

NEWSLETTER

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BLUESTREAMLINE - 15 YEARS AT SPEED AND ITS THREEFOLD CORONATION

In a jubilee when Transilvania University of Brașov turns 75 years from its establishment, *BlueStreamline* has been celebrating 15 years since it became the first Romanian Formula Student team.

After a decade and a half since the daring group of students set out to build the first Romanian singleseater that would compete at the legendary Silverstone circuit in the United Kingdom, the team has become a significant high-level professional training environment, providing an applicative framework where the students accomplish and validate the skills acquired at the curricular level.

This environment of professional development has expanded over time through a direct interaction with local and international economic partners. This approach has contributed over time to the graduates' integration on the labour market; and, most importantly, led them towards the fields in which they specialize themselves.

Undoubtedly, 15 years after its establishment, *BlueStreamline* succeeds in being a springboard to a future career, through the collaborations based on trust, respect, professionalism and good practice that it perpetually develops.

The direct involvement of Transilvania University of Brașov at the financing level, and the involvement of the support services in supporting this project defined by passion and high aspirations, has had over time an important impact in the development of this environment of training and professional insertion that promotes excellence and performance.

In this context, the last three competitive seasons have meant an exponential evolution for *BlueStreamline*, since the team succeeded in placing itself in the top 10 of the international competitions that it attended.

The 2023 competitive season was an unprecedented challenge for the Racing Team of Transilvania University of Brasov, since *BlueStreamline* succeeded in qualifying itself for four of the Formula Student stages: FSPortugal, FSSpain, FSAlpeAdria and FSBalkans, stages that took place in August and September 2023 on the Kartodromo Castelo Branco, Circuit de Catalunia, Circuit Rimac, Micevec and RheaRacingCircuit, Ghimbav.

For this season, *BlueStreamline* managed to design, build and test its 14th single-seater - BS23, which proved, at the end of the season, to be the most reliable and performing in the entire history of the single-seaters built by the team of Braşov.



BS23 at Formula Student - Spain, Circuit de Catalunya, 2023

The evolution of the team began at Castelo Branco in Portugal where *BlueStreamline* showed its potential to the fullest, by obtaining the title of Absolute Champions in the Combustion class for the first time, occupying the first position in all static and dynamic tests of the Lusitanian competition, which brought together under its umbrella 24 crews from universities all over the world.



Formula Student - Portugal, 2023 Champions

The second challenge was the renowned Formula Student Spain competition which, in its 13th edition, brought no less than 68 international teams on Montmelo track. As the only team in the world to have participated in all FSSpain editions, and fresh champions of the Portuguese edition, just one day away from the great performance achieved, *BlueStreamline* started strong the Catalan competition, being the first team to have succeeded in leaving the technical inspections, only to succeed afterwards in placing itself 3rd in the Skidpad, 2nd in the Acceleration, and 4th in the Autocross tests. On the last day of the crowning race, Endurance, the small and bold group of Brașov was aware that a good performance in the fierce and merciless 24 km-race could bring them anew on the podium.

However, in order to prove that the victory in Portugal was not a fluke, the team focused their desire for victory in an absolutely admirable effort, managing to outclass much stronger opponents and to win the Endurance test and implicitly the Catalan competition, thus becoming, one week away, the double champions of the peninsula, being nicknamed "Campeones Ibericos" right by the organizers.



Formula Student Spain, Champions 2023

If early August found the team 4,500 km away, the end of August and the beginning of September brought us back closer to home, in Croatia, where 48 teams, including 10 other former champions, were participating in another *Formula Student* edition. The Croatian competition, where *BlueStreamline* achieved bronze in 2021, was held at a high level of competitiveness. The team managed to cope with it honourably, ranking 9th overall and 7th in the Endurance race.



Formula Student - Alpe Adria Croatia, Champions 2023

After knowing the taste of the Iberian victories and then of the Croatian defeat, the Romanian students quickly digested the tumult of events and emotions they had gone through, and gathered their strength to face the other Romanian teams at the first edition of the Student Balkans Formula, held on Rhea Racing circuit of Ghimbav.

With the experience gained throughout the season and with the thirst for victory reactivated, *BlueStreamline* dominated its opponents and managed to pass all the tests and to obtain the third title of Formula Student Champions, as well as to achieve an enviable and hard-to-match record– the Formula Student Triple Crown.



Formula Student Balkans, Champions 2023

At the end of a full and intense season, the team is extremely satisfied to succeed in placing the name of Transilvania University of Braşov and Romania on the top step, and it starts the new season with the desire to repeat such a performance!



BlueStreamline - three-time Formula Student 2023 champions

We hope that these performances brought joy to everyone who witnessed them, and we thank everyone who was involved and partook of our success!

> Assoc. Prof. Dr. Eng. Mihai COMȘIȚ *BlueStreamline* Coordinator

MEDALS OF EXCELLENCE AT EUROSKILLS 2023 EUROPEAN OLYMPIAD



Between 5 and 9 September, Gdansk, in Poland, hosted the 8th edition of EuroSkills European Olympiad, which is the largest event dedicated to education, professional training and excellence in trades across Europe. Organized by WorldSkills Europe every two years, EuroSkills offers the best-trained young people all over the continent a once-in-a-lifetime chance to compete in order to become Europe's best in their field of activity. 600 young people from 32 countries attended this year's edition. The Romanian delegation competed in seven of the 43 sections, with five of the 10 competitors obtaining medals of excellence.

