

RESEARCH NEWSLETTER

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SCOPUS AWARD 2019

One of the biggest science forums was held in Nur-Sultan on December 12 under the theme “II Science Forum: Research Impact”. Hosted by Astana International Financial Center, Elsevier, and the Ministry of Education and Science, the forum brought together C-level industry leaders, government officials, Ministers and representatives of international scientific and educational organizations. The programme focused on important issues of assessing research performance in terms of the impact it has on the economy, society, and environment.



Askhat Aimagambetov, Minister of Education and Science of the Republic of Kazakhstan, pointed out that the government pays a special attention to the development of science in Kazakhstan. As instructed by the Head of the State, a new Education and Science Development State Program for 2020-2025 was designed based on new measures that would allow taking national science to the next level (INFORM.KZ).

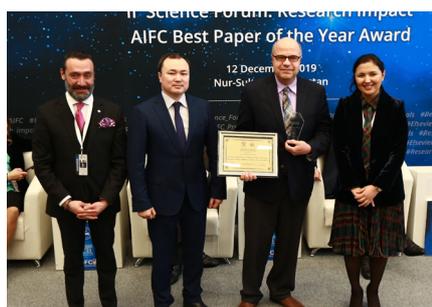
The Office of the Provost was represented by Loretta O’Donnell - Vice Provost for Academic Affairs and Chester Jablonski - Associate Provost for Graduate Studies. This year NU was honored with an *Outstanding Research Impact Award*.



As in previous year, NU professors received Scopus Award for their contribution to the development of national science measured by the number of published scientific articles and their citation in international journals:



SEDS Vice-Dean of Research Prof. Zhumabay Bakenov, Director of Center for Energy and Advanced Materials Science at NLA won in the nomination «*Researcher of the year*».



«*City Mayor Award*» was given to Prof. Vasileios Inglezakis, Prof. Luis R. Rojas-Solórzano, Prof. Jong Kim and two NU Alumni Aisulu Aitbekova and Aizada Ismailova for the remarkable contribution of their paper to the city titled “*Comparison between landfill gas and waste incineration for power generation in Astana, Kazakhstan*” published in *Waste Management and Research* (CiteScore 2.11, Q2 journal by Scopus)



Prof. Saltanat Janenova and Prof. Colin Knox from GSPP have been awarded for the best paper on administrative reforms. The title of the article is '*Civil Service Reform in Kazakhstan: trajectory to the 30 most developed countries in the world?*' published in International Review of Administrative Sciences (CiteScore 2.53, Q1 journal by Scopus)



Zakir Jumakulov, an Acting Director of Research Institute at GSE, and his colleagues Laura Perna and Kata Orosz from partner institution UPENN received an award for their research papers on higher education.



Prof. Anton Desyatnikov received a «High Contribution Award».



Dr. Aiymgul Kerimray was awarded in the nomination «*Woman in Science*». Aiymgul is NU first Ph.D. graduate in Science, Engineering and Technology (graduated in 2018).



Ainur Kadyrbayeva - NU Alumna 2015 received «*AIFC Best Paper of the Year*» award.

We would like to congratulate our research community members for their achievements and wish them success in future endeavors!

NLA researchers received “Science Leader-2019” award



On November 13, the «Science Leader – Web of Science Awards 2019» ceremony was held at Al Farabi Kazakh National University in Almaty. The event was organized by Clarivate Analytics, the owner and the developer of Web of Science – a publisher-independent global citation database.

This year Prof. Zhaxybay Zhumadilov, General Director at NLA, and Samat Kozhakhmetov, Senior Researcher at the Laboratory of human microbiome and longevity, received the «*Science Leader-2019*» award for their research activity over this year. In particular, their research publication on Cardiac and Cardiovascular systems was highly cited according to Web of Science.



Maxsat Zhabagin, a Junior Researcher at the Laboratory of genomic and personalized medicine, won in nomination «*Leader of Science-2019*» for an outstanding research performance among young Kazakhstani researchers.

It should be reminded that in 2015, 2016 and 2017 the well-known scientists from National Laboratory Astana - Dr. Zhumabay Bakenov, Dr. Almagul Mentbayeva, Dr. Timur Saliev, Ainur Kakpenova, Yeldar Baiken and others also won «*Leader of Science*» award by Thomson Reuters for their remarkable works.

PREPARED BY ZHAZIRA BUKINA



Young Researchers Alliance

Young researchers united



On December 7th, a networking event called #YRAKEZDESU organized by the Young Researchers Alliance (YRA) took place at UNO Astana, the first restaurant of modern farm gastronomy. All guests and participants of the event, including young researchers and professionals, entrepreneurs, representatives of state and non-governmental organizations and journalists were united by common interests in the development of Kazakhstani science.



Well-known people in scientific and professional circles were invited to the event, among which are the Head of educational projects at BTS Digital Sayasat Nurbek, Vice-minister of labor and social protection of population Nariman Mukushev, Executive director of Corporate Fund «Social Development Fund» Anar Uteshova, President of the Center for International Programs Ainur Karbozova, Director of Astana Protocol Anuar Beibytov and others, in order to get acquainted with activities of YRA and scientific youth of Kazakhstan.



The winners of Fostering Research and Innovation Program (FRIP) sponsored by Corporate Fund «Social Development Fund», and experts who evaluated applications in the form of a “blind” review also attended the event. Students presented their research projects and results. Chair of YRA Assiya Yermukhambetova handed letters of appreciation to all program experts for their participation on a voluntary basis in the applications review process.



