

SZEM

SZTE UNIVERSITY
OF SZEGED

S Z E G E D U N I V E R S I T Y M A G A Z I N E | 2019 |



From Europe to Europe— the best university

Szeged University Magazine (SZEM) introduces the “bridge crew” of the flagship of Hungarian higher education, the University of Szeged. The four vice-rectors speak about how the University of Szeged, ranked the best in Hungary in the latest QS ranking, can further improve its positions.

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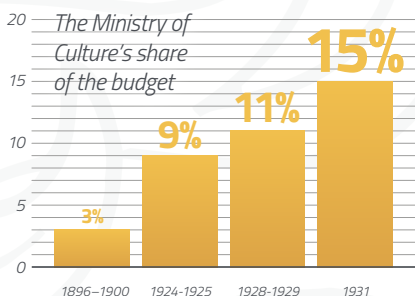
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KLEBELSBERG'S JOURNEY FROM THE SZEGED AREA TO THE DÓM CATHEDRAL

"A man of mission," "a thinking minister": this is how researchers refer to Kuno Klebelsberg when they analyse what he wrote about "cultural dominance" or "neonationalism," but he is also called a "creative minister" in regards to his school reforms, his university and science policy and his efforts to encourage extracurricular education, public health, the openness of communication and the dissemination of knowledge.

THE EFFECT OF HIS TEN-YEAR SERVICE AS MINISTRY OF CULTURE ON EDUCATION IN NUMBERS:



The state-sponsored school-building programme in the Great Plain built

in 3 years

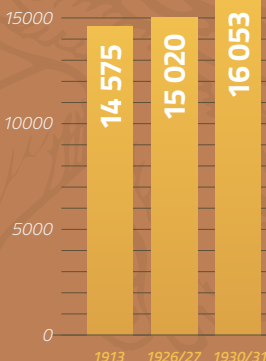


EARL KUNO KLEBELSBERG IS CONNECTED TO SZEGED IN A NUMBER OF WAYS

Historian Péter Miklós (SZTE JGYPK) writes in his paper Kuno Klebelsberg's Significance in Hungarian and Szeged Culture History: "... Kuno Klebelsberg earned indefinite merit during the great crisis of the Hungarian science policy and higher education system when the expulsion of the universities outside the borders occurred, and Szeged became a university city. It still determines the physical and symbolic image of Szeged, influencing its spiritual and human environment."



State-supported research posts multiplied



The number of university students increased:

SCHOLARSHIPS MADE IT POSSIBLE FOR

1957
STUDENTS TO STUDY ABROAD

YEARS AND SPEECHES

November 13, 1875: He is born in Magyarpécska in the region of Szeged. His father is an Austrian hussar captain and his mother comes from a Transdanubian family of lesser nobility.

1917: Kuno Klebelsberg, representing the "capital of Transylvania," urges the establishment of new university departments and student internships at the University of Kolozsvár.

June 16, 1922: He becomes the Minister of Religion and Public Education in truncated Hungary after the Trianon Treaty.

November 1922: He makes his first on-site visit to Szeged.

March 22-24, 1926: Accompanied by architect Korb Flóris, he designates the location of the clinics.

October 5, 1926: At his honorary doctorate commencement in Szeged, he told the faculty of professors: "The state and the city can only raise buildings, clinics and laboratories; but we cannot breathe a scientific spirit into these external frameworks. The faculty of professors will do this."

March 27, 1928: "The University of Szeged should be the University of the Great Hungarian Plain," he announces at a city meeting.

September, 1928: Accompanied by Albert Szent-Györgyi, he visits Szeged, where they discuss plans for development, supported by the Rockefeller Foundation.

October 1, 1928: At Klebelsberg's request, Albert Szent-Györgyi is appointed Head of the Department of Medical Chemistry at the University of Szeged.

October 24-26, 1930: Celebration Series: Consecration of the Votive Church. The Dóm Square building complex accommodates 12 university bodies.

October 25, 1930: He opens the 5000th elementary school unit, the Szeged-Rókus Elementary School, which has 12 classrooms; he becomes an honorary citizen of Szeged.

May 15, 1931: His memorial plaque is unveiled at the National Memorial Hall, with the text above the Klebelsberg Family Coat of Arms reading "Te saxa loquuntur," that is, "The stones are talking about you."

June 30, 1931: He is elected Member of Parliament for Szeged for the second time.

August 24, 1931: After the resignation of the Bethlen Government, he bids farewell to his ministry colleagues.

June 19, 1932: The travelling assembly of the Great Plain Commission comes to Szeged; he visits Szeged at the beginning of September.

October 11, 1932: He suffers from a parathyroid infection and dies of a heart attack in Budapest.

October 15, 1932: He is buried in the crypt of the Votive Church in Szeged.

April 11, 1935: His tomb with his full figure statue, the work of Béla Ohmann, is inaugurated in the chapel of the Votive Church in Szeged, his chosen resting place. The text above his tomb reads, "Count Kunó Klebelsberg 1875-1932, He served his country and the city of Szeged with thought, speech, writing and works, and keeps watch over their thriving until his resurrection."

To develop extracurricular
public education, he opened

500
KINDERGARTENS

1555
PUBLIC LIBRARIES



1500
SCHOOL LIBRARIES



Several researchers of the University of Szeged are studying the work of Kuno Klebelsberg, such as (from left to right) dr. Péter Miklós, prof. dr. Béla Pukánszky, dr. Natasa Fizel, dr. Gizella T. Molnár from the SZTE Juhász Gyula Faculty of Education and the head of the University Archives: Tamás Vajda.

HIS REMEMBRANCE

Albert Szent-Györgyi wrote in his tribute, entitled "Remembrance of my Master," that after Klebelsberg's death, he had to face that "the burning enthusiasm, the deep interest, selflessness, understanding and benevolence" that characterized the Minister of Culture and his work had passed. Several awards, such as the Kuno Klebelsberg Prize of the University of Szeged, are given out in his memory, and institutions, ex. the Library of the University of Szeged, bear his name. The Chancellor of SZTE, Dr. Judit Fendler introduced the EU-supported university development project as the Klebelsberg II Plan on October 12, 2017.

SZTE UNIVERSITY
OF SZEGED

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FROM EUROPE TO EUROPE -THE BEST HUNGARIAN UNIVERSITY

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LEADING
INSTITUTIONS!

From Traumatology to X-Factor

During their working hours, they teach, heal, invent and explore the mysteries of space. What do they exchange their white lab coats for after work? How do the teachers, researchers and doctors of the University of Szeged spend their free time?

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Mentor and student

Vera, Krisztián GreCsó's latest novel, recalls the atmosphere of Szeged and its university in the 1980s. At the release of Krisztián GreCsó's novel Vera, we asked him the secret to his success.

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CRADLE OF MUSICIANS & VISUAL ARTISTS

The Béla Bartók Faculty of Arts, SZTE, which was the Faculty of Music of the University of Szeged previously, is launching new art courses in addition to its university-level music education.

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SCIENCE AND RELAXATION

The priorities of the Botanical Garden of the University of Szeged are scientific research, the dissemination of knowledge, the facilitation of recreational opportunities and the spreading of practical experience. In addition to its plant conservation project, the green island of the University offers visitors a variety of events and a series of gardening programmes.

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Leader of the
University of Szeged:

prof. dr. Zoltán Kónya
Vice-Rector for Scientific Affairs and Innovation

Prof. Dr., Klára Gellén
Vice-Rector for Education

prof. dr. László Rovó
Rector

From Europe to Europe—the best hungarian university



Prof. Dr. Márta Széll
Vice-Rector for Strategic Planning

prof. dr. Péter Zakar
Vice-Rector for International and Public Relations

Szeged University Magazine (SZEM) introduces the “bridge crew” of the flagship of Hungarian higher education, the University of Szeged. The four vice-rectors speak about how the University of Szeged, ranked the best in Hungary in the latest QS ranking, can further improve its positions.

In the Milestones column of SZEM 2019, we interviewed the Vice-Rectors for Strategic Planning, Education, Scientific Affairs & Innovation and International & Public Relations. We asked what they think about their predecessors and role-models in their spheres, and about the aims, tasks and results they focus on. We also asked the four leaders who

directly help the work of the rector and the chancellor how their mandates fit their institutional and personal careers.

In our compilation, we highlight how SZTE and its clinics are responding to new challenges in medicine and patient care through new developments and research projects.

