
Engaged University

Academic year
2019/2020

Professor Andrzej Lesicki

RECTOR OF ADAM MICKIEWICZ
UNIVERSITY IN POZNAŃ

Ladies and Gentlemen!



ENGAGED
UNIVERSITY

Adam Mickiewicz University in Poznań is a socially-engaged and responsible university. These values have been present in our history from the beginning, although the challenges we face have changed over the years.

Today, Adam Mickiewicz University in Poznań is one of the best universities in Poland; it is both a research university and a European University, a title it earned as part of the EPI-CUR consortium. Social responsibility has always been an important motivation for our university; we are building a better world on the local, regional and global scale.

AMU undertakes responsible research and innovation that impacts the development of the city and region, society, the environment, business and politics. Within the walls of Adam Mickiewicz University, we create new knowledge, promote its active transfer, and maintain a high quality of education for all generations.

AMU also promotes social innovation based on cooperation between various organisations and communities in a regional, national and international context. The employees and students of Adam Mickiewicz University work for the benefit of society by providing expert advice, advisory services and mentoring, helping to evaluate the ideas of various social entities.

AMU is an open, friendly and creative university which pursues social innovation, shapes urban space and supports culture and its creators. We are a driving force behind sustainable social, cultural, economic and environmental development.

We warmly invite representatives of other universities, business partners and social organisations to cooperate with us on projects!

A handwritten signature in black ink that reads "Andrzej Lesicki". The signature is written in a cursive, flowing style.

ACADEMIC YEAR
2019 / 2020

Professor Bogumiła Kaniewska

RECTOR-ELECT
OF ADAM MICKIEWICZ UNIVERSITY IN POZNAŃ

Ladies and Gentlemen!



2020 has been an extraordinary year. Each of us has had to face new and difficult life experiences unprecedented in modern history. The year in which we faced a global pandemic turned out to be a challenge both for human wisdom and the power of science. Like any dramatic social experience, it exposed the strengths and weaknesses of our convictions and verified our beliefs, including those concerning the role of science, research, and knowledge: that is the importance of the university.

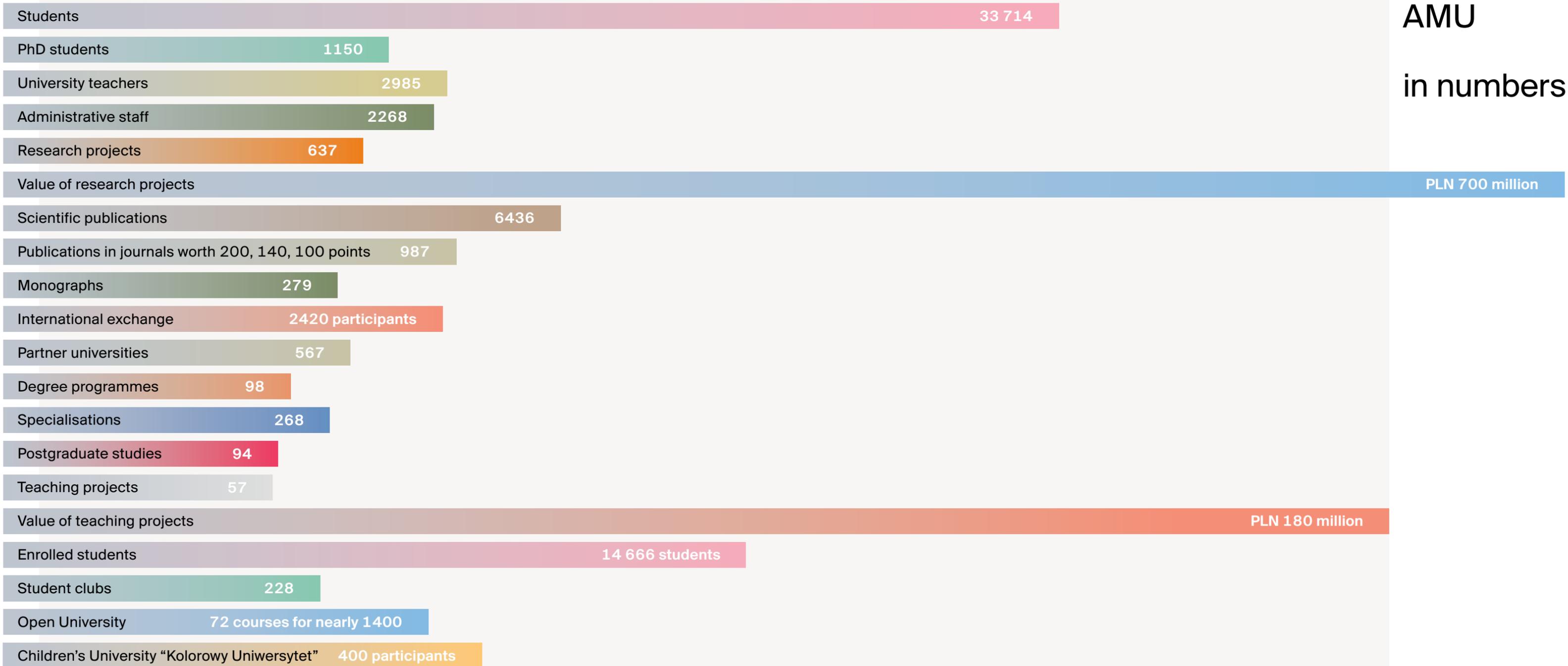
The most important mission of every scholar and higher education facility is to serve people and society. This is the role we emphasize through the achievements of Adam Mickiewicz University in Poznań as an “Engaged University”. Naturally, this volume only presents a fraction of the initiatives undertaken by our scientists, research teams, employees and students. As a university, we do not hide behind ivory walls – we reach out and respond to today’s problems. We look for answers until we find them; we confine ourselves to laboratories and libraries or go out in the field to do research; we establish collaborations that allow us to learn about different areas of life. To us, engagement is the constant readiness to respond to problems. This is how the community of Adam Mickiewicz University understands its role.

Centuries ago, Denis Diderot, freethinker, philosopher, writer and a critical observer of his time, wrote: “One may demand of me that I should seek truth, but not that I should find it.”

Let us go towards this truth together. I hope we have a beautiful, fruitful journey and that we pack a bit of optimism to go with a healthy dose of scepticism.

A handwritten signature in black ink that reads "Bogumiła Kaniewska". The script is elegant and cursive.