Under the Mechatronics section, youth from 18 countries, namely England, Austria, Belgium, the Czech Republic, Germany, France, Kazakhstan, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and Hungary, signed up. Most teams are trained for two or three years by experts in specialized FESTO training centres that have absolutely all the required equipment, materials and disposables to approach the high level of Euroskills and Worldskills competitions. The teams consist each of two members up to 25 years of age.

At this year's edition, under this section, Romania was represented by a team of UNITBV students.

Graduates of the bachelor's degree study programme of Mechatronics, within the Faculty of Product Design and Environment, admitted in July 2023 to the master's degree programme of Mechatronic Systems for Industry and Medicine, Mihai Cristian Cosma and Adrian Corboș are the two students who brought Romania the first Medals of Excellence at this prestigious competition.

During three days, the teams mechanically, electrically and pneumatically assembled FESTO

automated mechatronic modules and workstations, programmed them and put them into operation, achieving thus the necessary applications for the programmable automata that control the stations and the graphical interfaces for the control panels, tested them, identified flaws and solved them, and finally optimized the whole operating process. The sheer volume of work, as well as the high complexity of the systems and app requirements posed real challenges for all teams.

At the end of the three days of competition, the Romanian team managed to accumulate 704 points on the Worldskills scale, which allowed it to rank 8th out of 18 countries and to obtain the Medals of Excellence at its first participation in the European Olympics, outranking prestigious teams such as those of France, Sweden, Spain, Belgium, the Czech Republic, Poland, Slovakia, Norway, Lithuania and Slovenia, and proving thus that an excellent training in mechatronics is conducted in Romania and at UNITBV, as well as that there are talented youth and very good professionals.

The Romanian team's training activities took place in the Excellence Centre of Training in Mechatronics within the Faculty of Product Design and Environment of UNITBV, under the coordination of Prof. Dr. Eng. Luciana Cristea, Prof. Dr. Eng. Marius Cristian Luculescu and Lect. Dr. Eng. Leonard Gabriel Mitu.

The participation in 2023 EuroSkills Gdansk Olympiad was also a good opportunity to exchange experience and to promote UNITBV and Romania, as well as an important stage in terms of preparing to attend WorldSkills Lyon 2024 International Olympiad.

Romania's Mechatronics team is supported by UNITBV and the company Festo Romania, together with important partners from the economic environment: Siemens Industry Software, Miele, Raptronic, Auconsys, Assembla Engineering, IFM Electronic, ASTI Automation, Normandia, Premium Aerotec Romania, Insulheat and others.

> Prof. Dr. Eng. Luciana CRISTEA Prof. Dr. Eng. Marius Cristian LUCULESCU Faculty of Product Design and Environment

TRANSILVANIA UNIVERSITY OF BRASOV. LAUREATE OF THE AGIR AWARD FOR 2022

On Thursday, 14.09.2023, on the Romanian Engineer's Day, at the AGIR Award ceremony for the year 2022, which took place at the headquarters of AGIR in Bucharest, the Trophy for already implemented Special Engineering Achievements, Information Technology Section, was awarded to Transilvania University of Brașov for "Artificial intelligence-based software application for the prediction of fractional coronary flow reserve in optical coherence tomography", having as authors: Lucian Mihai Itu, Cosmin-Andrei Hatfaludi, Irina-Andra Tache, Costin Florian Ciușdel, Andrei Puiu, Diana Stoian.



The application was validated in Floreasca Emergency Clinical Hospital of Bucharest, and the details on the methodology, the results and the conclusions resulting from the use of the application are presented in the paper "UNITBV project awarded by AGIR under the category of Information Technology, and signed by Prof. Dr. Lucian Mihai Itu.

During the same event, under the section of Books published in 2022, the AGIR Diploma was awarded to the publication: "Dynamics of the Violin", edited by the Publishing House of Transilvania University of Brașov: Mariana Domnica Stanciu (coord.), Mircea Mihălcică (coord.) Mihaela Câmpean, Camelia Cerbu, Nicolae Constantin Crețu, Florin Dinulica, Vasile Ghiorghe Gliga, Alina Maria Nauncef, Silviu Marian Năstac, Ioan Călin Roșca and Adriana Savin.

The complexity and novelty of the book "Dynamics of the Violin" consists in the synergistic and interdisciplinary approach to the factors that influence the acoustic quality of violins; and, at the same time, it proves that, within a geometrically known structure, such as the violin, new models with acoustic and aesthetic qualities similar to the historical violins can be obtained by harmoniously combining the properties of the wood, the thickness of the boards, the quality of the wood processing and implicitly the violinist's experience. The scientific investigations were based on modern and transdisciplinary methods of analysis, starting from the evaluation of the specific structural, elastic and technological characteristics, the determination of the modal and acoustic parameters of the Romanian and historical violins, in correlation with their specific structural and technological characteristics, the evaluation and the validation of the acoustic quality of the demonstrative violins, based on the musical auditions conveyed to the respondents (musicians) through the questionnaires of artistic impressions.



We further mention that under the Section of Machine Building Engineering, the Trophy was also awarded to the Technical University of Moldova, with which our university has very good collaborative relations, for the TUMnanoSAT SATELLITE project, coordinated by Prof. Dr. Viorel Bostan, Rector of the University.

We congratulate the institutions and the authors for these outstanding achievements, we wish them ongoing success, and we aim for our university to participate in the annual AGIR Award competition in the coming years as well.

> Prof. Dr. Eng. EUR ING Ionel STAREȚU Chairman of AGIR Brașov Branch

A UNITBV research team received the 2022 AGIR Award under the Information Technology category for "Artificial intelligence-based software application for predicting the fractional coronary flow reserve in optical coherence tomography", authors: Lucian Mihai Itu, Cosmin- Andrei Hatfaludi, Irina-Andra Tache, Costin Florian Ciusdel, Andrei Puiu, Diana Stoian. The context, methodology, results and conclusions from the use of the application in Floreasca Clinical Emergency Hospital of Bucharest are presented below.