THE UNIVERSITY IS AT THE TOP OF
THE WORLD RANKINGS

2018/2019

SZTE UNIVERSITY
OF SZEGED

**TOP
10**

The Top 10%
of all the
universities
in the world

26 000 institutes

British QS (one of the world's most respected higher education rating companies) ranked 1000 higher education institutions out of 1620 universities in 82 countries based on 6 criteria. The SZTE ranked highly again, in the 501-510th places. Thus, the University of Szeged achieved the best results among the 7 Hungarian universities on the QS 2020 list.

Quacquarelli Symonds (QS) World University Rankings (WUR)



Éva ANTAL



Anna BOBKÓ

SZTE INVITED TO THE EUROPEAN UNIVERSITY ASSOCIATION

After a few years' hiatus, the post of Vice-Rector for Strategic Planning has been added back into the management structure of the University of Szeged. "I consider the trends adopted by the Directorate for Research and Development and Innovation of the University of Szeged to be very good. The Directorate is planning with great deliberation to provide prompt and effective responses to the requirements of the Horizon Europe project, which starts in 2021 and ends in 2027," said Prof. Dr. Márta Széll. As an example, the Vice-Rector for Strategic Planning of the University of Szeged mentioned the large-scale Hungarian Centre of Excellence for Molecular Medicine (HCEMM) project, whereby a new molecular medicine research institute is being established in Szeged, in a consortium between Semmelweis University, the Biological Research Centre of Szeged and the University of Szeged. According to her, this will also help attract more grants.

"Recently, we submitted a European Universities Erasmus+ application. Cooperating with the consortium of the French Paris-Saclay University, the Swedish Lund University, the Portuguese Universidade do Porto and the German Ludwig-Maximilians-Universität, Munich, we would like to cooperate on educational development and the promotion of fo-

cused and concentrated student mobility," the Vice-Rector explained. She believes that the university federations of the European Union will enjoy a great advantage in the next calls for proposals. "In our application, the guiding principle of our co-operation is global wellbeing, which affects teachers and administrative staff, as well as BSc, MSc and PhD students. We consider it important that by joining the health value chain, as many disciplines as possible should be able to get involved in this work. For example, the following Faculties of the University of Szeged are able to take part in the programme: the Faculty of Science and Informatics, the Faculty of Agriculture and the Faculty of Engineering through ensuring a healthy environment and food safety; the Faculty of Medicine, the Faculty of Pharmacy and the Faculty of Dentistry through drug development and healthcare; the Faculty of Health Sciences and Social Studies through prevention; the Faculty of Law and Political Sciences and the Faculty of Economics and Business Administration through the legal and economic aspects of health; the Juhász Gyula Faculty of Education and the Faculty of Humanities and Social Sciences through developing innovative pedagogical methodologies; and the Béla Bartók Faculty of Arts through the role of arts in health promotion.

In terms of developing the strategic goals of the university, in the long run I would like to assist Rector Prof. Dr. László Rovó primarily in outlining the direction of European Union projects.

Prof. Dr. Márta Széll

*Vice-Rector for Strategic Planning
of the University of Szeged*

If we win funding for our application, I would definitely consider it my responsibility to monitor the implementation, since it was my responsibility at the university level to prepare it.

"I would also like the educational, diagnostic and research activities of the Medical Genetics Institute of the Faculty of Medicine of the University of Szeged to be as internationally integrated as possible," she said about her direct work. "In education, I continue to have the task of expanding and transforming the Joint Program for European Medical Studies (JPEMS) training program, which was successfully implemented through French-Romanian-Dutch-Italian cooperation. I think it is important for our institute and the teams of the Albert Szent-Györgyi Health Centre of the University of Szeged performing molecular genetic diagnostics to carry out the highly valuable project that our institute coordinates and for which I myself am the professional leader. In Hungary, we in Szeged are the first to create a reference genetic-genomic database specific to the Hungarian population, which is open and accessible to all experts in the country who perform molecular genetic diagnosis and use new-generation sequencing methods. Hopefully, in the future we will be able to join similar databases that are already in operation across Europe.

"The tendencies that have taken shape in recent years, such as the establishment of the Interdisciplinary Centre of Excellence, have clearly highlighted the areas that are also benefitting from strong government support and follow international trends", said Prof. Dr. Márta Széll about the future. According to the Vice-Rector for Strategic Planning, the direction of the University of Szeged must be determined by following the international trends closely, with the support of a well-organized apparatus.

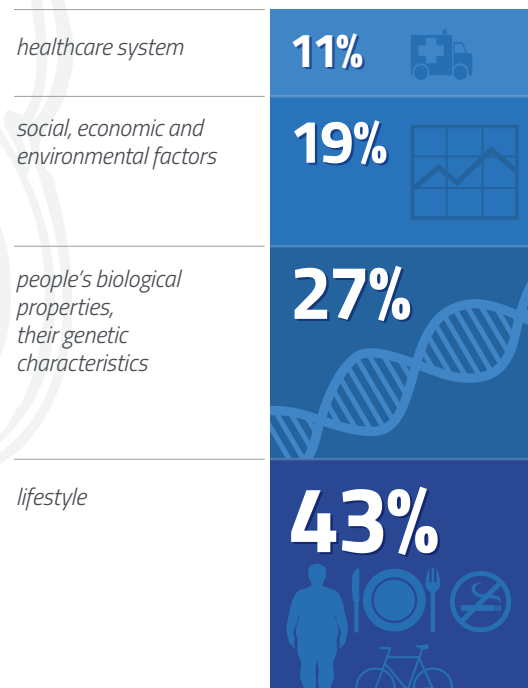
Summary

Prof. Dr. Márta Széll joined the MTA-SZTE Dermatology Research Group in 1999. In 2012 she started working at the Institute of Medical Genetics at the Faculty of Medicine of the University of Szeged, where she is now a Professor and the head of the department. Her fields of research are the examination of regulatory elements of tissue-specific expression, the signal transduction pathways, and the epithelial cell receptors; the genomic and molecular biology of multifactorial skin diseases; and the identification of non-coding RNAs, human pathological mutations, and polymorphisms, and functional testing of the latter in genodermatoses and neurodegenerative diseases.

Skill Lab for Practice-Oriented Training

"In Central and Eastern Europe, there are over a hundred universities with the exact same portfolio as the University of Szeged, and they have launched medical and health education courses in English, German and French," said the Vice Rector for Strategic Planning. According to her, the University of Szeged must maintain a high standard of education, while strengthening the practical orientation of its medical and health education. She considers the Skill Labs - or Medical Skills Development Centres - in Dóm Square and Pulcz Street a step in this direction. All these make the university more competitive.

THE FACTORS RESPONSIBLE FOR GLOBAL HEALTH



BASIC RESEARCH & INNOVATION

"When I was offered the post of Vice-Rector for Scientific Affairs and Innovation at the University of Szeged, I was reminded that, as co-research with Imre Kiricsi, I observed the work of the Vice-Rector for Research and Strategic Affairs in 2006," said Prof. Dr. Zoltán Kónya. "But I did not accept the post of Vice-Rector because of this, but rather because I, together with the members of the new Rector's leadership team starting in 2018, want to advance the University of Szeged."

"We need to define and contour the research image of the SZTE, and fill in the existing form with new content. Many EFOP and GINOP applications to the University of Szeged have given impetus to this work, as well as the new tender structure of the Ministry of Innovation and Technology, which supports higher education institutions on the basis of excellence in the period between large-scale grants," he emphasised.

"My job is to break down who does what at the University of Szeged even at the level of each researcher. Together with the Rector of the SZTE, we believe that good performance should be rewarded, not only with money and salary increases, but in all other ways. For example, we do this by making the work of the best performers and their results visible, say, on the renewed university website, or by internationalizing a wider range of university publications, or by shaping our training more efficiently with minor or major structural changes, adapting to international trends," said Prof. Dr. Zoltán Kónya. "So our plan is prepared to continuously improve the quality of our teaching and research, the healing activities and also the working conditions to meet our fourth mission. This way, we can also rise higher in the ranking lists." "The research image of the SZTE is defined not only by the ELI-ALPS Laser Research Centre but also by the clinical research, the internationally-acclaimed work financed by ERC tenders and the OTKA topics funded by domestic sources. The mission of the IKK, which currently includes the Department of Phar-

maceutical Sciences, the Institutes of Translational Medicine, Smart Systems, Photonics Laser, and the Material Science Research Institute, is to represent the characteristic features of the SZTE in the international research space," he said. "However, the IKK is a dynamic system, and the social sciences are also involved in the implementation of the commitments of its current research institutes. For example, the Faculty of Economics of the University of Szeged is involved in materials science research with its coaching activities. As Vice-Rector, I have a special role, in addition to strengthening the technical, life and natural sciences, in integrating human sciences into the SZTE's programme of excellence. Many of our outstanding research teams are working in these areas, and the joint research teams of the University of Szeged and the Hungarian Academy of Sciences are also receiving new sources of funding through this system."