National Ranking List of Universities Perspektywy 2020 - best degree programmes in Poland conducted at AMU

Archeology

English studies

Foreign language studies

Land management

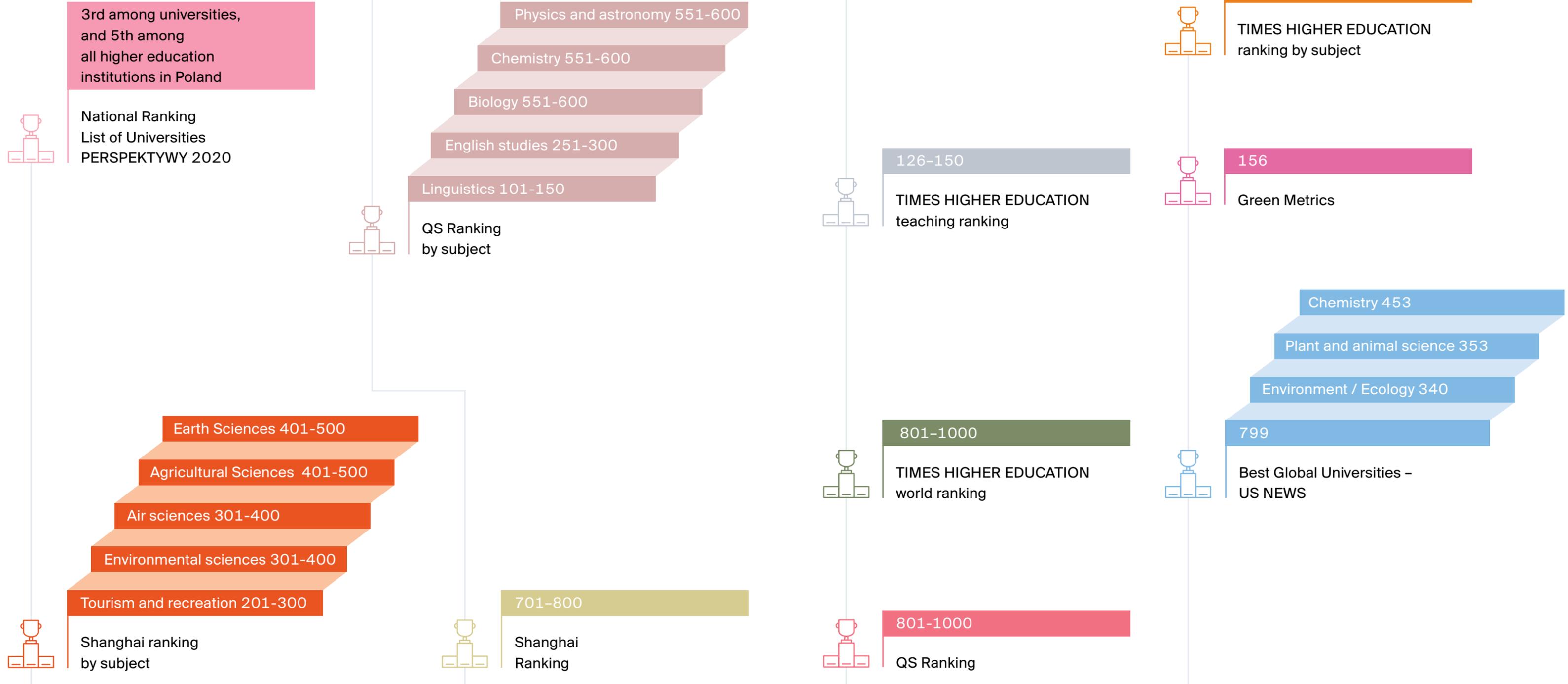
Education

Special education

Environmental sciences

Tourism and recreation

Rankings



EPICUR. A truly European university

In 2019, Adam Mickiewicz University applied for an EU grant for to become a European University in the European Partnership for an Innovative Campus Unifying Regions consortium (EPICUR). The process has been successful and the inauguration ceremony for the consortium was held on 7th November, 2019 in Brussels. As a result, AMU can be considered a truly European university. Our partners in the EPICUR consortium include:

- University of Strasbourg (project leader), France
- University of Amsterdam, the Netherlands
- Albert-Ludwigs-University Freiburg, Germany
- Karlsruher Institut für Technologie, Germany
- University of Haute-Alsace, France
- University Bodenkultur Wien, Austria
- Aristotle University of Thessaloniki, Greece

EPICUR is among the 24 projects that make up the European University. It brings together around 280 000 students from around the world. The consortium will receive a grant of EUR 5 million. This amount will fund the development of a new model of university infrastructure, as well as the best legal and organisational practices. Over the next 5 to 10 years, students will likely be able to receive diplomas from eight universities. However, changes are needed before this can happen. Rector of Adam Mickiewicz University, Professor Bogumiła Kaniewska, who previously supervised AMU participation in the consortium, believes that lobbying efforts in individual countries and pressure on the European Commission will be crucial for the success of the project.

Prof. Bogumiła Kaniewska, Rector of Adam Mickiewicz University: *This project has real potential, but it will be a challenge. Perhaps it would have been better to offer a double degree from the European University. However, this would require changes in the law of six countries. We would either need to develop joint graduation procedures or implement full recognition of students' achievements so that, for example, a student from Strasbourg who has satisfied all the requirements there would not be required to repeat the procedure in Poland.*

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Research University

Adam Mickiewicz University in Poznań is among the elite group of 10 universities who were awarded the title of research university in the Research University Initiative for Excellence. As a result, it will receive a 10% increase in funding between 2020 and 2026. The money is intended to help improve the quality of research, boost teaching and increase international cooperation.

The final list of research universities was selected by an international team of experts. Jarosław Gowin, who was Deputy Prime Minister at the time, invited 15 renowned scientists to participate in the evaluation committee.

Jarosław Gowin, Minister for Science and Higher Education: *None of these scientists were connected to any of the 20 universities that participated in the competition. Each expert has read 5 000 pages of proposals, and each proposal was reviewed by three of our experts. The reviews were strikingly similar: Adam Mickiewicz University was evaluated very highly at every stage of the competition. Consequently, the university will gain an additional 350 million PLN in research funding over the next seven years.*

Prof. Ryszard Naskręcki, Vice-Rector of Adam Mickiewicz University in 2016-2020, head of the EPICUR project: *Professor Kwiek and myself prepared for the interview with the committee for many days. We knew how important it was. It is, therefore, hardly surprising that we were honoured to see the results of both the preliminary and final reviews. We have an ambitious plan for increasing AMU's participation in international science with 10 strategic and 57 specific objectives.*

The most important strategic objectives financed from the Research University Initiative include:

- dramatic internationalisation of research
- mobilisation of research funding from national and European sources
- boosting the number of publications in scientific journals
- improving AMU structure
- creating a doctoral school

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People have always been
at the heart of research and teaching
at Adam Mickiewicz University.
Polish Nobel Prize in Humanities
and Social Sciences. Broad spectrum studies
in the humanities.

People

Research on the treatment of cancer.
DNA analysis of the Polish Piast dynasty.
The financial future of European science.
Immunological diagnostics for COVID-19.
Statistics in defence of children's rights. These
are just some areas of research undertaken
by the researchers and scientists
of Adam Mickiewicz University in Poznań.

