RESEARCH NEWSLETTER

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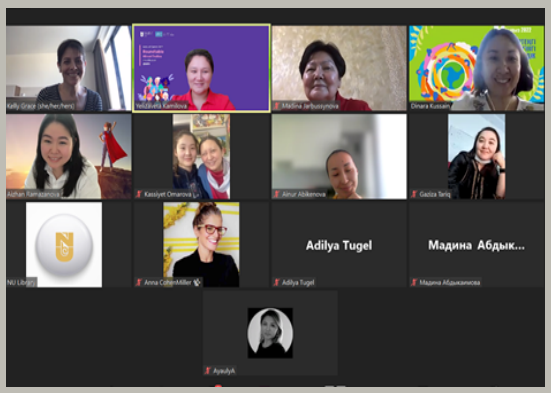


IN THIS ISSUE

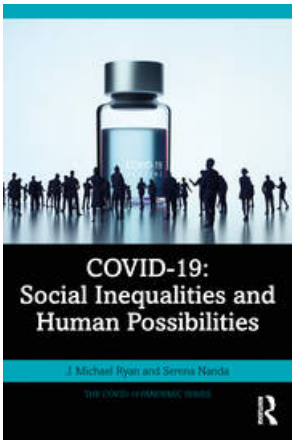
School of Sciences and Humanities News

NEW BOOK ON COVID-19 PANDEMIC BY DR. MICHAEL RYAN

Dr. Michael Ryan (Assistant Professor of Sociology) has written a new book (with Serena Nanda) entitled COVID-19: Social Inequalities and Human Possibilities. The book examines the unequal impact of the COVID-19 pandemic on individuals, communities, and countries, a fact seldom acknowledged and often suppressed or invisible. Taking a global approach, this book demonstrates how the impact of the pandemic has differed as a result of social inequalities, such as economic development, social class, race and ethnicity, sex and gender, age, and access to health care and education.

Along with the other titles in Routledge's The COVID-19 Pandemic series (edited by Dr. Ryan), this book represents a timely and critical advance in knowledge related to what many believe to be the greatest threat to global ways of being in more than a century. COVID-19: Social Inequalities and Human Possibilities is therefore indispensable for academics, researchers, and students as well as activists and policy makers interested in understanding the social impact of the COVID-19 pandemic and eradicating the inequalities it has exacerbated. The book is available here

The book has gotten pretty good reviews, below are some of them:



'You hold in your hands a tour de force. Ryan and Nanda have crafted what feels like a GPS for our time, thoughtfully and carefully leading us through this anxious, dark, and confusing labyrinth in our social history, alerting us to existing landmines and waking us up to ones of our own creation. Yet they manage to do this with profound curiosity and care, and their sociological analysis provides much needed light to vanquish the darkness.'

***Deborah J. Cohan**, Professor of Sociology, University of South Carolina Beaufort*

'Based on a reading of an extensive amount of cutting-edge information, this book documents how the COVID-19 pandemic is entangled in social inequalities both within and across nation-states: not only has the pandemic aggravated existing disparities between the disadvantaged and the wealthy but it has also created new ones. This work sheds light on the global pandemonium of the COVID-19 pandemic and will no doubt remain essential reading for many years to come as the world strives for greater social justice.'

***Niko Besnier**, Professor of Cultural Anthropology, University of Amsterdam*

'Michael Ryan and Serena Nanda offer a vivid, timely and comprehensive analysis of the sociological aspects of the COVID-19 pandemic, especially as they relate to social stratification. The authors make it abundantly clear that the pandemic is at least as much a social problem as it is a health crisis. Indeed, as they powerfully demonstrate, it is both. While they paint a dark picture, they also see hope in rebuilding better in the wake of the pandemic.'

***George Ritzer**, Professor Emeritus of Sociology, University of Maryland*

'After Ryan's two successful edited volumes on COVID-19, he has teamed up with Serena Nanda to deliver this remarkably powerful book on the impact of COVID-19 on social (global, local, digital) inequalities and human capabilities. It is a tale of pandemic inequalities, but also a plea for (re-)building a post-pandemic world.'