Young Researchers Awards were first presented to young researchers in the following nominations:

- “Outstanding YRA Service Award” to Ashirgul Kozhagulova;
- “Best Science Communicator” to Maksat Zhabagin;
- “Best Science Communicator in regions” to Assiya Ansabayeva;
- “YRA Academic Integrity Award” to Bulat Kenessov;
- “Distinguished YRA member Award” to our most active members Laura Karabassova, Zhaksylyk Sabitov, Almas Zhunisbayev, Kaissar Tabynov;
- “Best Author of YRA Brainstorm” to Miras Zhiyenbayev;
- “Top YRA Expert Award” to Balnur Zhaisanbayeva and Damir Aidarkhanov;





The award ceremony was followed by an entertainment program with games, quizzes, and prizes. One of the most remarkable team-building activities was a game oriented to interdisciplinarity development among teams. According to the game rules, each team should consist of representatives from different fields. Every team presented their idea of an innovative product, creation of which required participation of each member of the team. A brilliant young singer Tomiris Bekmurzina, the finalist of the Central Asia's Got Talent

show sang for the guests. The evening ended with a pleasant and dance music played by DJ DBS who was specially invited.

The main goal of the Alliance in organizing the given networking event was to create a platform where young professionals from different spheres can get to know each other and expand their network for future collaboration and exchange of ideas. Science is not created in a vacuum. Its development requires cooperation of researchers, entrepreneurs, government agencies, foundations, and other organizations.

For reference:

Young Researchers Alliance is a non-profit association founded by representatives in all fields of science - young and novice researchers, including students of master's and doctoral programs. The Alliance is known for changing stereotypes about scientists and making science trendy among youth. YRA's vision is to create an enabling environment for a new generation of researchers, scientists, and academics, as well as to support young researchers in their quest to conduct cutting-edge research in a variety of disciplines.

Follow YRA on Social Media:

For more information and registration please visit [YRA website](#)

SHARED BY MAIRA ZHAKSYBAY



Graduate School of Public Policy News

UN, other experts, present prescription to avoid dangerous water shortfall for 70 million Central Asians

Urgent need to replace competition with cooperation in the Aral Sea Basin

BY DR. STEFANOS XENARIOS, ISKANDAR ABDULLAEV, AND VLADIMIR SMAKHTIN

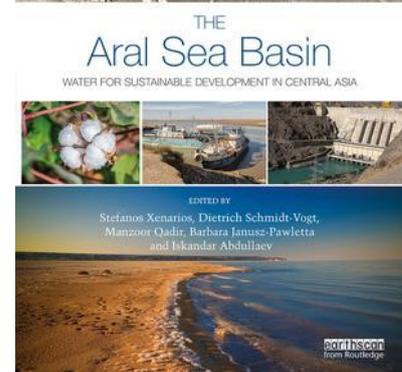
Nur-Sultan City, Kazakhstan -- The water resources in Central Asia's Aral Sea Basin support the lives and livelihoods of about 70 million people — a population greater than Thailand, France, or South Africa. And unless well-funded and coordinated joint efforts are stepped up, with competition replaced by cooperation, ongoing over-withdrawals compounded by climate change will cause dangerous water shortages in this huge, highly complex watershed spanning six nations: Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

That's the key message of a new book co-authored by 57 regional and international experts from 14 countries and the United Nations, who spent years examining a suite of challenges in the Aral Sea Basin. The new book assembles the views of nearly all major regional and international experts on the great challenges faced in the Aral Sea Basin. They include three co-authors from the UN University's Institute for Water, Environment and Health, in Hamilton, Canada. And almost half of the authors are based in Central Asia, creating a unique blend of regional and international voices and expertise on these critical issues.

The Basin's two major rivers, the Amu Darya and Syr Darya, discharge now only about 10% of what flowed into the Aral Sea until the 1960s, shrinking the sea by more than 80 percent -- «one of the world's most severe and emblematic environmental disasters.»

Freshwater is key to food, energy, environmental security, and social stability among the six Aral Basin countries. And given the countries' prospective economic and population growth, reliance on water resources will increase, compelling cooperation in sharing benefits and reducing costs. Intensive, wasteful irrigated farming when the nations were part of the Soviet Union was the main cause of the Aral Sea drying up and irrigation continues to consume about 90 percent of the total water withdrawal in the Basin, with agriculture contributing from 10 to 45 percent of GDP, and 20 to 50 percent of rural employment.

Most irrigation, hydropower and other water-related infrastructural systems and facilities are in transition, a blend today of past and present. Unfortunately, the existing observational meteorological and hydrological networks in the Basin, which declined in the 1990s when the Soviet period ended, are insufficient to support informed water management, and regional water data sharing is suboptimal. Degradation of land and water are among the major hindrances to sustainable development in the region, with land degradation alone estimated to cost about US\$3 billion of losses in ecosystem services annually.



There has been uneven progress across the countries on the Sustainable Development Goals (SDGs), and particularly Goal 6 (Clean Water and Sanitation), with contrasting progress also between urban and rural populations within each nation, most particularly Afghanistan.

The new book suggests a number of interventions and initiatives to end and reverse deterioration of the Aral Basin. For example, if existing large hydropower projects were managed in a collaborative manner, they can bring all countries multiple benefits, including improved reliability of supply and availability of water for agriculture, domestic use and electricity generation. Monitoring of snow and glaciers in high altitude mountain areas, as well as permafrost, is essential for sound estimates of water availability and water-related hazards. Such systems need to be re-installed.

Also needed: institutions for decentralized management of natural resources, such as water user associations to promote cooperative, sustainable, intra-regional management between upstream and downstream countries and integrated rural development approaches. Existing regional frameworks must either be reformed or replaced by new mechanisms of cooperation in order to successfully translate political will into highly effective, integrated regional water management.

Reforming the water sector, however, goes well beyond new policies and initiatives, updating the legislative framework, and building new institutions. A key challenge is to achieve continuous, strong, high-level political engagement throughout the Basin countries, the active participation of stakeholders, and technical and financial support. The Aral Basin's many water-related issues must be addressed jointly by all involved states within the concept that water, energy, and food issues represent a critical, interlinked nexus of needs.

Major geopolitical and economic development interests are placing increasing pressure on countries of the Basin to end resource competition and find a way to closer cooperation and effective pursuit of their shared interests.