Inferential logic of questions

Andrzej Wiśniewski

In 2019, Prof. Andrzej Wiśniewski from the Faculty of Psychology and Cognitive Science received Poland's most important scientific distinction: the FNP Prize. The prize has been awarded for the 28th time by the Foundation for Polish Science and is considered the Polish equivalent to the Nobel Prize.

Prof. Andrzej Wiśniewski was awarded in the field of humanities and social sciences for insight on the inferential logic of questions. His findings can be applied to improve machine learning, artificial intelligence, Internet search engines and database analysis.

The concept of Inferential Erotetic Logic (IEL) dates back to the 1980s. Professor Wiśniewski published his insights in the 1990s.

Prof. Andrzej Wiśniewski: *The logic of questions is sometimes called erotetic logic, from the Greek word "erotema" – "question". Inferential, i.e. concerning inferences. Hence, what we mean is the logic of questions that deals with inferences. What kind of inferences? First, inferences where the premises are declarative sentences that lead to questions. Second, inferences where the premise is a question and a declarative sentence that leads to another question. Third, inferences where the premise both is a question and leads to a question.*

According to Prof. Wiśniewski, the applications of his research can be quite surprising.

Prof. Andrzej Wiśniewski: *For example, the author of the theory of erotetic film narration admits that he was inspired by my ideas. I also discovered that my research was cited in an article on the basics of quantum mechanics – although whether it made sense to do so is an entirely different matter. Yet another example: somebody successfully used the inferential logic of questions to analyse the deliberations of Saint Thomas. Although applications of inferential erotetic logic are to be expected in the methodology and philosophy of science, we also see it in linguistics and computer science. In Poznań, our research group focuses on IEL applications in problem-solving, proof theory, dialogue studies and argumentation studies.*



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Cultural perspective on self-immolation

Grzegorz Ziółkowski

Theatre scholar Prof. Grzegorz Ziółkowski received the Tadeusz Kotarbiński Award of the First Rector of the University of Łódź for his book «A Cruel Theatre of Self-Immolations. Contemporary Suicide Protests by Fire and Their Resonances in Culture». The publication was considered the best monograph in the field of humanities in 2019.

The Kotarbiński Award is a distinction of national importance. The competition promotes research and publications in the humanities. It is the only award of this kind in Poland. Notably, the work of AMU's Dr. Monika Bobako «Islamophobia as a technology of power. A study in political anthropology» was nominated in last year's edition of the Award.

By awarding the prize to Prof. Ziółkowski, the jury recognised the author's in-depth knowledge of the religious, historical, sociological, psychological, philosophical and cultural perspectives. While the monograph cites extensive literature, it also discusses the author's own research. It is the first book in the world to describe self-immolation from a cultural perspective.

Prof. Grzegorz Ziółkowski, «A Cruel Theatre of Self-Immolations. Contemporary Suicide Protests by Fire and Their Resonances in Culture»: *Self-immolation in protest is understood as a voluntary, demonstrative and radical persuasive statement made in the name of values that the protester considers worthy of ultimate sacrifice. They are watched and are intended as a statement in front of an audience, a representation of disagreement and/or demand for change in the language of bodily suffering through fire.*

«A Cruel Theatre of Self-Immolations...» was nominated for the award of the Polish Society for Theatre Studies as the best publication on drama, theatre and performance in 2018.

In February 2020, an updated and abridged edition of the monograph was published by Routledge.



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ROKIOSK

The (magical) swallowwort

Anna Goździcka-Józefiak

Alicja Warowicka

Extract from the greater celandine (*Chelidonium Majus* L.) that is also known as swallowwort has enormous healing potential. The herb can become a weapon in the fight against dangerous diseases. It destroys not only cancer cells, but also bacteria, viruses and fungi. The molecular mechanism behind this phenomenon was discovered by Prof. Anna Goździcka-Józefiak and Dr Alicja Warowicka.

The team of researchers proved that a compound called heterogeneous fraction of berberine, which included pure berberine and its derivatives, is responsible for the therapeutic effect of swallowwort extract. The chemical compounds involved work in synergy to create a stronger pharmacological effect. They can form a molecule that has important functions in a cell, including regulating cell death.

The discovery by the Poznań scientists can help in the treatment of endometriosis and cervical cancer caused by the human papillomavirus HPV. One of the effects observed in the laboratory was that the substance can inhibit the proliferation of uterine mucosal cells in endometriosis. This suggests that the study may lead to the development of an effective cure for endometriosis, a debilitating disease that can contribute to infertility and cancer.

Swallowwort, however, still has many secrets. The plant's proteins are being studied by Prof. Robert Nawrot, while Dr Warowicka continues her research on berberine and nanomaterials. The discoveries by AMU biologists are likely going to contribute to a wider use of berberin for medical purposes.



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In the royal laboratory

Anna Juras

A team led by Dr Anna Juras from the Department of Human Evolutionary Biology conducts fossil DNA research at the Institute of Anthropology, Faculty of Biology of Adam Mickiewicz University. Their laboratory started to be affectionately called the royal laboratory after they began to study the DNA of the Piast royal dynasty.

Fossil DNA sequencing is considered a method for basic research, e.g. used in evolutionary biology to verify hypotheses about the origin and kinship of species, or in population genetics to study the origin and migration of human populations. But this method is also used in applied research involving the methods and tools for molecular analysis that could be used in forensic biology in the future (e.g. for identification of individuals or kinship research).

The study on the Polish Piast dynasty is being conducted as part of the project “The dynasty and society of the Piast state from an integrated historical, anthropological and gnostic perspective”.

Preliminary results are so intriguing that they could soon disrupt the current perception of the history of Poland and its people. Perhaps we will finally know the truth about where “our bloodline comes from”. We could also find out whether Casimir the Great was really a descendant of Bolesław the Brave, and perhaps even see what those princes and kings looked like.

Ongoing research on the remains of the Piasts involves the comparison and description of their genomes. Early in the project, the list of inventoried Piast burial sites consisted of about 500 locations. After studying only 30 of these sites, the team knew they were in for a guaranteed success. Notably, they represented the entire period of the Piast dynasty. Currently, researchers are comparing the Y chromosomes, to see whether markers are shared by all of the Piasts. By now we know, however, that this is not necessarily the case...



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Deciding Europe's scientific future

Michał Karoński

Professor Michał Karoński from the Faculty of Mathematics of Adam Mickiewicz University became a member of the six-person European Research Council Identification Committee. The committee, chaired by Prof. Carl-Henrik Heldin from Uppsala University, head of the Nobel Foundation, is tasked with presenting candidates for the new ERC Scientific Council. For a scientist, being chosen as a member is one of the greatest distinctions. According to Professor Karoński, the fact that he created the Polish National Science Center NCN, of which he was the head for over six years, may have contributed to his appointment.