***Sari Hanafi**, President, International Sociological Association*

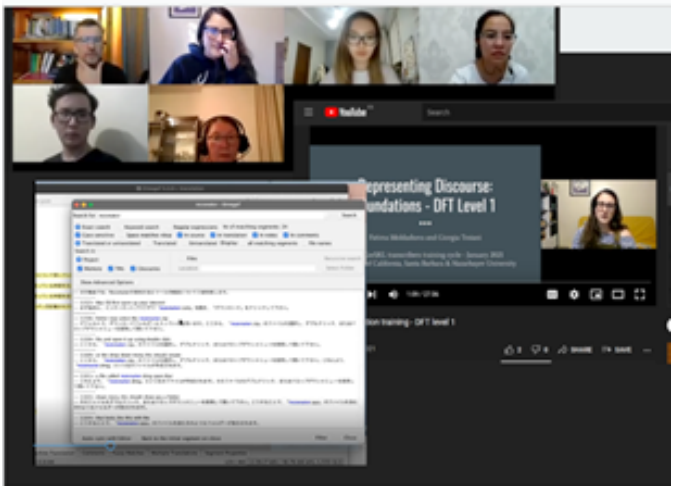
THE PROJECT "MULTIMEDIA CORPUS OF MODERN SPOKEN KAZAKH LANGUAGE" HAS COMPLETED ITS FIRST YEAR

SHARED BY ANDREY FILCHENKO

The project "Multimedia Corpus of Modern Spoken Kazakh language" is supported by the NU Collaborative Research Projects grant 021220CRP1422. Having started in January 2021 under the auspices of the Department of Languages, Linguistics and Literature of the NU School of Sciences and Humanities, the MCSKL project has developed partnership with Kazakhstani and international universities, including L.N.Gumilyov Eurasian National University, University of California Santa Barbara, Swarthmore College, University of Kansas and University of Hamburg.

The project aims to make an important contribution to the study of Kazakh language in its contemporary state by implementing the state-of-the-art multimedia corpus of annotated natural speech. This resource will have tremendous scientific and applied value, helping to explore language diversity, contact, variation and change in Kazakhstan in the context of Central Asia, uncovering the details of the present and understanding the past conditions of cultural and linguistic composition of this diverse region.

The project implies a strong educational element, engaging BA- and MA-students as research assistants in the process of collection of diverse language material, metadata, and its careful transcription and annotation.



The ideology of the project is manifest in three key mutually informed objectives: (i) building a contemporary linguistic research infrastructure; (ii) training a group of young local scholars in contemporary corpus linguistics; (iii) creating an international research collaboration network that could share expertise to the development of the objectives (i) and (ii), and remain valid beyond the life cycle of the project.

To achieve the goal of the project, a set of objectives is fulfilled in the Year-1 of the project:

1) developing meaningful collaborations across NU programs and externally with the sister programs at ENU and international partner-universities, benefiting from interdisciplinary and inter-institutional synergies and best practices. From the onset of the project, the group of international partners, particularly at UCSB, worked closely with the NU / ENU team developing and implementing the training program and integration of the relevant international best practice into the project.

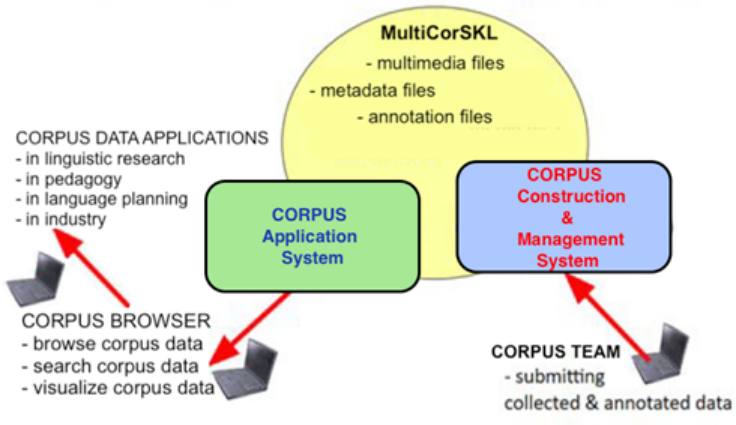
2) recruiting and training the team of NU/ENU research assistants in theory & methods of natural language data collection, archiving, and annotation. Since the onset of the project and throughout the Year-1, over 20 online seminars were held in collaboration with the project partners at UCSB. The training workshops were delivered in collaboration between the project PI, Andrey Filchenko and the UCSB partners: Professor John DuBois and PhD candidate Giorgia Troiani, with the support of Fatima Moldashova of Stanford University. The training of BA, MA, and PhD students from various regions of Kazakhstan in the state-of-the-art methods and technologies of high-quality primary data collection, processing, and application within specific corpus research methods for academic, educational, and commercial purposes is an important element of the project with long lasting effects.