Stefanos Xenarios is Associate Professor at Nazarbaev University, Kazakhstan and Editor in the Central Asian Journal of Water Research

Iskandar Abdullaev is Deputy Director, CAREC Institute, China

Vladimir Smakhtin is Director, UN University Institute for Water, Environment and Health, Canada and series editor of the Routledge publishers' Earthscan Series on Major River Basins of the World, in which the Aral Sea Basin Book is the latest addition

An earlier version of this article has been published in the InterPress News Agency at 7 November 2019

FYI, [this book is already available in our Library](#)



Graduate School of Education News

NUGSE Researchers Conduct Mixed Methods Research on Rural Schools of Kazakhstan



Students from rural schools in many countries worldwide have far fewer resources than their urban counterparts and receive far less national attention. Also, students of rural schools are less likely than their urban counterparts to enroll in higher education institutions immediately after graduation. This disadvantages communities that often are struggling to attract and retain talent. Funded by the

Nazarbayev University's Faculty Development Competitive Grant, a three-year-long research study is being conducted in 2018-2020. This mixed-methods study is conducted in purposefully selected mainstream rural schools in Kazakhstan to explore the following research questions by modifying the UNICEF's Quality of Education Framework: the quality of learners, curriculum/content, processes, environments and outcomes (UNICEF, 2000):

- What do the Kazakhstani rural school leaders, teachers, students, and parents understand by quality of education?
- What opportunities, resources, and support are available to these rural schools for achieving their perceived quality of education?
- What issues and challenges do these rural schools face in achieving the perceived quality of education?
- What possible solutions can be found to the issues hindering the quality of education in these schools?

The purpose of the study is to examine the quality of education provided in rural schools across Kazakhstan and to contribute to developing a contextually relevant, culturally sensitive, and sustainable approach to improving quality of education in rural schools by taking into account the voices and experiences of key stakeholders such as principals, vice-principals, teachers, students, parents, and school education officials from the Ministry of Education and Science and regions in Kazakhstan. Data related to school facilities, students' backgrounds and educational expectations, teacher characteristics, parental involvement and expectations, new curriculum implementation and availability of technology were collected using semi-structured interviews and questionnaires. Specifically, the study intends to explore key stakeholders' understanding and aspirations of quality of education; identify issues and challenges rural schools face in achieving their aspired quality of education; and suggest possible solutions to the problems being faced and ways to improve the quality of education in rural schools in Kazakhstan.

A mixed-methods approach, having both a quantitative survey and qualitative individual interviews and focus group discussions, is being employed. The quantitative survey is used to obtain data from large number of teachers from rural schools and qualitative interviews are used to obtain in-depth, rich and descriptive data from a relatively smaller sample. This research project is led by Dr. Mir Afzal Tajik and Dr. Duishon Shamatov as the Principal Investigator and Co-Principal Investigator respectively. The research assistants who have so far contributed to this project include, Darina Sadvakassova, Moldir Ablayeva, Bakhyt Zhumatay, Gulden Suyundikova, Lyudmila Fillipova, Alyona Kaus and Symbat Mazhikov. The results of the study may be beneficial to educational policymakers, school leaders and practitioners to address some of the critical issues hindering, as well as opportunities available for, provision and quality of education in rural schools in Kazakhstan. The study will provide a set of recommendations, based on the empirical data collected from the key stakeholders for enhancing provision and quality of education in rural schools.



Dr. Mir Afzal Tajik

THE ARTICLE IS SHARED BY LYUDMILA FILLIPOVA



School of Sciences and Humanities News

QUANTUM ENGINEERING PUBLICATION AT HIGHLY SELECTIVE JOURNAL



A research work of the Associate professor of Physics Department Constantinos Valagiannopoulos, Head of Metamaterials Modeling and Design Group, has been recently published in one of the top science journals – *Physical Review Applied* of the American Physical Society. The title of the publication is “*Quantum Fabry-Perot Resonator: Extreme Angular Selectivity in Matter-Wave Tunneling*”. This work provides simple quantum setups that have the ability to block all the incoming particle beams except from those traveling along a specific direction. This operation can be extremely useful in quantum signal processing and quantum computing devices where the matter waves are required to get properly filtered, channeled and steered in space. Therefore, the reported findings open alternative paths

when designing architectures for a broad range of quantum engineering applications from sensing and steering to filtering and quantum memory.

Physical Review Applied, along with *Physical Review Letters* and *Physical Review X*, is a prestigious journal that falls into Q1 category with IF 4.53 by Web of Science. As known, this journal selects only high-quality publications. Remarkably, in *Physical Review Applied* there only two publications from Kazakhstan - both are affiliated with NU and authored by Prof. Valagiannopoulos in 2019.

The article can be found via the following [link](#).

PREPARED BY DR.CONSTANTINOS VALAGIANNOPOULOS

SSH faculty member and her team designed a medical mobile application



Dr. Aizhan Kozhakhmetova (Biology Department) and two Master students from Computer Science Department (SEDS) Korlan Zhumabekova and Nurdaulet Kenges developed a medical mobile application called CeliacTest©. It was presented for the first time by Dr. Aizhan Kozhakhmetova on the XIV International Scientific and Practical Conference “Astana-Gastro 2019” that was held on November 1-2 in Nur-Sultan city. The application was highly appreciated by medical professionals. This project was implemented fully on a volunteering basis and had no funding.

CeliacTest© is the first free mobile self-assessment tool that determines whether a user is at risk of having coeliac disease.

For reference, coeliac disease is a complex immune-mediated gluten intolerance, which leads to problems with gut, bones, thyroid and other organs. Although it is quite common (1-2% of population), diversity of clinical presentations and low awareness make it difficult to diagnose people at early stages to avoid adverse consequences. Almost 90% of cases still remain undiagnosed.

