RESEARCH NEWSLETTER

IN THIS ISSUE

NU IS RANKED FIRST IN THE KAZAKH NATIONAL H-INDEX RANKING

We are pleased to announce that in the recently updated Kazakh National H-index Ranking 2023, Nazarbayev University (NU) has secured the top position among Kazakhstani institutions. The Kazakh National H-index Ranking is an independent international assessment that focuses on evaluating the scientific productivity of individual researchers, research groups, and organizations within Kazakhstan. This evaluation is based on the consolidated Hirsch index.

177	**156**	**334**
Kazakhstan Scopus h-index	Kazakhstan Web of Science h-index	Kazakhstan Google Scholar h-index

This ranking comprehensively considers the cumulative Hirsch index of scientific institutions in Kazakhstan, drawing data from prominent scientometric databases and platforms, including Scopus, Web of Science, and Google Scholar. The National H-index Ranking (NHR) utilizes this information to generate an indicator and assign corresponding ranked positions to institutions, thereby providing an insightful overview of their scientific impact and productivity.

Organization	Position ⬇	National H-index(difference)	H-index (Scopus)	H-index (WoS)	H-index (Google Scholar)
SCIENTIFIC POTENTIAL LEADERS					
Nazarbayev University 🎓	1 (0)	**106** (+7)	100	91	252
L.N. Gumilyov Eurasian National University 🎓	2 (0)	**71** (+4)	73	72	137
Al Farabi Kazakh National University 🎓	3 (0)	**71** (+5)	77	72	128
Satbayev University 🎓	4 (0)	**47** (-1)	61	32	98
Kazakh National Medical University 🎓	5 (0)	**42** (+4)	45	46	69
Al Farabi Kazakh National University, Center of Physical-Chemical Methods of Research and Analysis	6 (0)	**35** (+3)	24	72	19
Kazakh-British Technical University 🎓	7 (0)	**34** (+3)	39	36	52
Institute of Nuclear Physics, National Nuclear Center of the Republic of Kazakhstan	8 (0)	**33** (+3)	38	49	22
KIMEP University 🎓	9 (↑1)	**32** (+3)	39	31	51
Institute of Physics and Technology Kazakhstan	10 (↓1)	**30** (0)	46	43	4

BEST RESEARCHER AWARDS 2023

The results of the «Best Researcher Award 2023» have been officially disclosed by the Ministry of Science and Higher Education of the Republic of Kazakhstan. A total of 307 applications were reviewed by the Republic Review Committee across seven distinct scientific domains: «Natural Sciences», «Engineering and Technologies», «Medicine and Public Health», «Social Sciences», «Humanities and Arts», «Agricultural and Veterinary Sciences», and «Military Sciences and National Security». The given award was initiated by the Ministry as a measure aimed at supporting and reconizing researchers who have demonstrated noteworthy contributions to the advancement of national research and technology.

This year the «Best Researcher Award» received 50 distinguished scientists from local research institutes, universities, and scientific organizations, all of whom have significantly influenced the development of national science. Notably, six researchers from Nazarbayev University (NU), four from the National Laboratory Astana, and one from the Institute of Batteries emerged successfully from the competitive selection process. Each winner will be honored with a diploma and a monetary prize of 2000 MCI.

We extend sincere congratulations to our esteemed colleagues on this well-deserved recognition and express our heartfelt wishes for continued success in their ongoing research endeavors!

№	Name	Scientific domains	Affiliation
1	Almagul Mentbayeva	Natural Sciences	Nazarbayev University
2	Yerlan Amanbek	Natural Sciences	Nazarbayev University
3	Gulzhanat Aimagambetova	Medicine and Public Health	Nazarbayev University
4	Samat Kozhakhmetov	Medicine and Public Health	National Laboratory Astana
5	Sholpan Askarova	Medicine and Public Health	National Laboratory Astana
6	Askhat Jumabekov	Engineering and Technologies	Nazarbayev University
7	Gulsim Kulsharova	Engineering and Technologies	Nazarbayev University
8	Sultangali Arzykulov	Engineering and Technologies	Nazarbayev University
9	Aliya Mukanova	Engineering and Technologies	National Laboratory Astana
10	Arailym Nurpeissova	Engineering and Technologies	National Laboratory Astana
11	Fail Sultanov	Engineering and Technologies	Institute of Batteries, National Laboratory Astana

THE MINISTRY OF SCIENCE AND HIGHER EDUCATION HAS ANNOUNCED THE LIST OF STATE RESEARCH SCHOLARSHIP RECIPIENTS

The Ministry of Science and Higher Education has announced the list of scholars who have been awarded the State Research Scholarship 2023. The given Scholarship Program organized on a competitive basis seeks to recognize and support exceptional researchers and scholars who have demonstrated outstanding contributions to their respective fields in 2023 year.

We are pleased to share that six researchers from NU and NLA have received this scholarship, all listed below. We congratulate the recipients and look forward to witnessing the impactful outcomes of their research initiatives!

№	Name	Position	Affiliation
1	Aliya Bekmurzayeva	Senior Researcher	National Laboratory Astana
2	Baktiyar Soltabayev	Leading Reseacher	National Laboratory Astana
3	Galymzhan Nauryzbayev	Assistant Professor	Nazarbayev University
4	Aigerim Soltabayeva	Instructor	Nazarbayev University
5	Zhanat Kappassov	Assistant Professor	Nazarbayev University
6	Nurzhan Umirov	Junior Researcher	National Laboratory Astana, Institute of Batteries

THE SCIENCE FUND INVITES TO PARTICIPATE IN THE «HORIZON EUROPE» PRELIMINARY ASSESSMENT PROGRAM

The Science Fund under the Ministry of Science and Higher Education invites potential participants interested in the «Industry» direction (cluster 4) of the «Horizon Europe» program to send their applications for preliminary assessment.

This initiative is aimed at supporting potential applicants for «Horizon Europe» program and will be conducted online from January 23-26, 2024 on a free of charge basis. It is a great opportunity for participants to receive expert evaluations as they are carried out by the professionals with corresponding experience in the «Horizon Europe» program.

The deadline for submitting applications for preliminary assessment is January 12th, 2024. This assessment is aimed at potential applicants who are planning to participate in the «Horizon Europe» program by February 07, 2024. Please note that the number of participation slots for assessment is limited, so early submission is encouraged.

To participate you need to:

- get familiar with the list of topics for proposals
- register and submit your application on the website

All selected applicants will be notifed of their status by January 17th, 2024. If you have questions, please contact: horizon.europe@science-fund.kz, tel. +7 (7172) 76-85-54, ext. 1071.

NU PROFESSORS ARE IN THE TOP 2% SCIENTISTS AROUND THE GLOBE, AS OF OCTOBER 2023

NU professors are ranked in the top 2% of scientists in the world, according to a systematic bibliometric study by researchers from Stanford University. Based on bibliometric data from the Scopus database of over 180 000 top-scientists, this list is widely regarded as the most renowned of its kind. Prof. John Loannidis and his colleagues at Stanford University classified scientists into 22 scientific fields and 174 sub-fields. The database provides information on citations, h-index, co-authorship adjusted hm-index, and a composite indicator (c-score). The study presents two lists - career-long data, which is updated to the end-of-2022, and single recent year data covering citations received during calendar year 2022.

The lists of NU faculty members are as follows:

№	Name	Field
	List of researchers in the top 2% based on the career-long performance	

№	Name	Field
1	Pignatelli, M.	Clinical Medicine
2	Memon, Shazim Ali	Built Environment & Design
3	Yagiz, Saffet	Engineering
4	Tikhonov, Alexander	Biomedical Research
5	Valagiannopoulos, Constantinos	Information & Communication Technologies
6	Tosi, Daniele	Enabling & Strategic Technologies
7	Lee, Woojin	Earth & Environmental Sciences
8	Hazlett, Randy	Enabling & Strategic Technologies
9	Atabaev, Timur Sh	Enabling & Strategic Technologies
10	Desyatnikov, A.	Physics & Astronomy
11	Akhtar, Muhammad Tahir	Information & Communication Technologies
12	Maham, Behrouz	Information & Communication Technologies
13	Bakenov, Zhumabay	Enabling & Strategic Technologies
14	Gao, Changhong	Enabling & Strategic Technologies
15	Sarria-Santamera, Antonio	Clinical Medicine
16	Do, Ton Duc	Information & Communication Technologies

№	Name	Field
	List of researchers in the top 2% based on the single year performance	

№	Name	Field
1	Kalendar, Ruslan	Biology
2	Tikhonov, Alexander	Biomedical Research
3	Barlev, Nicolai A.	Biomedical Research
4	Memon, Shazim Ali	Built Environment & Design
5	Poddighe, Dimitri	Clinical Medicine
6	Ponomarev, Eugene D.	Clinical Medicine
7	Sarria-Santamera, Antonio	Clinical Medicine
8	Bolla, Srinivasa Rao	Clinical Medicine

№	Name	Field
List of researchers in the top 2% based on the single year performance		
9	Yousafzai, Shumaila	Economics & Business
10	Tosi, Daniele	Enabling & Strategic Technologies
11	Atabaev, Timur Sh	Enabling & Strategic Technologies
12	Gao, Changhong	Enabling & Strategic Technologies
13	Bakenov, Zhumabay	Enabling & Strategic Technologies
14	Bagheri, Mehdi	Enabling & Strategic Technologies
15	Konarov, Aishuak	Enabling & Strategic Technologies
16	Yagiz, Saffet	Engineering
17	Varol, Huseyin Atakan	Engineering
18	Do, Ton Duc	Information & Communication Technologies
19	Akhtar, Muhammad Tahir	Information & Communication Technologies
20	Zormpas, Dimitrios	Information & Communication Technologies
21	Maham, Behrouz	Information & Communication Technologies
22	Boranbayev, Askar	Information & Communication Technologies
23	Desyatnikov, Anton	Physics & Astronomy
24	Good, Michael R.R.	Physics & Astronomy
25	Cruz, Jonas Preposi	Public Health & Health Services

SCOPUS AWARDS 2023

Marat Fatkhullin (Vice President, Elsevier), Chet Jablonski (Vice Provost for Research, NU), Taifun Basal (Managing Director, Elsevier)

On October 31, Nazarbayev University received a Scopus Award 2023 in « Societal Impact of Research: Natural Sciences, Engineering & Technical Sciences, Social Sciences, Arts & Humanities» nomination. This is an important achievement for the university, as it signifies the recognition of its research community's efforts in contributing to the betterment of society across a wide spectrum of disciplines ranging from natural sciences to social sciences and the arts and humanities. This award highlights the university's commitment to producing research that not only advances knowledge but also makes a tangible societal difference.

The international Scopus Award is an objective indicator of scientific contribution made by an individual author to the development of national science that is measured by the number of published scientific articles and their corresponding citations in international journals. All considered articles are published in reputable journals indexed by the Scopus database, the world's largest multidisciplinary abstract database, which contains more than 23,000 titles of scientific, technical, and medical journals from 7,000 international publishers.

CELEBRATING PROF ADESIDA'S ENDURING LEGACY AT THE UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

On October, 2023, a ceremony was held at the University of Illinois to unveil a plaque honoring the achievements of Professor Ilesanmi Adesida, Provost and Acting President of NU. The unveiled plaque, a symbol of enduring recognition, will be permanently mounted in the laboratory that Prof Adesida led many years ago. Notably, the plaque will be placed alongside the one commemorating Nick Holonyak, the pioneering inventor of the LED.

Prior to his appointment at Nazarbayev University, Professor Adesida previously served as the Provost and Vice Chancellor for Academic Affairs at the University of Illinois at Urbana-Champaign (UIUC). He also served as the Dean of the College of Engineering and the Director of the Micro and Nanotechnology Laboratory at the same institution.

This recognition serves as a testament to the enduring impact of Prof Adesida's leadership and contributions, both at UIUC and in the broader scientific community.

RESEARCH DAYS AT NU
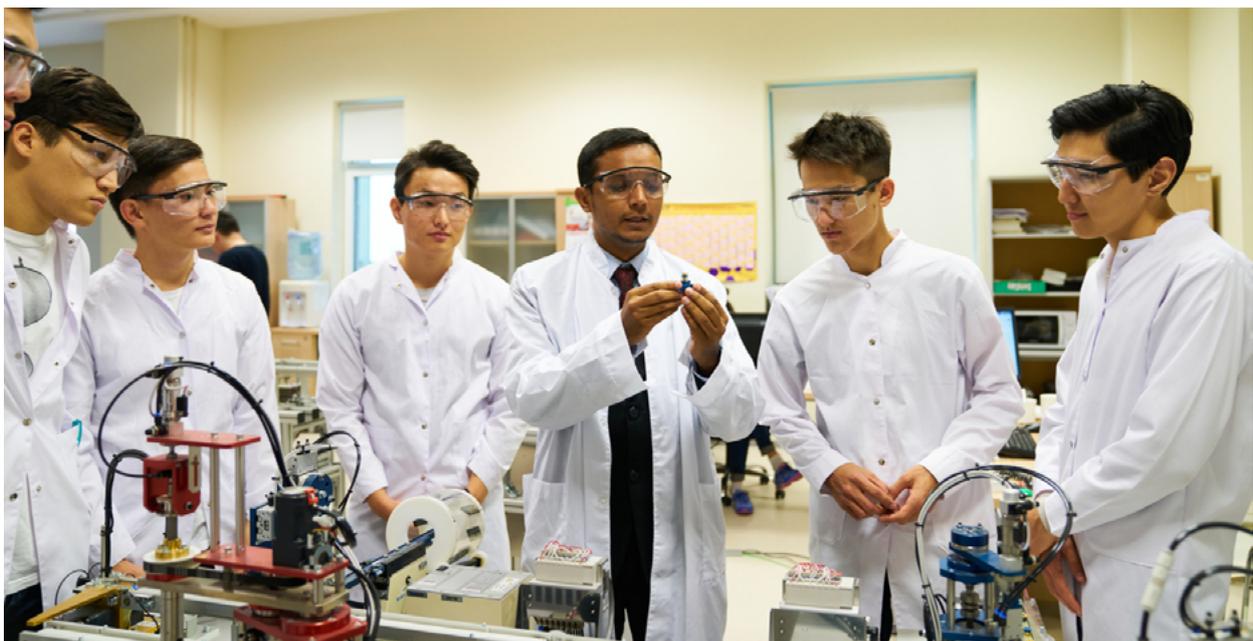
In a celebration of intellectual curiosity and scientific discovery, Nazarbayev University recently hosted its annual Research Days event on October 16th and 17th, bringing together scholars, experts, and students from various disciplines.

The two-day event unfolded at the heart of the university campus, with the Main Hall hosting speakers on the first day. Professor Ilesanmi Adesida, Provost and Acting President of Nazarbayev University, set the tone for the event with an inspiring opening address. The distinguished lineup of speakers included global thought leaders such as Professor John Rogers from Northwestern University, USA, Professor Dinah Birch from the University of Liverpool, UK, and Professor Charles Zukoski from the University of Southern California, USA. The event also featured insights from Professor Joep Konings, the Dean of the Graduate School of Business at Nazarbayev University.

Day two unfolded in the Lower and Upper Atriums of the campus, providing a dynamic space for engaging with cutting-edge research projects. The poster sessions allowed attendees to explore and interact with a wide range of research initiatives, fostering meaningful conversations and collaborations.

A highlight of the event was the opportunity for attendees to gain an insider's view of the innovative work happening in the university's state-of-the-art research labs and centers. From groundbreaking discoveries in science to advancements in business and technology, participants had the chance to witness the impact of Nazarbayev University's research firsthand.

Graduate School of Business News

RESEARCH DIGEST OVER OCTOBER–DECEMBER 2023
EVENTS

NAZARBAYEV UNIVERSITY GRADUATE SCHOOL OF BUSINESS RECEIVED TWO ACCREDITATIONS

NU Graduate School of Business has recently received 2 accreditations—from Association of MBAs (AMBA) and Business Graduates Association (BGA).

"The rigorous process of AMBA & BGA accreditation is a stamp of international recognition of the quality of our business school. The international peer review committee commended GSB on our visionary leadership, diverse and collegiate faculty body, energy of the administrative staff, and the quality of the current students and alumni, many of whom hold high positions in Kazakhstan. Furthermore, they noted the outstanding research output of the faculty, a significant achievement for such a young institution. Their commendations accurately highlight the tremendous contributions of the entire GSB community toward our school's mission to develop principled leaders and general knowledge to transform business and society," stated Dr. Jenifer Lewis, Vice Dean of Academic Affairs and Accreditation.

Dr. Joep Konings, the Dean of NUGSB, emphasized that «*according to the well-known UT Dallas rankings of research-intensive business schools, NUGSB is ranked number one in Eurasia. By obtaining AMBA/BGA accreditation, we show the relevance of being a research-intensive business school. Bear in mind that less than 2 percent of all business schools globally achieve such an AMBA/BGA quality label. This will make our graduates and alumni even more attractive for hiring by multinational enterprises, leading companies, banks, and government. It is an important recognition of the capabilities of our students to transform society and business, generating a positive impact on the region.*»

On October 11, NUGSB conducted a workshop on research collaboration between Southwestern University of Finance and Economics (SWUFE) and the Graduate School of Business at Nazarbayev University (NUGSB).

The workshop aimed at fostering research partnerships across institutions and countries, which is vital to understanding the complex dynamics of international business and economics.

The workshop was facilitated by distinguished experts in the field who possess extensive experience and expertise in international business and economics. NU was represented by GSB professors David DeRemer, Alexander Krasnikov, Jiyang Dong, and GSPP professor Peter Howie; SWUFE was represented by professors Han Li, Changqing Li, Jing Zhou, Xinghua Deng, and SWUFE graduate Dana Borumbayeva. Through interactive sessions, case studies, and group activities, participants had the opportunity to enhance their understanding of international and regional business and economics, gain new perspectives, and acquire practical skills that can be applied in their respective roles.

On October 16–17, NUGSB participated in NU "Research Days", an open house for NU research, bringing together researchers across the university. GSB's Jason Lewis, Tom Vinaimont, Aigerim Yergabulova, Zarema Khon, Alexander Krasnikov, Chandra Pathki, Anjan Ghosh, David DeRemer, and Mustafa Karatas presented their projects in the Poster Session on Day 2.

AWARDS AND GRANTS

Alexander Krasnikov and his co-authors have won the *2023 Literati Award for Outstanding Paper* at the *Journal of Consumer Marketing* with their paper titled "*How fakes make it through: the role of review features versus consumer characteristics*". According to their research "*consumers often can't detect fake reviews—and underestimate how many negative reviews might be fakes. Consumers who have a personality that scores high in terms of openness—such as being open to new adventures and intellectually curious—have better success at spotting fake reviews than other personality types. Extroverted people, on the other hand, tend to have a harder time identifying a fake review*".

NUGSB faculty have won four faculty development (FDCRG) grants (out of eight submissions):

- **Mustafa Karatas**: The impact of firm diversity on consumer behavior: when and why consumers prefer diverse versus non-diverse firms (highest score of all submissions)

- **Thierry Post**: Reference dependent Investment Choice: Theory, Methodology and Experiment Evidence (second highest score of all submissions)

- **David De Remer (joint with Aigerim Yergabulova)**: Empirical Frontiers of International Integration for Kazakhstan and Beyond

- **Denis de Crombrugghe (joint with David DeRemer and Aigerim Yergabulova)**: Side Effects of a closeby war: Are foreign business leaving Russia to relocate to Kazakhstan? Synthetic controls and other impact evaluation methods.

NURCE's proposal for a workshop on decolonising entrepreneurship research has been accepted for a 40,000 EUR funding by DAAD (Germany). There will be a conference in spring 2024 conducted by NURCE, and all expenses for the selected participants will be paid through the grant.

Aigerim Yergabulova has been awarded the Asian Universities Alliance (AUA) Scholarship 2023–2024 for the two-weeks research stay at Seoul National University.

RESEARCH SEMINARS

November 1, 2023: **Tom Vinaimont** (Finance, NUGSB) "Opportunity Cost of Capital for Entrepreneurs: A Reappraisal"

October 18, 2023: **Zarema Khon** (Marketing, NUGSB) "Lay Theories of Manipulation: Do Consumers Believe they are Susceptible to Marketers' Trickery?"