3) designing and implementing methodologically rigorous and theoretically informed collection of primary multimedia data on local modern spoken language varieties in Kazakhstan. Preceded by a rigorous RA training program implemented throughout the year, the Year-1 pilot phase of original language data collection amounted to the total volume of 200 Gb of recorded data.

4) designing and implementing protocols for automated language data and metadata processing for the corpus. Dictated by the sheer volume of the language data to be annotated within the project, the project team expert

Professor Zhenisbek Asylbekov (NU), Timofey Arxangelsky (UH), Jonathan Washington (SC), and the NU RAs Ilnar Selimzianov and Nikolay Mikhailov have been researching, synthesizing, and implementing automated speech-to-text transcriber, parser, morphologizer applications in their integration, which will be further trained and improved using manually annotated data, and implemented for large data volumes in the consequent periods of the project.

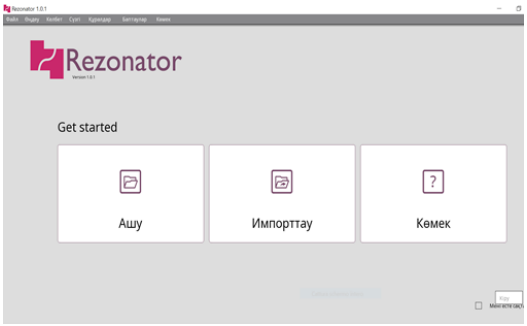
5) implementing deep annotation of the collected original primary data and integrating it into a searchable multimedia corpus representative of modern spoken Kazakh language in its diverse regional and social varieties. Manual data annotation of a pilot volume of the recorded data was performed in ELAN environment using the Discourse Functional Transcription and Interlinearized Glossing conventions. The transcriptions are annotated for a variety of features, including transcripts in standardized orthographies, phonetic transcriptions, interlinear glossing, free translations, notation of nonverbal communication and interactional elements, and cultural notes on language use in multilingual environment. The richness of the annotation is born in rigorous comparative analysis of regional and social varieties, and is aimed to support pedagogical endeavors and various technological applications.



6) designing, testing, and implementing data access/search/information extraction capacities for the produced database as a free-access resource for scientific and general communities. The database interface design is in its early phase although the free data access and effective information extraction utility is integrated into the design process from very early stages. Best practice examples internationally are considered and adapted to the project.

7) localisation of the specialized linguistic software applications. The project's comprehensive RA training program made possible the localization into Kazakh and Russian language of specialized software like Rezonator developed by Professor John Du Bois, the project's partner, for the analysis and quantification of the features of natural human communication.

The localization into the Kazakh and Russian languages was done for the first time and will serve both, the project itself (equipping RAs with valuable transferable skills), and wider professional community in the region (contributing to standardization of linguistic terminology supported by the distribution of specialized software, and contributing to application of the Kazakh language data to the contemporary research questions).



8) authoring academic publications and presentations on the project processes and outputs with international academic venues. Initial experiences and outcomes of the project were presented at the international conference "Arizona Linguistics Circle-15", in October 2021. This presentation, importantly, involved project RAs and has been followed by the publication co-authored by the whole project team, including G.Troiani, A.Filchenko, J.DuBois, G.Sarseke, I.Salimzianov, N.Mikhailov, B.Tursunova, A.Yelubai, B.Seitak, A.Khamitova, F.Moldashova, A.Akanov, M.Bizhanova, D.Koishybayeva, T.Nurgaliyeva, A.Seiilbek, T.Temirzhanova (2021. "Remote data collection: Multimodal Corpus of Spoken Kazakh Language" // Coyote Papers, Volume 24. (forthcoming).

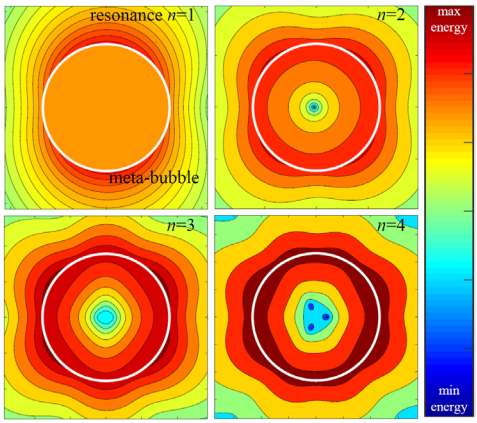
9) developing a program for a long-term inter-disciplinary, inter-institutional collaborative research on the Kazakh language and culture variation and change in the wider context of human history of Central Asia. It is anticipated that this component will be a readily replicable model for similar projects in the region.