The application evaluates the risk level of having a coeliac disease through a short questionnaire, which was elaborated by Dr. Aizhan Kozhakhmetova and other colleagues from Kazakhstan and the United Kingdom during her clinical and research career. Those users who are found to be at higher risk get recommendations to take necessary screening and blood tests.



CeliacTest© provides thorough information about coeliac disease, associated conditions, diagnosis, and treatment. The application serves as a platform for users to participate in an online forum, get medical consultations, search for doctors, medical centers in different cities of Kazakhstan. Moreover, through this app users can browse gluten-free restaurants and supermarkets. One of the app features is a tab with the latest news in science to keep users updated on ongoing national and international research. Users can even get an opportunity to be enrolled in research.

CeliacTest© is available on Google Play Market for Android. It's also planned to make a version for iOS in the near future. Currently, the user interface supports only Russian language, but soon it will support Kazakh and English as well. Despite the big disease burden, there are no coeliac communities or associations in Kazakhstan. Thus, CeliacTest© app aims to increase the awareness among people including doctors to improve the early diagnosis of individuals at-risk and to support them.

PREPARED BY DR. AIZHAN KOZHAKHMETOVA

Dr. H el ene Thibault (PSIR) invited to participate in a women Academics' Forum workshop at Swansea University

What happens when you bring early-career and established academics, researching the former communist world together?

Report on the Eurasian, East and Central European Studies Women Academics' Forum workshop 2.0 at Swansea University.

BY ALLYSON EDWARDS - Vice-Chair of EECESWAF at Swansea University



After what has been a truly exciting first year for the Eurasian, East and Central European Studies Women Academics Forum, the network held its second workshop at Swansea University, Wales on the 12th September 2019. This second workshop was a follow up of the first networking event that took place a year prior at Oxford Brookes University in September 2018. The one-day workshop in Swansea attracted a number of early-career and established female academics, with participants traveling to Swansea not only

from other UK universities but also from as far as Switzerland, Hungary and even Kazakhstan! The main goal of the workshop was to provide a platform for early-career researchers to share their work, with established female academics being in attendance to support and share their own experiences of academia to those early-career scholars in attendance.

The forum kicked off with a short introduction by the main organisers Allyson Edwards (Swansea University) and Jasmin Dall'Agnola (Oxford Brookes University). Keynote speaker, Professor Josette Baer (Professor in political theory, University of Zurich) opened the workshop by sharing her personal experiences of academia as a female scholar and providing a list of do's and don'ts for the early-career researchers. Later, the early-career academics, Dr. Ana Kirvalidze (Oxford University), Dr. Brigid Haines, (Swansea University) and Dr. H el ene Thibault (Nazarbayev University) took centre stage as they participated in a number of panels, organised thematically, on topics relating to the Post-Communist space. The provision of this platform allowed these scholars to share their work, exchange ideas and receive feedback in an informal and comfortable atmosphere. To finish, we held a roundtable where established female academics shared their experiences of "Navigating through academia as a female scholar" with the audience.

The main task of EECES WAF is to provide a forum for female academics to share their work. We promote the opportunity to network and dedicated a large portion of the day to moments where the scholars could discuss their research and even arrange potential collaborations. Some of the scholars were in touch prior to the event and saw the workshop as an opportunity to meet face-to-face. One attendee, when asked what they enjoyed most about the day, claimed, "The chance to meet other academics working on similar/ related themes and a chance to present my work." Another stated, "I was interested in the topics of the PhD students and I think the discussions that followed were helpful to them. Also, I thought it was indeed a good opportunity for professional networking." The forum does not limit itself to topics of gender disparity but uses their network to organise female-only conference panels and workshops, like the one at Oxford Brookes and Swansea, to create a comfortable and welcoming space for female academics to promote and share their work.

For membership enquiries, please email EECESWomen@gmail.com

The Eurasian, East and Central European Studies Women Academics Forum would like to thank the Economic and Social Research Council Welsh Doctoral Training Partnership and Swansea University College of Arts and Humanities for helping fund this wonderful event.

SOURCE: <https://twitter.com/EECESWAF>



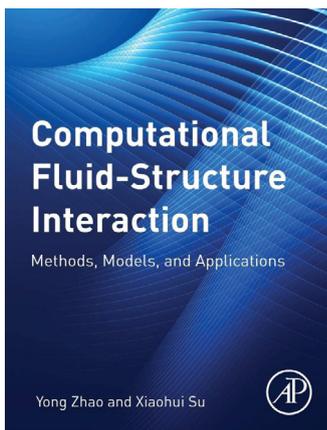
School of Engineering & Digital Sciences News

SEDS Professor's latest book published by Academic Press



Professor Yong Zhao from Mechanical and Aerospace Engineering Department together with his colleague Dr. Xiaohui Su from Dalian University of Technology published a book titled «*Computational Fluid-Structure Interaction: Methods, Models, and Applications*».

The book provides detailed explanations of a range of FSI models, their mathematical formulations, validations, and applications, with an emphasis on conservative unstructured-grid FVM. The first part of the book presents the nascent numerical methods, algorithms and solvers for both compressible and incompressible flows, computational structural dynamics (CSD), parallel multigrid, IOM, IMM and ALE methods. The second half covers the validations of these numerical methods and solvers, as well as their applications in a broad range of areas in basic research and engineering. ([source](#))



Prof. Yong Zhao has more than 28 years of experience in CFD research and published several books/chapters and more than 100 papers, many of which are in top journals in CFD and CSD.

FYI: This [book](#) is already available in our Library!