October 4, 2023: **Bektemir Ysmailov** (Finance, NUGSB) "Costly External Finance and Corporate Investment: The Role of Marketable Securities"

September 21, 2023: **Feng Bai** (Organizational Behavior, Hong Kong Polytechnic U.) "Moral Pride and Hubris: Exploring the Intrapersonal Foundation of the Virtue Route to Status"

NUGSB BUSINESS DIGEST

2023/23 [From Streets to Screens: Utilizing Social Media to Transform Sales and Reach for Women Shuttle Traders in the "Informal Economy"](#) by **Zhansaule Kimel**.

ARTICLES AND PUBLICATIONS

Shumaila Yousafzai has published a new book «*[Technological Leapfrogging and Innovation in Africa: Digital Transformation and Opportunity for the Next Growth Continent](#)*».

Shumaila Yousafzai has a paper accepted for publication in the *International Journal of Entrepreneurial Behaviour and Research* (Scopus Q1 top 10% ranked journal) with Dr. Ali Raza (Teesside University, UK) and Dr. Saadat Saeed (Durham University, UK). The title of the paper: «*Breaking Barriers and Bridging Gaps: The influence of Entrepreneurship Policies on Women's Entry into Entrepreneurship*».

David R. DeRemer, Yelzhas Kadyr, and Aigerim Yergabulova have added a new NUGSB Working Paper 2023/09 [Firm Employment Dynamics in Kazakhstan after Sudden Russian Immigration](#).

School of Medicine News

THE YALE SCHOOL OF PUBLIC HEALTH PARTNERS WITH NAZARBAYEV UNIVERSITY SCHOOL OF MEDICINE ON AN ADVANCED RESEARCH TRAINING TO ADDRESS HIV

The new program, called ***MoVE-Kaz for Molecular Virology/Epidemiology Training in Kazakhstan***, is funded by a grant from the Fogarty International Center of the U.S. National Institutes of Health. The training will provide Kazakh scientists and research clinicians with the necessary skills to help them investigate the spread of HIV in Central Asia and how it is affecting high-risk communities.

The goal of the training program is to create a pool of highly skilled Kazakhstani scientists and clinicians who are knowledgeable about phylogenetic applications and trained by national and international mentors from partner institutions. Other partner institutions associated with the program are: Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan; Katholieke Universiteit Leuven in Belgium; and State University of New York (SUNY)-Downstate, in Brooklyn, NY.

The full training is scheduled to start in early 2024 after the first cohort of Kazakhstani researchers is selected. The core curriculum will be held at Nazarbayev University School of Medicine, but participants will have an opportunity to come to New Haven for three months of targeted virology training. The Fogarty grant will also allow researchers interested in statistical genetics and computational biology to travel to KU Leuven in Belgium to learn under Philippe Lemey, a professor of evolutionary and computational virology with the Rega Institute.

Source: Yale School of Public Health

MOLECULARLY IMPRINTED NANO-POLYMERS AS A VIABLE ALTERNATIVE TO ANTIBODIES IN ANTI-CANCER RESEARCH AND THERAPY

Scientists from the Nazarbayev University School of Medicine have found a way to suppress the growth of cancer cells using special nanopolymer particles that can penetrate cells and bind oncogenes. These particles can also be used to deliver antitumor drugs into cells, which will increase the effectiveness of treatment and minimize the number of side effects.

Molecularly imprinted polymers (MIPs) are nanopolymer particles of about 100 nm diameter that contain imprints of various biomolecules including DNA, proteins, antibiotics etc that were used as specific templates. When creating MIPs, such a "template molecule" is first fixed on a solid-phase carrier, and then is immersed in a solution of monomers, which, upon polymerization "remembers" the shape of the template. Ready-made MIPs are able to recognize the template as part of the native biomolecule in the same way that antibodies recognize their corresponding antigens.

As earlier studies have shown, MIPs can be used in the diagnostics and treatment of cancer. Nanopolymers with molecular imprints of tumor receptors successfully find their targets on the surface of cancer cells and bind to them. If an anticancer drug is packaged in such a nanopolymer, it can be targeted to tumor cells without harming healthy tissues.

Until now, it was believed that nanopolymer particles could interact with receptors only on the surface of cells (DOI10.1021/acs.nanolett.7b03206). However, new experiments have shown that nanopolymers can also penetrate inside if they can attach to the cell surface for sufficient time, see Figure 1. This significantly expands the range of their use: if previously researchers had to select proteins to create MIPs only from among the surface proteins, now they can select oncogenes hiding inside the cell as targets. The research was recently published in the journal Nano Letters (DOI 10.1021/acs.nanolett.3c01374), a Q1 (top 10%) article with Prof. Barlev as corresponding author.
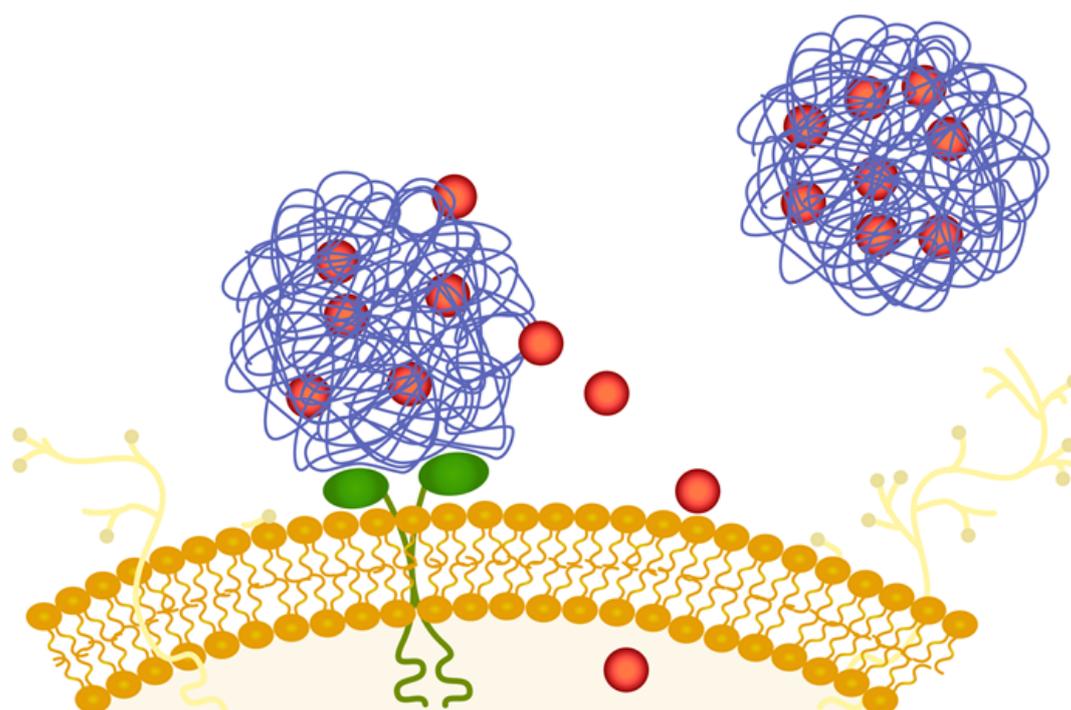

Fig.1 A Molecularly imprinted polymer (MIP) binding to a cell surface receptor and releasing bioactive materials that penetrates the expressing cell membrane to exerting their functions intracellularly

Professor Nikolai Barlev

The action of MIPs resembles the work of drugs based on monoclonal antibodies, but has a number of significant advantages. Firstly, it is impossible to create antibodies for very tiny molecules - an antibody must contain a minimum of 8-10 amino acids to trigger an immune response. Secondly, antibodies require special storage conditions - at room temperature they will degrade within a day. Thirdly, the cost of creating monoclonal antibodies is extremely high - a monthly course of an antibody-based anti-cancer therapy costs around 35-40 thousand dollars. MIP-based drugs have a much wider range of targets, can be stored at room temperature, and their production costs a dozen times less than monoclonal antibodies. In addition, monoclonal antibodies work either on their own or only with a certain range of toxins, and MIPs can be used for targeted delivery of an almost unlimited range of anticancer drugs.»

To test the effectiveness of nanopolymer particles, the researchers worked with the epidermal growth factor receptor (EGFR) protein, which is localized on the cell surface of vast majority of cancer cells. After binding to its ligand (partner) EGFR enters the cell and activates its growth. However, in certain types of cancer, such as lung cancer in smokers, mutations occur in the corresponding gene that regulates the production of this protein, which activate EGFR uncontrollably, turning it into an oncogene. As experiments on cell lines have shown, EGFR-imprinted nanopolymers are able to successfully bind to this protein and suppress its activity.

Central Asian Research Centre for Educational Innovation & Transformation

CURRENTLY, CARCEIT IS FUNDING NINE RESEARCH PROJECTS ACROSS THREE KEY AREAS

Director of CARCEIT, Dr. Naureen Durrani

International Collaborative Education Projects (ICEP) are actively supporting high intellectual merit, aiming to bring significant new knowledge and societal impact to Kazakhstan in the field of education through international partnerships.

Educational Innovation and Transformation Projects (EITP) are high intellectual merit that deliver significant new knowledge and societal impact to Kazakhstan in the field of education.

Education Impact Projects (EIP) are educational initiatives with a strong research foundation that directly impact education policy and practice. These projects are undertaken by NU alumni.

This edition of the newsletter showcases the research projects update and seminars conducted in the fall semester of 2023. Get the updates and stay in touch through our social media:

LinkedIn: nu-carceit, Instagram: nu_carceit, and Twitter: @carceit

INTERNATIONAL COLLABORATIVE EDUCATION PROJECTS (ICEP)

POSITIVE PEACE EDUCATION IN KAZAKHSTAN

Our "Positive Peace Education in Kazakhstan" project involves researchers from GSE, Cambridge University and the National Academy of Education named after Y. Altynsarin, together with teachers working in schools across Kazakhstan. It aims to explore and develop concepts of peace education relevant to the contexts of schools, teachers and students in Kazakhstan.

The concept of "positive peace education" derives from Johan Galtung's (1969) distinction between negative peace and positive peace. In Galtung's (1969) theory, terminating direct violence is defined as negative peace. Halting direct violence is important, but it does not address the root causes that may bring turbulence and discord between people, groups and societies. Positive peace is a much wider and more lasting phenomenon as it seeks to create conditions for a just and equitable society, addressing the structural and cultural violence that underlie much direct violence.

Grounded within this paradigm, positive peace education emphasizes the leading role of education in building and sustaining peace. By empowering teachers and learners with competences and knowledge that value peace, inclusion, and justice across all levels and all forms of education, it is possible to ensure positive and meaningful engagement of people with themselves, with others and with society. In this project, we see positive peace education as a multidimensional phenomenon that spans from the individual level, where the focus is on inner peace and wellbeing, through interpersonal relationships and community dynamics, to the global and ecological levels.

Most recently, the project's application to the Nazarbayev University's Social Development Fund (SDF) was successful, paving the way for the upcoming Summer School for Student Peace Ambassadors and their teachers next year. This extension builds upon the project's focus on impact and dissemination, approved based on the Social Impact 2023 competition.

Dr. Lynne Parmenter and her research team are collaborating with Cambridge University

In October, ICEP research team visited the city of Cambridge, UK, to observe UK schools implementing positive peace education, engage in discussions with UK-based researchers and the wider network of researchers in Cambridge, and delve deeply into the theories of positive peace education.

While in Cambridge, the ICEP team participated in thought-provoking discussions with experts from the University of Cambridge, visited the primary school in Exning, and planned the further development of the project. The knowledge and insights gained from this trip will undoubtedly shape the future of their project and contribute to the improvement of education in Kazakhstan.

Peace Education team members were featured in local newspaper in UK

NURTURING YOUNG MINDS: EXPLORING THE ROLE OF POSITIVE EARLY CHILDHOOD EDUCATION AND CARE IN THE HEALTH AND WELL-BEING OF YOUNG CHILDREN IN KAZAKHSTAN

Dr. Daniel Torrano and his team led a panel discussions with ECE experts in Almaty

Early childhood education and care (ECEC) provide a crucial foundation for a child's development, shaping their educational, psychological, health, and economic trajectories into adolescence and adulthood. While many studies have shown that quality ECEC positively impacts academic outcomes and school readiness, the role of ECEC in promoting the health and well-being of young children is poorly understood. This understanding is critical in developing comprehensive and integrated ECEC programs that support the holistic development of young children. This project aims to explore the role of ECEC on young children's health and well-being outcomes in Kazakhstan.

Significant progress has been made since May 2023, including the submission of our manuscript, '*Visualizing Early Childhood Education and Care Research: A Bibliometric Review*,' to a Q1 journal for current review. Concurrently, we're developing two potential manuscripts tied to our ongoing research. We conducted workshops covering bibliometric analysis, quantitative analysis, and the Draw/Write/Tell research method for CARCEIT researchers and staff.

Additionally, a poster titled '*Scientific Mapping of Early Childhood Education and Care Research*' was showcased during NU Research Day. Moreover, we have a forthcoming presentation scheduled for the Academic Leadership Institute's Executive University Leadership Program at NU.

Finally, we're in the preparation phase for our visit to the University of Melbourne, our international project partner. During this visit, we'll engage in collaborative work with their Centre for Wellbeing Science and Research in Effective Education in Early Childhood.

STRENGTHENING REGIONAL UNIVERSITIES IN KAZAKHSTAN

This project aims to conduct a comprehensive analysis of the changing role and influence of regional universities within the framework of recent reforms in the Kazakh higher education system. It explores the evolving dynamics of these universities, closely examining the complex interplay between education, autonomy, and societal impact in Kazakhstan.

Positioned as vital agents of diversity and economic development, regional universities prioritize accessible admissions, facilitating upward mobility for a diverse student cohort. Recent legislative changes have bestowed unprecedented autonomy upon these institutions, necessitating strategic leadership for essential functions such as securing funding, recruiting students, and developing programs. The Minister of Science and Higher Education underscores the pivotal role of regional universities in aligning with economic trends, emphasizing their significance in propelling regional progress

Within this analytical exploration, the study delves into the leadership's nuanced navigation of competition within the newfound autonomous landscape. It critically examines the strategic dimensions of leadership, probing how regional university leaders adeptly balance local imperatives with national educational objectives. As these institutions evolve into architects of their destinies, understanding the complex interplay of strategy and success becomes imperative in this transformative era of higher education. The study aims to contribute insights into the evolving role and strategic positioning of regional universities as they navigate the challenges and opportunities inherent in their newfound autonomy.

Pictured: Dr. Alper Calikoglu, Dr. Ahmet Aypay, Dr. Laura Ibrayeva, Ms. Diana Kalemeneva, and Dr. Sholpan Tazabek

EDUCATIONAL INNOVATION AND TRANSFORMATION PROJECTS (EITP)

THE QAZ GREEN HEALTH PROJECT: DEVELOPING THE ENVIRONMENTAL SUSTAINABILITY IN HEALTHCARE COMPETENCE OF THE PRESENT AND FUTURE HEALTHCARE WORKFORCE IN KAZAKHSTAN

Climate change is real and is considered the most significant challenge for humanity in the 21st century, posing a considerable threat to people and health, the economy, and the environment at the global, national, and local levels (U.S. Global Change Research Program, 2016; WHO, 2022). The continued rise in the warming level will lead to severe consequences for humans and the earth that may become irreversible (WHO, 2022).

The consequences of climate change, including natural disasters, pollution, and environmental degradation, negatively affect the health of many people worldwide (Rocque et al., 2021). Climate change endangers the basic needs for optimal health, such as clean air, water, food, and shelter (WHO, 2022). Around 250,000 additional annual mortality between 2030 and 2050 are expected due to extreme temperatures, natural disasters, and evolving infection patterns (WHO, 2019). The impacts of climate change on health can be direct (i.e., through natural disasters or sudden temperature changes) or indirect (i.e., through changes in ecological systems), exacerbating a person's vulnerability to diseases, worsening occupational hygiene and mental health, and increasing risks in resources depletion and migration (Rocque et al., 2021). The gravity of the negative consequences of climate change on health calls for urgent action from all sectors of society to contribute to protecting the environment and embracing sustainable action.

The aim of the project is to create and assist an environmentally sustainable healthcare system in Kazakhstan by building the capacity and competence of the present and future healthcare workforce in environmental sustainability in healthcare. The project will design, develop, implement, and evaluate two environmental sustainability courses in healthcare to enhance healthcare workers' and students' capacity and competence.

Dr. Jonas Cruz and his research team present their studies during the NU Research Day

SUSTAINABILITY EDUCATION AND HIGHER EDUCATIONAL INSTITUTIONS IN KAZAKHSTAN: A STUDENT PERSPECTIVE

Focusing on the students' perspectives, the core aim of our project is to explore how higher education institutions in Kazakhstan are providing students with the skills, knowledge, attitudes, and values essential for them to become socially responsible citizens actively shaping and contributing to the sustainable future. Utilizing a student-oriented approach, our research endeavors to achieve the objectives of exploring student attitudes; analyzing policy context; promoting student engagement; and enhancing skills and knowledge.

Our quantitative research phase is underway. Surveys have been distributed to seven prominent universities nationwide, and we're pleased with the enthusiastic response; the majority of responses have already been collected. This data is crucial in capturing a comprehensive understanding of current student perceptions and institutional approaches to sustainability education.

Simultaneously, our team has been diligently crafting a policy analysis. This analysis aims to critically examine existing frameworks guiding sustainability education in Kazakhstan, identifying areas where policy evolution can better support the development of sustainability competencies among students.

Moving forward in our quest for a deeper understanding of sustainability in education, we're entering a crucial phase. We're set to employ bibliometric analysis to illuminate the academic landscape of this topic. This method will enable us to quantitatively evaluate the academic terrain, identifying key trends, gaps, and the overall impact of research in this field. The insights gained will not only enhance our study but also contribute to shaping future research directions.
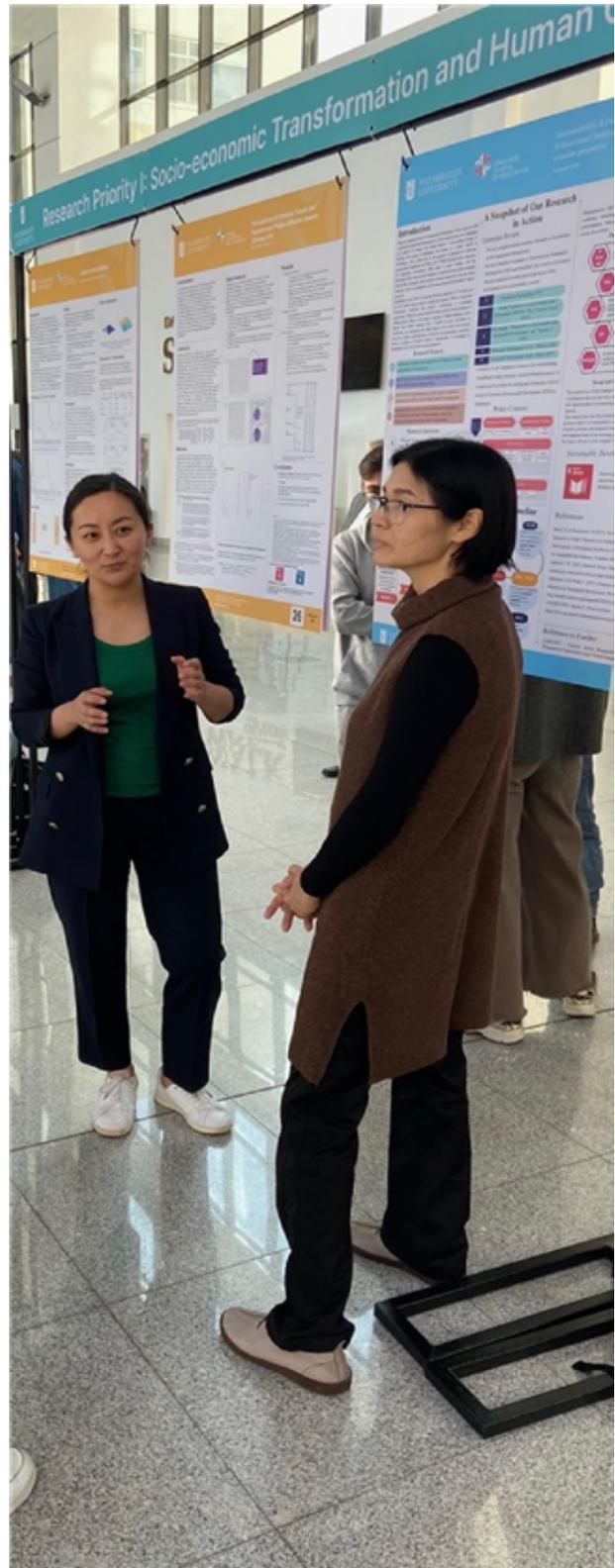
Dr. Gulzhanat Gafu and Nurgul Terlikbayeva presented their studies during the NU Research Day

