnology Centre, assistant. Supervisor: Dr Hab. Artur Góra, prof. SUT. Thesis topic: "Analysis of molecular aspects of protein regulation considering water molecules as a potential mediator in intermolecular interactions." I am pursuing a Doctor of Exact and Natural Sciences with honors. Discipline – chemical sciences. Resolution of the Chemical Sciences Discipline Council of June 19, 2024.

Dr Eng. Arch.

Agata GAŚOWSKA-KRAMARZ

Silesian University of Technology - Faculty of Architecture, assistant. Supervisor - Dr Hab. Eng. Arch. Grzegorz Nawrot, Prof. SUT. Thesis topic: "Isolation of methods for systemic qualification of residential space in multi-family housing construction in the context of shaping it under the influence of architectural and non-architectural factors: trends in shaping the space of apartments in multi-family housing construction at the beginning of the 21st century (on the example of the city of Opole)". Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline - architecture and urban planning. Resolution of the Architecture and Urban Planning Discipline Council of June 24, 2024.

Dr Eng. Barbara HELIZANOWICZ

Silesian Science and Technology Centre of the Aviation Industry. Supervisor: Dr Hab. Eng. Mateusz Kozioł, prof. SUT. Auxiliary supervisor - Dr Eng. Aleksandra Bogdan-Włodek. Thesis topic: "Use of low-weight preimpregnants for the autoclave production of polymer-carbon fibre composite panels containing small radius curvatures." Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline - materials engineering. Resolution of the Materials Engineering Discipline Council of May 28, 2024.

Dr Eng. Jyoti NAYAK

Silesian University of Technology – PhD student. Supervisor: Dr Hab. Eng. Je-

rzy Bochen, prof. SUT. Auxiliary supervisor - Dr Eng. Małgorzata Gołaszewska. Thesis topic: "Analysis of the impact of selected natural waste fibres and ashes on properties of mortars." Conferring the degree of Doctor of Engineering and technical sciences. Discipline – civil engineering, geodesy, and transport. Resolution of the Civil Engineering, Geodesy, and Transport Discipline Council of May 23, 2024.

Dr Eng. Nicolas OLIVEIRA DECARLI

Supervisor: Prof. Dr Hab. Eng. Przemysław Data. Auxiliary supervisor - Dr Eng. Piotr Pander. Thesis topic: "Analysis of interactions in donor-acceptor compounds and their application in organic light-emitting diodes (OLEDs)." Conferring the degree of Doctor of Exact and Natural Sciences. Discipline – chemical sciences. Resolution of the Chemical Sciences Discipline Council of June 19, 2024.

Dr Eng. Agnieszka PARADECKA-HRAPKOWICZ

Supervisor: Dr Hab. Eng. Krzysztof Lukaszewicz, prof. SUT. Thesis topic: "Characterization of the structure and properties of anti-wear coatings produced on an austenitic steel substrate." Conferring the degree of Doctor of Engineering and technical sciences. Discipline - materials engineering. Resolution of the Materials Engineering Discipline Council of May 28, 2024.

Dr Eng. Arch. Magdalena WAŁEK

Supervisor: Prof. Dr Hab. Eng. Arch. Magdalena Żmudzińska-Nowak, prof. Arch. Assunta Pelliccio, Ph. D Thesis topic: "Cultural landscape of the Jurassic belt of defensive architecture – a digital model representation in the process of heritage conservation and popularization." Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline - architecture and urban planning. Resolution of the Architecture and Urban Planning Discipline Council of May 20, 2024.

Dr Eng. Arch. Sylwia WIDZISZ-PRONOBIS

Supervisor - Dr Hab. Eng. arch. Anna Szewczenko, prof. SUT. Thesis topic: "Analysis of tools for engaging communities in the design of urban and architectural solutions resulting from climate change, including technology-based tools." Conferring the degree of Doctor of Engineering and Technical Sciences with distinction. Discipline - architecture and urban planning. Resolution of the Architecture and Urban Planning Discipline Council of May 20, 2024.

Dr Eng. Agata WIRTH-LJUNGQUIST

Supervisor: Prof. Dr Hab. Eng. Janusz Kotowicz. Thesis topic: "Analysis of the impact of the physicochemical homogeneity of fuel mixtures burned in the

CFB1300 installation on its failure rate." Conferring the degree of Doctor of Engineering and technical sciences. Discipline - environmental engineering, mining, and energy. Resolution of the Environmental Engineering, Mining, and Power Engineering Discipline Council of June 19, 2024.

Dr Eng. Tomasz WOJTAL

Jan Matejko Secondary School in Siemianowice Śląskie, GIG Katowice. Supervisor: Prof. Dr Hab. Eng. Jerzy Łabaj. Auxiliary supervisor - Dr Eng. Tomasz Matuła. Thesis topic: "Determination of the reduction rate of tin oxides with inert gas-hydrogen mixtures." Conferring the degree of Doctor of Engineering and technical sciences. Discipline - materials engineering. Resolution of the Materials Engineering Discipline Council of June 18, 2024.

AWARDED DEGREES

OF HABILITATED DOCTOR

Dr Hab. Eng. Krystian MISTEWICZ

Institute of Physics - Centre for Science and Education, of the Silesian University of Technology, Resolution of the Materials Engineering Discipline Council Discipline - materials engineering on 28/05/2024

Dr Hab. Eng. Malwina TYTŁA

Institute of Fundamentals of Environmental Engineering of the Polish Academy of Sciences. Resolution of the Environmental Engineering, Mining and Energy Discipline Council Discipline - environmental engineering, mining, and energy May 23, 2024

Dr Hab. Eng. Marek WĘGŁOWSKI

Łukasiewicz Research Network – Upper Silesian Institute of Technology. Resolution of the Materials Engineering Discipline Council Discipline - materials engineering on 28/05/2024

AWARDING THE ACADEMIC TITLE OF PROFESSOR

Prof. Dr Hab. Eng. Michał KAWULOK He graduated from the Faculty of Automatic Control, Electronics, and Computer Science of the Silesian University of Technology. Dr – 24/04/2007, Dr Hab. – December 22, 2015. Position of university professor from April 1, 2018. Employment at the Silesian University of Technology from May 18, 2007. Title of professor of engineering and technical sciences from May 15, 2024.

Edited by Katarzyna Mryka

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