The information value of the spoken language data in the form of digital annotated corpus is hard to overestimate. Although it is undoubtedly a more resource-intensive process than the existing practice of compiling large volumes of written language data, it is proven that spoken and written languages may have quite divergent features including the very grammar. In this light, a large database of naturally occurring spoken interactions is extremely valuable, enabling fuller and more precise understanding of the range of phenomena that evolve and define a language. The initial project implementation already demonstrates that analysis of spoken Kazakh language data from speakers of diverse regions, ages, genders, ethnic and social backgrounds more accurately captures the existing variation in the language, is truly representative of the complex modern reality, and offers unique insights into the region's history and development trends.

PHYSICS STUDENT PUBLISHES AS THE FIRST AUTHOR

Physics undergraduate student Dias Tulegenov, member of NU Metamaterials Modeling and Design Group led by Prof. Costas Valagiannopoulos, has published a study as the first author at the Journal of Applied Physics by American Institute of Physics. The paper is entitled "Meta-bubbles: Spherical metasurfaces as electromagnetic energy accumulators".

In this work, it is reported that collecting energy from the time-dependent electrodynamic fields into a vacuum volume can be substantially assisted by spherical impedance metasurfaces wrapped around the respective domains. These optimal meta-bubbles can be employed in integrated photonic systems involving an extensive range of applications from energy storage and optical memory to electromagnetic filtering and power accumulation.



This work was partially supported by Nazarbayev University Faculty Development Competitive Research through Grant No. 021220FD4051 (Optimal design of photonic and quantum metamaterials). The paper abstract is given below:

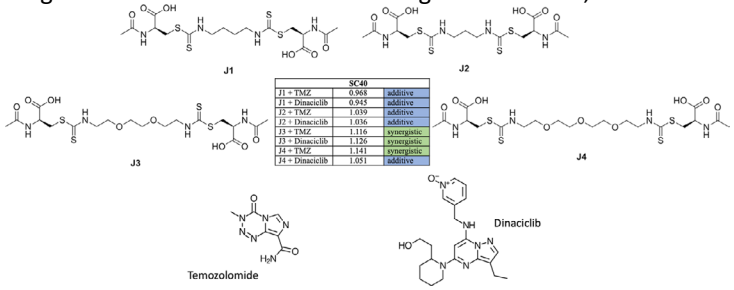
Collecting energy from the time-dependent electrodynamic fields into a vacuum volume can be substantially assisted by spherical metasurfaces wrapped around the respective domains. The combinations of sizes and surface admittances that lead to maximal concentration of power into the cells are identified and enhancement by several orders of magnitude has been recorded. The spatial distribution of the signals in the vicinity of these meta-bubbles unveils the nature of the sustained resonances and demonstrates their ability to wirelessly couple with other equipment nearby. The reported optimal regimes of operation can be employed in integrated photonic systems involving an extensive range of applications from energy storage and optical memory to electromagnetic filtering and power accumulation.

CANCER BIOLOGY: GLIOBLASTOMA RESEARCH

BY TIMO BURSTER

Pengfei Xu, Mike-Andrew Westhoff, Amina Hadzalic, Klaus-Michael Debatin, Lukasz Winiarski, Jozef Oleksyszyn, Christian Rainer Wirtz, Uwe Knippschild, and Timo Burster. Diisothiocyanate-derived mercapturic acids are a promising partner for combination therapies in glioblastoma. 2022. ACS Omega. doi: 10.1021/acsomega.1c06169. IF: 3.512 SJR: 0.78, Q1

Glioblastoma represents the most aggressive tumor of the central nervous system. Due to invasion of glioblastoma stem cells into the healthy tissue, chemoresistance, and recurrence of the tumor, it is difficult to successfully treat glioblastoma patients, which is demonstrated by the low life expectancy of patients after standard therapy treatment. Recently, we found that diisothiocyanate-derived mercapturic acids, which are isothiocyanate derivatives from plants of the Cruciferae family, provoked a decrease in glioblastoma cell viability. These findings were extended by combining diisothiocyanate-derived mercapturic acids with dinaciclib (a small-molecule inhibitor of cyclin-dependent kinases with anti-proliferative capacity) or temozolomide (TMZ, standard chemotherapeutic agent) to test whether the components have a cytotoxic effect on glioblastoma cells when the dosage is low. Here, we demonstrate that the combination of diisothiocyanate-derived mercapturic acids with dinaciclib or TMZ had an additive or even synergistic effect in the restriction of cell growth dependent on the combination of the components and the glioblastoma cell source. This strategy could be applied to inhibit glioblastoma cell growth as a therapeutic interference of glioblastoma.