The cardiovascular disease (CVD) is the number one cause of death worldwide; and the coronary heart disease (CAD) is the most prevalent CVD, responsible for 42% of these deaths. While the coronary X-ray angiography (XA) is the standard in the imaging for CAD, the optical coherence tomography (OCT) is used in numerous scenarios in conjunction with XA.

Given the limitations in anatomically assessing CAD, the Fractional Flow Reserve (FFR) was introduced as a functional index. Several clinical trials have proven the superiority of the FFR-guided decision making, which is the current diagnostic standard. However, despite offering obvious advantages, FFR is still relatively little used due to the need to administer hyperaemia-inducing drugs, additional costs, extended duration, and the invasive nature of the procedure.

The UNITBV team developed an artificial intelligenceaided software app for predicting invasively measured FFR. The start point are the OCT images. The proposed approach contrasts with previous approaches to FFR prediction, as it uses low-order raw anatomical data as input. The OCT data were exported from the OCT workstation available at Floreasca Clinical Emergency Hospital, Bucharest. A data preprocessing workflow was implemented from the exported OCT images. The 1D sequence of the ray values is used as input for the deep neural network predicting the FFR.

Several neural network (DNN) architectures were considered. Their performance was evaluated under different formulations: regression, standardclassification and few shot learning (FSL) on a dataset of 102 intermediate lesions from 80 patients. A convolutional neural network-based FSL approach entails better results compared to the standard classification: the accuracy, sensitivity and specificity per lesion were 77.5%, 72.9% and 81.5%, To compare, the previous MLD-based approach (minimum lumen diameter) has an accuracy of 67.6%, a sensitivity of 64.8% and a specificity of 70.8%; and the %DS (percent diameter stenosis) has an accuracy of 63.7%, a sensitivity of 63.0% and a specificity of 64.6%.

The main findings on the developed software application can be summarized as follows: (1) Artificial intelligence and deep learning (DL) - based prediction of FFR from low-order raw anatomical data is feasible in intermediate coronary artery lesions; (2) the FFR prediction provides clearly higher diagnostic performance compared to the initial minimum lumen diameter and percent diameter stenosis - based approaches; (3) The performance of the FFR prediction increases quasi-linearly with the dataset size, indicating that a larger training dataset will lead to superior diagnostic performance.

Therefore, the FFR virtual functional index made available through this app could increase the adoption of physiology-guided coronary interventions, while drastically reducing the requirements for invasive pressure measurements. The proposed method is potentially suitable for a clinical setting, given the realtime prediction performance of the DL model. The approach only requires knowledge of coronal luminal geometry, which can be directly extracted from OCT.

Prof. Dr. Lucian Mihai ITU Faculty of Electrical Engineering and Computer Science

UNITBV RECEIVES THE "HR EXCELLENCE IN RESEARCH" CERTIFICATION



HR EXCELLENCE IN RESEARCH

In late August 2023, Transilvania University of Brașov received the "HR Excellence in Research" certification from the European Commission, following a process of evaluation initiated two years ago.

Thus, since 2021, Transilvania University of Brașov has adhered to the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

UNITBV has undertaken the implementation of "Human Resources Strategy for Researchers -HRS4R", an approach based on continuously evaluating the way of applying the 40 principles of the Charter and the European Code for Researchers by strengthening the institutional mechanisms for creating an attractive working environment, with integrated programmes dedicated to professional training and with opportunities for career development in research.

In 2022, an internal analysis report was made, which presents the main results for understanding the current state, for identifying the gaps and for substantiating the career development directions of the teaching personnel and researchers within Transilvania University of Brașov. The results of this study subsequently contributed to the development of the HRS4R Plan of Action with a two-year implementation horizon.

In this context, the "HR Excellence in Research" certification is a recognition of the efforts and progress made in the implementation of the 40 principles, as well as a commitment to the continuation and expansion of the effort to align with the European standards of good practice.

Synthesis made by Assoc. Prof. Dr. Victor BRICIU Office of Marketing and Image Source: https://unitbv.ro/stiri-si-evenimente Photo credit: <u>https://euraxess.ec.europa.eu/jobs/hrs4r</u>

DIPLOMA OF MERIT AWARDED BY THE ROMANIAN COMMITTEE FOR THE HISTORY AND PHILOSOPHY OF SCIENCE AND TECHNOLOGY (CRIFST) OF THE ROMANIAN ACADEMY

On 20 October 2023, the General Assembly of the Romanian Committee for the History and Philosophy of Science (CRIFST) of the Romanian Academy took place in the Auditorium of the Romanian Academy.

During this event, Prof. Dr. Eng. Alin M. Olărescu secretary of the CRIFST Branch in the city of Brașov, was awarded the Diploma of Merit for organizing the "Stroești – Argeș" National Scientific Session in its 51st edition, on 29 and 30 July 2023.



"Stroești – Argeș" Cultural Scientific Society was founded on 30 July 1972, in the village of Stroești, Argeș county. Its main action consists in organizing an annual session of scientific communications on the last Sunday in the month of July. Except for the Covid pandemic years (2020 and 2021), when the event was just marked online, this session has been held continuously in the fifty-one years of existence for "Stroești - Argeș" Cultural Scientific Society. Since 2015, the scientific communications session organized in Stroești, Argeș county, has been held under the aegis of CRIFST within the Romanian Academy.