THE IMPACT OF ORIENTATION PROGRAMS ON FIRST-YEAR STUDENTS' ACADEMIC PERFORMANCE
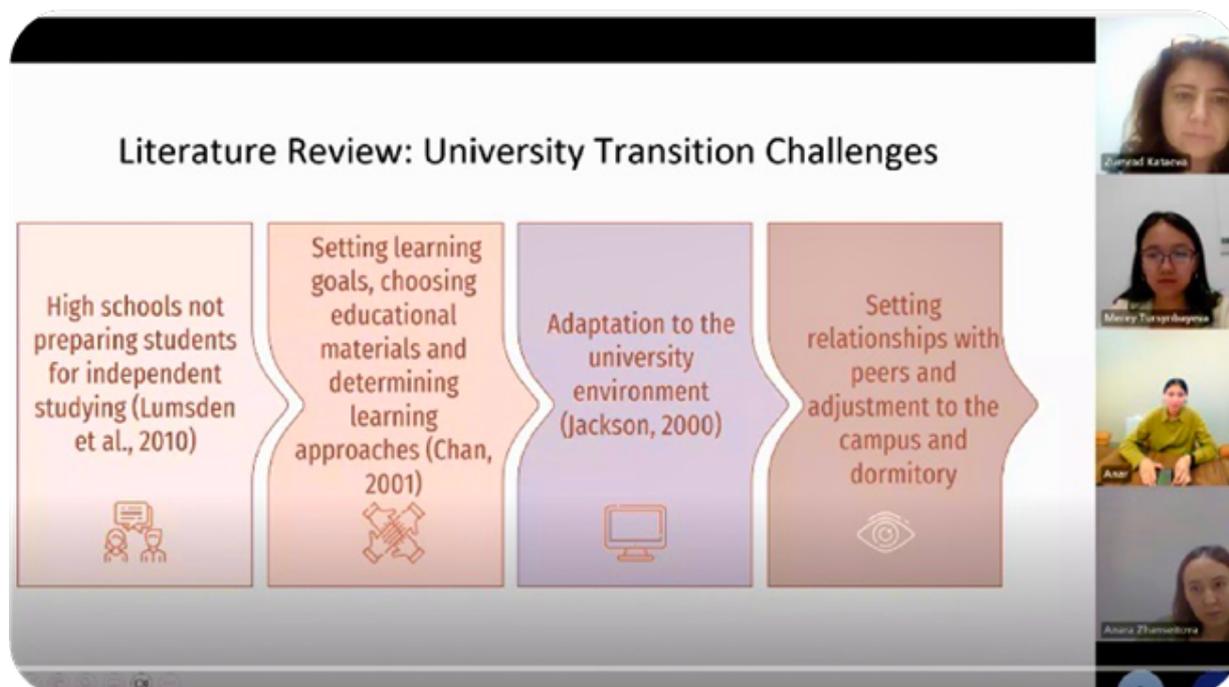
Merey Tursynbayeva and Anar Abildina were joined by their faculty mentor, Dr. Zumrad Kataeva, to present their findings via webinar

This research aims to investigate the impact of orientation programs on the academic performance and university experience of first-year students. It explores how various orientation approaches affect student engagement, sense of belonging, and social integration on campus. Additionally, the study aims to examine how the engagement of faculty and staff in these programs influences student outcomes, including academic performance and overall engagement.

1. How do orientation programs influence the academic performance and university experience of first-year students?

2. What are the varied impacts of different types of orientation programs on student engagement, sense of belonging, and social integration on campus?

3. What role do faculty and staff play in orientation programs, and how does their participation influence student outcomes like academic performance and engagement?

4. How can orientation programs be replicated in other Higher Education Institutions (HEIs), and what challenges and opportunities need to be considered in the process?

The research findings could elucidate how orientation programs contribute to students' academic and social accomplishments, as well as their engagement in studies. This could increase awareness regarding the significance of orientation programs and support other universities in Kazakhstan in adopting this practice. The project's findings will be presented as staff training at three higher education institutions in the South Kazakhstan region.

EDUCATION IMPACT PROJECTS (EIP)

ACADEMIC PROMOTION AND REMUNERATION POLICIES AT PRIVATE HIGHER EDUCATION INSTITUTIONS IN KAZAKHSTAN

Dr. Dinara Mukhamejanova and Dr. Gulfiya Kuchumova, participated in the ERAS International Conference and the WERA Focal Meeting in Singapore

This study involves a close examination of the existing career systems in the country's top private universities. Our specific focus is on faculty promotion and remuneration policies, and how these policies influence the academic performance and professional self-identification of faculty members.

The goal of this project is to explore the impact of Kazakhstani faculty's perspectives on academic promotion and remuneration policies on their academic performance and professional identity. The following research questions will steer the investigation: (1) How do faculty members perceive alterations in academic promotion and remuneration policies? (2) In what ways do faculty's perceptions of these policies influence their academic performance and professional identity?

Our hope is to provide policymakers with insights into academic career systems, allowing for the development of effective interventions in this sphere. Additionally, we aspire to facilitate collaborative efforts between university leadership and faculty to establish a supportive working environment.

EXPLORING STEM STUDENTS' INTERNATIONAL MOBILITY IN THE CONTEXT OF GEOPOLITICAL TENSIONS
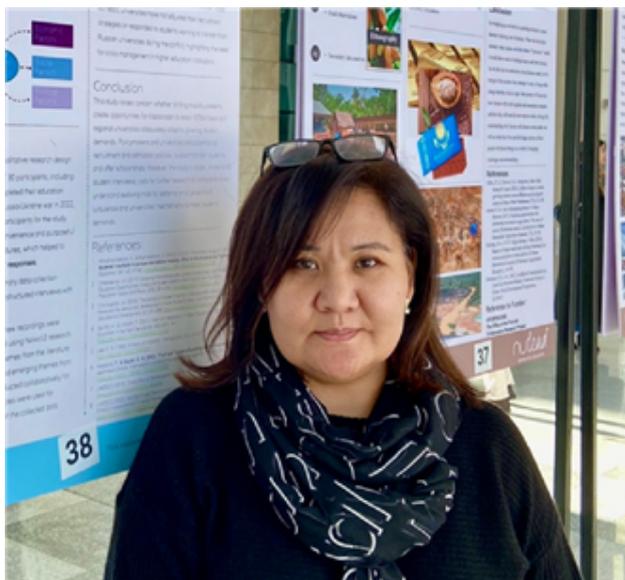
Dr. Ainur Alumkambetova, Assylzhan Ospanbek, and Manat Sergazina presented their study during the NU Research Day.

This research takes up the question of international student mobility in the context of the Russia-Ukraine war and how this conflict has impacted student mobility since the start of this conflict. The study was conducted in the period between May 2023 and August 2023 and consisted of 30 school graduates.

The findings show that Russia is no longer the priority option for STEM students from Kazakhstan, but is still seen as an attractive destination, especially for ethnic Russians, those who initially planned to migrate to Russia, and those students who were not able to nd a suitable specialty in Kazakhstani universities.

The strongest pulls are the perceived quality of STEM education in Russian technical universities, their reputation, infrastructure, and recruitment policies. The students are pulled by simplified admission procedures in Russian universities, tuition fee waivers, and scholarships for high achieving students and winners of STEM Olympiads. Moreover, the participants mentioned cultural, linguistic, and geographic proximity as important factors in their decision-making processes.

In regard to the domestic side, the study identified the following push factors: poor university infrastructure (equipment, labs, and dormitories), low teaching quality, and unavailability of narrow specializations in STEM programs at Kazakhstani institutions.

ENGAGEMENT IN EARLY INTERVENTION

Pictured: Akzhibek Begaliyeva, Meruyert Smagulova, Assem Tazhiyeva, Dana Mambetalina and Mariya Ippolitova

In Kazakhstan, the number of children with special needs has witnessed a significant growth as reported by Nurbai (2021). However, this statistical increase may not accurately reflect the overall situation in the country due to factors such as some parents choosing not to register disabilities in state institutions and the possibility of some children not receiving proper diagnoses.

The question of potential underestimation of the counts of children with special needs in Kazakhstan contrasts with concerns expressed in countries like the United Kingdom, United States, Africa, and Australia, where fears exist regarding an overestimation of the numbers of disabled children. These worries about a notable rise in diagnosed disabled children are closely tied to broader anxieties related to the «rise of the special needs industry» as articulated by Tomlinson (2012).

Research indicates the crucial importance of early intervention to empower families in assisting their children with special needs to enhance their skills from an early age (Haar, 2022; Moore, 2012). Moreover, parental involvement emerges as a central factor in the success of early intervention, as highlighted by Moore (2012). Simultaneously, various socioeconomic factors are believed to influence parental engagement in early intervention, including education level, income, place of residence (urban or rural), occupation, and the language spoken at home, as identified by Begum (2019).

Pictured: Prime Minister Alikhan Smailov with winners of Digital Bridge 2023, including Assem Tazhiyeva, the founder of Ozim Platform

In October, Ozim Platform was recognized as the winner of the [Digital Bridge Awards 2023](#) in the category of «Tech for Good». Digital Bridge stands as Central Asia's largest international technology forum, bringing together IT companies, startups, tech entrepreneurs, venture investors, and corporations. During the forum, outstanding companies and startups were honored with awards based on their respective categories of nomination. Assem's team was distinguished in the category of «***Tech for Good - technologies for solving environmental, social, and economic problems.***»

In November, CARCEIT featured the founders and researchers of the OZIM Platform. Their focus was on examining how socioeconomic factors impact parental knowledge and engagement in early intervention. This study addressed both rural and urban contexts in Kazakhstan for children with special needs. The researchers spoke candidly about the necessity of providing parents with the information and resources to support their children with disabilities. They also discussed the challenges of collecting data from a rural community on the sensitive topic of disabilities. Emphasizing the importance of developing specific strategies and a roadmap for data collection, especially when no previous data has been collected on the topic, the research identified barriers to parental engagement in early intervention practices.

A Round Table discussion on the CARCEIT Educational Impact Project (EIP) on Ozim Platform research findings was held via Zoom on December 6th, engaging key stakeholders including representatives from the Ministries of Education, Health, Social Protection, UNICEF, and various NGOs.

Nearly one hundred Principals and leadership from kindergarten and nurseries joined the discussion. This event focused on examining how socio-economic factors impact parental knowledge and engagement in early intervention, addressing both rural and urban contexts in Kazakhstan for children with special needs. This research identified barriers to parental engagement in early intervention practices and services, aiming to model measures for eliminating these obstacles.

Dr. Tsediso Makoelle opened the session with commendations from the Ozim Platform's efforts in aiding young parents in Kazakhstan. Additionally, acknowledgment was extended to the impactful research conducted, aiming to benefit the nation as a whole.

Young parents require digital technology that provides useful information, which can be easily shared with nurseries and kindergartens. Questions arose regarding how parents can access reliable information, particularly in regions of Kazakhstan where there is a lack of experts, especially in rural areas. There's a recognized need for research-based information, psychological support, and legal guidance.

Dr. Sourav Mukhopadhyay emphasized the critical need for early identification and intervention in the early years. He stressed that success in overall development depends on these aspects. Resources are required to identify proper developments across physical, cognitive, communicative, and environmental aspects.

In her concluding remarks, faculty mentor, Dr. Rita Kasa emphasized the need for an ecosystem that supports parents. She highlighted the importance of parental vigilance and underscored the necessity of partnership relations and equal trust that prove beneficial to them. Access to reliable internet and information emerged as crucial factors. Furthermore, Dr. Kasa emphasized the significance of spousal support and the quest for balance.
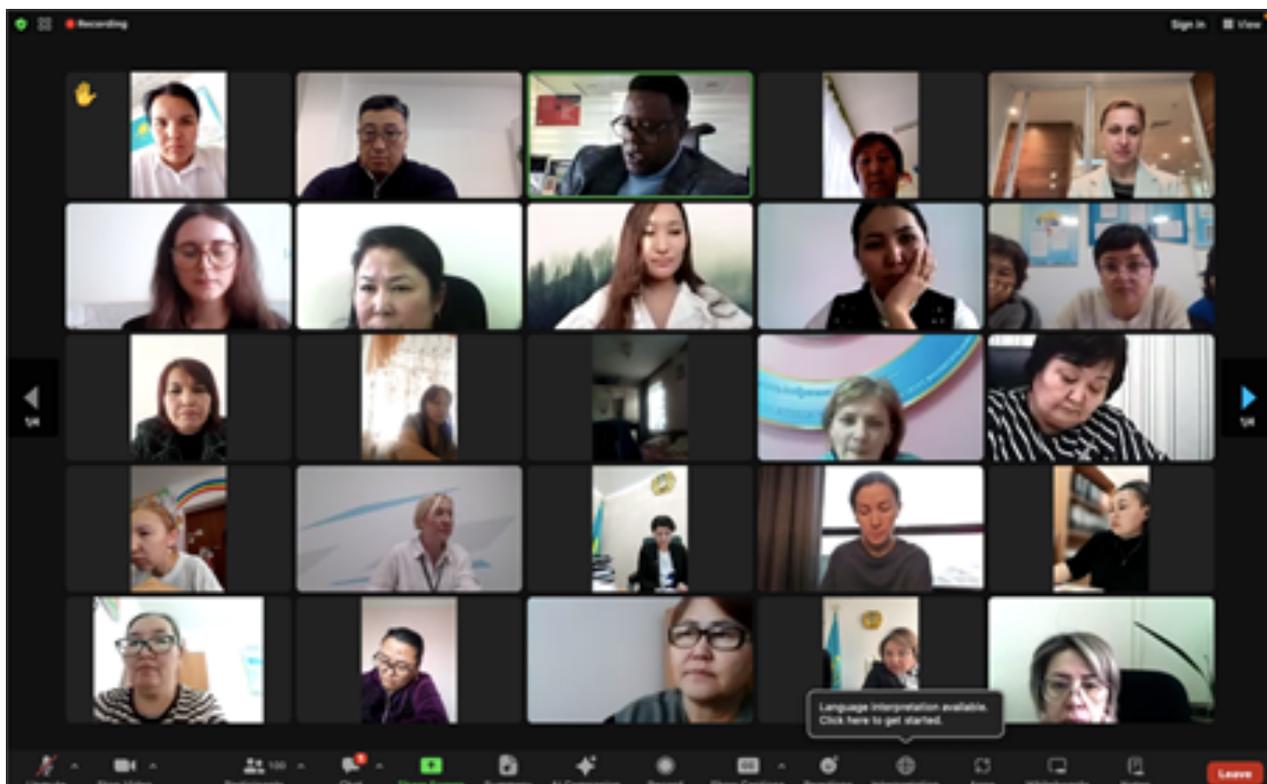
I BECAME WHO I AM BECAUSE OF MY TARBIYEH: RECONCEPTUALIZING SOCIAL CAPITAL THEORY GROUNDED IN THE LIFE STORIES OF KAZAKHSTANI YOUTH FROM RURAL OR LOWER SOCIOECONOMIC BACKGROUNDS

Social capital critically shapes the employment opportunities and social mobility of youth. Little is known, however, about how marginalized youth use social capital to pursue education and career aspirations, particularly in countries with developing higher education systems. Drawing on life history narratives of prestigious university graduates from rural or lower socioeconomic backgrounds in Kazakhstan, my research examines how the graduates use social capital in pursuing their education and career.

Informed by Bourdieu's critical framework, this study presents four key arguments. Firstly, Zhuldyz Amankulova asserts that participants' utilization of social capital is shaped by their ethical stance, distinguishing transactional use from endeavors aimed at enhancing life quality. Secondly, she argues that the ethical stance of the study's young participants evolves through tarbiyeh—a process cultivating positive mindsets, spirits, characters, worldviews, and moral senses. Thirdly, she demonstrates how participants' tarbiyeh influences their ethical considerations when employing social capital. Lastly, she illustrates that individuals involved in the participants' tarbiyeh hold significant value, deemed more important than the utilitarian aspect of social capital.

Ultimately, this study invites scholars to re-envision social capital theory by considering how one's moral values shape when and how they leverage social capital and how one's social capital can impact morality by shaping their worldview and beliefs. By bringing the question of morality into the conceptualization of social capital, the study contributes to the sociological literature by extending and reframing Bourdieu's framework.

At a joint CARCEIT and PEER Network Seminar, Dr. Zhuldyz Amankulova shared her study with NU GSE Community

School of Engineering and Digital Sciences News

CIRCULAR ECONOMY INDEXING IN CONSTRUCTION INDUSTRY USING BIG DATA AND AI

On 23rd of November 2023 a biannual research meeting for the project of Circular Economy Indexing in Construction Industry Using Big Data and AI under the supervision of Professor Ferhat Karaca was conducted. The participants of the event included co-PIs of the project, researchers, partners and invited guests from the industry (Figure 1).

The topics discussed in that meeting included the following progress of the project:

Figure 1. A photo taken at the biannual research meeting

EXPLORING STAKEHOLDERS' OPINIONS ON CIRCULAR ECONOMY IN CONSTRUCTION SECTOR: A NATURAL LANGUAGE PROCESSING ANALYSIS OF SOCIAL MEDIA DISCOURSE

This study, employing advanced artificial intelligence and natural language processing techniques, examines the varied perspectives of stakeholders on integrating circular economy principles into the construction industry. Our research navigates through the digital media landscape, analyzing discussions across multiple online platforms to discover the opinions surrounding CE in construction. Thus, we uncover the themes and concepts linked to CE, explore the diverse viewpoints across different digital forums, and identify the factors that cultivate a positive outlook towards CE.

Our findings demonstrate that a significant majority, 54%, express positive sentiments, while 28% remain neutral, and only 18% lean towards negative views. This intricate analysis not only sheds light on how CE is perceived in the digital world but also opens up the market possibilities for innovative approaches in the construction sector.

Further elevating the impact of our research, we have developed a cutting-edge online tool (accessible at this link) that evaluates opinions on CE, classifying them into positive, neutral, or negative categories. This tool stands as a testament to our commitment to integrating technology

with research, offering invaluable insights for policymaking and industry practice.

By providing insights into public sentiment and main topics discussed, it guides policy decisions towards societal needs. It also equips industry professionals with the knowledge needed to navigate the CE landscape, uncovering opportunities for innovation and circular growth. Join us in this journey as we contribute to a more sustainable and prosperous future in construction.

CIRCULAR ECONOMY IN CONSTRUCTION SECTOR AND URBAN RESILIENCE

This study connects Circular economy in Construction Sector with urban resilience. Precisely, the resilience of an urban road network was investigated after a 2023 large-scale earthquake in Turkey. The quality of an urban infrastructure and emergency response management were assessed. For this, the remote sensing imagery and Geographic Information Systems (GIS) were employed to determine the most heavily affected areas and post-earthquake road blockage. The outcomes of this research propose that the presented methodology can determine road blockage with great accuracy and reveal inefficiency in an emergency response management. This tool can be used by urban planners, policy makers, and other stakeholders to enhance the city's urban resilience and preparedness for possible seismic shocks in future.

CIRCULAR ECONOMY INDEXING IN CONSTRUCTION INDUSTRY: ANNOTATION OF CONSTRUCTION SITES USING SATELLITE IMAGES

This study employs the identification of construction sites for further use in city sustainability indexing and city similarity analysis through the comparison of distinct cities. High-resolution satellite images of 45 cities worldwide with varied geographic locations and different population sizes were executed from the Google Earth Pro application for this study. Originally, 1585 raw satellite images were used as a main dataset. The final goal of this study is to develop a Machine Learning model trained to identify the construction sites and units present on it.

Preliminary Annotation works that are used to train ML model are done manually by the group of moderators on the CVAT.ai platform. Moderators were trained by Civil Engineering department researchers to identify construction sites and corresponding objects relying on engineering sense. Table 1 represents 23 different labels for different units engaged in construction activities with their description.