The Scientific Council is the highest governing body of the European Research Council and is responsible for allocating funds for pioneering basic research in various fields. It determines the type of grants offered and the level of their financing, develops an annual agenda, sets the procedure for assessing applications, appoints experts to review them, and monitors programme implementation. Members of the council are appointed by the European Commission for a four-year term and act on their own behalf, outside of political or national interests.

Prof. Michał Karoński: *Being appointed is very difficult, because the bar for membership is set very high. Members are often ERC grant holders. They are among the elite of European scientists. Some are Nobel Prize winners. The ERC provides funding for the best researchers from across Europe. Members working in the Council are asked to forego any loyalty to national interests or their scientific field during their term. Their task is to work for the benefit of science. The next ERC budget is EUR 13 billion.*

Outside of his work as a member of the European Research Council Identification Committee, Professor Michał Karoński conducts research on discrete mathematics and theoretical computer science. From 2010 to 2016, he was chairman of the board of the National Science Centre, and since 2016, he has been a member of the prestigious Academia Europaea.

Outside of his work as a member of the European Research Council Identification Committee, Prof. Michał Karoński conducts research on discrete mathematics and theoretical computer science.



From meniscus to a COVID-19 test

Jakub Rybka

AMU Centre for Advanced Technologies is a multidisciplinary consortium of 11 bodies that brings together experts from the fields of exact sciences, life sciences, and technology. The centre works on new materials and biomaterials with broad applications. The deputy head of CAT is Professor Jakub Rybka.

In recent months, Prof. Rybka gained recognition for his innovative programme of preclinical trials of a bioprintable autologous meniscus. Centre for Advanced Technologies is one of only three research facilities in Poland that has a 3D bioprinter needed for the project.

Unfortunately, research was halted shortly after the outbreak of the coronavirus pandemic in order to make way for the development of an autoimmune test for COVID-19. This innovative project would allow researchers to diagnose not only patients who are currently ill, but also those who had been cured of the infection and could serve as potential donors of antibodies.

Prof. Jakub Rybka: *I learned about the possibilities offered by the test developed by Professor Florian Krammer on Sunday. After a brief consideration, I asked my colleagues if they were willing to change disciplines for a while. We usually work at the interface of nanotechnology, biotechnology and biomedical engineering. However, I am familiar with immunological research and protein production from my doctorate at the University of Life Sciences (BOKU) in Vienna. We realised that as scientists, we are prepared to undertake a new challenge.*

The work of our team has already brought results. The plasmid was obtained with the support of the Centre, the University, and thanks to some private connections. A pilot study was successfully conducted at the Centre for Advanced Technologies; the test was able to verify the presence of antibodies in patients. This is the first milestone on the road to universal immunological diagnosis of COVID-19.

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Solving DNA secrets

Andrzej Zieleziński

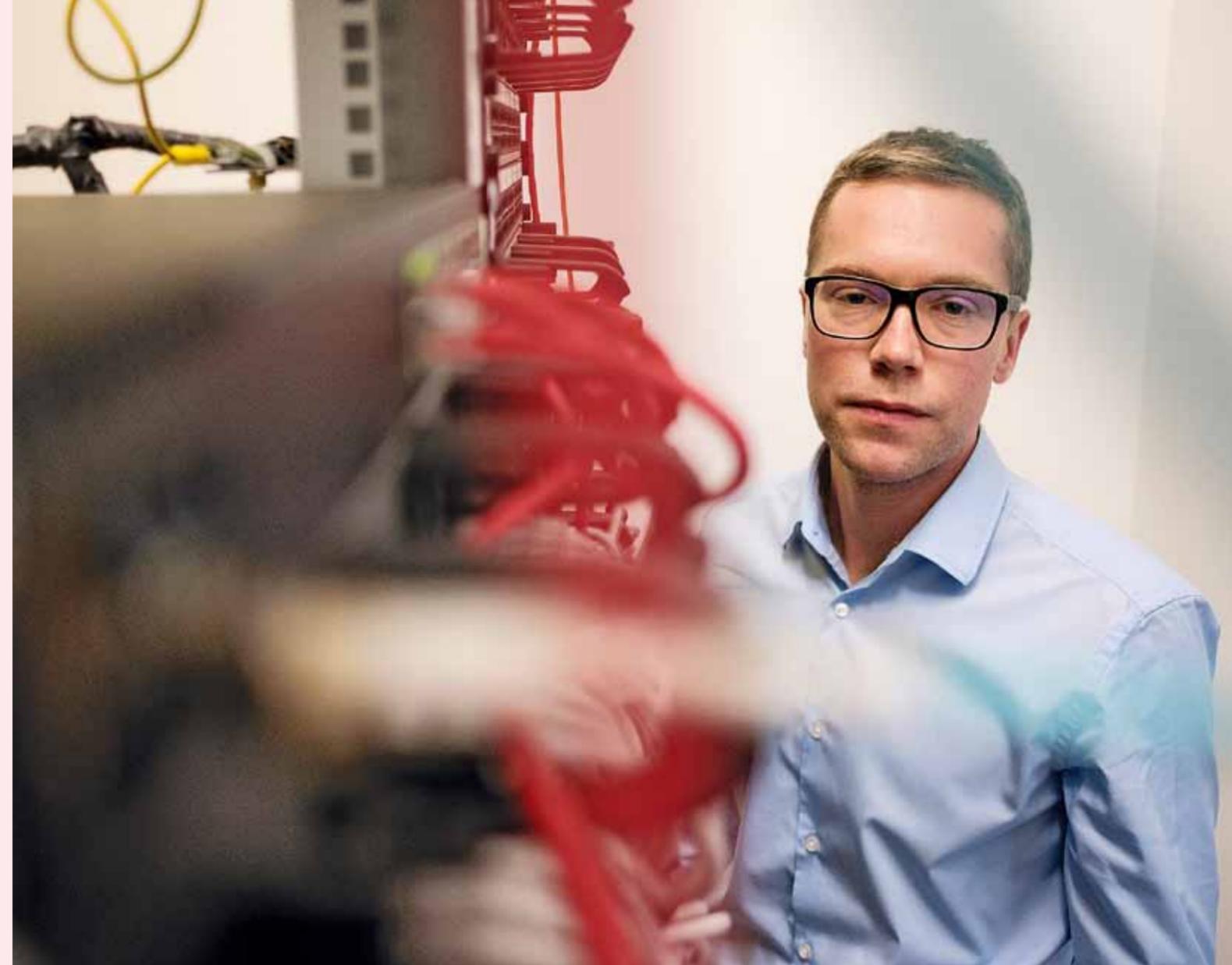
Dr Andrzej Zieleziński is a molecular biologist, expert in bioinformatics and winner of the 19th edition of the “Polityka” Science Award in the field of life sciences. The researcher develops computational methods for determining gene function, finding similarities between gene sequences and investigating gene formation mechanisms.