The management, at presidential level, of "Stroești - Argeș" Scientific Society was provided by: Prof. Emeritus Dr. Eng. Nicolae P. Leonăchescu DHC founder and executive president between 30 July 1972 and 26 July 1992; Prof. Dr. Eng. Emilian N. Baciu, 16 July 1992 – 24 July 2004, and Assoc. Prof. Dr. Eng. Alin M. Olărescu, 24 July 2004 – to date. In his speech on accepting the diploma, Assoc. Prof. Dr. Eng. Alin Olărescu mentioned: "I want to dedicate this diploma to all those who, since 1972, have been part and by the side of "Stroești - Argeș" Cultural Scientific Society. I would like to thank all those who have been actively involved in the organization of the Stroești sessions throughout their 51 years of existence. At the same time, I pay a pious tribute to all those who stood by our society and who, over time, passed away to the Other World, as well as to the two illustrious presidents who preceded me: Prof. Emeritus Dr. Eng. Nicolae P. Leonăchescu DHC and Prof. Dr. Eng. Emilian N. Baciu."



Assoc. Prof. Dr. Eng. Alin M. OLĂRESCU Faculty of Furniture Design and Wood Engineering

THE EVOLTREE 2023 CONFERENCE ON RESILIENT FORESTS FOR THE FUTURE

From 12 to 15 September 2023, "Sergiu T. Chiriacescu" International Conference Centre of Transilvania University of Brașov hosted the second edition of EvolTree, a conference that brought together over 140 participants, including 120 from abroad (31 countries on four continents).



The conference had six thematic sessions (*Climate* resilient forests, Tree genomics & biotic interactions under climate change, Evolutionary genomics, Innovative methods and approaches, Conservation genomics, Tree breeding and sustainable use of forest genetic resources) where 36 oral communications and over 70 posters were presented.



At the same time, two courses on topics of great interest (*Applications of remote sensing in forest genetics* and *Introduction to adaptive silviculture*) were held by professors at the Faculty of Silviculture and Forest Engineering in the city of Brașov. A trip to Lempeș forest and to Sânpetru educational base was also organized, on which occasion the results of the research conducted by our university were presented.



The conference held in Braşov was appreciated as an important achievement of the EvolTree research network, being an excellent platform for exchanging ideas in fields of great interest to the scientific community.

The mission of the EvolTree network is to integrate four major disciplines (Ecology, Genetics, Genomics and Evolution) in order to address global issues facing forest ecosystems today, such as environmental change and biodiversity erosion.

Details on the conference programme and the abstracts of the presented papers can be found <u>here</u>.

Prof. Dr. Alexandru-Lucian CURTU, Dean Faculty of Silviculture and Forest Engineering

THE RESEARCHERS' NIGHT 2023

As every year, this time as well, the Researchers' Night event took place at the Research and Development Institute within Transilvania University of Brașov, on the last Friday of September, more precisely on 29 September, between 5:00 p.m. and 9:00 p.m.



The event aimed to bring science and technology closer to students, and to explain the results of scientific research and their usefulness for everyday life in a way that everyone could understand.

Dozens of stands, both of the Research Institute and of the partners, were prepared with many experiments, demonstrations and interactive games. During the event, topics in fields such as computer science, robotics, electronics, chemistry, neuromarketing, biology, mathematics, arts, psychology or communication were addressed.

Visitors of all ages met trained robots and experimented equipment and technologies of use in medicine, mechanics or material science. Moreover, they attended 3D printing demonstrations, Arduino or artificial intelligence workshops. Last but not least, in the courtyard of the institute, the visitors could witness demonstrations with the racing cars made by the UNITBV students.

This year we have dedicated a special area to the five high schools participating in the event: "Dr. Ioan Meșotă" National College, "Andrei Șaguna" National College, "Grigore Moisil" National College of Computer Science, "Mircea Cristea" Technical College and "Andrei Mureșanu" High School.



At the same time, the participants in the event closely studied the technical intervention of the firemen, of the gendarmes, or they tested the equipment of the forensics.



We were joined by partners from the private sector who exhibited their latest products and findings in the field of technology. Atos, Benchmark, Canam, CoderDojo, Brașov Community Foundation, Ipsos, Learnex, Logiscool, Miele, NBHX Rolem, Preh, Rap Group, Sartorom, Siemens Corporate Technology, Schaeffler Romania, Varta, Vitesco Technologies are just some of our partners who were present with their stands at the Research and Development Institute within Transilvania University of Brașov.

> Mirela CORNEA Office of Communication

NATIONAL AWARDS IN FURNITURE DESIGN

On 21 September 2023, within the International BIFE - SIM Furniture, Equipment and Accessories Fair, hosted by Romexpo exhibition centre, Bucharest, the judging and awarding of the participants in the 20th edition of the National Competition of Furniture Design took place.

Among them there were also two students at the Faculty of Furniture Design and Wood Engineering:

- Ruxandra Nedelcu, a 2nd-year doctoral student in Forestry Engineering, won the first prize for her *Retro-revival* chest of drawers which, beside its classic lines, presents perforated panels in solid wood and the alternation of semitransparent epoxy resin - solid wood in the case of doors, as well as the intervention with light inside the chest of drawers.
- Ion Laurențiu Safta, a 1st-year graduate student in Furniture Eco-design and Restoration, for his *Eco-seat* chairs. These chairs combine the carpenter look with the innovations brought by the use of epoxy resins in the achievement of the legs and seats.

We remind that during the project phase of the National Competition of Furniture Design, held in June, Mihnea Molnar - Varlam, a 1st-year graduate student in Furniture Eco-design and Restoration, won a mention for his product "Power of C".