Table 1. Labels used to annotate construction sites

Label	Description
Site.n	Borders of the construction site
Excavation	Excavated area
Footing	Footing areas of building components
Crane	Cranes
Machinery	Hydraulic excavators and other machinery
Road	In-site connection roads
Mat.piles	Material piles
Cdw.piles	Construction and demolition waste piles

Label	Description
Alt.en.piles	Alternative energy sources - PV batteries, wind turbines, biofuel energy facility
Office	On-Site offices
Storage	On-site Storages
Work.fac.	On-site facilities for workers (toilets, canteens)
Entry	Site Entry
Parking	Parking for vehicles (cars, bikes, etc)
Fabrication	Fabrication workshop
Waste facility	Waste management/recycling facility (crasher)
Bin	Classification bins for waste
Fence	Silt fences that prevent soil washing
Water management	Rainwater collection storage or greywater preserving tanks
Scaffolding	Scaffolding and other safety constructions

Out of this list the labels "footing", "storage", "mat.piles", and "machinery" are utilized most by annotators. The primary training of the Machine learning model implies only the identification of building foundations since this is the most annotated item throughout the process. Therefore, sufficient amount of data (17873 objects detected by moderators) to train the ML model was present. ISSAI trained the Yolo V8 Neural network to identify footings of buildings, the initial accuracy of the trained model reached 20% accuracy for the test set resulting further in 30% accuracy for the training sets.

A noteworthy anomaly resulting from training the Machine Learning model identifying the footings of construction sites is that during the validation phase, the ML model managed to spot the footing initially missed by the moderator, Figure 2 illustrates this phenomenon.
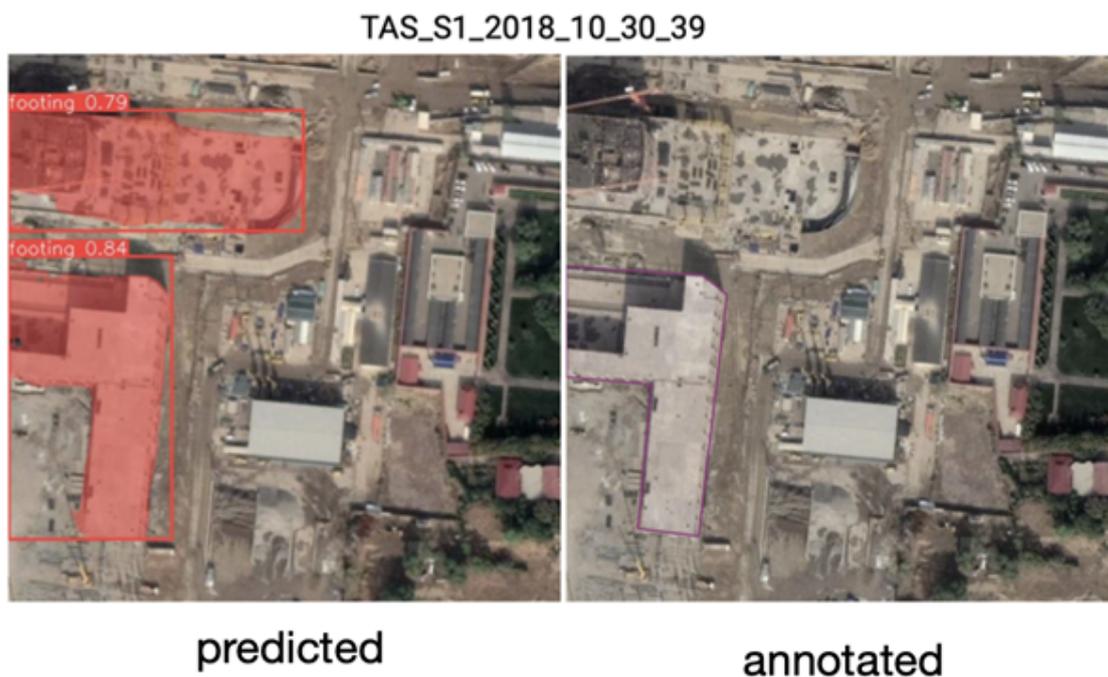
Figure 2. ML model annotation versus manual annotation

A brief overview of the work done in less than a year is presented here. However, the final target is not yet achieved, as the Machine Learning model still has imperfections. To enhance its efficiency, further works should be completed.

Overall, the research meeting was helpful and fruitful via provision of the latest progress of the project and improving the networking between various researchers and industry professionals.

DR. POULOPOULOS AND HIS RESEARCH GROUP PUBLISHED 3 HIGH-IMPACT Q1 PAPERS ON ADVANCED OXIDATION PROCESSES FOR WASTEWATER TREATMENT

Photo 1. In the photo, from left to right, are: Perizat Abdirova (MSc Student), Dr. Stavros Poulopoulos, and Yerkanat Kanafin (PhD Candidate)

The research group from the Chemical and Materials Engineering Department led by Dr. Stavros G. Poulopoulos investigates the degradation of pollutants in wastewater by means of advanced oxidation processes (AOPs). The team continues to push the boundaries of wastewater treatment research and is dedicated to finding sustainable solutions to global water challenges.

The group recently published its research work results in Scopus Q1 journals as follows:

1. UVA and goethite activated persulfate oxidation of landfill leachate
by Yerkanat N. Kanafin, Perizat Abdirova, Elizabeth Arkhangelsky, Dionysios D. Dionysiou, Stavros G. Poulopoulos.

The research team studied the photochemical treatment of a high-strength landfill leachate from Astana municipal solid waste landfill. The results of the study were published in Chemical Engineering Journal Advances (Q1) and can be found on the following link.
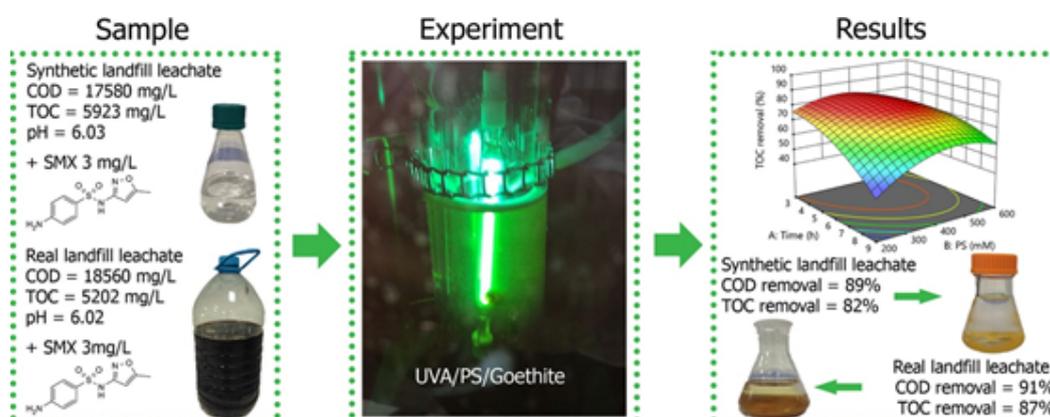
Figure 1. Graphical abstract of the paper

In this study, the researchers applied UVA and goethite activated persulfate oxidation to treat a synthetic and a real landfill leachate spiked with sulfamethoxazole (SMX). The optimum removal conditions were obtained using response surface methodology and 87% removal of total organic carbon (TOC) and 100% removal of SMX from the real landfill leachate were

obtained for persulfate concentration of 419.3 mM and goethite dosage of 663 mg/L after 4.68 h under UVA irradiation. Air stripping of real landfill leachate at pH 11 was complementarily applied to completely remove ammonia nitrogen after 3 hours. The results demonstrated the efficiency of the UVA/Persulfate/Goethite system for the removal of organic matter from the landfill leachate for the first time.

This work was the first published in collaboration with Dr. Dionysiou, Professor and Graduate Program Director, Environmental Engineering and Science Program, School of Energy, Environmental, Biological, and Medical Engineering (SEEBME), University of Cincinnati, UNESCO Co-Chair Professor on "Water Access and Sustainability", and one of the last in his career as he left us so suddenly. This paper will serve as a reminder of his kindness, friendliness, leadership and mental acuity. May his soul rest in peace.

2. Membrane bioreactor and advanced oxidation processes for combined treatment of synthetic wastewater containing naproxen, bisphenol A, and sulfamethoxazole

by Yerkanat N. Kanafin, Aliya Satayeva, Perizat Abdirova, Vassilis J. Inglezakis, Elizabeth Arkhangelsky, Stavros G. Poulopoulos.

The research team combined the sequencing batch reactor (SBR), membrane filtration and advanced oxidation processes (AOPs) to achieve high pollutant removal efficiency from the synthetic municipal wastewater. The results of the study were published in Journal of Water Process Engineering (Q1, IF: 7.34) and can be found on the following link.
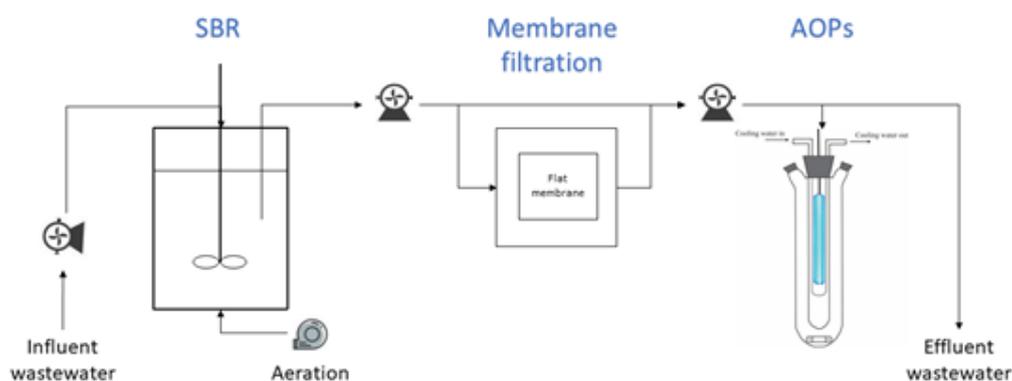
Figure 2. The scheme of the integrated system used in this work

Environmental and health issues caused by the abundance of emerging pollutants in the aquatic environment motivate the research into wastewater treatment methods. In the present study, a membrane bioreactor (MBR) and advanced oxidation processes (AOPs) were combined for the efficient treatment of a synthetic wastewater containing naproxen (NPX), bisphenol A (BPA), and sulfamethoxazole (SMX). The MBR setup consisted of a sequencing batch reactor (SBR) linked to an external filtration system. Track-etch membranes (TEM) with pore size of 10 nm, 50 nm, and 100 nm and a phase inversion membrane (PIM) were used.

The total organic carbon (TOC) removal for the SBR was in the range of 78–86 %, while the degradation of NPX, BPA, and SMX observed was 11 %, 45 %, and 6 %, respectively. All of the four membranes tested showed insignificant TOC removal efficiencies ranging from 1 % to 6 %. In the case of emerging pollutants, the highest removal values were observed for the 10 nm TEM: 11 %, 93 %, and 14 % for NPX, BPA, and SMX, respectively. Finally, the effluents from SBR and MBR were treated using UV-driven AOPs. Complete mineralization of TOC and removal of emerging pollutants were achieved after 30 min for MBR effluents using UV/ Persulfate 10 mM /Fe0 25 mg/L, which shows the high potential of using MBR and AOPs in combination.

3. 4-Nitrophenol reduction and antibacterial activity of Ag-doped TiO2 photocatalysts

by Saule Mergenbayeva, Akhmet Bekaliyev, Arslan Junissov, Dilnaz Begenova, Tri T. Pham, Stavros G. Poulopoulos.

The research team studied the photocatalytic reduction of toxic 4-nitrophenol (4-NP) via hydrogenation using sodium borohydride and newly prepared Ag-doped TiO2 (AT) nanoparticles to produce 4-aminophenol (4-AP) that is considered as an important intermediate that has wide application prospects. The antibacterial activity of these catalysts against Bacillus subtilis, Escherichia coli, Staphylococcus aureus, and Pseudomonas aeruginosa were tested. The results of the study were published in Environmental Science and Pollution Research (Q1, IF: 5.8) and can be found on the following link.
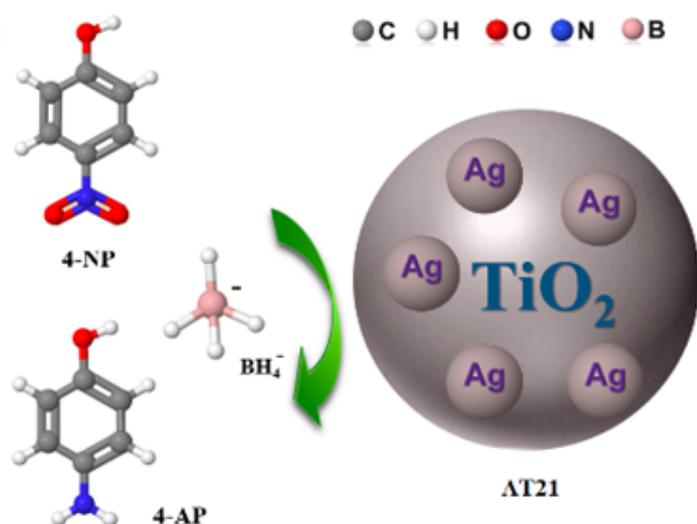
Figure 3. The schematic representation of 4-NP reduction by AT21 catalyst

Photocatalytic reduction of hazardous 4-NP by nano-sized materials to produce 4-AP, which is a commercially valuable product, is a promising alternative as the process is framed within the circular economy. In this context, AT catalysts were synthesized by liquid impregnation and reduction techniques, and their structure, morphology, elemental composition, textural, and light absorption properties were evaluated by XRD, Raman spectroscopy, SEM, TEM, EDS, BET, and DRS spectroscopy. AT catalysts exhibited an enhanced photocatalytic reduction of 4-NP into 4-AP in the presence of NaBH4. Among the tested catalysts, AT21 prepared by a simple aqueous reduction method showed the highest activity reaching about 98% 4-NP reduction within 10 min. Antibacterial tests of these catalysts against Bacillus subtilis, Escherichia coli, Staphylococcus aureus, and Pseudomonas aeruginosa revealed that AT21 also exhibited the lowest minimum inhibitory concentration, suggesting that it has the strongest antibacterial activity. These findings suggest that AT21 catalyst with improved catalytic and antibacterial properties can potentially be utilized for the remediation of 4-NP-contaminated water environment. This publication signals the successful initiation of collaboration with the research group of Dr. Tri Pham, responsible for investigating the antibacterial properties of the catalysts prepared.

Graduate School of Public Policy News

NEW NARRATIVES AND OLD MYTHS: HISTORY TEXTBOOKS IN KAZAKHSTAN

The research article "*New Narratives and Old Myths: History Textbooks in Kazakhstan*" authored by NU GSPP Professors Dr. Aziz Burkhanov and Dr. Dina Sharipova has been published online in the *Nationalities Papers* by Cambridge University Press.

This article focuses on the role of textbooks in the construction of national identity by analyzing state-approved versions of national identity and history in Kazakhstan. By doing so, this project seeks to highlight what understanding of identity prevails in the history textbooks of Kazakhstan, what narratives regarding the key historic events are promoted, particularly with respect to the Dzhungar wars, annexation of Kazakh Khanate by the Russian Empire, and the Soviet era. Finally, this article compares the main narratives in the textbooks published in Kazakh and Russian languages to illustrate differences and various understandings of identity in the two linguistic realms of Kazakhstan. The article argues that Kazakhstan's textbooks combine new, independence-focused narratives with the old approaches and partial reproduction of the Soviet symbolic discourse.

You can find the article here.
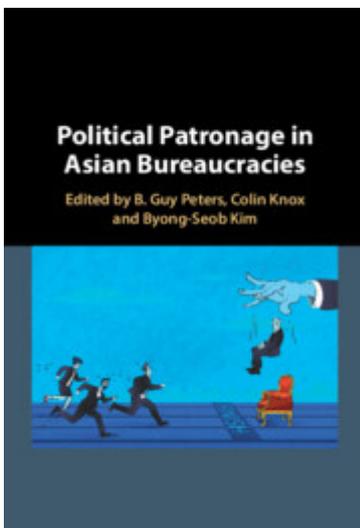
POLITICAL PATRONAGE IN ASIAN BUREAUCRACIES

GSPP Professor Colin Knox and his coleagues from University of Pittsburgh and Seoul National University published a book with the Cambridge University Press. A new book, titled «*Political Patronage in Asian Bureaucracies*», sheds light on the intricate dynamics of appointments to key public sector positions in 11 Asian countries. It employs a comprehensive typological framework to dissect this practice, focusing on the basis of trust and the predominant role of political appointees.

The study reveals varying levels of patronage across the sampled countries, with well-established civil service systems, such as Japan, Singapore, and South Korea, exhibiting minimal levels. In contrast, nations with weaker civil service structures, like Bangladesh and India, showcased notably higher levels of patronage appointments.

The narrative unfolds further as the analysis places countries like Vietnam, Kazakhstan, and China in a middle ground. Despite possessing formal civil service systems, these nations are significantly influenced by political parties and societal ties, offering a nuanced perspective on the interplay between bureaucracy and political patronage.

The book's insightful conclusion emphasizes the diversity within patronage practices, underscoring the significance of tasks performed by appointees and the nature of the trust relationships involved. This seminal work provides a crucial lens into the complexities of political patronage, offering a nuanced understanding of its impact on administrative structures in the Asian context.

Political Economy of Education Research (PEER) Network held "The Central Asia and Africa Hubs Joint Symposium" in Istanbul, Turkey, from November 20 to 25. This week-long event was funded by the Global Challenges Research Fund (GCRF). The PEER Network is a Research Consortium led by Prof Mario Novelli from the University of Sussex and Prof Kelsey Shanks from Ulster University. It consists of two regional hubs, namely the Central Asia Hub, led by Prof Naureen Durrani and Dr Hélène Thibault from Nazarbayev University, and the Africa Hub, led by Prof Azeem Badroodien and Dr Yunus Omar from the University of Cape Town. The symposium brought together members and fellows from both the Central Asia and Africa Hubs, as well as researchers from Sussex and Ulster University. The Project aiming to develop a critical and locally grounded approach to the Political Economy Analysis of Education and promote equity and social justice, commissioned early career researchers from Central Asia and Africa in summer 2022 to conduct small-scale research. The primary purpose of the symposium was to provide a platform for early career researchers from Central Asia and Africa to present their findings from the projects. They used the analytical lens of the Political Economy of Education to address existing inequalities and injustices among different social and cultural groups.

PEER NETWORK FELLOWS PRESENTING FINDINGS FROM THEIR SMALL-SCALE PROJECTS

CULTURE, EDUCATION & SOCIAL TRANSFORMATION

Bridget Steffen (Africa hub)

Re-Imagining Higher Education in the Chaosmos: experimenting with new, regenerative approaches to learning at UCT's Centre for Theatre, Dance and Performance Studies (CTDPS), drawing from the past, present and the future.

Monwabisi Dasi (Africa hub)

The significance of Oral Tradition as an educational instrument in the marginalised rural town of Steynsburg, Eastern Cape.

Sandile Fanana & Amy "Brown" Hendrickse (Africa hub)

Artivists creative responses to: Language as Power in mixed indigenous township spaces of Cape Town.

EMPIRE, GEOPOLITICS & EDUCATION

Diana Toimbek (Central Asia hub)

Fighting illiteracy and political enlightenment: Soviet educational policies in the 1920s.

Aigerim Mussabalinova (Central Asia hub)

The missing generation of children affected by nuclear tests in the Semipalatinsk region, Kazakhstan (1991-2021).

Sherzod Khaydarov (Central Asia hub)

Political economy analysis of factors influencing the expansion of Russian International Branch Campuses in Uzbekistan.

GENDER, EDUCATION & IDENTITY

Alexandra Nam (Central Asia hub)

Medium of instruction, national identity and attitudes towards gender roles in Kazakhstan

Ainur Almukhambetova (Central Asia hub)

Exploring STEM teacher-educators' gender awareness and understanding of gender-responsive pedagogies in Kazakhstan

Zhazira Bekzhanova (Central Asia hub)

Gender, language and social inequalities in the textbooks on the history of Kazakhstan

REFUGEES, EDUCATION & SOCIAL INCLUSION/EXCLUSION

**Alison Kuah and Julvie Mumangi
(Africa hub)**

Selling hope: non-state actors in refugee higher education in South Africa

**Kennedy Monari
(Africa hub)**

Refugee Educational Outcomes: An assessment of policy maker's perceptions on Uganda's progressive education approach to conflict-affected children.