SHARED BY DARYA ZVONAREVA

Prof. Luis R. Rojas-Solórzano supervises projects at IMT Atlantique



Prof. Luis R. Rojas-Solórzano was invited to teach and work on research with the Energy Systems and Environment Department at IMT Atlantique in France. Every year (since 2010) he delivers a 1-week invited lecture and supervises the research of 2 or 3 teams of 3-4 MSc students in their Integrated Project, which runs throughout a whole semester and has to deal with the evaluation of the feasibility of a type of Clean Energy Technology. The project is

part of their Masters in PM3E/ME3. This year, Prof. Rojas-Solórzano is leading/supervising the following two projects: *Effect of Current Policies in Feasibility of moving the Residential Space/Water Heating from Regular Grid to Wind Power in Denmark* and *Feasibility analysis of using phase-change material in thermal insulation for Australian homes*. Both projects are expected to end in February 2020 and produce at least 1 join paper with NU affiliation.

PREPARED BY PROF. LUIS R. ROJAS-SOLORZANO

Department of Chemical & Materials Engineering and Biological Sciences students fabricate biomimetic scaffolds for Anterior Cruciate Ligament regeneration

WRITTEN BY PROF. CEVAT ERISKEN

More than 200,000 people are suffering from Anterior Cruciate Ligament (ACL) related injuries each year in the US, only. There is an unmet clinical demand for improving biological attachment between grafts and the host tissue in addition to providing mechanical support. For biological graft integration, it is important to provide physiologically feasible environment for the host cells to enable them to perform their duties. However, behavior of cells during ACL healing and the mechanism of ACL healing is not fully understood partly due to the absence of appropriate environment to test cell behavior both in vitro and in vivo.

The study aimed at: i) investigating the change in fibril diameter of bovine ACL tissue upon injury, and ii) fabricating nanofiber-based scaffolds to represent the morphology and structure of healthy and injured bovine ACL tissues. Findings revealed that the collagen fibril diameter distribution of bovine ACL changed from bimodal to unimodal upon injury with subsequent decrease in mean diameter (Figure 1).

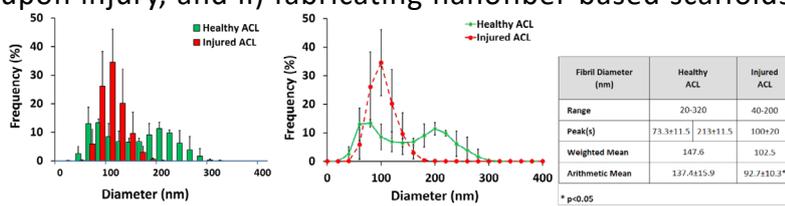


Figure 1: Healthy and injured collagen fibril diameter distributions in the form of (A) histogram and (B) line graph, together with (C) descriptive statistics. * indicates statistically significant difference at $p<0.05$ ($n=3$) and error bars represent SD.

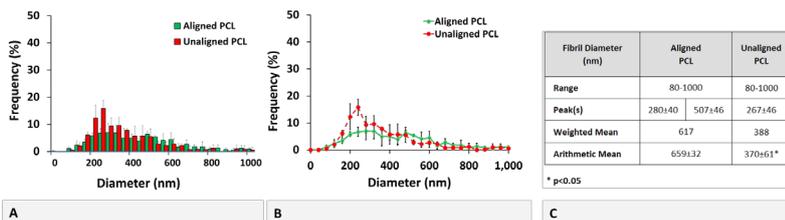


Figure 2: Aligned and unaligned PCL fiber diameter distributions in the form of (A) histogram and (B) line graph, together with (C) descriptive statistics. * indicates statistically significant difference at $p<0.05$ ($n=3$) and error bars represent SD.

tissue demonstrated comparable modulus values only with the aligned bimodal PCL scaffolds. There was significant difference between mechanical properties of aligned bimodal and unaligned unimodal PCL scaffolds. We believe that the results obtained from measurements of diameter of collagen fibrils of native bovine ACL tissue can serve as benchmark for biomimetic scaffold design.

RESEARCH TEAM MEMBERS:



Z. Beisbayeva



A. Zhanbassynova



G. Kulzhanova



F. Mukasheva



Prof. Cevat Erisken

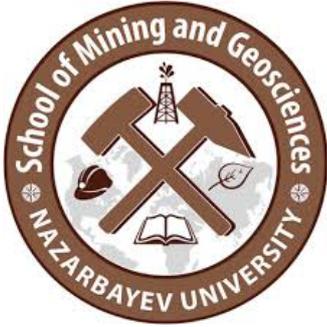
27 Mechanical & Aerospace Engineering students became Certified SolidWorks Associate

On November 28, 2019, after taking the MAE-201 Computer-Aided Design course, 27 2-nd year students in Mechanical & Aerospace Engineering passed a 3-hour online exam and became Certified SolidWorks Associate (CSWA). SOLIDWORKS - is one of the most widely used computer-aided design packages on the planet. The SOLIDWORKS Associate exam (CSWA) is the starting point for many CAD high school or college students who are looking to prove to employers that they can walk into a job and be productive. The CSWA is a practical test (like all SOLIDWORKS professional certification exams) that covers 3D modeling, design concepts, and sustainable design over the course of three hours.

All 27 students received electronic certificates and personal listing on the CSWA directory. Among them, there are five students who demonstrated an outstanding result: 240 out of 240 points.

Congratulations to all our CSWA titleholders who gained new skills demanded at the job market!

PREPARED BY PROF. YERKIN G. ABDILDIN



School of Mining and Geosciences

Congratulations for being appointed as Associate Editor of Tunnelling and Underground Space Technology Journal

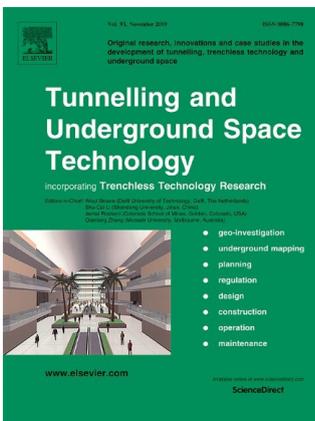


We are pleased to inform you that Prof. Saffet Yagiz is invited as Associate Editor of the [Tunnelling and Underground Space Technology incorporating Trenchless Technology Research](#).