Nedelcu Ruxandra, *Retro-revival* chest of drawers First prize, prototyping phase, Bucharest 2023.



Ion Laurențiu Safta, *Eco-seat* chairs Mention, prototyping phase, Bucharest 2023.



Mihnea Molnar - Varlam, *Power of C* Mention, project phase, Bucharest 2023.



Team of the Faculty of Furniture Design and Wood Engineering, Romexpo, Bucharest 2023.

Assoc. Prof. Dr. Eng. Alin M. OLĂRESCU Faculty of Furniture Design and Wood Engineering

A NEW MEETING OF THE PARTNERS WITHIN THE DIGITUN/PROJECT



Since 2022, Transilvania University of Brașov has been a partner in the project "Digital readiness and capacity building of humanities professors in universities through partnership with digital technologies companies" (DigitUni), financed by the Erasmus+ Strategic Partnerships programme no. 2021-1-LT-01-KA220-HED-000031124.

The project is managed by the Faculty of Economics within Vilniaus Kolegija/ University of Applied Sciences, Lithuania; and the project partners are from Poland (Fundacja Rozwoju Aktywnosci Miedzynarodowej i Edukacyjnej), Bulgaria (Pax Rhodopica Foundation), Romania (Transilvania University of Brașov), Italy (Prism Impresa Sociale S.R.L.) and Greece (Panepistimio Patron).



Pursuing the main objective of the DigitUni project, which is to support digital transformation and to build the humanities professors' capacity to provide high-quality, inclusive digital education services, by developing digital skills and strengthening their cooperation with companies - experts in digital technologies, the project partners' third transnational meeting took place in Brașov, in 7 and 8 September 2023. The meeting was organized and hosted by Transilvania University of Brașov, at the University's Rectorate, *Training Hub* room.



During the two-day meeting, the participants discussed the project management and financial aspects, reported the progress of the works within the intellectual results (*DigitUni Toolbox* - a toolkit of digital resources and guidelines for their application in a hybrid/online educational process, and the handbook on the hybrid/online educational process for humanities professors and assistants).

Moreover, the participants in the meetings went through details on the future activities envisaged in the project, in order to complete the electronic platform and the interactive library (https://digituni.eu/), which will be used to host all the DigitUni project results and to function as a database of various resources for both academic personnel and students within a hybrid/online education process.

> Project coordinator on behalf of UNITBV, Assoc. Prof. Dr. Victor BRICIU Faculty of Sociology and Communication



From 2020 to late March 2023, Transilvania University of Brașov was a partner in the project "Rediscovering *NewEurope* - On-Wheels summer school for Balkan/Central and Eastern Europe transborder history and politics" (ReNewEurope), financed by the Erasmus+ Strategic Partnerships programme, no. 2020-1-PL01- KA203-081999.

The main objective of this project was to develop an innovative, holistic and integral approach in training both professors and assistant professors, as well as researchers and specialists, with a view to conducting an educational programme in the field of studies about the Balkans and Central and Eastern Europe region, through a summer school on wheels focusing on four fields, namely: (1) Minorities and majorities; (2) Rule of law and European integration; (3) Identity and nationalism; (4) Politics and religion.

As a continuation of these activities, from the current year to late June 2025, the ReNewEurope partners: University of Warsaw, Poland, Transilvania University of Brasov, Romania, University of Zagreb, Croatia, University of Belgrade, Serbia, and PAX Rhodopica Foundation, Bulgaria, along with a new partner, University of Navarre, Spain, have come together in a new project "On-Wheels summer school for the socio-cultural evolution of the European Values, Principles, Identitv and Awareness" (EUROPIA), also financed by the Erasmus+ Strategic Partnerships programme, no. 2022-1-PL01- KA220-HED-000086334.

The EUROPIA project aims to improve the capacities of the universities to conduct educational processes in the field of European history, law and politics, with an emphasis on the awareness of

values, principles, identity and common European conscience.

EUROPIA also aims to raise the awareness of the university academic environment regarding the need to organize and conduct travelling schools in the field of European history, law and politics, in the light of common European values, principles and identity so as to overcome the existing stereotypes and prejudices among the students all over Europe.



In this context, the partners' second transnational meeting took place in Belgrade from 23 to 24 October 2023. During the two-day meeting, the participants discussed the need to develop specific and high-quality materials meant to define and overcome the problems related to the way the European studies are taught in different countries, for the benefit of both academics and students, as well as of society at large.

A visible result of the collaborative work conducted by the partners within the two projects will materialize in the summer of 2024, when a pilot summer school will be organized in Poland, in which teaching personnel and students from all partner university centres will participate.

> Project coordinator on behalf of UNITBV, Assoc. Prof. Dr. Arabela BRICIU Faculty of Sociology and Communication

TRANSILVANIA CREATIVE CAMP 2023 – THE THIRD EDITION OF THE INTERNATIONAL SCHOOL ON CREATIVE PROMOTION OF DESTINATIONS AND HERITAGE INTERPRETATION

Transilvania Creative Camp (TCC) 2023 took place between 1 and 7 September in Târgu Lăpuș and its neighbouring villages. For a week, the participants attended courses and workshops held in classrooms, but also field activities where they experienced the daily life in the villages across the Land of Lăpuş, and shared it online with the potential visitors of this region.



This project was attended by eight students at Transilvania University of Brașov, five high-school students at *Petru Rareș* Theoretical High School of Târgu Lăpuș, and 17 international students at: Meisei University Tokyo (6), University of Dunaujvaros (3), University of Applied Sciences, Hannover (3), Heilbronn University of Applied Sciences (2), Universita Politecnica delle Marche (2), and School of Advanced Social Sciences Nova Gorica, Slovenia (1).