Dr Zieleziński has shown that viruses often use molecular camouflage to encode WG protein sequences. As a result, viruses disguise themselves as a functionally similar type of protein in the host. This is how they break the RNA defence mechanism to cause an infection. This discovery opens up new possibilities for gene therapy.

Dr Zieleziński established a consortium of scientists from 15 international centres who use alignment-free methods to compare DNA/RNA sequences. The group includes researchers from the University of California at Berkeley, the US National Institute of Health and the Universities of Padua and Göttingen. The researchers have just published their first joint paper testing this method on different biological sets.

Dr Zieleziński's research also focuses on the identification of viruses (bacteriophages) helpful in the treatment of diseases caused by antibiotic-resistant bacteria. He is currently developing software for the identification of pathogenic bacteria species susceptible to a given virus based on the virus' DNA sequence. It can provide important data to support phage therapy, which is an innovative method for the treatment of particularly difficult-to-control infections.

The researcher has 16 publications in journals ranked on the ISI Master Journal List with an Impact Factor of 100.



Dr Andrzej Zieleziński is currently developing software for the identification of pathogenic bacteria species susceptible to a given virus based on the virus' DNA sequence. It can provide important data for phage therapy, which is an innovative method for the treatment of infections that are otherwise particularly difficult to control.

Fighting for the welfare of children

Łukasz Szoszkiewicz

Łukasz Szoszkiewicz was inspired to take an interest in the problem of global incarceration, especially among children, following the visit of Professor Manfred Nowak, the former UN Special Rapporteur on Torture. With the support of his supervisor, Prof. Zdzisław Kędzia, Szoszkiewicz received an invitation to cooperate with the UN Global Study on the Children Deprived of Liberty project.

His role in the project was information analysis and data completion. Many of the entries were incomplete or unreliable, which is why he cross-referenced them with data available from NGOs and other UN agencies. Szoszkiewicz used the answers that national authorities sent in response to a survey on children deprived of liberty. The main aim of the report was to investigate why children are institutionalised, and how to prevent this. The report contained a detailed analysis and precise recommendations. The fact that there are at least 7 million children deprived of liberty in the world is appalling.

The team presented the result at an expert meeting at the UN headquarters.

A guide on the implementation of the recommendations is currently being developed. Szoszkiewicz and members of the team visit other regions of the world and update the data, as the information can become outdated very rapidly. In 2020, Łukasz Szoszkiewicz was awarded the City of Poznań Science Award, a scholarship for outstanding achievements in the field of legal science for the use of new technologies to make an impact on international human rights.



Research by Łukasz Szoszkiewicz and a team of experts demonstrated that at least 7 million children are deprived of liberty worldwide.



We create the future with the past in mind.
We build bridges between
teaching history and education for the future.
We support the development
of our region's inhabitants of all ages.

City

We integrate the community of Poznań.
We are an open platform for meetings
between people. We activate the culture
of the Wielkopolska region. We bring together
people faced with unprecedented isolation.

Enigma Cipher Centre

In the summer of 2021, the first visitors will enter the Enigma Cipher Centre located in the capital of the Wielkopolska region. The centre will be located in Poznań – the same place where cryptologists Marian Rejewski, Jerzy Różycki and Henryk Zygalski worked on the famous cipher.

Adam Mickiewicz University in Poznań is a partner in this exciting venture. Our University offered over 1,000 square metres of space to host the future Centre, as well as increased expenditure on the repairs and modernisation of Collegium Martineum, the building where the Enigma Cipher Centre will be located. This location is not accidental. This is where the Poznań branch of the Military Cipher Bureau was located before the war, and where the three men had been working when they cracked the Enigma. Collegium Martineum was built later, between 1949 and 1950. For several years now, the building hasn't belonged to a faculty, although it does provide rooms for certain university courses, as well as a number of administrative offices. It is located on St. Martin Street, which, perhaps unexpectedly, is experiencing a revival thanks to the urban regeneration programmes carried out by the city. We expect Collegium Martineum and its Enigma Cipher Centre to become highlights of the Poznań city centre.

Mariusz Wiśniewski, Deputy Mayor of Poznań: *The mission of the Enigma Cipher Centre will be to educate the public, and to commemorate the famous cryptologists who defeated the German encryption machine. The modern, interactive exhibition will bring the history of cryptography closer than ever before. Visitors will take an encryption course, learn about ancient cryptographic methods and discover the origins of the Enigma. But that is not all! The Centre will also explain how the work carried out by university cryptologists is related to the modern digital revolution. Issues such as programming and online security will be addressed as well.*

The interactive part of the project will be carried out by the Krakow-based company New Amsterdam. The company successfully implemented such projects as the exhibitions in the Museum of the Second World War in Gdańsk, as well as the exhibition in Bletchley Park, the historic headquarters of British cryptologists. A replica of the Enigma is also expected to be among the Poznań exhibits.

A modern, interactive exhibition in the Enigma Cipher Centre will showcase the history of cryptography. Visitors will take an encryption course, learn about ancient cryptographic methods and discover the origins of the Enigma itself.

DEPUTY MAYOR OF POZNAŃ,
MARIUSZ WIŚNIEWSKI

PROPOSED DESIGN



The reading of Olga Tokarczuk

Olga Tokarczuk received the Nobel Prize for Literature in Stockholm on December 10th, 2019. On that day, the community of Adam Mickiewicz University in Poznań and the inhabitants of the city decided to celebrate this exceptional event by publicly reading the writer's works.

The Great Reading of Olga Tokarczuk took place in Collegium Minus and attracted a wide range of participants. Among the readers of Tokarczuk's work was Professor Andrzej Lesicki, the Rector of Adam Mickiewicz University, as well as a number of researchers, city officials, artists and students. Literary scholar Professor Przemysław Czapliński gave a lecture on the Nobel Prize winner. A screening was organised, showing excerpts of interviews with Tokarczuk, as well as films and plays based on her work. The event was broadcast live on the AMU website.



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Centre for Open Humanities

Anna Musiała

Przemysław Czaplinski

Centre for Open Humanities (COH) is a research unit founded by lawyer Professor Anna Musiała and literary scholar Professor Przemysław Czaplinski. Outside of its research function, the Centre is a discussion forum that connects Adam Mickiewicz University and the community of Poznań. It is a meeting platform for researchers from various scientific fields and a centre helping diagnose the problems of the community.

COH was created to study the relationship between law and the humanities. The research addresses concerns over the isolation of the law from community life and the often divergent interpretations of legal texts. Understanding and strengthening the relationship between the law and the humanities is essential for resolving this issue, which is a problem not only in Poland, but also worldwide.