"The leadership is doing its best to make sure that the buildings of the University meet 21st century standards," said Prof. Dr. Zoltán Kónya. "I believe that the next four or five years will bring a major change in the overall picture of the SZTE in this area as well."

1126 QUALIFIED INSTRUCTORS

745 PHD STUDENTS

30 BILLION HUF RESEARCH & DEVELOPMENT EXPENDITURE

≈ 1000 TESLA MODEL S



25

RESEARCH TEAMS

115

DOCTORAL PROGRAMMES



IKK

INTERDISCIPLINARY
CENTRE OF EXCELLENCE

The IKK, the Interdisciplinary Centre of Excellence, was established by the Senate of the University, under the previous Rector's leadership. It calls for the SZTE's Vice-Rector for Scientific Affairs and Innovation and the Vice-Rector for Strategic Planning to exercise professional supervision together. The new IKK exists only virtually, but the plan is for it to become a centre of excellence in a real building where new university equipment centres can be established.

As many as 20-25 strengthened research teams within the IKK will make the University of Szeged more visible internationally!

Prof. Dr. Zoltán Kónya

Vice-Rector for Scientific Affairs and Innovation of University of Szeged

Summary

Prof. Dr. Zoltán Kónya is an internationally-recognized researcher in the chemistry of nanostructured materials. In recent years, he has worked mainly on the synthesis, characterization and use of one-dimensional nanostructures (carbon and titanate nanotubes). His research aims to produce and classify new materials with his colleagues to achieve a breakthrough in the creation of products of high intellectual added value in the field of nanotechnology and environmental technology. He is the co-author of more than 300 international publications (IF>1000), the number of his independent references is approximately 6500, his Hirsch Index is 45. He is a co-inventor of 13 patents. He regularly teaches at all levels of higher education.



The key issue is how to serve students in terms of their Housing, Career Development, Sports and Culture

Prof. Dr. Péter Zakar
Vice-Rector for International and Public Relations

Summary

Prof. Dr. Péter Zakar, as a historian, researches and teaches at the Faculty of Humanities and Social Sciences at the University of Szeged, dealing mainly with the 19th century and its church history, as well as the history of the Revolution and War of Independence in 1848–49. Earlier, he taught at the Gyula Juhász Teacher Training College, SZTE, and served as the Dean of the Faculty of Social Sciences at the Ferenc Gál College. He gained professional and public experience as the Vice-President of the Csongrád County Local Authority between 2006 and 2014.

539

**ERASMUS+
PARTNER
UNIVERSITIES**

12

**CEEPUS
NETWORKS**

18%

**INTERNATIONAL
STUDENTS**

SZTE REMEMBERS & REMINDS US OF ITS HISTORY & ROOTS



Erzsébet GÁJZER

Anna BOBKÓ

The international and public relations of the University of Szeged are again supervised by a single Vice-Rector. "The Vice-Rectors before me have built a solid foundation in both international and public relations. This is shown the welcome fact that the drop in student numbers experienced in previous years stopped last year. With our results, we have surpassed the national average and we are proud of our international achievements. At the European level, we play a leading role in mobility programs, and the more than five hundred international partnerships developed worldwide by the SZTE are exemplary," said Prof. Dr. Péter Zakar. "The internationalization of the institution and the development of foreign language education are permanent goals, and it is a constant challenge to increase the number of students. In today's virtual world, we must adapt to the expectations of the secondary school generation. We are constantly improving our recruitment activities, using apps, chat boxes and student hotlines to inform secondary school graduates about the programmes of the University of Szeged and about the opportunities here. More and more international students are taking advantage of online applications. Administrative work is greatly eased by online credit card payments, but further development is needed in this area. In 2018, we launched the START scholarship program to attract students to

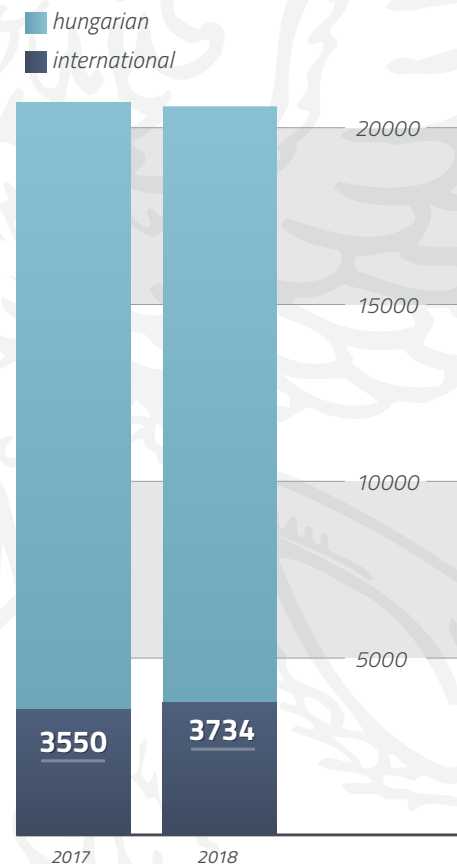
Szeged," said the Vice-Rector for International and Public Relations. "We hope that the mentoring programme and financial support, which facilitate students' integration into the university, will also help students remain here in the long run, because it is also a challenge to keep graduated students in the region and even in our country. Another key issue is how we can serve Hungarian and international students in other ways, such as housing, career, sports and culture.

"As a historian, I also consider the preservation of local, national and European identity, and the strengthening of the attachment to Hungarians beyond the borders very important during my tenure as Vice-Rector," said Prof. Dr. Péter Zakar. "Students should be introduced to the institution and its roots and cross-border ties, as well as to the significant personalities who have shaped the life of the university. For example, in 2021, we will celebrate a double jubilee: István Báthory founded the Jesuit College, the predecessor of the University of Szeged, in 1581, and in 1921, the Ferenc József University, having been expelled from Cluj-Napoca, was moved to Szeged. Leading up to the anniversary, we will remember and remind the community of the history of the SZTE and our predecessors with several exhibitions, publications and university history programmes.

MODERN ATHLETIC CENTER

The Sports Centre of SZTE at Hattyas sor will develop a modern athletic center with 1.6 billion HUF government support, which will include a 400-meter 8-lane Tartan running track and an 80x10-meter indoor running track. In addition, the new center will include a grassy football field and technical sports areas such as weightlifting, javelin throwing, discus throwing, hammer throwing, high jump, long jump and practice tracks.

CHANGE IN THE NUMBER OF ACTIVE STUDENTS (2017–2018)



21 000
UNIVERSITY STUDENTS

400+ STUDENTS TRAVELLING
ABROAD EVERY SCHOOL YEAR

QUALITY EDUCATION & MENTORING ENVIRONMENT



Ilona ÚJSZÁSZI

Anna BOBKÓ

"Education law is a unique and special area of law indeed. Student and instructor affairs and the development of education require a specific legal perspective. I had the opportunity to deal with this field when I was Vice-Dean for Education, but now I have the chance to see this field from a much broader perspective at university level," Prof. Dr. Klára Gellén shared with us. The Vice-Rector for Education believes that, in addition to performing the tasks in her assigned sphere, she can explore this segment of law in depth and detail.

"Role models can be important, but for me, basic human values are crucial, and we must strive to consistently act according to them in every situation. I am happy that in this position I can also work with such inspirational colleagues who have such exceptional professional humility and commitment. Productive collaboration is possible in such an environment. "The most important task for SZTE is to provide education with content that keeps pace with international trends and, if possible, is ahead of the world. The requirements for this include practical orientation in our training, which entails consistent performance and innovation in each field of training. The role of technology and digitalisation plays a pivotal role in the permanent modernization of the content and methodology of our education. It is in our common interest to support students' progress in their studies and the effective transfer of knowledge. In addition, we need to develop clear and transparent educational procedures and policies that can be applied for and followed by both

Hungarian and international students. This is also a permanent task for the Vice-Rector for Education, like cooperating with university faculties, to support training and curriculum development," she said. "Coordinating educational projects focused on our goals, encouraging student welfare, ensuring the quality of university life through such tasks as dormitory placement issues, and creating a family-friendly environment are also among our tasks.