They collaborated within five work teams, with a balanced distribution of the participants' skills, in order to research and promote the destination, through the lens of one of the themes proposed by the organizers: a) Traditions, folklore and traditional clothing b) Wooden churches and history of the places; c) Gastronomy; d) Crafts and field work in the villages across the Land of Lăpuş; e) Natural heritage.

The participants collected data through direct interviews, participant observation, photo, video and documentary materials; and they made their

proposals for promoting the area under the guidance of 17 communication specialists and professors from Romania, Poland, Japan and the United States.



"We are delighted with the interest shown by the representatives of various academic institutions from many countries in resuming a beneficial project for all partners, seven years after its initiation. The Land of Lăpuş stands out for its rich and authentic historical, natural and traditional heritage. Inhabited by hardworking and welcoming people, this region provides considerable opportunities in terms of developing sustainable tourism for the benefit of local communities", said Mitru Leşe, mayor of Târgu Lăpuş town.

Two films were created to promote the Land of Lăpuș, and the information accumulated within this project will be used in scientific research. The findings will be published in national and international academic journals.

> Assoc. Prof. Dr. Florin NECHITA Project coordinator Faculty of Sociology and Communication

THE FOURTH EDITION OF THE ROMANIAN ARTIFICIAL INTELLIGENCE DAYS

This year, Romanian Al Days 2023 took place in Brașov, from 20 to 21 September, under the aegis of Transilvania University of Brașov. The event was attended by over 250 people from both academia and industry.



The binder of the conference were the technical presentations given by international experts in the field of Artificial Intelligence (AI) and the various panels of discussion held around this technology. The conference was opened by Dr. Viorica Pătrăucean (Google DeepMind, Great Britain), who communicated the goal of the conference and the agenda of the two days, as well as by Prof. Dr. Sorin Grigorescu (Transilvania University of Brașov), who presented the achievements and activities of the RovisLab group (Robotics, Vision and Control Laboratory) in the field of AI applied in robotics.

The presentations on the first day were given by international experts, such as Prof. Dr. Dariu Gavrilă (Delft University, Netherlands), who presented new perception algorithms in the field of autonomous vehicle driving, Dr. Elena Burceanu (Bitdefender), who spoke about flaw detection, Dr. Iuliana Georgescu (University of Bucharest), who presented her contributions to the field of artificial vision, and Prof. Dr. Rada Mihalcea (University of Michigan), who discussed natural language processing. These presentations were complemented by contributions from sponsors such as Xperi and Bosch, as well as by panels that touched on the AI applications in medicine and Romania's national AI strategy. The first day ended with an engaging poster session and informal discussions.

The second day started with two presentations in the field of the AI applied in space robotics, given by Prof. Dr. Alin Albu-Schaeffer (German Aerospace Centre, Germany) and Dr. Martin Schuster (German Aerospace Centre, Germany), followed by the contributions of Dr. Răzvan Pașcanu (Google DeepMind, Great Britain) in state space-based models used in neural networks, and the use of AI in medical applications, a presentation given by Prof. Dr. Lucian Itu (Transilvania University of Brașov). Bitdefender and Google contributed information about the AI projects underway at these companies. The topics related to education in the era of AI and AI in business and start-ups were touched on in two panels.

Throughout the conference, the sponsors provided interactive demonstrations of the AI technologies developed within the companies.



During two days, the Romanian AI Days succeeded in coagulating both renowned international experts in the field and the local Romanian community, offering an opportunity for interaction among its members. The students had as well the opportunity to interact with the AI field and its community members, many of whom contributed presentations to the poster session.

> Assoc. Prof. Dr. Sorin Mihai GRIGORESCU Faculty of Electrical Engineering and Computer Science

2023 *FOOD_SAFETY AND HEALTY LIVING* (FSHL) SUMMER SCHOOL -_ 1ST SESSION ORGANIZED IN BUCHAREST

Between 3 and 6 September 2023, the international summer school "Food Safety and Healthy Living" (FSHL) 2023 – 1st session was successfully held, bringing together participants (teaching personnel and students from Romania, Slovenia, Albania, the Republic of North Macedonia and Croatia) within the project CEEPUS RO-1111-07-2223 that Transilvania University of Brașov coordinates, but also partners from other previous projects.

The involvement of the teaching personnel within the UNITA alliance – University of Brescia and University of Turin is also a novelty worth noting.

This year, the summer school was organized in Bucharest, under the coordination of an experienced consortium: "Carol Davila" University of Medicine and Pharmacy, Transilvania University of Brașov, University of Milan (Italy), University of Perpignan via Domitia (France), together with University of Lisbon (Portugal) and University of Ljubljana (Slovenia). Synevo Romania, "Victor Babeș" National Institute for Research and Development, Bucharest, the International Centre of Biodynamics, Bucharest, the Romanian Society of Ethnopharmacology, LOM SRL and the Ministry of Education and the Ministry of Research, Innovation and Digitization were as well our collaborators in this endeavour.

Over 82 undergraduate, graduate and doctoral students at various Romanian universities (Brașov, Bucharest, Galați, Cluj-Napoca, Sibiu, Târgu Mureș), Slovenia, Italy, the Republic of North Macedonia, Albania and Turkey attended (in a hybrid system) lectures on the principles of healthy nutrition, the importance of a balanced lifestyle, the identification of appropriate methods for the analysis of different compounds with an either beneficial or toxic activity over the biosystems, the understanding and integration of the *one health* concept.