GOVERNING EDUCATION SYSTEMS: CHALLENGES & OPPORTUNITIES
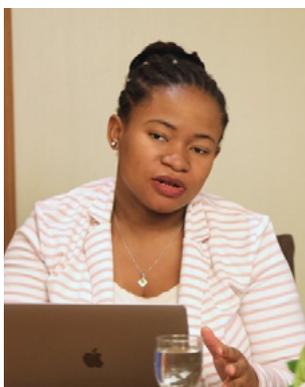
**Joy Sambo
(Africa hub)**

An exploratory study on the cultural and political economy: decision-making concerning menstruating schoolgirls' education access in Kafue District of Lusaka, Zambia

**Zahraa McDonald
(Africa hub)**

Evaluating qualification frameworks from the perspective of political economy of education

**Zilola Khalilova
(Central Asia hub)**

The Role of Religion in Uzbekistan's Educational Landscape: A Post-Soviet Perspective

DIVERSE POLICY ACTORS IN EDUCATION

**Ashley Visagie
and Helga Jansen-
Daugbjerg
(Africa hub)**

'Radical love' and
personalised justice:
The stigma power of
resilience discourses

**Natalya Hanley
(Central Asia hub)**

The role NGOs play in
the education sector
within the conflict-
affected context

**Rahimjon
Abdugafurov
(Central Asia hub)**

Islam, Women, and
Genderization in
Professions: The Case
of Uzbekistan

INCLUSION, ACCESS & SOCIAL TRANSFORMATION IN HIGHER EDUCATION

**Nowell Chidakwa
(Africa hub)**

Experiences of post-high school
students in Zimbabwean rural
communities: a collaborative
approach to enhancing resilience
to attaining higher education

**Kot David Adhal Nguar
(Africa hub)**

Perceptions among university
students about the role of
higher education in promoting
peacebuilding and economic
transformation: Evidence from
South Sudan

LANGUAGE, EDUCATION, POWER & IDENTITY FORMATION

**Vasila Bozichaeva
(Central Asia hub)**

Equity in learning assessment in Tajikistan: Language minority and students with disabilities in higher education

**Kelvin Mubiana Katukula
(Africa hub)**

Language as a form of violence and assimilation: stakeholders' views of Silozi as a medium of instruction and learning in the Zambezi region of Namibia

**Fariza Tolesh
(Central Asia hub)**

The Politics of Languages in Education: A Study on Access to Education and Labor Market Participation of Ethnic Uzbeks in Kazakhstan

In addition to the fellows' presentations, the Hub leaders, Prof Mario Novelli (University of Sussex), Prof Kelsey Shanks (Ulster University), Prof Naureen Durrani and Dr Hélène Thibault (Nazarbayev University), Prof Azeem Badroodien (University of Cape Town), conducted several sessions, inviting the participants to reflect on the synergies and themes that emerged throughout the event. They encouraged critically examining diverse inequalities and injustices among various social and cultural groups, extending beyond their immediate contexts. Capturing education as a microcosm of a broader society, discussions attempted to delve into the role of education in addressing structural violence, thereby contributing to the construction of an inclusive, just, and cohesive society and fostering positive peace.

Moreover, with the aiming to support sustainable career and scholarly community development among the early career researchers from Central Asia and Africa, practical advice on potential career paths was shared, while the participants were encouraged to consider future collaborative work across the Hubs. Participants also had the privilege of immersing themselves in the rich Turkish society, culture, and context, thanks to Dr Birgul Kutan from the University of Sussex. By the end of the week, all participants had formed strong bonds through their shared experiences. It was incredible to see how they not only interacted between hubs but also gained valuable insights from the Turkish context.

It was truly inspiring to see scholars from diverse regional backgrounds coming together to foster mutual learning and identify shared structural violence in the field of education. The symposium was a great success, with a perfect balance of PEER Fellow inputs and reflective sessions on various topics such as careers, evaluation, capturing synergies, and final reflections. The event was truly an enriching and collaborative environment that fostered intellectual exchange and a collective commitment to social justice and positive peace.

School of Sciences and Humanities News

DEPARTMENT OF MATHEMATICS HOSTED FIFTH WORKSHOP ON DIGITALIZATION AND COMPUTABLE MODELS ON OCTOBER 2-6, 2023

The main goals of the WDCM workshop series include:

- Providing a venue for leading researchers in computability theory and computer science to meet and discuss the latest trends in their areas.

- Providing an opportunity for younger researchers to present their work.

- Encouraging joint projects of interdisciplinary nature.

Program committee consisted of Sergey Goncharov (Sobolev Institute of Mathematics, Russia), chair Marat Arslanov (Kazan Federal University, Russia), co-chair Pavel Alaev (Sobolev Institute of Mathematics, Russia), Serikzhan Badaev (Kazakh-British Technical University, Kazakhstan), Nikolay Bazhenov (Sobolev Institute of Mathematics, Russia), secretary of the PC, Iskander Kalimullin (Kazan Federal University, Russia), Manat Mustafa (Nazarbayev University, Kazakhstan), Luca San Mauro (TU Wien, Austria), Victor Selivanov (A.P. Ershov Institute of Informatics Systems, Russia), Frank Stephan (National University of Singapore), Jamalbek Tussupov (Eurasian National University, Kazakhstan).

There were 13 pleanary speakers:

1. Juan Aguilera (Vienna University of Technology, Austria). Determinacy in second-order arithmetic.

2. George Barmpalias (Institute of Software, Chinese Academy of Sciences). Path-random trees and models of arithmetic.

3. Lorenzo Carlucci (Sapienza University of Rome, Italy). On the effective content of restrictions and variants of Hindman's Finite Sums Theorem.

4. Longyun Ding (Nankai University, China). On equivalence relations induced by Polish groups.

5. Marat Faizrakhmanov (Kazan Federal University, Russia). Numberings and the Recursion Theorems.

6. Akitoshi Kawamura (Kyoto University, Japan). Subrecursive translations between irrational number representations.

7. Bakh Khoussainov (University of Electronic Science and Technology of China). Exotic examples of automatic structures.

8. Nurlan Kogabaev (Sobolev Institute of Mathematics, Russia). Complexity of the problem of Horn representability for sentences.

9. Alexander Melnikov (Victoria University of Wellington, New Zealand). Computable topological groups.

10. Russell Miller (City University of New York, USA). Computability and the absolute Galois group of Q.

11. Holger Thies (Kyoto University, Japan). Formal verification and program extraction for efficient computations over real numbers and hyperspaces.

12. Guohua Wu (Nanyang Technological University, Singapore). More on cuppings in computably enumerable degrees.

13. Yue Yang (National University of Singapore). Some generalizations of Posner-Robinson Theorem.

Program also included 14 contributed talks (20mins each). There were over 30 attendance including students from NU and from other universities in Kazakhstan.

THE EUROPEAN CONFERENCE ON INFORMATION LITERACY (ECIL): A LIBRARIAN'S QUEST FOR KNOWLEDGE AND ADVANCEMENT

YELIZAVETA KAMILOVA
EXPERT MANAGER, TEACHING AND LEARNING OFFICE, LIBRARY

As a teaching and learning librarian, I have a great responsibility to educate and teach NU students and other groups of users information literacy concepts, especially as a subject liaison at graduate schools of education and public policy.

The European Conference on Information Literacy (ECIL) is an annual conference co-organized by the Department of Information Management of Hacettepe University and the Department of Information and Communication Sciences of Zagreb University (European Conference on Information Literacy, n.d.). "Information Literacy, Media Literacy and Lifelong Learning being the main themes, ECIL aims to bring together researchers, information professionals, media specialists, educators, and policy makers from around the world to exchange knowledge and experience and discuss current issues, recent developments, challenges, theories, and good practices." (ECIL, n.d.). This year the ECIL conference received UNESCO's Patronage which demonstrates the eligibility and reliability to international scope and an audience and outreach at the international level (United Nations Educational, Scientific and Cultural Organization, n.d.).

The Nazarbayev University Library Administration recommended attending the ECIL conference due to its exceptional alignment with both my professional interests and the strategic goals of our organization, as it has a longstanding reputation for being at the forefront of discussions and developments in the field of information literacy. As a professional responsible for managing and enhancing information literacy initiatives within our organization, I recognized that ECIL would provide a unique platform to learn the latest trends, research, and best practices in the information literacy field.

Acknowledging the significance of participating in this conference, in collaboration with my colleague and co-author, Zh. Orazymbetova began preparations with the intention not only to attend but also to present. This endeavor will afford me the opportunity to introduce Kazakhstan and Nazarbayev University to European experts in the information literacy field, sharing insights into the current state of media and information literacy in our country by publishing an article in conference proceedings. Additionally, I aim to collect feedback and establish connections for potential collaborations.

The Conference Committee after the long-drawn reviewing process confirmed the acceptance of the article.

The paper presents the findings of the «SauattyKeleshek» social project, which was funded by the Nazarbayev University Social Development Fund and aimed to enhance MIL knowledge, skills, and abilities among academic and school librarians in Kazakhstan.

The study explores the MIL competencies of the project participants and assesses how MIL training can improve their knowledge. The «SauattyKeleshek» project engaged 391 participants in 24 online and 7 onsite educational training sessions, where they learned to manage information flows, search for, use, and share reliable information, select and organize digital content, understand copyright issues, and apply critical thinking strategies. As an overall result, the article will be published in Springer Nature Journal, and currently, the Book of Abstract is available online on Google Scholar.

The project's findings and outcomes were shared and presented at a dedicated ECIL session, moderated by Information Science expert Professor Jane Secker (University of London, UK).

I shared the presentation with my coauthor and introduced Kazakhstan and Nazarbayev University to the participants from European countries.

As expected, foreign experts showed keen interest in our project, asking questions about the process and outcomes. Participants inquired about the 1600 euro budget and expressed curiosity about its significance in Kazakhstan, considering it a relatively small amount for Europe. Other participants inquired about the background of project participants, specifically whether they were librarians and had any formal education related to library science. Another question was about the project's sustainability and current status.

After the presentation, a representative from Ukraine reached us and invited to join the International project "Filter". Funded by the Governments of Japan and Germany, the United Nations Development Programme (UNDP) in Ukraine is supporting the «Filter» National Media Literacy Project of the Ministry of Culture and Information Policy in developing the National Media Literacy Strategy.

In addition, Andrew Beman Cavallaro from the University of South Florida emailed us with the proposal to write a peer-reviewed article regarding the partnerships between librarians that form internationally through professional development organizations.

Attending the European Conference on Information Literacy was an exceptional opportunity for me, given that the conference places a strong emphasis on topics that align with my role and expertise. The ECIL Conference presented a wide range of presentations, discussions, and workshops and provided an opportunity to network with professionals and experts from different countries and backgrounds. The ideas and knowledge shared by the presenters and fellow participants were not only enlightening but deeply inspiring.

I was able to ask questions from the presenter regarding the chatbot procedure which I am currently piloting at NU Library. In addition to the response from the expert speaker, some participants who also run this project shared their practice and provided their contacts for further discussions.

I was also impressed by the expert speakers - Hannah and Jane (USA) with the presentation "How Do Instruction Librarians Continue Learning New Concepts and Skills throughout their Careers? Stories and Best Practices from North American Instruction Librarians" sharing their study on middle-career librarians' professional development issues, burnout, lack of attention, and ways to handle them. Another great session with the title: "Innovative Information Literacy Support for Academic Students – We Got their Backs" by Heidi Janina Troberg and Pia-Maria Niemitalowas (Finland) dedicated to the Information literacy sessions and the results of the study were a great clue to implement and develop here at NU.

And of course, Artificial Intelligence was the most important theme in this conference, shared their visions and possible applications with us. Krista Lepik from University of Tartu, Estonia assured the opinion that the AI can be compared with the Estonian folklore creature Kratt with her presentation "Students' Perceptions of Using Artificial Intelligence in Written Assignments – Is Information Literacy Still Needed?".

The experts from the US provided a workshop on understanding the end user, and how librarians provide good quality assistance. The session "The Impact of Teaching Digital Literacies and Open Practices" provided by Jane Secker was also interesting as she presented the Board Game she used for the Copyright Literacy sessions. As the game is online and can be adapted and available under Creative Commons licenses it is a great chance to diversify the NU library Open IL session.

Another workshop provided by Heather and Ashely "Building the Habit: How Information Literacy in Everyday Life Connects to Lifelong Learning" was a great insight for me, we investigated how learners experience and create meaning through exemplar information literacy activities. The most interesting part was how the workshop was done, the speakers involved participants at every stage of the discussion and prepared tasks so all the members could share their backgrounds, and thoughts and engage. I also think of applying this strategy and idea during the School of Library Technologies to train local Kazakhstani librarians. Overall, these sessions and workshops were a wonderful opportunity to expand my understanding of information literacy and its various applications.

I had the chance to participate in discussions and sessions centered around information literacy, media literacy, and lifelong learning, which are the core themes of the conference. As a result, I was able to make a list of suggestions and recommendations to be implemented at NU Library, for instance:

• Implementation of Silent Teams Room: Creating an online platform where library users can connect at specific times to receive real-time consultations.

• Using the Board Game methodology for developing Copyright Literacy: A gamified ap-proach to increasing users' awareness of copyright rules.

• Replacing the information assessment method CRAAP Method with TRAAP: Revising the criteria for assessing the credibility of information.

• Visual (online) sheets to support sessions: to enhance engagement, understanding, and reten-tion of information shared during the Open IL sessions.

• Discussion of LibChatBot: Conversation of the process of integrating chatbots in library services and their relevance.

The overall suggestions and recommendations were shared with colleagues on November 7, 2023 during the NU Library Staff Training Day.

It was an excellent opportunity to disseminate the knowledge and insights gained from the ECIL conference and get feedback from the library director who was acting as a session moderator. Suggested ideas and best practices were discussed among colleagues and even selected concepts were implemented in the library's operational process.

In conclusion, attending the ECIL conference was a great strategic decision for the library administration to equip us with the knowledge and resources needed to effectively address our organization's information literacy challenges and goals. The knowledge and experience gained from the conference is shared with Teaching and Learning Office librarians, and NU Library staff, also a set of training sessions will be based to introduce Kazakhstani librarians during the School of Library Technologies and Eurasian Academic Libraries Conference. In addition, the presentation "Social Project of Media and Information Literacy Knowledge Improvement among Academic and School Librarians in Kazakhstan'' helped showcase Kazakhstan and NU as actively developing contributors in the field of Information Literacy.

REFERENCES

European conference on information literacy. (n.d.). Aim & scope. https://ecil2023.ilconf.org/aim-scope/

United Nations Educational, Scientific and Cultural Organization. (n.d.) Logo and patronage. https://www.unesco.org/en/logo-patronage

RESEARCH PERFORMANCE OVERVIEW

In this issue, we are delighted to present you an overview of research activities conducted under the auspices of Nazarbayev University.

Since its inception in 2011, Nazarbayev University faculty members and researchers have released 8,041 peer-reviewed publications indexed by Scopus, and have been cited 97,119 times for 2011-2023 period (Source: SciVal, December 2023). The approximate number of citations per peer-reviewed publication is 12.1. The overall H-index of NU is 100, whereas H5-index is 69. The Field-Weighted Citation Impact is 1.43, meaning that our publications have been cited 33% more than would be expected based on the world average for similar publications (over 2018-2023 years).

International collaboration is widely recognized as a key factor that positively influences citation metrics. By expanding professional networks and fostering global partnerships, collaboration often leads to the production of highly cited publications.

During the period from 2018 to 2023, NU exhibited a significant commitment to international collaboration, as evidenced by the production of 4,229 research papers in partnership with 3,031 organizations from 131 different countries. These collaborative efforts accounted for 66.1% of the total number of publications indexed by Scopus. The map on the right illustrates how these collaborations are spread throughout the world. The overall Field-Weighted Citation Impact of these co-authored papers is 1.58, meaning that these papers are cited 58% more than would be expected based on the world average for similar publications.

For getting more comprehensive information on the research performance at NU, please have a look at the following presentation prepared using SciVal research evaluation platform.

If you have any questions regarding the provided information, please contact Saule Sadykova (ssadykova@nu.edu.kz)

FUNDING OPPORTUNITIES

#	Opportunity	Funder	Deadline	Source link
1	Challenge Award	PhRMA foundation	1-Nov-23	URL
2	RESEARCH GRANTS	LEO Foundation	8-Jan-24	URL
3	Supporting Research in Health Disparities, Policy and Ethics in Alzheimer's Disease and Dementia Research (HPE-ADRD)	Alzheimer's Association	9-Jan-24	URL
4	Education and awareness grants 2024	LEO Foundation	15-Jan-24	URL
5	TB REACH WAVE 11: BRINGING INNOVATIVE APPROACHES FOR TB AND LUNG HEALTH CLOSER TO THE POINT OF NEED	StopTB partnership	17-Jan-24	URL
6	Commercialization grants 2024-2026	MSHE RK	22-Jan-24	URL
7	The Zuckerberg Water Prize	Zuckerberg Institute	25-Jan-24	URL
8	Call for Proposals: Expanding Online Trust & Safety Research	Stanford Internet Observatory	30-Jan-24	URL
9	INNOVATION CUP	Merck	31-Jan-24	URL
10	Discovery Grants	National Psoriasis Foundation	1-Feb-24	URL
11	2024 Motorola Solutions Foundation Annual Grant	Motorola Foundation	1-Feb-24	URL
12	Audiobox Responsible Generation Grant	Meta	2-Feb-24	URL
13	Early and Late Stage Clinical Trials for the Spectrum of Alzheimer's Disease/Alzheimer's Related Dementias and Age-Related Cognitive Decline (R01 Clinical Trial Optional)	NIH	5-Feb-24	URL
14	Kaleidoscope Pro-Only Grant	Wildlife Acoustics	15-Feb-24	URL
15	Pilot Studies for the Spectrum of Alzheimer's Disease/Alzheimer's Disease-Related Dementias and Age-Related Cognitive Decline (R61 Clinical Trial Optional)	NIH	20-Feb-24	URL
16	THE TRINITY CHALLENGE ON ANTIMICROBIAL RESISTANCE	The Trinity Challenge (TTC)	29-Feb-24	URL
17	Action Potential grants	The FamilieSCN2A	1-Apr-24	URL
18	The Mohammed bin Rashid Al Maktoum Global Water Award	UAE Water Aid Foundation, Suqia UAE	30-Apr-24	URL
19	DIAGNOSTICS ACCELERATOR: PERIPHERAL BIOMARKERS PROGRAM	The Alzheimer's Drug Discovery Foundation	rolling basis	URL
20	HODGKIN-HUXLEY RESEARCH GRANT	The FamilieSCN2A	rolling basis	URL
21	American Tinnitus Association`s grant program	The American Tinnitus Association	rolling basis	URL
22	Research Grants and Support	Nestlé Foundation	rolling basis	URL
23	Carl Zeiss Humboldt Research Award	the Humboldt Foundation	rolling basis	URL
24	Fraunhofer-Bessel Research Award	the Humboldt Foundation	rolling basis	URL

FUNDING OPPORTUNITIES

#	Opportunity	Funder	Deadline	Source link
25	Friedrich Wilhelm Bessel Research Award	the Humboldt Foundation	rolling basis	URL
26	Clean Energy Accelerator	Amazon	rolling basis	URL
27	Project Grants	The Myrovlytis Trust	rolling basis	URL
28	Small/ Pilot Studies	The Myrovlytis Trust	rolling basis	URL
29	Energy Foundation`s grants	Energy Foundation China	rolling basis	URL
30	Impact Collaboration Programme (ICP 2023)	The Geneva Science-Policy Interface	rolling basis	URL
31	Research Core Award: Non-rodent Large Animal Model for Inherited Retinal Disease (worldwide)	Foundation Fighting Blindness	rolling basis	URL