School of Medicine News

PERSPECTIVE ANALYSIS OF CCR5 BLOCKADE BY ANTAGONISTS

In the context of the Research Topic "***CCR5: a Receptor at the Center Stage in Infection***", guest edited by Luca Vangelista and shared by Frontiers in Immunology (Impact Factor 7.6; Q1 Immunology; Q1 Immunology and Allergy) and Frontiers in Microbiology (Impact Factor 5.6, Q1 Microbiology and Q1 Microbiology (medical)), Yerkezhan Amerzhanova and Luca Vangelista published (in Frontiers in Immunology) a Perspective article titled "*Filling the gaps in antagonist CCR5 binding, a retrospective and perspective analysis*".

The Perspective analyzes the recent developments of potent CCR5 antagonists and presents different original approaches to GPCR antagonism, focusing mostly on the possibility to optimize occupancy of the receptor orthosteric cavity of CCR5. CCR5 is a chemokine receptor of central relevance for HIV-1 entry but also a key player in numerous infectious and inflammatory diseases. Within the article, a retrospective structural analysis of the potent CCL5 mutants previously generated by the group of Luca Vangelista (Sci Rep 2018 8:1890 doi: 10.1038/s41598-018-20300-9) is reported using computational biology.

Yerkezhan Amerzhanova is a 2020 Master in Molecular Medicine (MMM) graduate that worked in the group of Luca Vangelista both during her MMM research thesis and, after graduation, as research assistant. Since October 2021, she is a visiting fellow at the European Molecular Biology Laboratory (EMBL) in Heidelberg, funded by a Yessenov Foundation Internship and by the EMBL host laboratory.

Written by Luca Vangelista - Associate Professor & Director of the Master in Molecular Medicine at NUSOM

NEWS FROM THE OBSTETRICS AND GYNAECOLOGY TEAM

The first one «*Contemporary Fertility-Sparing Management Options of Early Stage Endometrioid Endometrial Cancer in Young Nulliparous Patients*» is very important from the clinical point of view, and deserves the attention of both our students & faculties, and UMC physicians & preceptors.

The second recently published article «*Impact of governmental support to the IVF clinical pregnancy rates: differences between public and private clinical settings in Kazakhstan—a prospective cohort study*» presents results from the Nazarbayev University Social policy grant awarded to Prof. Terzic.

The third paper «*Comparison of two invasive non-surgical treatment options for uterine myomas: uterine artery embolization and magnetic resonance guided high intensity focused ultrasound— systematic review*» is a systematic review, published in the leading Q1 journal,

and is linked to the LSP of our MD student Madina Yerezhepbayeva.

The fourth paper «*Factors Influencing on Pain in Patients Undergoing Pipelle Endometrial Biopsy for Abnormal Uterine Bleeding: Why a Personalized Approach Should Be Applied?*» deals with factors influencing the pain in patients undergoing Pipelle endometrial sampling for abnormal uterine bleeding. It was published in the journal of personalized Medicine, a Q1 journal for general Medicine.

All papers are open source and are freely available. Provided by Prof. Milan Terzic and his team

DIABETES MELLITUS - NEW FINDINGS AND IMPLICATION FOR KAZAKHSTAN

Diabetes Mellitus is a disease characterized by elevated glucose levels. Glucose is critical and essential as a source of energy for our metabolism, but high levels of glucose are very toxic, and create significant problems in our circulatory system, affecting all our organs and systems, mainly the heart, brain, kidneys, retina, and peripheral circulation.

Classically, we consider 2 main types of diabetes: Type 1 and Type 2. Type 2 is the most frequent, representing more than 90% of overall cases. With this type of diabetes, the body becomes resistant to insulin and the pancreas progressively is unable to produce the amount of insulin necessary to control your blood sugar. Resistance to action of insulin or having low levels of insulin imply that people with Type 2 diabetes will have too much glucose in their bloodstream and will have significant complications associated with their cardiovascular system, circulation, eyesight, and kidney function.