“Over the years Tunnelling and Underground Space Technology has established a leading reputation, and as a member of the Editorial Board, you will have a key role maintaining its quality and impact. We also recognize the role that the Board will play in bringing high-quality content to Tunnelling and Underground Space Technology and we welcome your own submissions to the journal and encourage your colleagues to submit their work too. If possible, we hope that as a Board member you will consider the possibility of being a Guest Editor for a Special Issue or soliciting a review article” written in the invitation. We congratulate you on these undertakings!

For reference: Tunnelling and Underground Space Technology incorporating Trenchless Technology Research is an international journal which publishes authoritative articles encompassing original research and case studies on the development of tunneling technology, the use of underground space and trenchless technology.

The journal is one of the top leading journal with Impact Factor: 3.942; CiteScore: 5.00; SCImago Journal Rank (SJR):2.24; Q1 Level and within Top %1 in the subject category.



SHARED BY PROF. SAFFET YAGIZ



NAZARBAYEV UNIVERSITY LIBRARY

Knowledge Sharing of NU Librarians in Ukraine

The 4th International Scientific Conference on University Library at a New Stage of Social Communications and Development with the theme “University Library in the Development of Digital Infrastructure of Science and Education” brings together higher educational institution librarians and information specialists to discuss the new trends in library and information services to meet the needs of researchers, faculty members, and students. It was held at the Scientific and Technical Library of the Dnipro National University of Railway Transport named after Academician V. Lazaryan (Ukraine) from 3-4 October 2019.



Topics discussed during the conference were about bibliometrics, citation analysis, management of libraries, strategic partnerships, marketing and promotion, open repositories, and practical experiences of librarians. This international conference was organized by the Scientific and Technical Library of the Dnipro National University of Railway Transport named after Academician

V. Lazaryan (Ukraine), Fundamental Library of the Belarusian State University (Republic of Belarus), Scientific Library of the Belarusian National Technical University (Republic of Belarus), Nazarbayev University Library, and Ukrainian Library Association. Joseph Yap and Darya Zvonareva are among the members of the scientific committee.



Library Acting Director Assemgul Temirkhanova gave her welcome remarks to the audience. During the conference, librarians from Nazarbayev University presented their papers. Joseph Yap and Altynay Kozhayeva presented two papers namely, “Is Our Collection Enough or Underutilized?: a Citation Analysis of Master’s Theses” and “Use of Choice Reviews to Build the Geosciences Collection.” The objectives of the first paper is to share how citation analysis can help measure the utilization of the library collection as well as improve whatever is lacking in our current collection. They discussed the steps made in order to analyze the depth of the print and e-resources collection of the library. The second paper analyzes

the current marine and geosciences collection by using Choice Reviews Online as a tool. They both compared existing print and non-print collection and recommended to purchase essential titles lacking in the collection. Meanwhile, Darya Zvonareva presented her paper on “The Value of Library Resources and Services through the Lens of Discovery Tools.” She discussed how discovery tools can improve the retrieval of information if it is organized wisely.

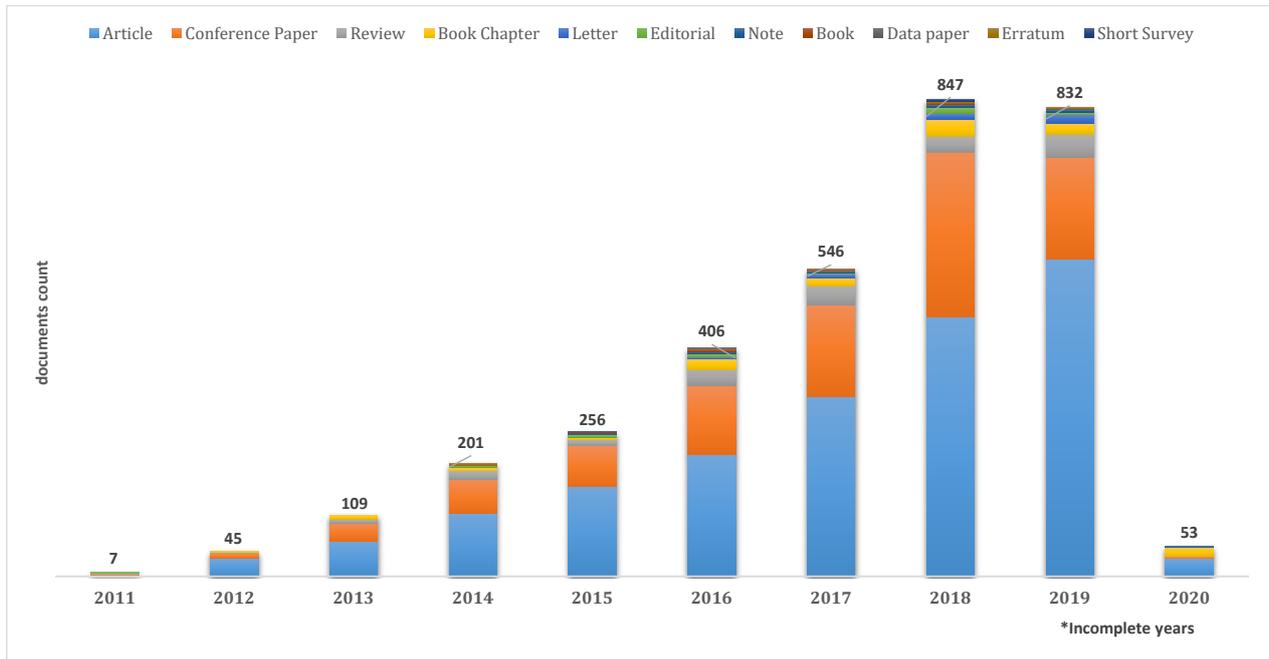
Participants were given a chance to have a tour of the Dnipro River, as well as visit Zaporizhzhia, where the first inhabitants of Cossacks live.