"The SZTE not only focuses on admission scores, but also pays great attention to retaining students at our university. We need to concentrate on reducing the dropout rate in order to increase the number of admissions. Our task is that students should immediately feel the effect of mentoring when they enter an institution of the University of Szeged. This goal is served by, among other things, the informative lectures for the freshmen in the week of admission, as well as the targeted information programmes subsequently provided. In addition to receiving necessary information, students can manage their academic affairs as well as problems in their private lives in a supportive environment, using the services provided by the SZTE. It is important that instructors should understand that preparing students for exams, for example, is part of the transition from secondary school to higher education. Our goal is that the students who have been admitted to the University of Szeged should leave our institution with a degree, and to this end, we accompany them with a complex support system from the beginning to the end.

INFRASTRUCTURE

344

UNIVERSITY
BUILDINGS

962

INSTRUCTIONAL
ROOMS

3900

STUDENT HOSTEL
BEDS

At the University of Szeged we strive to create an educational, methodological environment that inspires both students and instructors.

*Prof. Dr. Klára Gellén
Vice-Rector for Education
of the SZTE*



Lifelong learning

"Several minor steps, such as establishing a work schedule, can be important in providing full-time or part-time training programmes in higher education or even a postgraduate education, not only for those who are newly graduated from secondary school but also for middle aged people and the elderly, who are the second or third generation compared to the young adult students," said the Vice-Rector for Education of the SZTE. "We are already working on developing such alternative, open, online courses. It is also our priority to provide students and secondary school graduates with organized training that can help them acquire the skills needed to meet the entry requirements, such as foreign language certificates and advanced level qualifications on the secondary school leaving exams."

ALUMNI MENTOR PROGRAMME

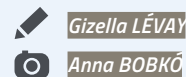
363
MENTORED STUDENTS

171
MENTORS

Summary

Prof. Dr. Klára Gellén conducts her research in the fields of information communication; media and advertising law; contract law, in particular the electronic contracts; consumer protection and investor protection. She has also been researching and lecturing abroad, for example at the University of Łódź, La Sapienza in Rome and the University of Essex. She is also writer of several books, book chapters and lecture notes. She is a member of the editorial board of several prestigious scientific journals. She has written the legal commentary for the Wolters Kluwer Publishing House since 2014.

WORLD-CLASS MEDICAL TECHNOLOGY AND RESEARCH



The SZTE Albert Szent-Györgyi Health Center further enhances the standard of high-quality patient care at its clinics. The University of Szeged provides innovative and revolutionary medical opportunities that meet 21st century expectations with the support of its several investment, development and research projects.

‘The developments planned at several clinics of the University of Szeged are in line with development strategies of the Ministry of Innovation and Technology in the field of healthcare industry and the concept of introducing the latest technologies at universities. All this will be seen in the near future on the international level of imaging diagnostics. We are excited about the surgical robots turn-out and the ongoing improvement in the field of healthcare’ said Prof. Dr. László Rovó, Rector of the University of Szeged, Director of the Department of Otorhinolaryngology and Head Neck Surgery at the press conference of the world-class robotic hybrid operating room handing at the Albert Szent-Györgyi Health Center, Neurosurgery Clinic on the 5th of October, 2019.

The surgical complex is made up of a dedicated spine, a head and neck surgery hybrid operation room – owing to the investment of the SZTE worth 2.5 billion HUF.

‘We would like to establish a world-class scientific workshop at the clinic in Szeged’ emphasized Prof. Dr. Pál Barzó. The director of the Neurosurgery Clinic of the University of Szeged said that the aim is to examine patients with the most up-to-date diagnostic equipment and to provide optimal treatment that is appropriate to the disease. Complex illnesses that usually take multi-stage treatment and are of

a very high risk can be cured in the new operation rooms. These complex diseases include extensive base tumors that narrow and damage main arteries, wide spread or life-threatening vasodilatation, glomeruli or haemophiliac tumors.

The first robotic arm operating in Hungary, Siemens Healthineers ARTIS Pheno, has been placed in the world-class hybrid surgical operating room which serves neurological surgery. On the day of the robotic arm hybrid operating room handover the professor emphasized: ‘There is no neurosurgical intervention in the world that we cannot perform at the highest standards in the world.’

Another revolutionary innovation project in medical science is the establishment of the Molecular Fingerprint Testing Center at the University of Szeged to perform oncology diagnostics of the most common cancers through blood molecular fingerprinting. Based on a cooperation agreement between the University of Szeged and the Nonprofit Ltd. Molecular Fingerprinting Center, a biobank will be developed in the higher education institution as part of a university center. The scientific goal of the project is to improve oncology diagnostics through the molecular fingerprinting of the most common cancers, particularly (but not exclusively) breast, lung and prostate cancers.

AMBULANT
PATIENTS

2,5
million

80 000

ACTIVE
IN-PATIENTS

SZTE Receives The 'Excellent Clinical Center' Award

The Albert Szent-Györgyi Health Center of the University of Szeged has become the best among of the four medical universities this year in the complex examination of the elements of the hospital-clinical operation. Its management is stable and its quality management system is outstanding. The number of its specialists and trained nurses and their qualification as well as the professional organization deserve recognition' – this was praised with appreciation at the XI Medicina Conference organized by the Hungarian Hospital Association and the Medicina Forum. At the event in Budapest, on the 8th of October 2019, the "Excellent Clinical Center" was awarded to the Albert Szent-Györgyi Health Center of the University of Szeged.

1800
BEDS

12
million
PROCEDURES

Without a deficit

As a results of mobilizing its internal reserves, for the first time in twelve years, SZTE SZAKK has broken even, starting 2019 with no losses, announced Dr Judit Fendler. According to the Chancellor of the University of Szeged, it has managed remarkable savings through, for example, through the Health Centre performing internal patient transport under its own management, and through establishing the state-of-the-art Blood Bank close to the surgeries and the emergency department. At the same time, it has increased its own revenues by, among other things, re-launching paid patient care for foreign patients. According to the Chancellor of the University of Szeged, further measures and resources, including operational and investment support are needed to ensure balanced management of the Szeged Health Centre in order to improve the quality of patient care and education.

From Traumatology to X-Factor



During their working hours, they teach, heal, invent and explore the mysteries of space. What do they exchange their white lab coats for after work? How do the teachers, researchers and doctors of the University of Szeged spend their free time? We talked to Taka, i.e. Dr. Takayuki As Kurokawa, a resident traumatologist of the SZTE who recently demonstrated her singing skills on X-Factor, a talent show on the RTL Klub channel.

"How long have you been pursuing your hobby?"

"I have been singing since I was a child. I grew up in the love of music. At home, in Japan, my father had his own acoustic orchestra. While I would be playing in my room, they would be making music in the rehearsal room. My father is a neurosurgeon and is a perfectionist when it comes to medicine as well as music, as I am. But he didn't allow me to pursue only the music. The first priority at home was learning. I attended the best law university in Tokyo, I studied very much, and I did karaoke to relax.

Karaoke is very popular in Japan. During university I started ballroom dancing. we performed many times, so I gained practice in stage performance. I did not finish law school because I came to Szeged to the Faculty of Medicine of the University of Szeged thanks to a Hungarian study program. I sang at some parties organized for students, including the ICE, the International Cultural Evening. I got a lot of positive feedback, and then a friend of mine entered me in X-Factor, a talent show on RTL Klub."





"What is your most memorable experience of singing?"

"Definitely X-Factor. I was in a completely new environment and had a lot of new experiences. I loved the rehearsals, the live shows. Fortunately, I'm not a nervous type of person. I do the task and that's it. That's how I was with this opportunity. It was a difficult time for me, many times travelling to Budapest after my shift, but it was worth it! I'm grateful to the show, and not only, but also, because people on the street or the patients at the hospital recognize me. My first single is being produced now and we're also planning to shoot a music video in Szeged. I would advise candidates auditioning for the new show to take advantage of every opportunity and not be overwhelmed."

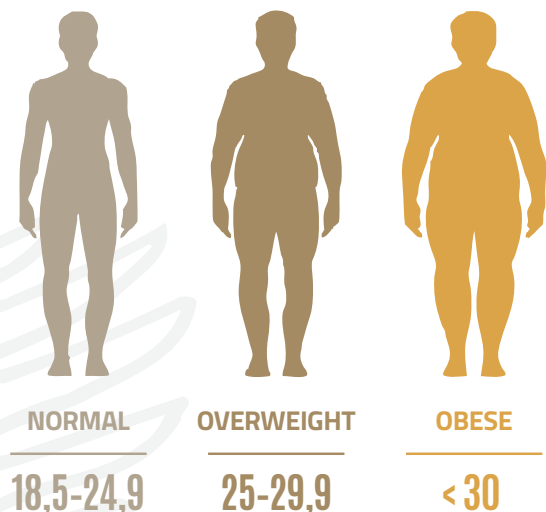
"What challenges do you face as an accident surgeon every day?"