The postdoc researcher, grantee of *Transilvania Fellowship* scholarship (February 2023 competition), Dr. Arash Mohammadinejad, presented the paper entitled "Lateral flow assay and food safety", a topic of interest, both for the food control, but also for the medical fields. Details of the presented papers and guest lecturers can be found in the <u>Book of</u> Abstracts of the Sumer School.

Prof. Dr. Mihaela BADEA Faculty of Medicine



2023 *FOOD_SAFETY AND HEALTY LIVING* (FSHL) SUMMER SCHOOL - 2ND SESSION ORGANIZED IN LJUBLJANA



Our last year's optimistic thoughts have found their fulfilment this year as well, even exceeding our expectations. Why? Because in 2023 we managed to organize and attend two international summer schools themed on "Food Safety and Healthy Living" (FSHL). If in the previous material we presented the results of the international summer school held in Bucharest, the second FSHL 2023 summer school was organized as a *joint event* between two international projects - CEEPUS and Erasmus Plus BIP (*Blended Intensive Programme*), with Prof Dr. Lea Pogacnik da Silva (Biotechnical Faculty, University of Ljubljana) as the main organizer, along with Transilvania University of Brașov and Universidade de Lisboa.



The summer school had a virtual component (on 11 September), but also one with active presence in Ljubljana between 15 and 23 September 2023. The direct beneficiaries of the courses and practical works were over 60 participating students (on behalf of UNITBV, eight students participated via Erasmus BIP, three students via CEEPUS), but also teaching personnel who, upon returning to their universities of origin, actively participated in implementing some of the information discussed into their usual courses; therefore, the number of indirect beneficiaries of this event was and will be much higher.

The overall aim of the summer school was to expose students to current research developments in a variety of life sciences fields, with an emphasis on the nutritional properties of foods and their chemical/microbiological safety, which leads to an improved quality of life and long-term health. Information on the topics presented is indicated in the <u>Book of Abstracts</u>.



The participating students (from Romania, Slovenia, Portugal, Spain, Italy, Albania, Croatia, Poland, the Republic of North Macedonia, Serbia) were involved in study visits and practical works in various research fields (biotechnology, micro-biology, food technology and sensory analysis), in order to obtain a new food product with improved properties. Within these activities, the problem-solving, teamwork, discussion and oral-communication skills were built. The students drew on their interaction with colleagues from other European universities and made connections that could lead to future professional collaborations.

The students received certificates attesting to 3 ECTS obtained for fulfilling the summer school demands (active course and laboratory attendance, group presentations of the practical work results).

Having these examples of good practice, we hope that the year 2024 will be a success for the initiative of the Erasmus Plus BIP project - *Bioanalytical (Tele)monitoring for Life Sciences - Medicine, Food control, Environmental monitoring* - of which UNITBV will be the coordinator this time.

> Prof. Dr. Mihaela BADEA Faculty of Medicine

SEMINAR THEMED ON THE TRANSPLANTATION OF RETINAL GANGLION CELLS



From 17 to 18 August, we received the visit of <u>Prof. Petr</u> <u>Baranov</u>, MD, PhD, from the Department of Ophthalmology, *Harvard Medical School*. Dr. Baranov is an expert in modern techniques for the regeneration of the optic nerve and the

recovery of the retinal ganglion cells (RGCs) lost as a result of the pathological changes occurring in Glaucoma.

Glaucoma is one of the most common causes of blindness in developed countries, and it is basically an incurable disease the causes of which are still incompletely understood. Dr. Baranov resorts to various genetic manipulation techniques in order to reprogram RGCs from stem cells and to transplant them into experimental animal models. In these research, Dr. Baranov also uses Brn3bKO mice, generated by Dr. Tudor C. Badea, 1st-degree scientific researcher at Transilvania University of Brașov.

Dr. Badea and Dr. Baranov collaborate in the framework of <u>Rrestore consortium</u>, which brings together world leaders in neurobiology, regeneration and replacement of RGCs. During his visit, Dr. Baranov paid a call to the Laboratory of Molecular Genetics and Neurosciences and to the Experimental

Biobase for Small Animals, and he discussed potential collaborations with Dr. Badea and his team.



Moreover, on 18 August, in the L8 building of the Research and Development Institute within Transilvania University of Brașov, he presented the seminar: "Transplantation of retinal ganglion cells: guiding donor neurons to their fate".

Tudor Constantin BADEA, MD, MA, PhD, 1st-degree Scientific Researcher Research and Development Institute, Faculty of Medicine, Transilvania University of Brașov National Centre for Brain Research/ ICIA/ Romanian Academy

> Photo credit: https://researchers.masseyeandear.org/ details/281/petr-baranov <u>https://www.unitbv.ro/cercetare/evenimente</u>

DIALOGUE WITH THE WRITER MARIUS CHIVU AT THE MULTICULTURAL CENTRE



On 5 September, the Multicultural Centre hosted a meeting with the writer Marius Chivu, an event organized within Alpin Film Festival, on the occasion of releasing the travel volume *Three weeks in Atlas*. The book, published this year by Humanitas, is the last of the trilogy dedicated to the journeys undertaken by the author, along with *Three weeks in the Himalayas* (Humanitas, 2012/2016) and *Three weeks in the Andes* (Humanitas, 2016).

The volume, which Marius Chivu spoke about in a dialogue moderated by Adrian Lăcătuș, the Director of the Centre, documents a journey made, as he himself testifies: "*old school* and clandestine, namely

unaccompanied, unadvised and unsupervised: without travel agencies, without bookings, having only one phone with us, but no Internet connection, no applications or digital maps, offline, leaving ourselves to chance, to improvisation and on-site orientation, aided by a map that we were to buy once we arrived in Morocco".