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Abdildin, Y., Jyeniskhan, N., Salamat, A. and 2 more (...) (2023).Effect of Barbiturate Coma Therapy on Patients with Resistant Intracranial Hypertension: A Meta-Analysis. 2023 International Conference on Decision Aid Sciences and Applications, DASA 2023,485-488
- Abdildin, Y., Narbayev, D., Viderman, D. (2023).Statistical Analysis of the Effect of Extended-Release Epidural Morphine Versus Morphine Sulfate on Postoperative Medical Outcomes. SIST 2023 - 2023 IEEE International Conference on Smart Information Systems and Technologies, Proceedings,145-148
- Abdugapbar, K., Dautov, K., Hashmi, M. and 1 more (...) (2023).High-Efficient Double Negative Metamaterial-based Absorber. IEEE Antennas and Propagation Society, AP-S International Symposium (Digest),2023-227-228
- Abdullahi, A.K., Mosanya, A.U., Bello, N. and 1 more (...) (2023).Evaluation of job satisfaction among pharmacists working in public health facilities. Exploratory Research in Clinical and Social Pharmacy,12
- Abedinia, O., Shorki, A., Nurmanova, V. and 1 more (...) (2023).Synergizing Efficient Optimal Energy Hub Design for Multiple Smart Energy System Players and Electric Vehicles. IEEE Access,11116650-116664
- Abibullaev, B., Keutayeva, A., Zollanvari, A. (2023).Deep Learning in EEG-Based BCIs: A Comprehensive Review of Transformer Models, Advantages, Challenges, and Applications. IEEE Access,11127271-127301
- Adhikari, B. (2023).The impact of the Asian infrastructure investment bank on the United Nations. Global Institutions in a Time of Power Transition: Governing Turbulence,122-141
- Adoko, A.C., Zhakipbayev, A. (2023).A reliability analysis of the dilution graph method for open stope design: A case study. 57th US Rock Mechanics/Geomechanics Symposium,
- Ahmad, A., Orassay, A., Majaz, S. and 6 more (...) (2023).Computational analysis of target genes in monkeypox virus infection and potential therapeutic precursors. Expert Review of Anti-Infective Therapy,21(10) 1153-1161
- Aidabulov, M., Zhakupov, D., Zhunussova, K. and 3 more (...) (2023).Thermal Characterization, Kinetic Analysis and Co-Combustion of Sewage Sludge Coupled with High Ash Ekibastuz Coal. Energies,16(18)
- Aidarkhanov, D., Yelzhanova, Z., Ren, Z. and 7 more (...) (2023).Synergic effects of incorporating black phosphorus for interfacial engineering in perovskite solar cells. Surfaces and Interfaces,43
- Aitbayev, A., Valagiannopoulos, C. (2023).Hiding a Light Source with Photonic Dimers of Paired Nanorods. IEEE Transactions on Antennas and Propagation,1-1
- Aitekenov, S., Sultangaziyev, A., Abdirova, P. and 4 more (...) (2023).Raman, Infrared and Brillouin Spectroscopies of Biofluids for Medical Diagnostics and for Detection of Biomarkers. Critical Reviews in Analytical Chemistry,53(7) 1561-1590
- Aitkali, A., Zhuniskhanov, A., Rakhmankulov, E. (2023).Investigation of the burial mounds of early nomads of the Irtysh river region of Semey. Kazakhstan Archeology,21(3) 82-94
- Ajjaq, A., Barin, Ö., Çağırtekin, A.O. and 2 more (...) (2023).ZnO seed-mediated hydrothermal growth of advanced 1-D ZnO and 2-D CuO nanostructured oxide ceramics for gas sensing applications. Ceramics International,49(24) 40853-40865
- Akanova, I., Urazayev, D., Kadirzhanov, Y. and 1 more (...) (2023).Demo: A LoRaWAN Emulator Testbed. Proceedings - IEEE Symposium on Computers and Communications,2023-
- Akhmedyarova, A. (2023).Housing Market Dynamics in Kazakhstan: An Estimated DSGE Model. International Real Estate Review,26(3) 420-462
- Alimanov, K., Assylbekov, Z. (2023).Hardness of Learning AES with Gradient-Based Methods. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics),14342126-133
- Alimbetov, D., Umbayev, B., Tsoy, A. and 4 more (...) (2023).Small molecule targeting of the p38/Mk2 stress signaling pathways to improve cancer treatment. BMC Cancer,23(1)
- Almstedt, L., Baltieri, D., Sorbelli, F.B. and 13 more (...) (2023).Technological Innovations in Agriculture for Scouting Halyomorpha Halys in Orchards. Proceedings - 19th International Conference on Distributed Computing in Smart Systems and the Internet of Things, DCOSS-IoT 2023,702-709
- Alsaheb, R.A.A., Mohammed, M.M., Lafi, A.S.A. and 2 more (...) (2023).Study the Effect of Different Renewable Carbon Sources on the Succinic Acid Biosynthesis by Optimization Culture Composition using 4-Liter Scale Bioreactor. Indian Journal of Agricultural Research,57(5) 579-588

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Amankeldi, F., Issakhov, M., Pourafshary, P. and 3 more (...) (2023).Foam Stabilization by Surfactant/ SiO2 Composite Nanofluids. Colloids and Interfaces,7(3)
- Amirkulova, A., Derbissalina, G., Benberin, V. and 4 more (...) (2023).Association between PNPLA3 and TM6SF2 gene polymorphisms and non-alcoholic fatty liver disease patients in Kazakhstan. Electronic Journal of General Medicine,20(6)
- Andizhanova, T., Adilkhanova, A., Khalimon, A.Y. (2023).Homogeneous Metal-Catalyzed Hydrogenation of CO2 Derivatives: Towards Indirect Conversion of CO2 to Methanol. Inorganics,11(7)
- Andreev, V.V., Skrzypacz, P., Golman, B. (2023).Taylor series solutions to steady-state non-isothermal diffusion–reaction problems for porous catalyst pellets with arbitrary kinetics. Mathematical Methods in the Applied Sciences,
- Anwar, M.I., Ali, M., Lanjwani, H.B. and 1 more (...) (2023).Double stratification impacts on MHD flow of micropolar nanofluid over a stretching surface inserted in porous medium. International Journal of Modern Physics B,
- Arora, P., Mostafa, K.G., Russell, E. and 4 more (...) (2023).Shrinkage Compensation and Effect of Building Orientation on Mechanical Properties of Ceramic Stereolithography Parts. Polymers,15(19)
- Arynov, Z. (2023).Educated into Sinophilia? How Kazakh Graduates/Students of Chinese Universities Perceive China. Journal of Current Chinese Affairs,52(2) 334-353
- Arynov, Z., Orazgaliyev, S., Issova, L. (2023).Non-recognizing the Other? Discursive deligitimation of the EAEU by the EU. Journal of Contemporary European Studies,
- Ashirbekov, Y., Seidualy, M., Abaildayev, A. and 6 more (...) (2023).Genetic polymorphism of Y-chromosome in Kazakh populations from Southern Kazakhstan. BMC Genomics,24(1)
- Askar, N., Muneer, R., Pourafshary, P. (2023).Effect of wettability and phase distribution on critical salt concentration for fines migration initiation in sandstone reservoirs. Journal of Molecular Liquids,390
- Ayaya, G., Makoelle, T.M., Van Der Merwe, M. (2023).Developing a framework for inclusion: a case of a full-service school in South Africa. International Journal of Qualitative Studies in Education,36(10) 1996-2014
- Azam, A.B., Jie Kong, Z., Ng, S.Y. and 5 more (...) (2023).Low-cost Underwater Localisation Using Single-Beam Echosounders and Inertial Measurement Units. OCEANS 2023 - Limerick, OCEANS Limerick 2023,
- Azzopardi, P.S., Kerr, J.A., Francis, K.L. and 229 more (...) (2023).The unfinished agenda of communicable diseases among children and adolescents before the COVID-19 pandemic, 1990–2019: a systematic analysis of the Global Burden of Disease Study 2019. The Lancet,402(10398) 313-335
- Badaev, S.A., Bazhenov, N.A., Kalmurzayev, B.S. and 1 more (...) (2023).On diagonal functions for equivalence relations. Archive for Mathematical Logic,
- Bagdauletkyzy, Z., Galymgereyev, M., Abzalova, A. and 2 more (...) (2023).Poster: A Simulator for Time-Slotted LoRa Networks. Proceedings - IEEE Symposium on Computers and Communications,2023-
- Bagheri, M., Mohammadi, M., Riazi, M. (2023).A review of smoothed particle hydrodynamics. Computational Particle Mechanics,
- Baimukhanov, B., Zorbas, D. (2023).Infrastructure-Less Long-Range Text-Messaging System. Proceedings - 2023 IEEE 8th International Conference on Information and Communication Technologies for Disaster Management, ICT-DM 2023,
- Bajet, J.B.A., Alquwez, N., Soriano, S.S. and 4 more (...) (2023).Mental health and social support among Saudi antenatal clients during the COVID-19 crisis. Nursing and Midwifery Studies,12(2) 83-88
- Bakar, A., Kiani, M.S., Nawaz, R. and 1 more (...) (2023).Pressure-dependent physical properties of cesium-niobium oxide: a comprehensive study. RSC Advances,13(42) 29675-29688
- Bakar, A., Kiani, M.S., Rasool, I. and 5 more (...) (2023).Comprehensive study of Cesium-Tantalum Oxide for electronic, optical and thermoelectric properties under the effect of pressure for energy applications. Optik,295
- Bapayeva, G., Terzic, M., Semenova, Y. and 11 more (...) (2023).Unveiling the Role of the Work Environment in the Quality of Life of Menopausal Physicians and Nurses. International Journal of Environmental Research and Public Health,20(18)
- Baris, O.F., Pelizzo, R. (2023).INTRODUCTION TO THE SPECIAL ISSUE: MAGIC, RATIONALITY, AND POLITICS—THE POLITICAL CONSEQUENCES OF TRADITIONAL BELIEFS. World Affairs,186(4) 852-868

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Bass, M., Hessenauer, P. (2023).Can Mobile Device Use in the Classroom Facilitate Student Engagement in Higher Education. Lecture Notes in Networks and Systems,711831-840
- Battakova, Z., Imasheva, B., Slazhneva, T. and 9 more (...) (2023).Public Health Response Measures for COVID-19 in Kazakhstan. Disaster Medicine and Public Health Preparedness,17(5)
- Bayramov, E., Tessari, G., Kada, M. and 2 more (...) (2023).Remote Surveillance of Differential Deformation for Kazakhstan Offshore Kashagan Oilfield Using Microwave Satellite Remote Sensing. Remote Sensing,15(19)
- Bekezhankyzy, Z., Dauletkanov, B., Azhibek, D. and 4 more (...) (2023).Biomimetic Nanofiber Membrane for a Polymer Lung-on-chip Device Modeled using Computational Fluid Dynamics. Proceedings of the IEEE Conference on Nanotechnology,2023-782-786
- Bektyrganova, S., Kozhakhmet, D., Kim, A. and 7 more (...) (2023).A case report of extra-articular manifestation of rheumatoid arthritis: Rheumatoid nodules in lungs. International Journal of Rheumatic Diseases,
- Belgibayeva, A., Rakhatkyzy, M., Rakhmetova, A. and 3 more (...) (2023).Synthesis of Free-Standing Tin Phosphide/Phosphate Carbon Composite Nanofibers as Anodes for Lithium-Ion Batteries with Improved Low-Temperature Performance. Small,19(48)
- Belyayev, A., Kalendar, R., Josefiová, J. and 5 more (...) (2023).Telomere sequence variability in genotypes from natural plant populations: unusual block-organized double-monomer terminal telomeric arrays. BMC Genomics,24(1)
- Berekeyeva, A., Sharplin, E., Courtney, M. and 1 more (...) (2023).Ethical human participant research in Central Asia: a quantitative analysis of attitudes and practices among social science researchers based in the region. Research Ethics,
- Berman, P., Murzabulatov, M., Raskhodnikova, S. and 1 more (...) (2023).Testing Connectedness of Images. Leibniz International Proceedings in Informatics, LIPIcs,275
- Bissenova, A. (2023).DECOLONIZING 'THE FIELD' IN THE ANTHROPOLOGY OF CENTRAL ASIA: 'Being there' and 'being here'. The Central Asian World,82-95
- Bjørklund, G., Semenova, Y. (2023).Serum Levels of Cortisol and Adrenocorticotropic Hormone and their Association with Depression in Environmentally Exposed Populations in Kazakhstan. Molecular Neurobiology,
- Bolatov, A., Tezekbayev, M., Melnykov, I. and 3 more (...) (2023).Long-Tail Theory Under Gaussian Mixtures. Frontiers in Artificial Intelligence and Applications,372109-116
- Boranbayev, A., Obrosova, N., Shananin, A. (2023).MATHEMATICAL MODEL OF ECONOMIC DYNAMICS IN AN EPIDEMIC. Siberian Electronic Mathematical Reports,20(2) 797-813
- Boranbayev, A., Obrosova, N., Shananin, A. (2023).Technology of Input–Output Analysis with CES Production: Application for Studying the Kazakhstan Supply Chain during the COVID-19 Pandemic. Sustainability (Switzerland),15(19)
- Borooah, V., Knox, C. (2023).Inequalities in undergraduate participation and performance in Irish higher education. Higher Education Quarterly,
- Boshkayev, K., Idrissov, A., Luongo, O. and 1 more (...) (2023).Quasiperiodic oscillations for spherically symmetric regular black holes. Physical Review D,108(4)
- Burmistrova, V., Makoelle, T.M. (2023).Change from face-to-face teaching and learning to online learning: A case of a cross-sectional study in a Kazakhstani medical University. Cogent Education,10(2)
- Cao, J., Saravanan, S., Kashkynbayev, A. and 2 more (...) (2023).International Conference on Mathematical Modeling 2023. Mathematics and Computers in Simulation,
- Cerone, A. (2023).Modelling and Analysing Cognition and Interaction. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics),1349030-72
- Cerone, A. (2023).Preface. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics),13490v-viii
- Chakrabarty, H., Chatrabhuti, A., Malafarina, D. and 2 more (...) (2023).Effects of gravitational lensing by Kaluza-Klein black holes on neutrino oscillations. Journal of Cosmology and Astroparticle Physics,2023

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Chen, W., Qiu, Y., Babichuk, I.S. and 10 more (...) (2023).Improving the Strain Control Performance of MoS2 Monolayer to Develop Flexible Electronics. Advanced Engineering Materials,
- Chen, X., Wang, Y., Peng, C. and 10 more (...) (2023).Pseudomorphic Synthesis of Monodisperse Afterglow Carbon Dot-Doped SiO2 Microparticles for Photonic Crystals. Advanced Materials,35(48)
- Choudhary, A., Chahar, A., Sharma, A. and 1 more (...) (2023).Stranger Trust Architecture: An Advancement to Zero Trust Architecture. Lecture Notes in Electrical Engineering,107337-46
- Clouder, L., Karakus, M., Polat, F. (2023).Environmental interventions supporting autistic transition-age youth employability: A scoping review. Research in Autism Spectrum Disorders,109
- Conlon, T., Cotter, J., Kovalenko, I. and 1 more (...) (2023).A financial modeling approach to industry exchange-traded funds selection. Journal of Empirical Finance,74
- Costley, J., Gorbunova, A., Courtney, M. and 2 more (...) (2023).Problem-solving support and instructional sequence: impact on cognitive load and student performance. European Journal of Psychology of Education,
- Cruz, J.P., Baigulina, B., Shalkenova, Z. and 3 more (...) (2023).Investigating the Kazakhstani Pediatric Nurses' intravenous catheter management knowledge and confidence: A cross-sectional study. Nurse Education in Practice,73
- Cruz, J.P., Colet, P., Almazan, J. and 3 more (...) (2023).Assessing the Validity and Reliability of the Russian Version of the Leading a Culture of Quality in Infection Prevention Scale among Nurses in Kazakhstan. Journal of Nursing Management,2023
- Dairabayeva, D., Perveen, A., Talamona, D. (2023).Influence of fused filament fabrication parameters on the flexural strength of nylon. Manufacturing Letters,35502-508
- Dautov, K., Tolebi, G., Abdugapbar, K. and 2 more (...) (2023).ML-enabled Resonance Prediction for SGP-Based WPT. IEEE Antennas and Propagation Society, AP-S International Symposium (Digest),2023-1167-1168
- Dauyltayeva, A., Mukhtarov, A., Sagandykova, D. and 3 more (...) (2023).Screening of Chemicals to Enhance Oil Recovery in a Mature Sandstone Oilfield in Kazakhstan: Overcoming Challenges of High Residual Oil. Applied Sciences (Switzerland),13(18)
- David, T.I., Pestov, N.B., Korneenko, T.V. and 1 more (...) (2023).Non-Immunoglobulin Synthetic Binding Proteins for Oncology. Biochemistry (Moscow),88(9) 1232-1247
- Desyatnikov, A.S. (2023).Vortex rings in paraxial laser beams. Optics Express,31(20) 31955-31968
- Dialektopoulos, K.F., Malafarina, D., Dadhich, N. (2023).Gravitational collapse in pure Gauss-Bonnet gravity. Physical Review D,108(4)
- Dialektopoulos, K.F., Said, J.L., Oikonomopoulou, Z. (2023).New insights from GW170817 in the dynamical system analysis of Einstein Gauss–Bonnet gravity. Physics of the Dark Universe,42
- Dikhanbayeva, D., Aitzhanova, M., Lukhmanov, Y. and 3 more (...) (2023).Industry 4.0 Readiness Assessment of Enterprises in Kazakhstan. IFIP Advances in Information and Communication Technology,689297-310
- Djurišić, A.B., Ng, A., Nigmetova, G. and 3 more (...) (2023).Introducing nanoconcepts used in solar cell development. Sustainable Nanomaterials for Energy Applications,
- Dolzhikova, I., Abibullaev, B., Zollanvari, A. (2023).A jackknifed-inspired deep learning approach to subject-independent classification of EEG. Pattern Recognition Letters,17628-33
- Doumani Dupuy, P.N., Tashmanbetova, Z., Kiyasbek, G. and 4 more (...) (2023).Earliest human burial in Kazakhstan: Neolithic findings from the Koken settlement. Kazakhstan Archeology,21(3) 164-186
- Dukenderov, A., Abilez, A., Onabek, A. and 3 more (...) (2023).Systems Engineering Approach for Designing Electrical Vehicle for Shell Eco-Marathon. SIST 2023 - 2023 IEEE International Conference on Smart Information Systems and Technologies, Proceedings,451-456
- Durdyev, S., Koc, K., Tleuken, A. and 3 more (...) (2023).Barriers to circular economy implementation in the construction industry: causal assessment model. Environment, Development and Sustainability,
- Eduard, A., Urazayev, D., Magzym, Y. and 1 more (...) (2023).Demo: Implementation of a train-arrival notification system. Proceedings - IEEE Symposium on Computers and Communications,2023-
- Eduard, A., Urazayev, D., Sabyrbek, A. and 2 more (...) (2023).Infrastructure-Less Long-Range Train-Arrival Notification System. Proceedings - IEEE Symposium on Computers and Communications,2023-956-962