Diagnosing diabetes is very easy: a simple fasting blood test will tell you if you have diabetes. But diabetes is a "silent killer": typically, type 2 diabetes remains undiagnosed in a significant number of cases, delaying taking appropriate effective measures to control this disease. Late diagnosis of this type of diabetes leaves people at risk of developing serious complications, including stroke, heart disease, blindness, kidney disease, and low limb amputations.

Binur Orazumbekova, a graduate of the Master in Public Health at NUSOM, conducted an analysis for her Thesis, supervised by endocrinology and public health professors from NUSOM Alpamys Issanov, Kuralay Atagaldiyeva, and Antonio Sarría-Santamera, investigating the prevalence of "known" and "unknown" DM in Kazakhstan as well as of "pre-diabetes", when glucose levels are very high but not enough to be properly considered as diabetes. She used for her analysis data from a survey conducted using WHO tools in the country. This study is part of a project funded by Nazarbayev University and led by Dr. Sarría-Santamera to investigate the main characteristics of diabetes mellitus in Kazakhstan.

The results showed that the proportion of people with diabetes is not only much higher than previous estimations indicated (8.0%) but that only 54% of diabetic patients are aware of having the disease and that 1.9% of the population are at high-risk to become DM patients.

The public health implications of those findings are significant. "We need to make sure that people are aware of the risk factors and symptoms of Type 2 diabetes and we need to encourage them to ask for a diabetes test if they are at risk of developing the condition,» said Binur, who also indicated that «we already know that more and more people are developing the condition in Kazakhstan and therefore we urge the Government to keep diabetes and diabetes awareness at the top of the health agenda".

The full paper is available at:

Orazumbekova B, Issanov A, Atageldiyeva K, Berkinbayev S, Junusbekova G, Danyarova L, Shyman Z, Tashmanova A, Sarria-Santamera A. Prevalence of Impaired Fasting Glucose and Type 2 Diabetes in Kazakhstan: Findings from a large study. Frontiers in Public Health 10;2022. DOI: 10.3389/fpubh.2022.810153

Provided by Dr. Antonio Sarria-Santamera

NEPHROLOGY RESEARCH UPDATE

Valdemir Kim, supervised by Dr. Gaipov, won the first place at the National Congress of Nephrologists for the Best Abstract among Young Nephrologists. As a result, he was awarded with 3-year membership at European Renal Association-European Dialysis and Transplant Association with his abstract on:

LATE DIAGNOSIS OF CKD AND ASSOCIATED SURVIVAL AFTER INITIATION OF RENAL REPLACEMENT THERAPY IN KAZAKHSTAN: ANALYSIS OF NATIONWIDE ELECTRONIC HEALTHCARE REGISTRY 2014-2020

Valdemir Kim, Arnur Gusmanov, Yesbolat Sakko, Mariyam Kim, Alpamys Issanov, Ainur Assan, Marina Khvan, Abduzhappar Gaipov

Introduction: Chronic Kidney Disease (CKD) is a global public health issue with estimated prevalence around 11% to 13% worldwide. This chronic condition eventually progresses to End-Stage Renal Disease (ESRD), which requires a life-saving renal replacement therapy (RRT). Although incidence of ESRD is increasing in Kazakhstan, little is known about the effect of different factors on prognosis in this group of patients. Thus, we aimed to study how delayed diagnosis of CKD affects survival after initiation of RRT.

Methods: Data was obtained from Unified National Electronic Health System (UNEHS). In total 15,048 patients were diagnosed with CKD by the beginning of 2020. Baseline patient characteristics were described for the whole patient population. Out of them, 7,889 (52.4%) patients were recorded to receive renal replacement therapy: either dialysis or kidney transplantation. Several independent variables were analyzed for an impact on survival after initiation of RRT using Cox Proportional Hazards Model. The outcome event in the model was either death or alive status at 2020-01-01.

Results: The cohort consists of 8,144 males (54%), 6,904 females (46%). Ethnicity distribution was 63% Kazakh, 16% Russian and 21% other. Median age of patients at the time of diagnosis of CKD was 48 years (IQR 30-60). 5,984 patients (40% of total or 76% of ESRD patients) were started on RRT within 30 days of diagnosis. 811 patients (10% of ESRD patients) received transplantation. Median follow-up time of patients receiving RRT was 2.75 years (IQR 1.36-4.51).