"I work at the Traumatology Clinic in the Faculty of Medicine of the Albert Szent-Györgyi Health Centre, SZTE. As a physician at the department, one of my most important tasks is to prioritize cases. We have to work quickly, since there are 130 patients in the department. I also work as a physician in attendance. I am most interested in sports medicine, and eventually I would like to specialize in this field."

"Are there any overlaps between your work and your hobby?"

"Many people at the hospital have recognized me since I was on X factor, both patients and hospital workers. It's funny when patients ask me to take a selfie after I change their dressing. As I mentioned, we plan to shoot a video, and I'd like to include several university buildings or even my workplace in it, if I get permission."

WHO IS OVERWEIGHT OR OBESE?



BMI | Body Mass Index

body weight (kg) / the square of height (m)

IMPROVING HEALTH AWARENESS



76% ▼ **61%**
The proportion of **white bread** consumers fell to 61% in 2016 from 76% in 2007.

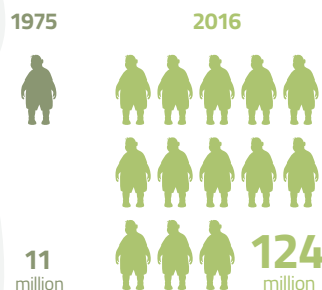
Source: GfK Hungária Market Research Institute

EVERY FIFTH CHILD IS OVERWEIGHT



7-year-old child: overweight or obese if BMI is 19.5 kg/m² or more

THE NUMBER OF OBESE CHILDREN IN THE WORLD



20 000 *

CHILDREN ARE OVERWEIGHT IN HUNGARY

(approximately the population of the town of Csongrád)

* Source: National Institute of Pharmacy and Nutrition, 2018 data of the Hungarian Student Sports Association, on the occasion of the European Day against Obesity, 22 May and World Obesity Day, 11 October.

FOODS ENRICHED WITH SELENIUM AND OMEGA-3 FATTY ACIDS

✚ Éva Antal

A new EU-funded project targets healthy family planning and the birth of healthy children. Its professional leader is Dr Nikolett Nagy, Adjunct Professor of the Medical Genetics Institute, Faculty of Medicine (ÁOK), SZTE.

"The purpose of this diverse research is to develop pre-pregnancy, post-natal and post-pregnancy screening and diagnostic tests that ensure the physical well-being of the pregnant woman and the foetus, thereby contributing to the birth of healthy children. One part of this is screening for neonatal dermatological lesions. This area has received little attention so far. The research is led by Dr. Zsanett Csoma, associate professor at the Department of Dermatology and Allergology at the Faculty of Medicine, SZTE," says Dr Nikolett Nagy. "Our other major focus is the study of genetic disorders. We are collaborating with several faculties and departments of the University of Szeged on researching this topic because we are also interested in the economic and social effects of screening for these diseases."

Another important area of the project is the development of functional foods, which is carried out by the Faculty of Engineering, SZTE, under the leadership of Dr Balázs Szabó, associate professor. There is a growing demand for function-

al foods. These are products that meet specific nutritional needs. They include products specially made for healthy nutrition and for people with various food allergies. The research group of the Faculty of Engineering (SZTE) wants to produce bread, baked goods and biscuits that contain the essential vitamins and minerals that are important during pregnancy: for example, Omega-3 fatty acids, selenium and zinc. These are important because low selenium levels during pregnancy can lead to low birth weight, and the same can be true for the lack of Omega-3 fatty acids. In addition, babies who received adequate amounts of Omega-3 in the womb are calmer, get fewer colds, recover faster, and are more resistant to allergic diseases. Zinc contributes to the absorption of folic acid and may also play a role in preventing pregnancy diabetes, among other things. This part of the research is outstanding because these products may sooner or later appear in shops and contribute to the healthy nutrition of pregnant women and to the healthy nutrition of babies.

* The studies are carried out as part of the EFOP 3.6.1 project, entitled "Multidisciplinary Health Service, Health Education and Health Promotion Partnership for Healthy Family Planning and the Birth of Healthy Children in the South Great Hungarian Plain Region".

LIFESTYLE CHANGE FOR OVERWEIGHT CHILDREN

✚ Éva Antal

"Obesity is not a disease but a condition," says Dr Tibor Kalmár, Senior Research Fellow at the Paediatric Clinic of the Faculty of Medicine, SZTE. Their pilot project aims to investigate how reversible and irreversible cardiovascular lesions occur in the bodies of overweight children as a result of lifestyle changes. At the same time, they also summarize sociological, social and economic factors that influence successful lifestyle adjustments.

7 to 12-year-old students from three primary schools in Szeged and their parents are taking part in the project's research. They will also perform genetic blood tests for volunteers, especially for overweight children.

Researchers already know that the microbiome - the sum of the many billions of bacteria in us - changes according to our eating habits, but this process is not fully understood. Their research can provide experts more detailed information that can help them understand how obesity develops and can be reversed.

Dieticians will draw up personalized diets for the overweight children and their parents involved in the program.

The researchers are aware that there is no single universal solution to losing extra weight and trust that their results will show how customized programs for each patient can be developed in the future.

* The title of this EFOP 3.6.1 project is: "Prevention of cardiovascular complications due to obesity in childhood. The role of lifestyle change and the examination of its complex biological effects through intelligent physiological technologies and the multidisciplinary application of medicine, health education and health promotion."

Mentor and student



Ilona ÚJSZÁSZI

Anna BOBKÓ


Vera, Krisztián Grecsó's latest novel, recalls the atmosphere of Szeged and its university in the 1980s. At the release of Krisztián Grecsó's novel *Vera*, we asked him the secret to his success. He is a graduate of the Faculty of Humanities and Social Sciences at the University of Szeged, a writer comfortable with long and short prose, poetry, plays, screenplays, songs and articles..

"I still have a good relationship with my former teachers, most of all with Uncle Miska Ilia, whom I love very much [...] I wrote my thesis under the supervision of professor András Kovács. I can only say good things about Sándor Olasz. I fondly remember the lessons of Gyöngyi Mikola as well as the Old Hungarian Literature seminars of László Szilasi, which had a huge impact on me. I can't leave Professor Ötvös off the list ... We admired our professors and looked up to them like they were gods," said Krisztián Grecsó – who could be called the writer of the secrets behind reticence – about his relationship with his professors.

In the "Substantial version" of his biography on his

webpage, www.grecso.hu, he writes, "Jusztika, my grandmother is my role model [...] I made three lifelong friends in Csongrád [...] I realized it in Szeged that I could not postpone becoming an adult any longer". The "Official version" says, "Krisztián Grecsó was born in Szegvár in 1976 [...] He attended elementary school in his native village and graduated from János Batsányi Grammar School in Csongrád. [...] He obtained a degree in Hungarian at the József Attila University in Szeged in 2001."

He described the feeling when the student becomes a mentor and what it means for the writer when his work becomes part of the curriculum and a research topic at the Doctoral School of Literary

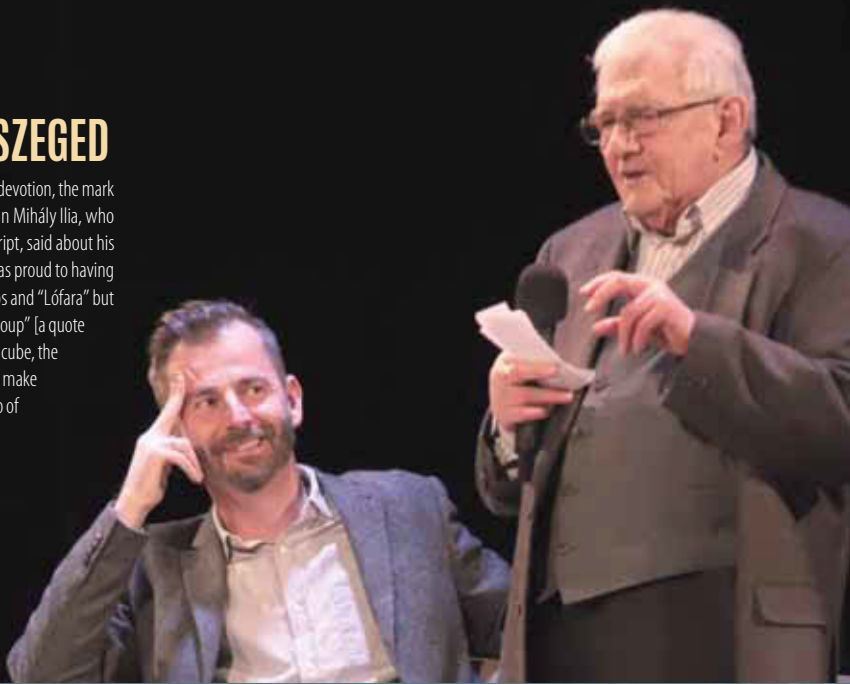


KRISZTIÁN GRECSÓ'S *most important works:*

Vízjelek a honvágyról [*Watermarks About Homesickness*] (poems, 1996) | Angyalkacsinálás [*Angel-making*] (poems, 1999), Pletykaanyu [*Blabbermother*] (short stories, 2001), Caspar Hauser (poems, 2001), Isten hozott [*Long Time No See*] (novel, 2005), Tánciskola [*Dance School*] (novel, 2008), Mellettem elférsz [*I've Got Room For You*] (novel, 2011), Megyek utánad [*I'll Follow You*] (novel, 2014), Jelmezbál [*Costume Ball*] (short stories, 2016), Harminc év napsütés [*Thirty Years of Sunshine*] (feuilletons, 2017), Vera (novel, 2019)