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Esfahani, A. (2023).Prescribed solutions of a nonlinear fractional Schrödinger system with quadratic interaction. Analysis and Applications,
- Felegari, S., Sharifi, A., Khosravi, M. and 3 more (...) (2023).Using Sentinel-2 data to estimate the concentration of heavy metals caused by industrial activities in Ust-Kamenogorsk, Northeastern Kazakhstan. Heliyon,9(11)
- Foster, F., Kanderzhanova, A., Umbetkulova, S. and 3 more (...) (2023)."Who Else If Not Us": An Exploratory-Descriptive Qualitative Study of Kazakhstani Frontline Professionals' Experience and Perceptions During the Coronavirus Disease 2019 Pandemic. Qualitative Health Research,
- Frissen, I., Kappassov, Z., Huang, K.-Y. and 1 more (...) (2023).Humans can sense small numbers of objects in a box by touch alone. Perception,52(11-12) 799-811
- Gali, V., Jamwal, P.K., Gupta, N. and 1 more (...) (2023).An adaptive dynamic power management approach for enhancing operation of microgrid with grid ancillary services. Renewable Energy,219
- Galiyeva, D., Syssoyev, D., Mussina, K. and 6 more (...) (2023).Epidemiology of type 1 diabetes mellitus in children in Kazakhstan: Data from unified national electronic health system 2014-2021. Electronic Journal of General Medicine,20(6)
- Gardner, W.M., Razo, C., McHugh, T.A. and 550 more (...) (2023).Prevalence, years lived with disability, and trends in anaemia burden by severity and cause, 1990–2021: findings from the Global Burden of Disease Study 2021. The Lancet Haematology,10(9) e713-e734
- Glushkova, N., Semenova, Y., Sarria-Santamera, A. (2023).Editorial: Public health challenges in post-Soviet countries during and beyond COVID-19. Frontiers in Public Health,11
- Glushkova, N., Turdaliyeva, B., Kulzhanov, M. and 10 more (...) (2023).Examining disparities in cardiovascular disease prevention strategies and incidence rates between urban and rural populations: insights from Kazakhstan. Scientific Reports,13(1)
- González, J., Bosch-Presegué, L., Marazuela-Duque, A. and 9 more (...) (2023).A complex interplay between H2A.Z and HP1 isoforms regulates pericentric heterochromatin. Frontiers in Cell and Developmental Biology,11
- Good, M.R.R., Zarikas, V. (2023).Phenomenological footprints of Λ varying gravity theories inspired from quantum gravity models in the multi-messenger era. Classical and Quantum Gravity,40(20)
- Gunina, E.V., Zhestkij, N.A., Sergeev, M. and 15 more (...) (2023).Laser-Assisted Design of MOF-Derivative Platforms from Nano- to Centimeter Scales for Photonic and Catalytic Applications. ACS Applied Materials and Interfaces,15(40) 47541-47551
- Guo, Y., Khan, S., Wahab, A. and 1 more (...) (2023).Multipolar Acoustic Source Reconstruction from Sparse Far-Field Data Using ALOHA. IEEE Signal Processing Letters,301627-1631
- Harakan, A., Pelizzo, R., Kuzenbayev, N. (2023).TRADITIONAL BELIEFS AND ELECTORAL BEHAVIOR IN INDONESIA. World Affairs,186(4) 896-924
- Haruna, U.A., Luther, M.L., Zubairu, M. and 8 more (...) (2023).Food loss and waste in Nigeria: Implications for food security and environmental sustainability. Advances in Food Security and Sustainability,8217-233
- He, Y.-X., Liu, H.-L., Tang, X.-D. and 8 more (...) (2023).Investigating the Globally Collapsing Hub-Filament Cloud G326.611+0.811. Astrophysical Journal,957(2)
- Husain, S., Jarndal, A., Hashmi, M. and 1 more (...) (2023).Accurate, Efficient and Reliable Small-Signal Modeling Approaches for GaN HEMTs. IEEE Access,11106833-106846
- Husain, S., Kadirbay, B., Jarndal, A. and 1 more (...) (2023).Comprehensive Investigation of ANN Algorithms Implemented in MATLAB, Python, and R for Small-Signal Behavioral Modeling of GaN HEMTs. IEEE Journal of the Electron Devices Society,11559-572
- Hutchinson, J. (2023).The Centrality of Simplicity in Frege's Philosophy. History and Philosophy of Logic,
- Ievlev, E., Good, M.R.R. (2023).Larmor Temperature, Casimir Dynamics, and Planck's Law. Physics (Switzerland),5(3) 797-813
- Ievlev, E., Good, M.R.R. (2023).Non-thermal photons and a Fermi-Dirac spectral distribution. Physics Letters, Section A: General, Atomic and Solid State Physics,488
- Indika, N.-L.R., Senarathne, U.D., Malvaso, A. and 5 more (...) (2023).Abnormal Porphyrin Metabolism in Autism Spectrum Disorder and Therapeutic Implications. Molecular Neurobiology,

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Irgibaeva, I., Barashkov, N., Aldongarov, A. and 5 more (...) (2023).FTIR and NMR spectra of polymeric ionic liquids – Products of reaction between hydroxycontaining amidines and carbon dioxide. Journal of CO2 Utilization,77
- Irmanova, A., Lukac, M. (2023).AES 128 Encrypted Image Classification. Proceedings - 2023 7th International Conference on Cryptography, Security and Privacy, CSP 2023,186-190
- Ishchenko, M., Sobolenko, M., Berczik, P. and 4 more (...) (2023).Milky Way globular clusters on cosmological timescales: III. Interaction rates. Astronomy and Astrophysics,678
- Isupova, O. (2023).Learning, Performance, Fatigue and Regret: Tales of Motherhood on Russian Social Media in the 2010s–2020s. Europe - Asia Studies,
- Jaeger, M., Adair, D., Soleimani, S. (2023).Multi-Criteria Evaluation of eLearning Attributes using the Fuzzy TOPSIS Method. International Journal of Engineering Education,39(1) 241-251
- Javed, S., Zorbas, D. (2023).Downlink Traffic Demand-Based Gateway Activation in LoRaWAN. Proceedings - IEEE Symposium on Computers and Communications,2023-669-674
- Jyeniskhan, N., Shaimergenova, K., Ali, M.H. and 1 more (...) (2023).Digital Twin for Additive Manufacturing: Challenges and Future Research Direction. SIST 2023 - 2023 IEEE International Conference on Smart Information Systems and Technologies, Proceedings,337-342
- Kadyrbek, N., Mansurova, M., Shomanov, A. and 1 more (...) (2023).The Development of a Kazakh Speech Recognition Model Using a Convolutional Neural Network with Fixed Character Level Filters. Big Data and Cognitive Computing,7(3)
- Kalendar, R., Karlov, G.I. (2023).Editorial: Mobile elements and plant genome evolution, comparative analyses and computational tools, volume II. Frontiers in Plant Science,14
- Kamilova, A.T., Azizova, G.K., Poddighe, D. and 4 more (...) (2023).Celiac Disease in Uzbek Children: Insights into Disease Prevalence and Clinical Characteristics in Symptomatic Pediatric Patients. Diagnostics,13(19)
- Kanzhigitova, D., Askar, P., Tapkharov, A. and 5 more (...) (2023).p-Toluenesulfonic acid doped vanadium pentoxide/polypyrrole film for highly sensitive hydrogen sensor. Advanced Composites and Hybrid Materials,6(6)
- Kapanov, A., Almaganbet, A., Yazdi, S.S.H. and 1 more (...) (2023).Coil Parameters Optimization for Dynamic Wireless Charging of Electric Vehicles using Particle Swarm Optimization (PSO) Algorithm. Proceedings of the International Conference on Optimisation of Electrical and Electronic Equipment, OPTIM,
- Karalis, A., Zorbas, D., Douligeris, C. (2023).Reducing the Synchronization Time in the Minimal 6TiSCH Configuration Under Channel Uncertainty. 2023 IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2023,63-69
- Karimov, A., Dautov, K., Hashmi, M. (2023).Development of Highly-Efficient Near-Field WPT and RCN-Based Rectifier for IoT Sensors. IEEE Antennas and Propagation Society, AP-S International Symposium (Digest),2023-699-700
- Karzhaubayeva, M., Amangeldi, A., Park, J.-G. (2023).CNN Workloads Characterization and Integrated CPU-GPU DVFS Governors on Embedded Systems. IEEE Embedded Systems Letters,15(4) 202-205
- Kashkynbayev, A., Yeleussinova, M., Kadyrov, S. (2023).An SIRS Pulse Vaccination Model with Nonlinear Incidence Rate and Time Delay. Letters in Biomathematics,10(1) 133-148
- Kazhiyev, S., Kaumbekova, S., Shah, D. (2023).Malic acid-based deep eutectic solvent and its application in Insulin's structural stability. Results in Engineering,20
- Keutayeva, A., Abibullaev, B. (2023).Exploring the Potential of Attention Mechanism-Based Deep Learning for Robust Subject-Independent Motor-Imagery Based BCIs. IEEE Access,11107562-107580
- Khan, S.S., Sajid, M., Wasim, A. and 3 more (...) (2023).A Lean Knowledge-Based Decision Support System for Cost Estimation in the Foundry Industry. Brazilian Archives of Biology and Technology,66
- Kim, J., Kim, Y., Satyanaga, A. (2023).Instability of Embankment Slopes Due to Overflow and Drawdown. Water (Switzerland),15(19)
- Kiyan, V., Smagulova, A., Kovenskiy, A. and 2 more (...) (2023).First Report of Stem Rot of Adenium obesum and Leaf Spot of Persea americana Caused by Aspergillus niger in Kazakhstan. Plant Disease,107(9)

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Knox, C., Janenova, S. (2023).Kazakhstan: In search of international legitimacy. The Elgar Companion to the OECD,232-244
- Knox, C., Sharipova, D. (2023).Public sector reforms in developing countries: A preliminary review. Public Administration and Development,43(5) 368-380
- Kongrtay, K., Kadrlodinova, N., Sultankulova, F. and 5 more (...) (2023).Prevalence of high-grade HPV types among women in Astana, Kazakhstan (2018-2022). Journal of Cancer Metastasis and Treatment,9
- Kozhagulova, A., Yapiyev, V., Karabayanova, L. and 7 more (...) (2023).Geological controls on the geothermal system and hydrogeochemistry of the deep low-salinity Upper Cretaceous aquifers in the Zharkent (eastern Ily) Basin, south-eastern Kazakhstan. Frontiers in Earth Science,11
- Krstic, V. (2023).A Functional Analysis of Human Deception. Journal of the American Philosophical Association,
- Krstić, V. (2023).Lying by Asserting What You Believe is True: a Case of Transparent Delusion. Review of Philosophy and Psychology,
- Krstić, V. (2023).Lying: revisiting the 'intending to deceive' condition. Analysis (United Kingdom),83(2) 249-257
- Kuanyshbekov, T., Guseinov, N., Tolepov, Z. and 5 more (...) (2023).Thermally Reduced Graphene Oxide Membranes From Local Kazakhstan Graphite "Ognevsky". ChemistrySelect,8(42)
- Kudaibergenova, Z., Dautov, K., Hashmi, M. (2023).Performance Enhancement of DGS-Based WPT System Using Double Negative Metamaterial. IEEE Antennas and Propagation Society, AP-S International Symposium (Digest),2023-547-548
- Kulmambetova, G., Utupov, T., Kurentay, B. and 8 more (...) (2023).Draft genome sequence of a Fusobacterium nucleatum strain isolated from a patient in Kazakhstan with colorectal cancer. Microbiology Resource Announcements,12(10)
- Kumar, M.S., Dadlani, A., Moradian, M. and 2 more (...) (2023).Age of Information in Multi-Source Updating Systems: An M/G/1 Vacation Queueing Model. IEEE International Conference on Communications,2023-63-68
- Kumarov, A., Chisom Nwaogu, E., Zhumadil, A. and 2 more (...) (2023).Current collector-free printed three-dimensional MXene-based anodes for lithium-ion batteries. Electrochemistry Communications,157
- Kurmankulov, S., Dikhanbayeva, D., Perveen, A. and 1 more (...) (2023).Female engineers in a transitional economy: perceptual facilitators for and barriers to studying in STEM fields. ASEE Annual Conference and Exposition, Conference Proceedings,
- Kussainova, A., Bulgakova, O., Aripova, A. and 5 more (...) (2023).Molecular and Cellular Mechanism of Action of Chrysotile Asbestos in MRC5 Cell Line. Journal of Personalized Medicine,13(11)
- Kussainova, R.E., Urazbayeva, G.T., Kaliyeva, A.B. and 1 more (...) (2023).Innovative Teaching: A Bibliometric Analysis From 2013 to 2023. European Journal of Educational Research,13(1) 233-247
- Lau, A.W.K., Shaimoldin, N., Maksut, Z. and 4 more (...) (2023).Initial On-Sky Performance Testing of the Single-Photon Imager for Nanosecond Astrophysics (SPINA) System. IEEE Transactions on Instrumentation and Measurement,721-11
- Lawrence, M.G. (2023).BERGMAN-SZEGŐ ASYMPTOTIC FORMULAS AND THE STRIP PROBLEM. Journal of Mathematical Sciences (United States),
- Li, Y., Anwar, M.I., Katbar, N.M. and 7 more (...) (2023).Analysis of magnetized micropolar fluid subjected to generalized heat-mass transfer theories. Open Physics,21(1)
- Li, Y., Lin, S., Xue, Y. and 5 more (...) (2023).Boron nitride nanoplate-based improvement of the specificity and sensitivity in loop-mediated isothermal amplification for Vibrio parahaemolyticus detection. Analytica Chimica Acta,1280
- Lim, W.X., Chan, W.L., Elhadidi, B. (2023).A domain decomposition technique for acoustic wave interactions and scattering. Computers and Mathematics with Applications,152129-142
- Lukac, M., Abdiyeva, K. (2023).Hacking DCNs. Studies in Systems, Decision and Control,49649-59
- Luo, Y., Gao, X., cao, J. and 1 more (...) (2023).Event-triggered consensus for delayed second-order leader-following heterogeneous multi-agent systems under input saturated condition. JVC/Journal of Vibration and Control,29(21-22) 4908-4923

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Madenova, Y., Suorineni, F.T., Mukhamedyarova, Z. (2023).Effects of fractures on seismic wave propagation path: laboratory studies. 57th US Rock Mechanics/Geomechanics Symposium,
- Madenova, Y., Suorineni, F.T., Mukhamedyarova, Z. (2023).Seismic source wave propagation analysis using laboratory AE monitoring system. 57th US Rock Mechanics/Geomechanics Symposium,
- Magzym, Y., Eduard, A., Urazayev, D. and 2 more (...) (2023).Synchronized ESP-NOW for Improved Energy Efficiency. 2023 IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2023,57-62
- Makhataeva, Z., Akhmetov, T., Varol, H.A. (2023).Augmented-Reality-Based Human Memory Enhancement Using Artificial Intelligence. IEEE Transactions on Human-Machine Systems,1-13
- Makoelle, T.M., Mosito, C.P. (2023).Pre-Service teacher preparation for inclusive teaching in South Africa. Practices and Perspectives of Teaching and Teacher Education in Africa,1-23
- Malone, K.L., Schuchardt, A. (2023).Modelling-based pedagogy as a theme across science disciplines– Effects on scientific reasoning and content understanding. European Journal of Science and Mathematics Education,11(4) 717-737
- Mammadov, A.G., Abaszade, R.G., Babanli, M.B. and 5 more (...) (2023).PHOTOCONDUCTIVITY OF GADOLINIUM-DOPED CARBON NANOTUBES. International Journal on Technical and Physical Problems of Engineering,15(3) 53-58
- Manabayeva, Z., Hernández-Torrano, D. (2023).Reversing Gifted Underachievement in Kazakhstan: Teachers' Perception, Experiences, and Practices. Underachievement in Gifted Education: Perspectives, Practices, and Possibilities,114-125
- Maratbekkyzy, L., Shakeel, M., Pourafshary, P. and 1 more (...) (2023).Enhancing Polymer Flooding Efficiency in a Sandstone Oilfield in Kazakhstan through Silica Nanoparticle-Based Control of Polymer Adsorption. Energy and Fuels,37(19) 14727-14740
- Marovah, T., Mutanga, O. (2023).Ubuntu philosophy: A pathway to decolonising participatory research in the Global South. Ubuntu Philosophy and Disabilities in Sub-Saharan Africa,109-129
- Masood, Z., Kostas, K.V., Khan, S. and 1 more (...) (2023).Shape-Informed Dimensional Reduction in Airfoil/Hydrofoil Modeling. Journal of Marine Science and Engineering,11(10)
- Mazhit, A., Zhumanova, K., Duisenbayeva, B. and 1 more (...) (2023).Highly efficient CT contrast agent based on barium-doped mesoporous silica nanoparticles (SiO2-Ba NPs). Materials Letters,353
- Mazhit, B., Hashim Abbas, A., Pourafshary, P. (2023).Evaluation of flaxseed hydrocolloid's potential in improving oil recovery. Journal of King Saud University - Engineering Sciences,
- Mehisto, P., Winter, L., Kambatyrova, A. and 1 more (...) (2023).CLIL as a conduit for a trilingual Kazakhstan. Language Learning Journal,51(6) 691-705
- Mohammadpour, M., Malayeri, M.R., Kazemzadeh, Y. and 1 more (...) (2023).On the impact of oil compounds on emulsion behavior under different thermodynamic conditions. Scientific Reports,13(1)
- Moldasheva, A., Bakyt, L., Bulanin, D. and 1 more (...) (2023).The impact of cellular environment on in vitro drug screening. Future Science OA,9(9)
- Moradalizadeh, S., Topol, H., Demirkoparan, H. and 3 more (...) (2023).Remarks on bifurcation of an inflated and extended swellable isotropic tube. Mathematics and Mechanics of Solids,
- Muhammad, A.I., Musa, S.S., Musa Shallangwa, M. and 3 more (...) (2023).Combating diphtheria outbreak in Nigeria must not be ignored!. Clinical Epidemiology and Global Health,24
- Mukhamedyarova, Z., Morales, S.K., Suorineni, F. and 1 more (...) (2023).Numerical modeling of seismic wave propagation in mimicked underground mine models. 57th US Rock Mechanics/ Geomechanics Symposium,
- Mukhamedyarova, Z., Suorineni, F., Maksut, Z. and 2 more (...) (2023).Real-time Seismic Wave Velocity Prediction for Accurate Source Location in Underground Mines Based on Machine Learning. 57th US Rock Mechanics/Geomechanics Symposium,
- Mukhangaliyeva, A., Dairabayeva, D., Perveen, A. and 1 more (...) (2023).Optimization of Dimensional Accuracy and Surface Roughness of SLA Patterns and SLA-Based IC Components. Polymers,15(20)
- Mukhmetov, O., Zhao, Y., Mashekova, A. and 3 more (...) (2023).Physics-informed neural network for fast prediction of temperature distributions in cancerous breasts as a potential efficient portable AI-based diagnostic tool. Computer Methods and Programs in Biomedicine,242

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Mullahmetov, M.N., Lobanov, D.S., Melnikova, V.A. and 1 more (...) (2023).ESTIMATING PARAMETERS OF PERMISSIBLE DEFECTS IN STRUCTURAL FIBERGLASS BASED ON THEORY OF CRITICAL DISTANCES. PNRPU Mechanics Bulletin,2023(4) 77-86
- Murtaza, H.A., Mukhangaliyeva, A., Golman, B. and 2 more (...) (2023).Quantitative Characterization of Metal Powder Morphology, Size Distribution, and Flowability for Additive Manufacturing. Journal of Materials Engineering and Performance,
- Mutanga, O. (2023).The Ubuntu philosophy: Implications and recommendations for addressing disability-related challenges. Ubuntu Philosophy and Disabilities in Sub-Saharan Africa,184-190
- Mutanga, O. (2023).Ubuntu Philosophy and Disabilities in Sub-Saharan Africa. Ubuntu Philosophy and Disabilities in Sub-Saharan Africa,1-195
- Mutanga, O. (2023).Ubuntu philosophy and disabilities in Sub-Saharan Africa: Successes, promises, and challenges for inclusive development. Ubuntu Philosophy and Disabilities in Sub-Saharan Africa,1-17
- Mutsvanga, C., Zvarivadza, T., Adoko, A.C. and 1 more (...) (2023).Numerical modeling application in the design of regional pillars for an ore-replacement project: underground platinum mining case study. 57th US Rock Mechanics/Geomechanics Symposium,
- Muxunov, A., Bulanov, N., Makhmetov, S. and 9 more (...) (2023).Awareness of chronic kidney disease and its risk factors in the former Soviet Union countries. Electronic Journal of General Medicine,20(6)
- Myrzabayeva, G., Suragan, D. (2023).Pointwise estimates for polyharmonic green's function in balls. AIP Conference Proceedings,2879(1)
- Nabidollayeva, F., Pivovarova, S., Safin, S. and 2 more (...) (2023).Investigation of Solar Water Heating Systems (SWHS) and Their Implementation in Kazakhstan. SIST 2023 - 2023 IEEE International Conference on Smart Information Systems and Technologies, Proceedings,445-450
- Naghdipour, B. (2023).Teacher-initiated vs. student-initiated written corrective feedback in EFL writing. Electronic Journal of Foreign Language Teaching,20(1) 22-36
- Nauryz, N., Omarov, S., Talamona, D. and 1 more (...) (2023).Performance of Powder mixed Drilling EDM on Biomedical Ti-6Al-4V Alloy. E3S Web of Conferences,430
- Navarro-García, C., Sarria-Santamera, A. (2023).The effect of older population on public health spending: Evidence from Spain. Health Care Science,2(5) 306-316
- Nugmanova, A., Shon, C.-S., Kim, J.R. and 1 more (...) (2023).Characterizing Chronologically Aged Basic Oxygen Furnace Slags as Aggregates and Their Use in Asphalt Concrete Mix as Filler. Applied Sciences (Switzerland),13(18)
- Nuroldayeva, G., Adair, D., Bakenov, Z. and 1 more (...) (2023).Revealing Phase Transition in Ni-Rich Cathodes via a Nondestructive Entropymetry Method. ACS Omega,8(41) 37899-37907
- Nurzhan, S., Bekezhankyzy, Z., Ding, H. and 6 more (...) (2023).The Effect of Different Glucose Concentrations on the Antiproliferative Activity of Metformin in MCF-7 Breast Cancer Cells. Pharmaceutics,15(9)
- Ogbuabia, T.B., Guney, M., Baimatova, N. and 2 more (...) (2023).Assessing the Impact of Combined Heat and Power Plants (CHPPs) in Central Asia: A Case Study in Almaty for PM2.5 Simulations Using WRF-AERMOD and Ground Level Verification. Atmosphere,14(10)
- Olarewaju Olagunju, S., Mukhtarkhan, D., Kim, J. and 2 more (...) (2023).Physical, mechanical, chemical, and environmental characterization of stockpiled BOF slag as railway ballast material. Construction and Building Materials,408
- Olzhabay, Y., Hamidi, M.N., Ishak, D. and 3 more (...) (2023).Performance Evaluation of Emerging Perovskite Photovoltaic Energy-Harvesting System for BIPV Applications. Smart Cities,6(5) 2430-2446
- Omran, W., Yousafzai, S. (2023).Epistemic Injustice and Epistemic Resistance: An Intersectional Study of Women's Entrepreneurship Under Occupation and Patriarchy. Entrepreneurship: Theory and Practice,
- Omran, W., Yousafzai, S. (2023).Navigating the twisted path of gaslighting: A manifestation of epistemic injustice for Palestinian women entrepreneurs. Human Relations,
- Ong, K.L., Stafford, L.K., McLaughlin, S.A. and 792 more (...) (2023).Global, regional, and national burden of diabetes from 1990 to 2021, with projections of prevalence to 2050: a systematic analysis for the Global Burden of Disease Study 2021. The Lancet,402(10397) 203-234