Cox multivariate regression demonstrated that patients who initiated RRT after 30 days and after 1 year of diagnosis had more favourable survival prognosis in comparison to patients who started RRT within first 30 days of diagnosis with HR 0.82 ($p=0.012$) and HR 0.74 ($p=0.008$) respectively. Kidney transplant recipients had a 79% lower risk of post-ESRD mortality (HR 0.21, $p<0.001$). Older age at diagnosis was associated with poorer survival evident from HR 1.03 ($p<0.001$). There was no significant difference between males and females HR 1.08 ($p=0.114$). Russian and other ethnicities were shown to have significantly high HR with 1.31 ($p<0.001$) and 1.17 ($p=0.013$) respectively. Several regions of Kazakhstan (not shown in the figure) had statistically significant HR < 1 (Aktobe region and Shymkent) and HR > 1 (Almaty, Zhambyl, Mangystau and South-Kazakhstan regions) in comparison with the capital - Nur-Sultan.

Conclusions: A significant proportion of patients (40%) diagnosed with CKD started RRT within the first 30 days, meaning that those patients were already at stage 5 CKD. Such late diagnosis might have an adverse impact on survival after commencing RRT. Therefore, more focus should be made on early diagnosis and management of CKD, especially in patients with risk factors, such as diabetes and hypertension.

Provided by Dr. Abduzhappar Gaipov and 4th year MD student Valdemir Kim

NEWS ABOUT PAIN MANAGEMENT AND REMOTE MONITORING OF CHRONIC CRITICALLY ILL PATIENTS

Dr. Viderman and his team recently published several articles in Q1 journals (IF 4.5-5). Two of them are dealing with plane block techniques in order to reduce postoperative pain and opioid consumption after surgery both published in Frontiers in Medicine, while the third one is a systematic review on «Remote Monitoring of Chronic Critically Ill Patients after Hospital Discharge» published in the J. Clin. Med.

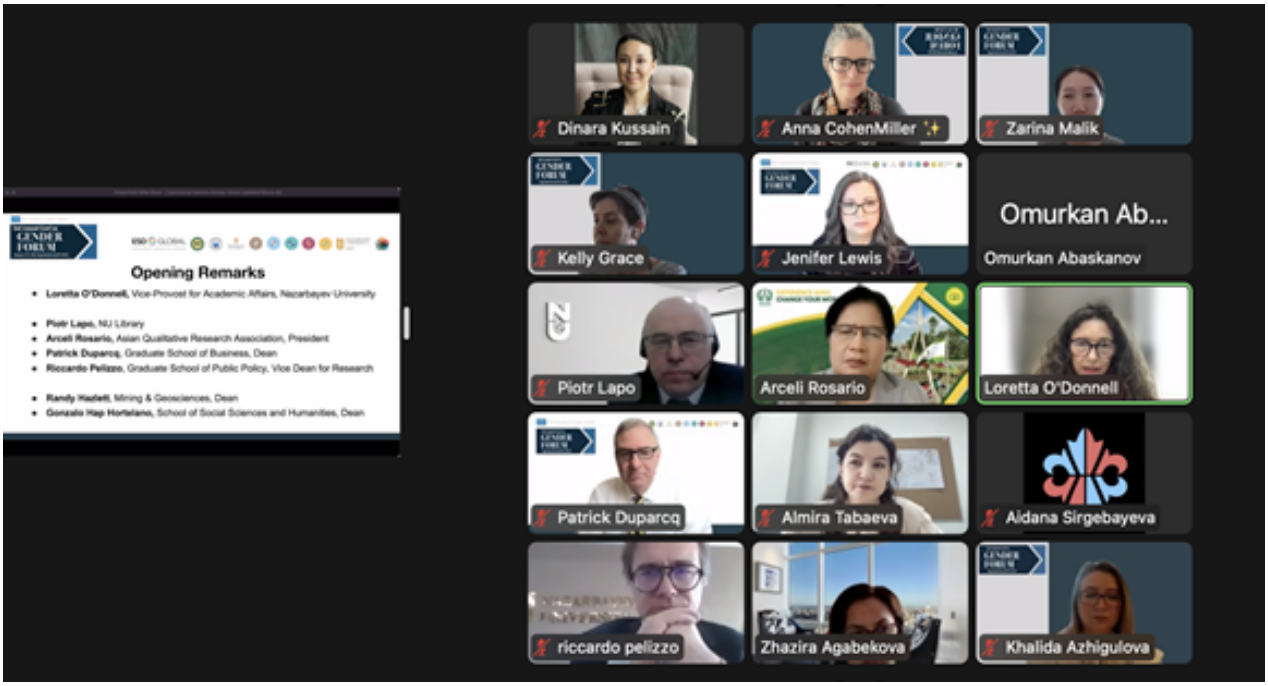
- Transversus Abdominis Plane Block in Colorectal Surgery: A Meta-Analysis. Viderman D, Aubakirova M, Abdildin YG. Front Med (Lausanne). 2022 Feb 23;8:802039. doi: 10.3389/fmed.2021.802039. eCollection 2021.PMID: 35295183 Free PMC article.
- Erector Spinae Plane Block in Abdominal Surgery: A Meta-Analysis. Viderman D, Aubakirova M, Abdildin YG. Front Med (Lausanne). 2022 Feb 23;9:812531. doi: 10.3389/fmed.2022.812531. eCollection 2022.PMID: 35280917 Free PMC article.
- Remote Monitoring of Chronic Critically Ill Patients after Hospital Discharge: A Systematic Review. Viderman D, Seri E, Aubakirova M, Abdildin Y, Badenes R, Bilotta F.J Clin Med. 2022 Feb 15;11(4):1010. doi: 10.3390/jcm11041010.PMID: 35207287 Free PMC article. Review.