VERA IS A NOVEL ABOUT SZEGED

It was highlighted at the book's debut that Vera is a novel about devotion, the mark of the author Krisztián Grecsó's love of Szeged. Literary historian Mihály Ilia, who as the "mentor" was asked to be the first reader of the manuscript, said about his "student's" recent work that it is a well-written novel and he was proud to having read it. He explained that not only place names such as Alsóváros and "Lófara" but signs of a certain era such as "the potato soup should be potato soup" [a quote from former political leader of Hungary János Kádár], the Rubik's cube, the TV set warming up in an hour and instalments paid on a Trabant make Vera a novel about Szeged. Krisztián Grecsó belongs to the group of authors who graduated from the University of Szeged – starting with András Dugonics, and continuing with Lajos Ambrus, Tibor Zalán, László Darvasi and László Szilasi – who describe in their novels about Szeged how they make their home in the city spiritually and how they embrace its past.



Studies at the Faculty of Humanities and Social Sciences at the University of Szeged. "I am very pleased that in the Eötvös dormitory, where I used to live, there is a group led by Márk Szántai whose members study my works. It is a pleasure because we always have the feeling that 'no one can be a prophet in his own country'. That is why having a good relationship with the students and professors in Szeged is important to me. Professor Zsófia Szilágyi is essential: she is smart, a great organizer and knows how to get and keep these guys together, so that they motivate and reinforce each other. I also meet with Márk in Pest: we sit down, talk and I also ask him about his tasks. He wrote, for example, a serious and thorough article about Tánciskola [Dance school]. That novel of mine was failing, but Márk's essay helped get the book back on the right shelf. I also felt this as an editor. When they're students, people do some things in an impudent and slapdash way that they wouldn't dare do ten years later. This insolence also opens new paths for those they criticise."



Even with the genre variety of his works (which won the Faludy Prize in 2002, the József Attila Prize, and the Bárka Prize in 2019), the multitude of his evening presentations (available in the calendar on www.grecso.hu) and his editorial and theatrical activities, Grecsó's personality shines through. In

the "Substantial version" of his biography, he admits, "I like good wine, slow days and resting my eyes."

"Do not allow yourself the luxury of resentment. Do not let yourselves be hurt". This is the message of the successful writer to the current students of his former schools. "The beginning of every career is all about learning to tolerate failure, because it is not in anyone's interest to have a young person start out and become a household name in their field. This failure tolerance is

often more important than whether the individual is talented or not. You need to train mentally at the beginning of your career. This is what also matters in life: if we can make it with a strong spirit..."

HORTICULTURE, AGRICULTURAL INFORMATICS AND PRECISION AGRICULTURE

Erzsébet Gajzer

Dr. Edit Jónás Józsefné Mikó, the first female Dean of the Faculty of Agriculture (MGK) of the University of Szeged, aims to introduce new training programmes, develop infrastructure, increase mobility abroad and strengthen research groups and community life.

"We are planning to launch new degree programmes and new specializations in addition to the existing three bachelor training courses - Agricultural Engineering, Rural Development Engineering, Wildlife Engineering - and the Rural Development Engineering master's course," the new Dean says about the vision of the SZTE MGK. "We want to open up to horticulture, agricultural informatics and precision agriculture. The daily life of farm animals is now controlled by sensors and automated systems. The use of drones is no longer a rarity in crop production. We also need to adapt our training to such technological developments."

SZTE MGK has contracts with thirty companies and institutions. The dual trainings also benefit corporate partners, since the graduates from the Faculty of Agriculture, SZTE in Hódmezővásárhely will already have work experience. "Sweet potato research is a priority, but with the support of the National Fund for Research, Development and Innovation, we are also developing forage for dairy cattle," says Dr Edit Jónás Józsefné Mikó about the knowledge map of SZTE MGK. "Intensive research is being

continued to analyse the quality of fermented and forage feed. We also study the nutritional value of silage maize, sorghum and Sudan grass varieties bred for the low-rainfall region of the Great Hungarian Plain, as well as exploring the possibilities of their preservation and feeding methods. We conduct significant research in wildlife management: in addition to monitoring rabbit stocks, we also research pollen climatology. Hódmezővásárhely is home to one of the largest indigenous speckled poultry populations in Hungary, and there is ongoing research on gene pattern maintenance in this area, while we are also conducting studies on caponizing. Our staff also participates in international bird protection programmes, for example, focusing on the protection of the European rollers. During my tenure as Dean, I would definitely like to strengthen and develop research teams to support the work that has already begun and to encourage students and colleagues to start new research."

The SZTE MGK offers its BA programme in Agricultural Engineering in English as well, and 18 percent of the students are international students. Students, teachers and researchers come to the Hódmezővásárhely-based Faculty of Agriculture of the SZTE from China, Pakistan, Turkey, Mongolia, South Africa and Nigeria, as well as from Serbia and Switzerland.



DIGITIZATION AND INTERNATIONAL VISIBILITY

Ilona Újszászi

Prof. Dr. Márta Görög is the youngest and the first woman leader in the history of the SZTE Faculty of Law. She is the new Dean of the SZTE Faculty of Law, Head of the Institute, the alumna leading the SZTE Alma Mater, Scientific Secretary of SZTE Szeged Regional Committee and mother of two children. We asked her about the Faculty of Law's vision for the 21st century.

"The ÁJTK of the University of Szeged stands out among the Hungarian law faculties as a professional community with a positive radiation. It is a good feeling to belong here, and students also feel this way, as they receive personal attention from their instructors. It is an excellence workshop with renowned research in all disciplines," said the new Dean.

"We need to formulate a vision for the Faculty of Law on the basis of our educational portfolio, our research and the successes of our colleagues and students, all while maintaining our values," said Prof. Dr. Márta Görög. "Our two most important aims are strengthening digitalisation and international visibility. When defining our goals, we must take changes into account in our target group. Generation Z, that is, today's 'digital natives,' is going to be followed by the alpha-generation. And this latter group, which is in elementary school today, is characterized by attitudes that we need to respond to by revamping the methodology and curriculum of university

education and making it increasingly oriented towards practice. In terms of international visibility, our Gateway program, which has been operating since 2012, stands out among our cooperation agreements with a number of higher education institutions abroad: during the past 7 years, nearly 300 Chinese students came to Szeged. We also want to renew this program by, for example, offering postgraduate courses with new themes and summer universities. In addition to disseminating our scientific achievements, this is how we can achieve success as an internationally-recognized fourth-generation Faculty of Law. We also need to find ways to increase the motivation of our colleagues. A motivated research and teaching team with excellent knowledge and experience can guarantee our future success.

"One of my goals is to further increase our tendering activity to support research," she said. "We are engaged in complex and exciting areas such as artificial intelligence, digitalization, knowledge transfer, self-driving vehicles, drones, and robotics. Each of these areas requires legal solutions because we have to find dogmatic solutions to issues such as who is responsible for legal violations in cases involving robotic surgery, self-driving vehicles and artificial intelligence. I believe in interdisciplinary and multidisciplinary dialogue and knowledge."



Scholarships for study and extra work

"The work students invest over their academic years is rewarded by the University of Szeged with scholarships, various opportunities for competitions and corporate internships and through the well-paying job the graduate finds as a result of the experiences gained," says Csilla Gyurkó (pictured). The young BA graduate of the Mechatronic Engineering programme of the University of Szeged (SZTE) has twice received the support of the New National Excellence Programme (NNEP).