Prof. Przemysław Czaplinski: *In Poland, the law is deeply objectified; that is to say, it is treated as something immutable, approved away from the community, usually acting against an individual and outside the scope of any social negotiations. Meanwhile, the law has a history of change, so we should stop treating it as an absolute.*

Centre for Open Humanities organises debates on important social issues. So far, five debates have been held in cooperation with the ZAMEK Culture Centre in Poznań under the motto: “No job is shameful, but... Work in Poland in the 21st century”. The Centre also hosted a debate titled “The human right to work in Poland: needs, risks, opportunities”, featuring Professors Ryszard Bugaj and Arkadiusz Sobczyk. Moreover, the researchers arranged a meeting of Polish-French lawyers and humanities scholars in Paris (Assis franco-polonaise de droit).

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I am someone who builds things...

Katarzyna Wala

Katarzyna Wala is a cultural animator, journalist and graduate of Cultural Anthropology at Adam Mickiewicz University. She works in the University Film Studio and participates in the project "When Science is a Woman".

As part of the AMU Marketing Centre, she supports scientists in terms of communication and social outreach. In 2020, she received the "Głos Wielkopolski" Young Art Medal for Cultural Animation, a prestigious award honouring artists and activists associated with the culture of the Wielkopolska region. The jury recognised Katarzyna Wala for her work for the benefit of the local community, the restoration of the forgotten tradition of the Sobótka Parade, revitalisation activities and the launch of the Bloomer movement.

Katarzyna Wala reconciles her artistic endeavours with cultural anthropology. She searches for, and highlights, the forgotten threads of local history. Her events act as commentary on the current socio-economic situation. Wala uses role-playing, photographic reconstruction, costumes and theatre props in her work. Her projects are an experimental mix of history, local lore and art constructing narratives for places and identities. Building a platform for cooperation and constructive communication between various interest groups is an important element of her work. She managed to bring back the tradition of Sobótka Parades that used to be organised on the Warta River in Poznań with the support of local authorities, the water sports community, and local inhabitants. As an avid proponent of herstory, she created the Bloomer group, which revolves around two 19th century symbols of the emancipation of women: trousers and the bicycle. A number of Poznań women wearing symbolic bloomers on bicycles starred in the film "Siłaczki", directed by Marta Dzido and Piotr Śliwowski.

Wala is the author of the ethnographic film «Kominierz», awarded in Göttingen, and the winner of the Golden Copernicus Prize for the popular science film «High Pressures in Science and Nature».



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AMU speaks. Ideas for the pandemic

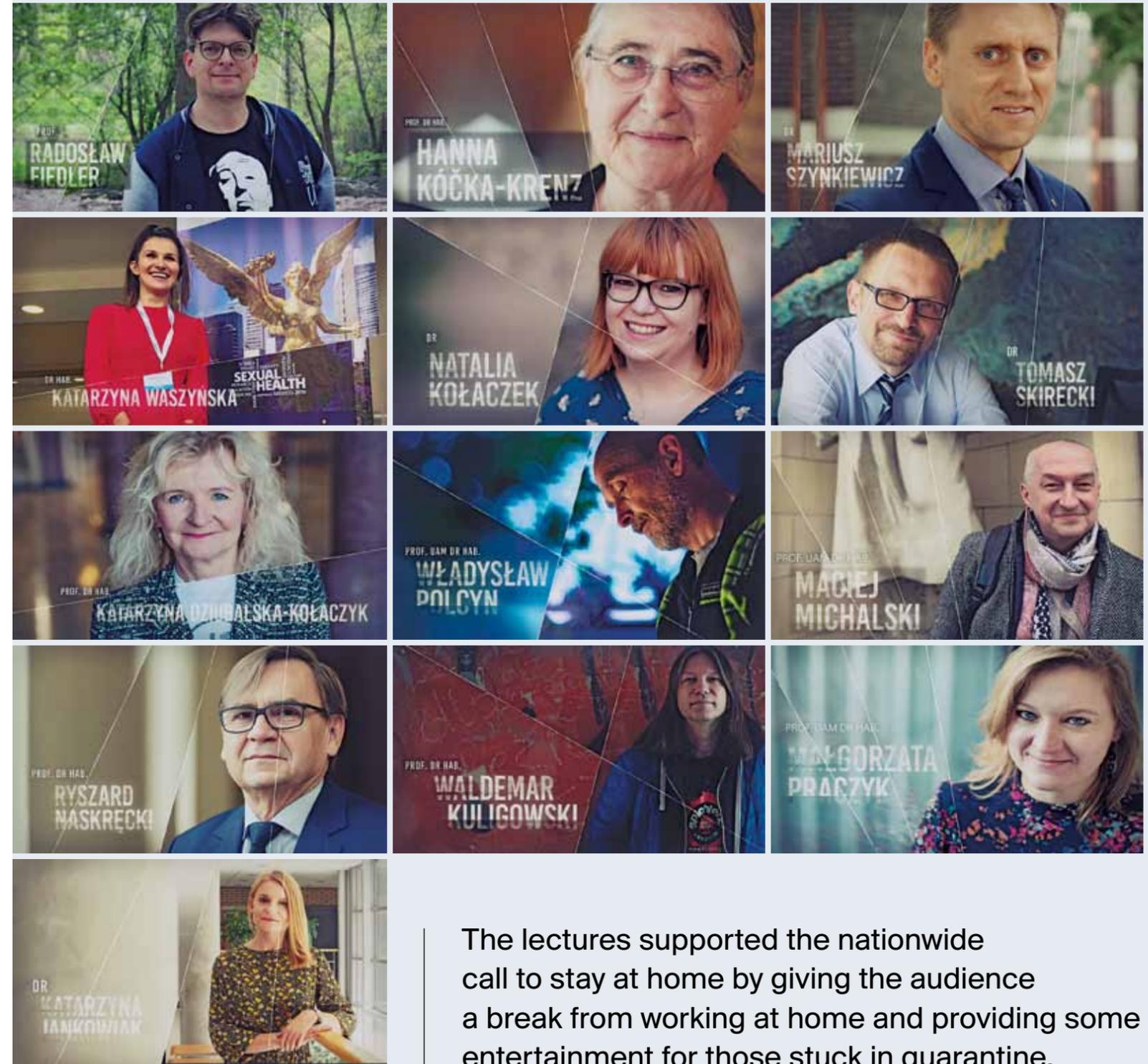
“AMU Speaks - 11:00” is the slogan of a series of short, live lectures that premiered on March 20th, 2020 on the Facebook profile of Adam Mickiewicz University. The series of lectures broadcast over the last several months turned out to be a hit among the audience. The idea was born in the AMU Film Studio. The subject matter was very broad, ranging from positive emotions, through algorithms, to waterbears.

AMU Speaks reached out to all those who had found themselves with a lot of free time due to the coronavirus pandemic. The lectures supported the nationwide call to stay at home by giving the audience a break from working at home and providing some entertainment for those stuck in quarantine. They were also intended to help students whose classes had been suspended by giving them the opportunity to listen to AMU researchers live.