The given proceedings are available in this [link](#)

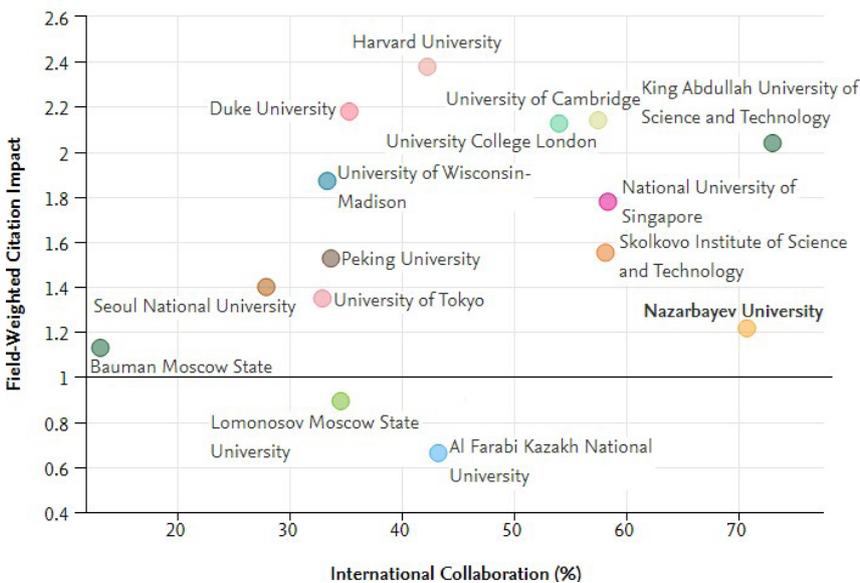
WRITTEN BY JOSEPH YAP

NU Research Performance Overview

Research publications for 2011-2019



Since its inception in 2011, Nazarbayev University faculty members and researchers have released 3,302 peer-reviewed publications indexed by Scopus, and have been cited 16,139 times for 2011-2019 period (Source: Scopus, December 26). NU citation impact is about 4.9 (that is an average number of citations per peer-reviewed publication). The chart above illustrates the number of reviewed papers per year between 2011 to 2020. Note that 2019 and 2020 are incomplete years and their numbers are subject to change. As can be seen, number of NU publications increases steadily over the given period and constitutes mainly from articles and conference papers (59.3% and 28.3% respectively).

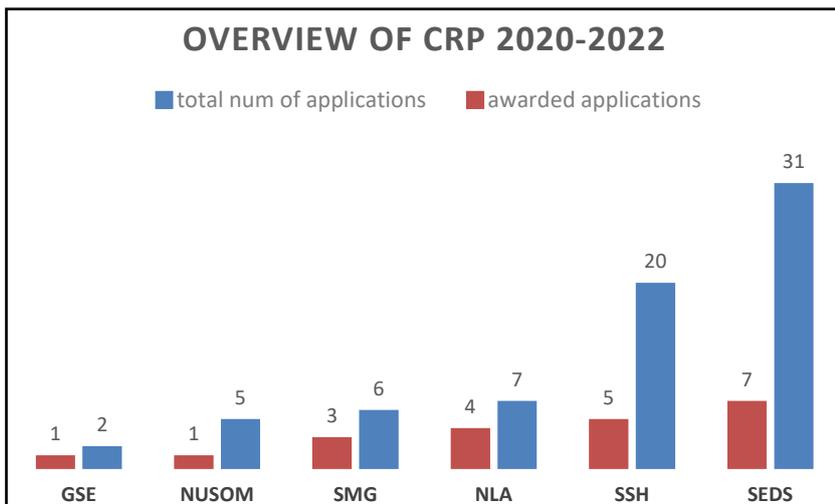


So far, the field-weighted citation impact (FWCI) is 1.22, meaning that NU publications have been cited 22% more than would be expected based on the world average for similar publications. The graph on the left compares different institutions based on the level of international collaboration against FWCI. NU has a high level of international collaboration (over 70%) and the quality of its publications is higher than the global average.

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

NU Collaborative Research Program

One of the main highlights of 2019 is the launch of Collaborative Research Program (CRP). This initiative aims to build sustainable partnerships and collaborations between NU and Kazakhstani scientific community aligning with a strategic priority of the University. Within the framework of CRP NU has established partnerships with institutions like Eurasian National University, Kazakh-British Technical University, Suleyman Demirel University, Satpayev University, Karaganda State University, Astana Medical University, Al Farabi Kazakh National University and more.



This year out of 71 accepted applications, 21 were awarded, and 20 research projects will start their implementation in 2020. The success rate of the first batch of submitted applications for CRP is 28%. The chart on the left demonstrates the number of research proposals submitted and awarded by School/Center in 2019.



All research proposals were collected and sent for scientific peer-review conducted by Oak Ridge Associated Universities (ORAU). Each proposal was evaluated by three independent experts in corresponding subject area using 1-9 scale (1-bad and 9-Exceptionally). Since CRP is focused on supporting sustainable partnerships and deliver high-quality research the threshold level was set to 6.67. The table on the left

shows the number of applications submitted with scores given by ORAU. Overall, 9 proposals scored above the threshold and 12 meet the minimum pass score.

We congratulate all awarded researchers and look forward to hearing about their achievements!

Funding Institutional

Gain a competitive edge
with funding insights, discovery & decisions



Dear NU Community,

We would like to remind you that we have a subscription for Funding Institutional software that anyone affiliated with Nazarbayev University can use to search for external grants from government and private funding organizations.

Funding Institutional - is a search tool for funding opportunities, awarded grants and funder profiles.

You can search grants by:

- **Your research discipline**
- **Grant type** (research, travel grant, training etc.)
- **Eligibility requirements:**
 - experienced researchers
 - young professionals
 - grad and undergrad students

HOW TO USE?