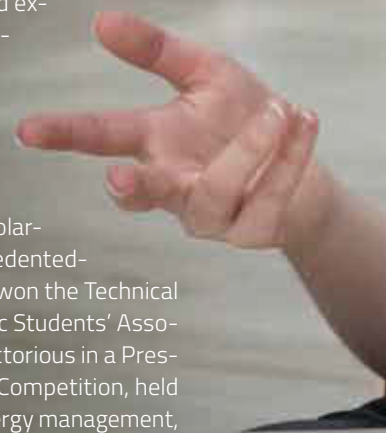
Csilla Gyurkó's undergraduate studies were state-financed, and she received a regular scholarship as well. The student, graduating in 2019 from the Mechatronic Engineering programme of the University of Szeged, Faculty of Engineering, has received the National Higher Education Scholarship twice, thanks to her outstanding academic achievements. She has also received the "Gold Level Student Award" and the "Talent of the Faculty of Engineering of the University of Szeged 2019". Through the call for applications she discovered on the SZTE Talent Point website, she won the scholarships of both ContiTech Rubber Industrial Ltd. and Givaudan Hungary Ltd. She has also won the New National Excellence Scholarship and the Golden Grade Award of the SZTE Söfi Foundation twice.

"We used the steering and control unit from the first pneumobile, or air-powered vehicle, from our first NNEP, which students and teachers designed together. Additionally, with the help of the 2018 NNEP scholarship, I developed a classroom management

system that assist the entry and exit of the students at the university labs," Csilla Gyurkó said. The latter work laid the foundation for her thesis on Designing and Implementing an Access Control System with NFC Technology.

As part of her entry into the scholarly world, a paper of this unprecedentedly hard-working young woman won the Technical Section of the National Scientific Students' Associations conference. She was victorious in a Presentation Techniques Academic Competition, held conference presentations on energy management, and has served as a demonstrator as well.

"As a student of the Faculty of Engineering at the University of Szeged, every minute of my studies, my time spent on vehicle construction, teamwork and racing has been rewarded with generous rewards and practical experience - summarized Csilla Gyurkó, who during her three and a half years at the





University of Szeged took part in the life of several companies as a participant of four different types and about ten rounds of vehicle construction competitions. Today she is a communications engineer at Mercedes-Benz Manufacturing Hungary Ltd., responsible for communications and security.



FOCUSES ON HEALTH PRESERVATION

 Bernadett Kocsis

Katalin Julianna Dinnyés graduated as a health visitor from the Faculty of Health Sciences and Social Studies of the University of Szeged. She then got her master's degree in health education and library sciences at the Gyula Juhasz Teachers' Training Faculty. She received the New National Excellence Program scholarship for her application titled Male and Female Health Expectancy Based on Lifestyles.

How do the performance pressure and complying with gender expectations affect our lives? How can we cope with the stress we are exposed to and how does this affect our health? These questions are the questions Katalin Julianna Dinnyés answered with her research. The young researcher, who graduated with degrees from two faculties of the University of Szeged, explored the content of the secondary school textbooks, made statistical calculations and collected responses to questionnaires, all on the basis of the different educational areas of the National Core Curriculum.

"Among other things, I studied the proportion of genders in high school textbooks in computer science, biology, ethics, geography and physics, how male and female characters appear in pictures and how health is related to appearance rates," explained the specialist, whose work is supported by the New National Excellence Program.

Thanks to the Hungarian Public Administration Scholarship, the young researcher started to work in the Department of Public Health and Epidemiology at the Department of Public Health and Food Chain Safety of Csongrád County while she was completing her master's studies, and is currently working full time as a health promoter there. Her next goal is doctoral training, encouraged by her workplace leaders.

"There is a significant difference between the two genders in terms of health and health-related behaviour," said Katalin Julianna Dinnyés. "The results of my research have confirmed the thesis formulated in the scientific literature: women are more health conscious, pay more attention to nutrition and exercise, and prevention is more important to them. The study I did is not representative, but it can be stated that married people pay less attention to their own health, nutrition, and exercise than single people do."

CRADLE OF MUSICIANS & VISUAL ARTISTS

The Béla Bartók Faculty of Arts, which was the Faculty of Music of the University of Szeged previously, is launching new art courses in addition to its university-level music education.

A decision by the Senate of the University of Szeged widened the horizon of the smallest faculty of the university, which had been concentrating only on musical arts. The Tisza Lajos Boulevard building of the Faculty of Music, SZTE, will be renovated with more than 3 billion HUF in tenders and government funding. The University's art education portfolio will be enlarged, while the arts-related programmes will remain the same.





Ilona ÚJSZÁSZI

Anna BOBKÓ

"Our training programmes are connected to classical music or fine arts. As a new novelty, we will introduce training programmes in painting, sculpture and graphics. But we are also preparing for the second stage: design and graphic design. Artist training in restoration, industrial design, 3D animation, and photography are included in our intended portfolio, and even dance and theatre are among the future possibilities. We plan to teach the technical services of theatre arts, such as sound technology and visual effects, but in the field of performing arts at the University of Szeged we will not train, for example, directors, dramaturges, or actors," said Dean Dr Róbert Nátyi. "At the same time, knowing the administrative process of the Hungarian Accreditation Committee and the competition offered by other education programmes, I believe that we will be able to launch 8-10 new training programmes at our Faculty from 2022, when we can return to our newly-opened and expanded headquarters."



SCIENCE AND RECREATION IN THE BOTANICAL GARDEN

Bernadett Kocsis

The priorities of the Botanical Garden of the University of Szeged are scientific research, dissemination of knowledge, facilitation of recreational opportunities and spreading practical experience. In addition to its plant conservation project, the green island of the University offers visitors a variety of events and a series of gardening programmes.

As a research site, the SZTE Botanical Garden plays an outstanding role in propagating and maintaining highly protected plants. The garden is an ideal location for ex situ (far from the habitat) plant propagation because it provides both the professional experience and all the technical conditions for plant cultivation.

Intensifying agricultural cultivation has accelerated the destruction of loess fields and other vegetation. Therefore, the Körös-Maros National Park launched a loess-field rehabilitation project in 2012, aimed at repopulating and reintroducing endangered or protected loess grass species. As part of the project, the SZTE Botanic Garden has undertaken the collection of the reproductive parts of the loess-grass plant species, which are mostly seeds, from the fields. Some of the collected seeds

were sown in areas designated for regeneration as part of this internationally-acclaimed project. A total of 65,300 seeds of 30 species were sown in this way in the autumn of 2018. As for other species, individual plants suitable for planting were grown, and the seedlings were planted in a predetermined network, imitating the pattern of natural plant communities. 9867 individual plants of 46 species were planted in three sites in the national park at the time of the first relocation.

Examples of the plants to be preserved include the Hungarian pink carnation, the woodland sage, the late-flowering dandelion and the Gallic rose.

The Botanical Garden of the University of Szeged also disseminates knowledge. In the spirit of this mission, it organizes programmes for gardeners, such as a series of events called "Gardening together in the Botanical Garden." These events offer five weeks of lectures for aspiring gardeners, providing participants the opportunity to immediately put their

theoretical knowledge into practice. Guests have the opportunity to learn about different types of soil, the secrets of composting, plant protection, the basics of balcony gardening, and garden design as well. Entertainment programmes are also available for those wishing to relax, coinciding with the flowering of different plants in the Botanical Garden. The green island of the University traditionally holds Lavender Days at the end of June, using a Mediterranean aesthetic to celebrate the thousand faces of lavender. The

event features stage programmes, music and a crafts fair. The traditional Lotus Days, organized in honour of the flowering of the Indian lotus, awaits the visitors with the tastes, music, and flavours of the Far East. The Botanical Garden is also worth visiting in autumn, when nature lovers can discover the mysterious world of carnivorous plants, mushrooms, pumpkin carving and pumpkin desserts in September and October.

1200
PLANT
SPECIES

300
KINDS OF
CACTI

20
TROPICAL
BUTTERFLY
SPECIES

SCIENCE PARK TO BE BUILT AROUND THE ELI

A nearly 85-hectare science, innovation, technology and industry park will be established by the University of Szeged. The Science Park Szeged, built around the ELI Laser Research Centre, is a prominent government project and is unique in Hungary, promoting the concentration of research and development resources.