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Ospanova, A., Maham, B., Kizilirmak, R.C. (2023).Delay-Outage Analysis of Multi-LEO Satellites Communication System. IEEE Access,11124509-124523
- Otarbay, Z., Orazaly, M., Assaiyn, Y. and 3 more (...) (2023).Deep Transformer Network and CNN Model with About 200k Parameters to Classify P300 EEG Signal. SIST 2023 - 2023 IEEE International Conference on Smart Information Systems and Technologies, Proceedings,193-201
- Palanisamy, G., Kashkynbayev, A., Rajan, R. (2023).Finite-Time Stability of Fractional-Order Discontinuous Nonlinear Systems With State-Dependent Delayed Impulses. IEEE Transactions on Systems, Man, and Cybernetics: Systems,1-13
- Parkhomenko, H.P., Solovan, M.M., Sahare, S. and 7 more (...) (2023).Impact of a Short-Pulse High-Intense Proton Irradiation on High-Performance Perovskite Solar Cells. Advanced Functional Materials,
- Pelizzo, R., Koepko, M., Kuzenbayev, N. and 1 more (...) (2023).TRADITIONAL BELIEFS AND ELECTORAL BEHAVIOR: SOME EVIDENCE FROM TOGO. World Affairs,186(4) 925-950
- Pelizzo, R., Kuzenbayev, N. (2023).BEYOND RELIGION: SUPERSTITION, TRADITIONAL BELIEFS AND THE EXTREME RIGHT. World Affairs,186(4) 978-1018
- Pelizzo, R., Kuzenbayev, N. (2023).TRADITIONAL PRACTICES AND SUPPORT FOR THE STRONGMAN. World Affairs,186(4) 951-977
- Pelizzo, R., Turganov, D., Kuzenbayev, N. (2023).MODERNIZATION, SUPERSTITION, AND CULTURAL CHANGE. World Affairs,186(4) 869-895
- Piletsky, S.S., Baidyuk, E., Piletska, E.V. and 9 more (...) (2023).Modulation of EGFR Activity by Molecularly Imprinted Polymer Nanoparticles Targeting Intracellular Epitopes. Nano Letters,23(21) 9677-9682
- Pisareva, D. (2023).Do People Protest for Democracy? Investigating the Democratic Theory of Protest Participation in Armenia's Velvet Revolution of 2018. Demokratizatsiya,31(3) 285-308
- Polat, F., Karakuş, M., Helmer, J. and 5 more (...) (2023).Factors affecting multi-stakeholders perspectives towards inclusive early childhood education (IECE) in Kazakhstan. Children and Youth Services Review,155
- Purushothama, C., Crape, B.L., Stolyarov, V. and 3 more (...) (2023).Preloaded combination nicotine replacement therapy for smoking cessation in Kazakhstan: A randomized controlled trial study protocol. PloS one,18(11)
- Rahman, M.M., Jung, E., Eom, S. and 2 more (...) (2023).Mercury concentrations in sediments and oysters in a temperate coastal zone: a comparison of farmed and wild varieties. Environmental Science and Pollution Research,30(50) 109810-109824
- Rakhatkyzy, M., Belgibayeva, A., Kalimuldina, G. and 2 more (...) (2023).Enhancing low-temperature characteristics of graphite anode by comprehensive modification of electrolyte. Electrochemistry Communications,157
- Rakhatkyzy, M., Suleimenova, B., Shaimardan, M. and 2 more (...) (2023).Modeling Solubility of Acetylsalicylic Acid in Aspen Plus. Engineered Science,26
- Rakhimbekova, A., Kudaibergenov, B., Seitkamal, K. and 10 more (...) (2023).Rapid detection of vaccinia virus using biofunctionalized fiber-optic ball-tip biosensors. Scientific Reports,13(1)
- Rakhimbekova, A., Kudaibergenov, B., Seitkamal, K. and 3 more (...) (2023).Semi-distributed fiber-optic interferometer as a simple and rapid sensor for detection of cancer biomarkers. 2023 IEEE BioSensors Conference, BioSensors 2023 - Proceedings,
- Rakhmetova, A., Belgibayeva, A., Kalimuldina, G. and 2 more (...) (2023).Free-standing SnSe@C nanofiber anode material for low-temperature lithium-ion batteries. Journal of Power Sources Advances,24
- Rashid, A., Kang, L., Yi, F. and 4 more (...) (2023).Characterization of HIV-1 CRF02_AG/A3/G unique recombinant forms identified among children in Larkana, Pakistan. Frontiers in Cellular and Infection Microbiology,13
- Rehman, S., Rehman, E., Liu, B. (2023).Potential Correlation Between Self-Compassion and Bedtime Procrastination: The Mediating Role of Emotion Regulation. Psychology Research and Behavior Management,164709-4723

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Restrepo, J.E., Ruzhansky, M., Suragan, D. (2023).Generalized fractional Dirac type operators. Fractional Calculus and Applied Analysis,26(6) 2720-2756
- Rustembekkyzy, K., Zholdasbekov, A., Abduvalov, A. and 2 more (...) (2023).Porosity-dependent photoelectrochemical activity of double-layered TiO2 thin films deposited by spin-coating method. RSC Advances,13(49) 34482-34488
- Rydchenko, V., Malone, K.L., Kerimkulova, S. (2023).Key Stakeholders' Perspectives and Experiences of 12-Year Schooling Reform in the Context of Kazakhstan: A Long-Term Pilot Implementation. European Education,55(2) 105-122
- Saavedra Cifuentes, E., Teitelbaum, Y., Arnon, S. and 3 more (...) (2023).Turbulence-Driven Clogging of Hyporheic Zones by Fine Particle Filtration. Geophysical Research Letters,50(20)
- Sadjoli, N., Cai, Y., Seet, G. and 1 more (...) (2023).PCD reconstruction, object classification and pose estimation for underwater vehicles using orthogonal multibeam forward looking sonar fusion. Ocean Engineering,288
- Sakko, Y., Madikenova, M., Kim, A. and 9 more (...) (2023).Epidemiology of tuberculosis in Kazakhstan: data from the Unified National Electronic Healthcare System 2014-2019. BMJ Open,13(10)
- Salikhanov, I., Kunirova, G., Aitbaeva, A. and 3 more (...) (2023).Cost-Effectiveness of Hospice Palliative Care for Patients With Cancer and Family Caregivers: A Multicenter Study in Kazakhstan. Value in Health Regional Issues,3869-76
- Sarria-Santamera, A., Yemenkhan, Y., Terzic, M. and 2 more (...) (2023).A Novel Classification of Endometriosis Based on Clusters of Comorbidities. Biomedicines,11(9)
- Satyanaga, A., Rahardjo, H., Zhai, Q. and 2 more (...) (2023).Modelling Particle-Size Distribution and Estimation of Soil–water Characteristic Curve utilizing Modified Lognormal Distribution function. Geotechnical and Geological Engineering,
- Schopp, N., Abdikamalov, E., Mostovyi, A.I. and 7 more (...) (2023).Interstellar photovoltaics. Scientific Reports,13(1)
- Seisenbayev, N., Absalyamova, M., Alibekov, A. and 1 more (...) (2023).Reactive Transport Modeling and Sensitivity Analysis of CO2–Rock–Brine Interactions at Ebeity Reservoir, West Kazakhstan. Sustainability (Switzerland),15(19)
- Sekenova, A., Li, Y., Issabekova, A. and 2 more (...) (2023).TNF-α Preconditioning Improves the Therapeutic Efficacy of Mesenchymal Stem Cells in an Experimental Model of Atherosclerosis. Cells,12(18)
- Shafqat, M., Khan, M.B., Awan, H.H. (2023).The Behavior of Pre-Treated Crumb Rubber and Polypropylene-Fiber-Incorporated Mortar Subjected to Elevated Temperatures †. Engineering Proceedings,44(1)
- Shaimergenova, K., Ali, M.H., Shehab, E. (2023).Development of Middleware for Data-Centric Digital Twin of Additive Manufacturing. SIST 2023 - 2023 IEEE International Conference on Smart Information Systems and Technologies, Proceedings,412-416
- Shakeel, M., Pourafshary, P., Hashmet, M.R. and 1 more (...) (2023).Application of machine learning techniques to predict viscosity of polymer solutions for enhanced oil recovery. Energy Systems,
- Sharplin, E., Karabassova, L., Bekova, M. (2023).Educational practitioners' conceptualizations of the nature, impact and challenges of educational research in Kazakhstan. Asia Pacific Education Review,
- Shimony, T., Teitelbaum, Y., Cifuentes, E.S. and 4 more (...) (2023).Kaolinite Deposition Dynamics and Streambed Clogging During Bedform Migration Under Losing and Gaining Flow Conditions. Water Resources Research,59(9)
- Shomenov, K., Yuldashov, A., Ali, M.H. (2023).A Compact 3D Printed Text-to-Braille Converting Device with Optical Character Recognition (OCR). Proceedings - 2023 10th International Conference on Electrical and Electronics Engineering, ICEEE 2023,12-17
- Shuvalov, O., Kirdeeva, Y., Daks, A. and 4 more (...) (2023).Phytochemicals Target Multiple Metabolic Pathways in Cancer. Antioxidants,12(11)
- Strochkov, V., Beloussov, V., Solomadin, M. and 4 more (...) (2023).Full genome sequence of a human rhinovirus A1B, obtained in Kazakhstan. Microbiology Resource Announcements,12(11)
- Suleiman, M., Mustafa, A., Ainayev, Y. and 7 more (...) (2023).The surgical management of penile oleogranuloma: case series. International Journal of Impotence Research,

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Suragan, D., Talwar, B. (2023).Fujita exponent on stratified Lie groups. Collectanea Mathematica,
- Swartz, E., Scheepers, C.B., Lindgreen, A. and 2 more (...) (2023).Introduction to technological leapfrogging and innovation in Africa. Technological Leapfrogging and Innovation in Africa,1-16
- Swartz, E., Scheepers, C.B., Lindgreen, A. and 2 more (...) (2023).Technological leapfrogging and innovation in Africa. Technological Leapfrogging and Innovation in Africa,1-300
- Tajik, M.A., Manan, S.A., Schamiloglu, U. and 1 more (...) (2023).Gaps between policy aspirations and enactment: graduate students' struggles with academic English amidst a turbulent transition to the EMI environment in Kazakhstani universities. Current Issues in Language Planning,
- Tajik, M.A., Namyssova, G., Shamatov, D. and 3 more (...) (2023).Navigating the potentials and barriers to EMI in the post-Soviet region: insights from Kazakhstani university students and instructors. International Journal of Multilingualism,
- Talipova, A.B., Buranych, V.V., Savitskaya, I.S. and 3 more (...) (2023).Synthesis, Properties, and Applications of Nanocomposite Materials Based on Bacterial Cellulose and MXene. Polymers,15(20)
- Tanaguzova, M., Nanovsky, S., Orazgaliyev, S. (2023).Assessing the Effect of Joining the World Trade Organization on Trade Performance: A Study of CIS Countries. Economies,11(9)
- Tao, J., Riaz, S., Zhou, B. and 3 more (...) (2023).Testing the δ -Kerr metric with black hole x-ray data. Physical Review D,108(8)
- Tashenov, Y., Suleimenova, D., Baptayev, B. and 2 more (...) (2023).Efficient One-Step Synthesis of a Pt-Free Zn0.76Co0.24S Counter Electrode for Dye-Sensitized Solar Cells and Its Versatile Application in Photoelectrochromic Devices. Nanomaterials,13(20)
- Taurbekov, A., Abdisattar, A., Atamanov, M. and 9 more (...) (2023).Biomass Derived High Porous Carbon via CO2 Activation for Supercapacitor Electrodes. Journal of Composites Science,7(10)
- Tausif, M., Dilshad, S., Umer, Q. and 4 more (...) (2023).Ensemble learning-based estimation of reference evapotranspiration (ETo). Internet of Things (Netherlands),24
- Temirkhan, M., Spitas, C., Wei, D. (2023).A computationally robust solution to the contact problem of two rotating gear surfaces in space. Meccanica,
- Tlebaldiyeva, L., Arzykulov, S., Rabie, K.M. and 2 more (...) (2023).Outage Performance of Fluid Antenna System (FAS)-aided Terahertz Communication Networks. IEEE International Conference on Communications,2023-1922-1927
- Toksanbayev, N.K., Adoko, A.C. (2023).An optimized deep neural network for rockburst damage potential modelling. 57th US Rock Mechanics/Geomechanics Symposium,
- Tore, U., Abilgazym, A., Asunsolo-del-Barco, A. and 4 more (...) (2023).Diagnosis of Endometriosis Based on Comorbidities: A Machine Learning Approach. Biomedicines,11(11)
- Turlybekuly, A., Sarsembina, M., Mentbayeva, A. and 2 more (...) (2023).CuO/TiO2 heterostructure-based sensors for conductometric NO2 and N2O gas detection at room temperature. Sensors and Actuators B: Chemical,397
- Turmukhambetova, A., Yegorov, S., Korshukov, I. and 12 more (...) (2023).The impact of Gam-COVID-Vac, an Adv5/ Adv26 COVID-19 vaccine, on the biomarkers of endothelial function, coagulation and platelet activation. PLoS ONE,18(10)
- Tyler, B. (2023).Formal Methods Adoption in Industry: An Experience Report. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics),13490152-161
- Uğurlu, K., Brzeczek, T. (2023).Distorted probability operator for dynamic portfolio optimization in times of socio-economic crisis. Central European Journal of Operations Research,31(4) 1043-1060
- Umbayev, B., Saliev, T., Safarova, Y. and 5 more (...) (2023).The Role of Cdc42 in the Insulin and Leptin Pathways Contributing to the Development of Age-Related Obesity. Nutrients,15(23)
- Urazayev, D., Eduard, A., Ahsan, M. and 1 more (...) (2023).Indoor Performance Evaluation of ESP-NOW. SIST 2023 - 2023 IEEE International Conference on Smart Information Systems and Technologies, Proceedings,
- Valido, A.A., Castro, A.J. (2023).Topological Magnetoelectric Response in Passive Magnetic Devices. Physical Review Applied,20(3)
- van Aarle, B., Konings, J., Putseys, A. (2023).Designing a European energy price regulation system: some basic principles. Journal of Economic Policy Reform,

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Veliz, V., Maleki, M., Madani, N. and 3 more (...) (2023).Plurigaussian modeling of non-stationary geological domains to assess geological uncertainty in a porphyry copper deposit. Ore Geology Reviews,162
- Viderman, D., Aubakirova, M., Aryngazin, A. and 4 more (...) (2023).Ultrasound-Guided vs. Fluoroscopy-Guided Interventions for Back Pain Management: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Diagnostics,13(22)
- Viderman, D., Seri, E., Aubakirova, M. and 3 more (...) (2023).Reply to Farahani, P.; Wahid, L. Comment on "Viderman et al. Remote Monitoring of Chronic Critically Ill Patients after Hospital Discharge: A Systematic Review. J. Clin. Med. 2022, 11, 1010". Journal of Clinical Medicine,12(21)
- Yakavets, N., Winter, L., Malone, K. and 2 more (...) (2023).Educational reform and teachers' agency in reconstructing pedagogical practices in Kazakhstan. Journal of Educational Change,24(4) 727-757
- Yavari, H., Fazaelizadeh, M., Aadnoy, B.S. and 4 more (...) (2023).An approach for optimization of controllable drilling parameters for motorized bottom hole assembly in a specific formation. Results in Engineering,20
- Yavari, S., Olaifa, K., Shafiee, D. and 2 more (...) (2023).Molybdenum oxide nanotube caps decorated with ultrafine Ag nanoparticles: Synthesis and antimicrobial activity. International Journal of Pharmaceutics,647
- Yazici, A., Zhumabekova, D., Nurakhmetova, A. and 5 more (...) (2023).A smart e-health framework for monitoring the health of the elderly and disabled. Internet of Things (Netherlands),24
- Yedres, D., Dautov, K., Nauryzbayev, G. and 1 more (...) (2023).Development of High Gain Reflectarray Over Wide Bandwidth Using Fitting Method. IEEE Antennas and Propagation Society, AP-S International Symposium (Digest),2023-1005-1006
- Yergaliyeva, S., Nemkayeva, R., Guseinov, N. and 7 more (...) (2023).Synthesis and optical properties of Ag/Au-TiO2 plasmonic composite thin films. Optical Materials Express,13(10) 2726-2736
- Yerlanuly, Y., Parkhomenko, H.P., Zhumadilov, R.Y. and 10 more (...) (2023).Achieving stable photodiode characteristics under ionizing radiation with a self-adaptive nanostructured heterojunction CNWs/CdZnTe. Carbon,215
- Zahid, W., Farooqui, N., Zahid, N. and 6 more (...) (2023).Association of Interferon Lambda 3 and 4 Gene SNPs and Their Expression with COVID-19 Disease Severity: A Cross-Sectional Study. Infection and Drug Resistance,166619-6628
- Zaman, M., Hasan, M., Peshkov, A.A. and 5 more (...) (2023).Diversification of 4-bromo-1H-indole-3-carbaldehyde-derived Ugi adducts: Access to the azepino[3,4,5-cd]indoles and spiroindolines. Tetrahedron Letters,130
- Zhang, W., Kim, S., Lee, D. and 2 more (...) (2023).Seismic performance of self-sustaining precast wide beam-column connections for fast construction. Computers and Concrete,32(3) 339-349
- Zhang, X., Jiang, C., Chen, Y. and 5 more (...) (2023).Study on the non-uniformity of rust layer and residual rebar caused by pitting corrosion in mortar. Construction and Building Materials,406
- Zhang, X., Wang, H., Gao, Z. and 4 more (...) (2023).Evaluation of the Performance of the Horizontal Drain in Drainage of the Infiltrated Water from Slope Soil under Rainfall Conditions. Sustainability (Switzerland),15(19)
- Zhetpisbayeva, I., Kassymbekova, F., Sarmuldayeva, S. and 2 more (...) (2023).Cervical Cancer Prevention in Rural Areas. Annals of Global Health,89(1)
- Zhulanov, A., Chertov, N., Nechaeva, Y. and 4 more (...) (2023).Genetic Uniqueness and Genetic Structure of Populations of Picea obovata Ledeb. and Larix sibirica Ledeb. in the Northern and Middle Urals. Forests,14(9)
- Zhumabekova, A., Marat, N., Sagynbayev, N. and 1 more (...) (2023).Design and Development of a Smart 'Baby NO CRY' Cradle. Proceedings - 2023 10th International Conference on Electrical and Electronics Engineering, ICEEE 2023,439-443
- Zhumayeva, M., Dautov, K., Hashmi, M. and 1 more (...) (2023).Wireless energy and information transfer in WBAN: A comprehensive state-of-the-art review. Alexandria Engineering Journal,85261-285
- Zhunussova, G., Tajik, M.A., Fillipova, L. and 1 more (...) (2023)."I am a mixed person of Kazakh, Turkish and English": Multilingual students' identity in EMI universities in Kazakhstan. System,119

New research publications indexed by Scopus (count: 280 as of 26.12.23)

- Zub, V., Semenova, Y., Tolstanov, O. and 5 more (...) (2023).Provision of medical care to cancer patients in Ukraine during Russo-Ukrainian war: A survey of oncologists' perceptions. International Journal of Healthcare Management,