- Anyone with our corporate email (@nu.edu.kz) has an opportunity to use Funding Institutional.
- Just go to <https://www.fundinginstitutional.com>
- The user interface of FI is pretty intuitive. If you get stuck at some point, refer to the user manual that is available via this [link](#).

NOTE: If you are **outside the campus**, follow these steps to access the system:

1. Go to [electronic resources page](#)
2. Click on **Funding institutional**
3. Enter your login and password (a.k.a. your name.surname and password you use to log in to your computer or directum or my.nu.edu.kz)
4. Enter your Funding institutional login and password (a.k.a. your e-mail and password you have registered with on Scopus/SciVal/Funding Institutional)

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

FUNDING OPPORTUNITIES

#	Opportunity	Funder	Amount	Deadline	Source link
1	Technology Development Grants	Wellcome Trust	Up to 1,500,000 GBP	2020-03-26	URL
2	Research Opportunity in Zoonotic and Emerging Diseases	Oak Ridge Associated Universities	Not specified	2020-03-31	URL
3	IUGG Grants Program 2020-2023	International Union of Geophysics and Geodesy	Up to 80,000 USD	2020-04-01	URL
4	Gonda fund: Funding request project or publication	Koninklijke Nederlandse Akademie van Wetenschappen	Up to 2,000 EUR	2020-04-01	URL
5	Staley Small Grants	Wellesley College	Up to 5,000 USD	2020-04-13	URL
6	BRACHMAN HOFFMAN SMALL GRANTS	Wellesley College	Up to 5,000 USD	2020-04-13	URL
7	SSHRC Explore Grant	Trent University	Up to 7,000 CAD	2020-05-01	URL
8	SSHRC Exchange Grant - Knowledge Mobilization Activities	Trent University	Up to 3,000 CAD	2020-05-01	URL
9	DIBS Research Incubator Awards	Duke Institute for Brain Sciences, Duke University	Up to 100,000 USD	2020-05-01	URL
10	Sigma/Chamberlain College of Nursing Education Research Grants	Sigma Theta Tau International	Up to 10,000 USD	2020-05-01	URL
11	Small grants	Alberta Gambling Research Institute, University of Alberta	Up to 10,000 CAD	2020-05-01	URL
12	Concerted Research Actions	Bijzonder Onderzoeksfonds	Up to 150,000 EUR	2020-05-06	URL
13	German Research Chair "Mathematics and its application" at the African Institute for Mathematical Sciences (AIMS) in Rwanda	Alexander von Humboldt-Stiftung	Up to 560,000 EUR	2020-05-15	URL
14	Workshop proposals	Erwin Schrödinger International Institute for Mathematics and Physics	Up to 20,000 EUR	2020-05-15	URL
15	Health Systems Research Initiative Call 7: Providing evidence to strengthen health systems in low and middle income countries: Foundation grants	Medical Research Council	Up to 200,000 GBP with total funding of 4,700,000 GBP	2020-05-28	URL
16	Thematic programmes	Erwin Schrödinger International Institute for Mathematics and Physics	Up to 84,000 EUR	2020-06-01	URL
17	EACVI Research grants	European Association of Cardiovascular Imaging	Up to 25,000 EUR	2020-09-30	URL
18	Georg Forster Research Award	Alexander von Humboldt-Stiftung	Up to 25,000 EUR with total funding of 60,000 EUR	2020-10-31	URL
19	International Exchange Programmes in Humanities, Social Science and Bioethics	Wellcome Trust	Up to 1,500,000 GBP	2020-11-30	URL
20	International Dissertation Research Grants	American Academy of Religion	Up to 5,000 USD	2020-12-01	URL

FUNDING OPPORTUNITIES

#	Opportunity	Funder	Amount	Deadline	Source link
21	Culham St Gabriel's Grants	King's College London	Not specified	2020-12-31	URL
22	Research and Development Management (RADMA) - Postgraduate Student Research Support	King's College London	Up to 1,000 GBP	2020-12-31	URL
23	EACVI research grants 2020	European Society of Cardiology	Up to 25,000 EUR	2020-12-31	URL
24	Research Development Awards in Humanities, Social Science and Bioethics	Wellcome Trust	Up to 1,000,000 GBP	2021-01-31	URL
25	Computational Science and Technology Advanced Research Studies (C-STARS) - Software Engineer	Oak Ridge Associated Universities	Not specified	Not specified	URL
26	Computational Science and Technology Advanced Research Studies (C-STARS) - Modeling and Simulation	Oak Ridge Associated Universities	Not specified	Not specified	URL
27	Evert Willem Beth foundation	Koninklijke Nederlandse Akademie van Wetenschappen	Not specified	Not specified	URL
28	Wallenberg Academy Fellows	Royal Swedish Academy of Sciences	Not specified	Not specified	URL
29	FBI Critical Incident Response Group Research Opportunity	Oak Ridge Associated Universities	Not specified	Not specified	URL
30	FBI Critical Incident Response Group Research Opportunity	Oak Ridge Associated Universities	Not specified	Not specified	URL
31	Early Career Researcher (ECR) Mentoring Scheme	Charles Sturt University	Up to 6,000 AUD	Not specified	URL
32	Early phase clinical trials: Canada	Newfoundland and Labrador Centre for Applied Health Research	Up to 1,500,000 CAD	Not specified	URL
33	Leverage funding for large grants/Research contracts	Charles Sturt University	Up to 50,000 AUD	Not specified	URL
34	Technology Development Grants	Wellcome Trust	Up to 1,500,000 GBP	2020-03-26	URL
35	Research Opportunity in Zoonotic and Emerging Diseases	Oak Ridge Associated Universities	Not specified	2020-03-31	URL
36	IUGG Grants Program 2020-2023	International Union of Geophysics and Geodesy	Up to 80,000 USD	2020-04-01	URL
37	Gonda fund: Funding request project or publication	Koninklijke Nederlandse Akademie van Wetenschappen	Up to 2,000 EUR	2020-04-01	URL

New publications (count: 234)

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