Marius Chivu is a writer, editor and translator. In 2012, he debuted with the volume of poetry *Plastic Winnower* (Brumar, 2012). In 2013, he published the book of literary interviews *What the Author Meant* (Polirom, 2013); and in 2014, the volume of short prose *End of Season* (Polirom, 2014). He produced several anthologies such as *Best of. Short Prose of the 2000s* (Polirom, 2013). He is the editor of *Dilema veche* [*Old Dilemma*] magazine and the director of the radio-talk with writers "All You Can Read" on UrbanSunsets.com.

Anca PAPANA Multicultural Centre, Transilvania University of Brașov

HARMONY OF FORM AND FULLNESS OF COLOUR IN DUMITRU SCHIOPU'S CREATION



The Multicultural Centre hosted the artist Dumitru Șchiopu's exhibition between 1 August and 30 September, through a project co-financed by the City Hall of Brașov. Dumitru Șchiopu's painting launches a complex invitation to let ourselves be overcome with the fascination for the world of colours, but also to immerse ourselves in the abstract, in the core of nuances, in the music of form, in our own interiority. The reflection through chromatics is related, for Dumitru Șchiopu, to a continuous questioning about who we really are, what we are looking for and what we actually find.

The liveliness of his art pieces was also carefully captured in the catalogue made by the Multicultural Centre of the University and recently released by the Publishing House of Transilvania University, a catalogue which presents, in addition to the beauty of the painting, nine excerpts from the writer Gheorghe Crăciun's literary creations "Mechanics of the Fluid", "Composition with Unequal Parallels" and "Images, Letters and Travel Documents". Their inclusion is closely related to the memory of a deep friendship that significantly contributed to the painter's development.



The force of creation, but also the human sensitivity meet under a comprehensive imprint in Dumitru Șchiopu's art, who gave us the privilege of discovering, through his fantastic vision, a genuine show of forms.

> Miruna AVRAM, 2nd-year student Faculty of Letters

CLASSICAL MUSIC RECITAL AT THE MULTICULTURAL CENTRE



On Sunday, 17 September 2023, the Multicultural Centre within Transilvania University of Brașov hosted a classical music concert performed by the participants in the second edition of Bușteni International Music Residency. Dragoș Rusanu (violin), Ana Ilie (piano), Luca Amarandei (violin), Radu Torok (piano) performed music pieces by A. Corelli (S. Rachmaninov, La Folia), W. A. Mozart (Sonata for violin and piano in E minor, KV 304, Sonata for violin and piano in G major, KV 301), A. Parfenov (Hommage an Sergej Sergejewitsch) and F. Liszt (Mephisto Walzer No. 2 arranged by A. Parfenov for violin and piano).

The programme of the residency was led by Iuliana Münch (violin) and André Parfenov (piano), who were present on stage with their students, ending the evening with two compositions signed by the pianist and composer of German origin André Parfenov himself.

> Anca PAPANA Multicultural Centre, Transilvania University of Brașov

IN MEMORIAM - PROF. DR. ENG. TIBERIU NAGY (1933 - 2022)



Professor Tiberiu Nagy was born on 3 February 1933 in Aita-Seacă, Covasna county. He completed his secondary and high school studies in the town of Sfântu Gheorghe at "Miko"

Reformed Szekler College and at the "High School for Boys", which he graduated in 1956. In the same year, he began his university studies at the Polytechnic Institute of Brașov, Faculty of Mechanics, majoring in "Automobiles and Tractors", which he graduated in 1961.

His academic path was as follows: 1961-1962, Head of Laboratory at the Chair of Automobiles and Tractors; 1962-1968, Assistant Professor; 1968-1972, Lecturer; 1972-1978, Associate Professor; 1980-2003, Professor. After his retirement in 2003, he became a consulting professor.

In 1970, he defended his doctoral thesis entitled "Study on the influence of the organized air movement in the combustion chamber of the compression ignition engine with direct injection over the formation and combustion of the air-fuel mixture", developed under the guidance of professors Radu Mărdărescu and Victor Hoffmann. Also in 1970, he completed a three-month documentation and collaboration internship at the Polytechnic Institute of Prague and the Polytechnic Institute of Zilina (Czechoslovakia).

In 1990, he obtained the title of doctoral supervisor in the field of "Mechanical Engineering". Also in 1990, he became a founding member of SIAR

(Romanian Society of Automotive Engineers), and then a member of SAE.

Professor Tiberiu Nagy's teaching activity within the areal of several disciplines, among which "Exploitation and technique of road transport", "Reliability of motor vehicles" and "Therotechnics and reliability of automobiles" stand out, for which he developed, together with his collaborators, nine university textbooks and monographs.

Professor Tiberiu Nagy's scientific research was anchored in the field of processes in the internal combustion engines (especially in the formation and combustion of the fuel mixture in compression ignition engines), as well as in the field of reliability, therotechnics and therotechnology, where he filled a position of well-known pioneer in our country. He published 56 scientific research papers in high-level journals.

The scientific research contracts that he led or was a collaborator in, amounting to 26, were made for the most important plants of this kind in the country, including the Truck Plant of Brașov, and the Research Institute for Automobiles and Tractors (ICPAT).

Among his successes we mention the role played in the achievement of "Tâmpa" *concept-car* (entirely designed and built in the university), in the conversion of the Dacia engine with a 1,289 cm³ carburettor into a diesel engine with direct injection and the equipping of the Dacia 1300 car with this type of engine (both of them homologated).

> Lect. Dr. Andrei BENCZE Faculty of Mechanical Engineering