Each lecture lasted about 30 minutes; 31 scientists delivered their talks in front of the camera between March 20th and June 5th, 2020. Within 24 hours of the broadcast, each recording with subtitles was uploaded to the official AMU YouTube channel. All lectures in the series can be watched on YouTube.

Popular lectures included:

- “Quarantine as a ritual of passage” - Prof. Waldemar Kuligowski (over 185 000 views)
- “Multilingualism: facts and myths” - Prof. Katarzyna Dziubalska-Kołaczyk (over 60 000 views)
- “Sex education and sexualisation. What supports and what disturbs human psychosexual development?” Prof. Katarzyna Waszyńska (over 50 000 views)



The lectures supported the nationwide call to stay at home by giving the audience a break from working at home and providing some entertainment for those stuck in quarantine.



Open University is an opportunity for everyone

AMU Open University launched on October 24th, 2016. It is a great example of the university's involvement in its third mission. In its first year, AMU Open University offered 8 courses, in which over 200 students enrolled in the winter semester. That was four years ago. Since then, the number of courses and students has increased every year.

Open University courses are addressed to three groups of participants. First, people who want, in expand their knowledge. The second group consists of hobbyists who want to develop their passion in an academic environment. The classes are also aimed at young people such as high school graduates.

Prof. Witold Mazurczak, AMU Rector's Open University representative: In the fall of the 2019/2020 academic year, we offered 79 courses, in which we registered 2049 participants. We launched 32 courses for 633 students. In winter, we offered 55 courses, in which 1272 people registered; we launched 27 courses for 483 students. Finally, just before the pandemic, we completed enrolment for 69 spring courses. 2056 people have signed up. This is a record in the history of AMU Open University. Unfortunately, the outbreak of the pandemic and the suspension of classes at AMU have caused considerable disruption. Since May, courses are conducted exclusively online.

Importantly, after completing the course, participants are asked to fill in a questionnaire concerning not only their satisfaction with the class they have taken, but also their recommendations regarding topics of future classes. According to the questionnaires, the vast majority of participants take classes to improve their qualifications. One in five students decide to take an exam, after which they are issued a course completion certificate. The course offer for the current, fifth, year of AMU Open University is available on the Open University website.



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Children's University "Kolorowy Uniwersytet"

AMU Children's University has been promoting science for over 10 years by helping primary school pupils develop their creative and intellectual potential. This educational project became a permanent feature on the calendar of events addressed by the University to the inhabitants of Poznań and the Wielkopolska region. During the academic year, children enrolled at the university participate in meetings with scientists, who teach them about a variety of scientific fields and instil a passion for science. The interactive lectures spark children's curiosity and touch upon a variety of topics important for the modern world. Courses cover a range of disciplines, from natural sciences to the humanities. The classes take place in different faculties so that children can get to know the whole university.

Every year ends with a formal graduation and diploma ceremony. So far, over 160 classes for about 2200 children from over 100 schools have been held as part of the project.

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Climate change and its consequences for human life and health are one of the most important issues tackled by our university.

We work in the area of pro-climate education.

Environment

We educate people and encourage activities that prevent harm to the environment. We carry out and implement research that affects the welfare of our immediate surroundings. We shape attitudes and build long-term commitment to protecting the precious resources of our planet.

Polish Archaeological Institute at Athens

The Polish Archaeological Institute at Athens is a branch of Adam Mickiewicz University established in Athens in 2019. It represents the interests of all Polish scientists conducting research in Greece.

The prolonged process of creating PIAA was completed with the acquisition of the building for the centre's headquarters. The transaction was finalised in 2020, when AMU signed an agreement with six other scientific institutions from Poland.

The facility is open to archaeologists as well as historians, art historians, Byzantium scholars, classical philologists and other researchers. The Institute will serve as a centre for the promotion of Polish science and culture in Greece.

The Institute, headed by Prof. Janusz Czebreszuk, an archaeologist from Poznań, has obtained the first ever field research licence for Adam Mickiewicz University in Greece. AMU's archaeologists will continue the research in the Anthemous River valley that has been carried out for over 10 years.



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To see the explosion of a supernova

Michał Jerzy Michałowski

In 2019, the results of an international research group, including a team of AMU astronomers headed by Dr Michał J. Michałowski, were published in Nature. The astronomers observed a gamma flash and a characteristic hot cocoon of matter, for the first time confirming the link between this phenomenon and the simultaneous explosion of a supernova. Dr Michałowski received a Fulbright scholarship, a new research grant and the City of Poznań Science Award immediately afterwards.

The observed gamma flash was the long-awaited verification of the model of an exploding star. The model consisted of three components: a narrow jet of particles, light emission related to the supernova, and the theory that a hot cocoon of matter was torn out of the star. The theory was confirmed when the Poznań-based scientists proved the cocoon's existence.

Dr Michał Jerzy Michałowski: *This in itself was a considerable achievement. But we did not stop there. We were able to observe matter being torn out of a star. For the first time, we have insight into what is happening inside it. There is another aspect to this, namely the implications of the high iron content in the released gasses. We are only beginning to explore how exploding stars release iron into the universe. Theoretically, it is possible for that iron to be sucked into the black hole, from which it would never be able to escape. But that would mean no iron in the universe. We have proved that there is a mechanism by which stars get rid of iron and enrich interstellar matter at the same time.*

Bear in mind that the events we are discussing took place 500 million years ago. That's how much time it takes for the light beam to travel so that we see it through telescopes.

Currently, Dr Michałowski is looking into the topic of exploding stars; more specifically, he is studying the properties of gases in galaxies with supernovae explosions. He is trying to answer the question whether supernova explosions of a particular type depend on the amount and properties of gas in its galaxy.

The gamma flash observed by scientists took place 500 million years ago. That's how much time it takes for the light beam to travel so that we see it through telescopes.



Clean beaches for the Wielkopolska region

Zygmunt Młynarczyk

Grzegorz Borkowski

Adam Młynarczyk

Prof. Zygmunt Młynarczyk, Dr. Grzegorz Borkowski and Adam Młynarczyk, MSc. patented an innovative method of water treatment for designated public beaches. The solution restores the recreational functions of water reservoirs that in the summer often become overgrown with cyanobacteria, diatoms and chlorophyta.

The method developed by AMU scientists separates the treated part of the beach with a barrier that stops algae blooms. Bathing water is purified by filters placed at the bottom of the water reservoir, or by a suitable geological bed and pump system. The water, aerated and treated with UV rays and ozone, is then returned to the designated bathing area.

Eutrophic waters are found in most lakes in western Wielkopolska, limiting tourist interest in the region, depriving residents of access to local beaches and limiting the popularity of water sports. The method of water treatment proposed by AMU scientists solves this problem, which is why it has already met with considerable interest from the local authorities.



Prof. Zygmunt Młynarczyk, Dr. Grzegorz Borkowski and Adam Młynarczyk, MSc. patented an innovative method of water treatment for designated public beaches. The method has attracted a lot of interest from the local authorities.