Thanks to government support for landscaping totalling more than HUF 1.7 billion, the renewal of the area of the former Soviet military barracks in Szeged has begun. With the establishment of the Science Park Szeged, in connection with the ELI-ALPS research infrastructure, a science-innovation centre of European significance will be created. It will provide an excellent environment not only in an intellectual but also in a physical sense for the concentration of research and development resources. The Park will promote the strengthening of R&D activities, linking the state, market players and university research workshops at a regional level.

The SZTE Automotive Competence Centre will also be located in the Science Park, where among others internal combustion engines and their emissions will be examined on a special engine brake bench. At the same time, the centre will play an important role in the development of technical education, for example in electrical engineering.

The Park will also contain an Incubator House, which will hold the Hungarian Centre for Excellence in Molecular Medicine. The internationally-recognized facility will primarily support research groups studying

immunological, inflammatory, cardiovascular and cancerous diseases.

With the renovation of the old theatre building, a Visitor Centre and a Museum of Information Technology will be established, the mission of which will include accommodating the collection of the Foundation for Information Technology Historical Museum.


The work started with spatial planning in the autumn of 2018. A comprehensive geodetic survey was followed by the demolition of buildings and cladding, scrubbing, munitions clearance and an archaeological impact assessment. The completion of the landscaping, which is financed by government funds, is expected by the autumn of 2019. At the same time, the development of a road and utilities concept plan for the entire area has begun.

The excellent transport system in Szeged, the environment for developing after the preparation of the land, and the physical proximity of the ELI-ALPS research site will offer many private companies the opportunity to take up residence, therefore a 65-hectare area will be set aside for business use. It is estimated that the Science Park will create 1,500 new jobs in the city by 2021.

HIGH-TECH PARK



WORKING CLOSELY WITH THE ELI

 **Erzsébet Gajzer**

The University of Szeged and the ELI-ALPS Research Institute are working together to develop a neutron-based laser acceleration. The specialized laser equipment of the centre is used for research on nuclear waste management.

A joint Hungarian-French-American interinstitutional project was launched under the leadership of the University of Szeged. It established international consortium to develop a procedure to more easily manage nuclear waste. By using the laser system of the ELI-ALPS research institute in Szeged, experts can achieve a scientific breakthrough in the management of nuclear waste generated by nuclear power plants.

Safely storing materials with half-lives of hundreds of years is a special challenge for the scientists. The current solution is a P&T (partitioning and transmutation) process that has been known for decades. During partitioning, the different components of nuclear waste are separated and the materials with long-lived waste

is transformed by transmutation. The material is exposed to, for example, neutron radiation, which either stabilizes it or causes it to become a rapidly-degrading nucleus or nuclei. However, the practical realization of this is made practically impossible by the fact that the required neutrons can only be produced in nuclear reactors or by accelerators. The key question is, therefore, whether a substantially cheaper, easy-to-use neutron source can be developed.

Gerard Mourou, who was awarded the Nobel Prize in Physics in 2018, developed a scheme with a world-renowned Japanese researcher, Toshiki Tajima, which would overcome this obstacle with a laser-acceleration-based neutron source. The ELI-ALPS provides the infrastructure for the practical implementation of this process. The Hungarian government is supporting the development of the laser neutron source required for this transmutation with a national research programme totalling 3.6 billion HUF over three years.

**PATENTING STATISTICS
AT THE UNIVERSITY
OF SZEGED (2018)**

40

**PATENTS
FILED AND
GIVEN**

17

KNOW-HOW

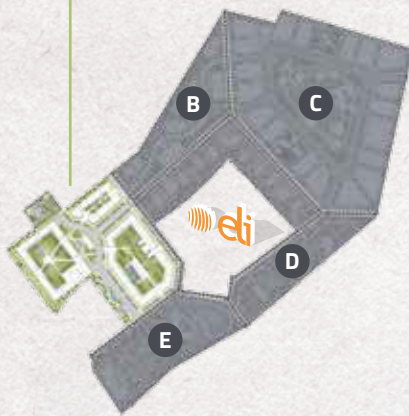
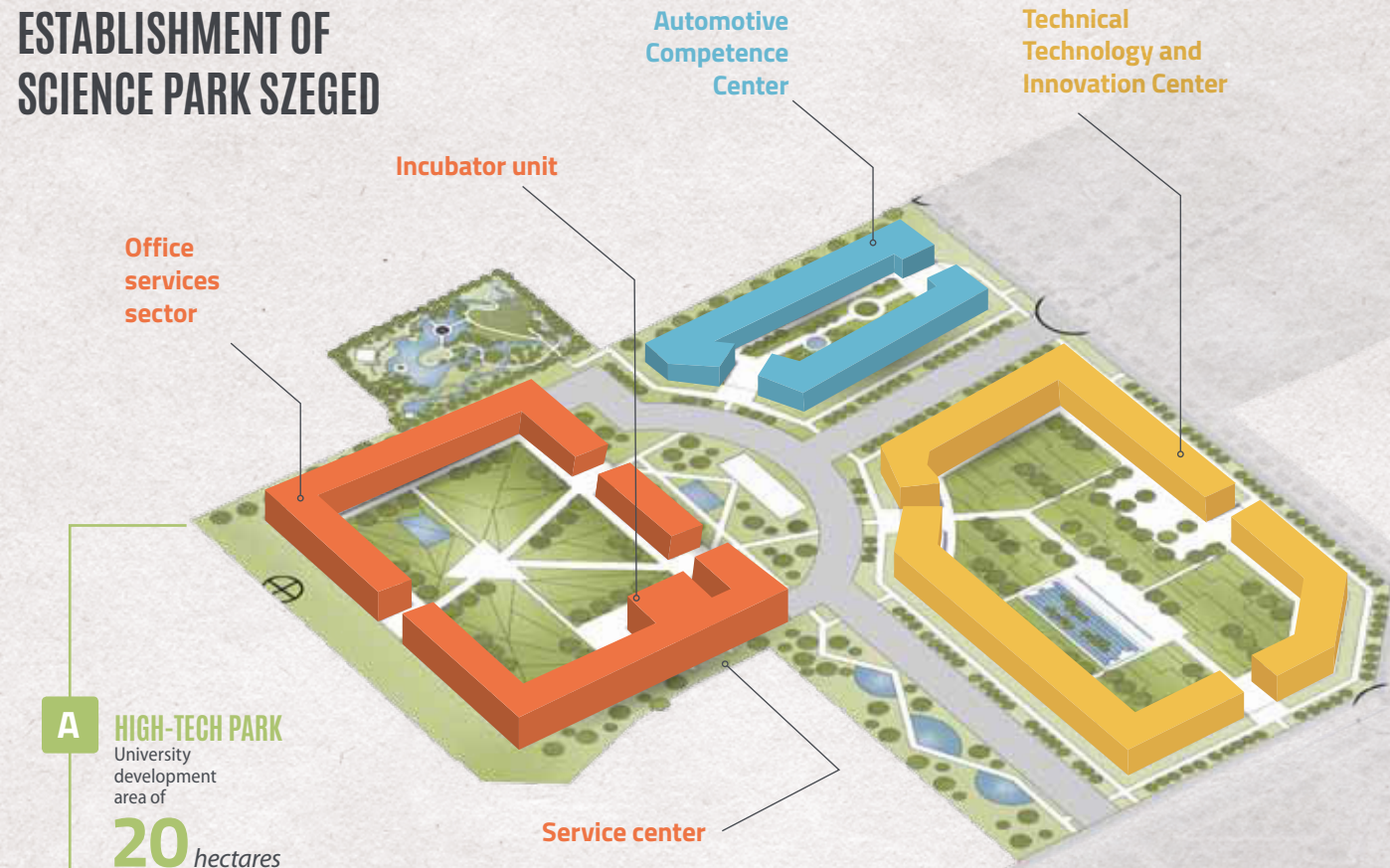
20

**UTILIZATION
CONTRACTS**

<100

**ACTIVE INDUSTRIAL
PARTNERS**

ESTABLISHMENT OF SCIENCE PARK SZEGED



OPEN AREA FOR ENTREPRENEURS: **65** hectare

- B** Office Park
- C** The Industrial Future Park
- D** Renewable Energy Park
- E** Science and Technology Park

1,7
BILLION HUF

in government support for landscaping



February 13, 1991
Soviet soldiers withdraw from the barracks

1999
The area is under SZTE management

February 6, 2014
The foundation stone of ELI-ALPS is laid down

May 23, 2017
The building of the ELI-ALPS Laser Research Institute is handed over

November 8, 2017
Proposal of the Science Park concept around ELI; accession to funds

June 29, 2018
The foundation stone of the Science Park, Automotive Competence Center, is laid.