Looking for the unknown

Paweł Owsiany

AMU Nadnotecki Institute in Piła has been conducting research on biodiversity and the functional significance of plankton organisms in the ponds of the Tatra National Park for over 6 years. In winter, the team of Dr Paweł Owsiany documents rare species of dinoflagellates and discovers new ones as they work in extreme conditions, often under a metre of ice and snow. But more things are happening in Piła. This branch of Adam Mickiewicz University is so active in the field of environmental protection that it is quickly becoming an academic centre for climate education.

The Institute is doing particularly prominent work on algae, particularly the abovementioned Dinoflagellata. The species has a number of interesting evolutionary adaptations that allow it to benefit from a variety of food sources and flourish in the cold and poorly-mineralized mountain lakes of the Tatra National Park.

Throughout the year, the team of researchers from NI AMU travels to the Tatra Mountains. To conduct research using divers, they need special permission from the Minister of the Environment, as well as park management. In addition to studying plankton composition, the divers also collect Dinoflagellata cysts preserved in the sediment. Their research is producing spectacular results.

Dr Paweł Owsiany: *Together with our colleagues from Ludwig Maximilian University in Munich, our laboratory is extracting the dinocysts preserved in the sediment. We try to breed creatures that the Tatra mountains have protected from the prying eyes of researchers so well that they aren't even found in the plankton. This is how we are able to discover new species and varieties of organisms. Such a cold biodiversity centre is an extremely important empirical testing ground for science, particularly in the era of climate change.*

The Institute is also great at building partnerships; at the regional level, with the HSA Divers' Association Krok po Kroku; and at the national level, with the NORD Foundation, the Piła City Hall or the Chamber of Commerce of Northern Wielkopolska. International partners include German universities of Munich and Osnabruck, with whom the Institute collaborates in studying the collected samples.



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For the sake of clean water

Józef Górski

Hydrogeologist Prof. Józef Górski is an expert on the quality, monitoring and protection of groundwater. The scientist is actively involved with the issue of water retention in the environment. In particular, he believes in the importance of small water retention, and its importance for groundwater and surface water levels and quality.

In the years 2016-2019, Prof. Górski was the Polish coordinator of an EU project on the use of infiltration as a natural process for treatment of surface water that would improve its properties to match groundwater. He helped design a new infiltration water intake for Bydgoszcz. In response to the construction of the A2 motorway, he designed the system protecting the water intake in Debina, which is a source of drinking water for the capital of Wielkopolska. He has been involved in the protection of the Mosina - Krajkowo water intake where the protection of water resources has become particularly important in recent years, due to the expansion and modernisation of the intake.

Prof. Górski implemented a modern and cost-efficient method of groundwater treatment in the aquifer that removes iron and manganese from the water. His methodology has been used successfully in the Wolsztyn water intake for over 30 years. The scientist also studied heavy metal content in drinking water. He carried out an international research project on this topic, identifying the scope of the problem in selected cities in Poland (Poznań, Szczecin, Choszczno).

Prof. Józef Górski implemented a modern and cost-efficient method of groundwater treatment in the aquifer that removes iron and manganese from the water.



Night-time singing of daytime birds

Kinga Kułaga

Kinga Kułaga studies why birds active by day also sing at night. The biology student wants to know where and how often this happens. Her study is looking to answer the question whether night-time singing is only a side effect of light pollution after dusk, a functional adaptation, or perhaps a compromise between the various factors affecting the birds.

Kinga Kułaga, who won the Diamond Grant for her research proposal, examines the phenomenon in a wide range of environments. Preliminary research carried out in the valley of Górny Nurec has shown that about 25 species of singing birds are active at night, including the thrush nightingale, cuckoo, common grasshopper warbler and sedge warbler. Despite the fact that the studied area is far away from human settlements, i.e. there is no light pollution at night, the birds sang at dusk. Her research continues in the forested areas and fields of the Białowieża and Biebrza National Parks. The student placed 60 devices recording sound and light intensity across the areas in question.

Kinga Kułaga's project is a contribution to the science of the evolution of the species in terms of the ability of day birds to adapt to night activities and the benefits from night singing.



Kinga Kułaga's project is a contribution to the science of the evolution of the species in terms of the ability of day birds to adapt to night activities and to benefit from night-time singing.

Green University

Adam Mickiewicz University in Poznań supports and encourages activities which counteract climate change and prevent harm to the environment. The Green University project promotes and protects natural areas and biodiversity. It supports environmental initiatives, promotes healthy lifestyles, and promotes waste segregation and conservation of natural resources.

For two years, this idea has been promoted through the IDEAMU competition held at AMU. Projects awarded in the second edition of IDEAMU were proposed by a group of anthropologists (Prof. Natalia Bloch, Dr Łukasz Kaczmarek and Kamila Grześkowiak, MA) and the researchers from the Nadnotecki Institute in Piła (Dr. Paweł M. Owsiany, Iwona Kukowska, Magdalena Ozga, Mateusz Gutowski, MA, Tomasz Paliwoda, Marta Miciak and Marta Piekuta). The first project, «Green Conferences», created a guide to good practices for socially responsible and environmentally friendly scientific conferences. The other project, „PapieroEKologia + HydroDOSKONALENIE”, developed solutions for preventing paper waste, rational water management and reduction of the use of disposable plastic in academic contexts.

In the framework of Green University, AMU researchers developed a programme for the sustainable use of the natural resources of the Morasko Campus, both by the academic community and city inhabitants. The programme includes a lawn mowing paradigm that maintains biodiversity as much as is possible in the city.

Green University promotes and protects natural areas and biodiversity. It supports environmental initiatives, promotes healthy lifestyles, promotes waste segregation and conservation of natural resources.



Everyday life during the pandemic

The coronavirus SARS-CoV-2 pandemic has had a significant impact on human health, as well as the economy, work and education. The situation has forced us to change our daily routines and habits. In March 2020, shortly after the introduction of pandemic-related restrictions, a team of sociologists and students from Adam Mickiewicz University carried out a study which evolved into a complex long-term project devoted to everyday life in Poland.

The researchers studied how society adapted to the situation and how ordinary people's lives changed immediately after the introduction of sanitary restrictions. In the second phase of the project, sociologists focus on the daily experience of the pandemic. They inquire whether there have been any significant changes in the lives of respondents and how they reacted to these changes; what people feel is missing – and what they are fed up with; what they believe changed for the better and worse as a result of the pandemic. This project is a unique attempt at documenting the everyday life of Poles at this exceptional time.

The research is carried out by: Prof. Rafał Drozdowski, Prof. Marek Krajewski, Dr Maciej Frąckowiak, Dr Ariel Modrzyk, Dr Łukasz Rogowski, Małgorzata Kubacka, Przemysław Rura and Agnieszka Stamm.