RESEARCH NEWS OF THE GRADUATE SCHOOL OF BUSINESS

January - March 2022

GENDER FORUM

The 2nd annual Gender Forum, hosted by the Consortium of Gender Scholars (GenCon), was held on 9 March 2022. The forum is coordinated by the GenCon organizing committee, led by the Consortium's co-Directors, **Dr. Anna CohenMiller** (NUGSE) and **Dr. Jenifer Lewis**, Associate Professor in the Graduate School of Business. The forum was supported by a number of NU schools (including GSB), the Office of the Provost, ESD Global, and the NU Library. We look forward to seeing you at next year's forum in March 2023!



The forum was online due to covid-related restrictions and brought together 174 scholars, students, and practitioners from Kazakhstan, Central Asia, and around the world to focus on the Forum's theme: Opportunities and Challenges for Gender Equity in Central Asia.

The full-day event included research paper presentations, networking and discussion opportunities, stakeholder meetings, a workshop, and two keynote addresses including one from Dr. Khalida Azhigulova, PhD, Associate Professor in Law, Eurasian Technological University (Almaty), Director of the Centre for Research of Human Rights, Inclusion and Civil Society.

It is especially important to note that of the 25 scholars who presented research, 16 of them are from Kazakhstan or Central Asia and include professors, graduate, and undergraduate students. The forum program and more information about GenCon can be found on the GenCon website.

GLOBAL ENTERPRISE MONITORING KAZAKHSTAN – PANEL DISCUSSION ON FEBRUARY 25

On February 25, 2022, to launch the **results of the Global Enterprise Monitoring (GEM) report for Kazakhstan**, which GSB prepared, a panel discussion with key stakeholder on entrepreneurship in Kazakhstan was held at the Graduate School of Business. The panel session was attended by Deputy General Director of QazTrade, Nurlan Kulbatyrov, Commissioner for the Protection of the Rights of Entrepreneurs of Kazakhstan, Rustam Zhursunov, Director of the Department of Entrepreneurship Development Policy of the Ministry of National Economy of Kazakhstan, Eric Dzhambulov, Head of KPMG Strategic and Operational Consulting Group in Central Asia, Bolat Mynbayev, as well as representatives of SMEs and professors of the NU GSB.

Yerken Turganbayev, the Administrative Director of the NU GSB, shared key conclusions from the GEM National Report «Kazakhstan 2020-2021». He noted that entrepreneurial activity in Kazakhstan at the early stages increased in 2020 compared to previous years. According to the indicator of termination of activity, 26.8% of enterprises closed due to the pandemic. It was noted that it is important to create framework conditions for our entrepreneurs to enter the international market. The average indicator of Kazakhstan in the category of state programs was close to the average indicator of GEM (20th place out of 45 countries)

The occasion of the GEM launch was a unique opportunity to share the launching of the new **Nazarbayev University Research Center of Entrepreneurship (NURCE)**, embedded in GSB. The director Professor Shumaila Yousafzai explained that the purpose of the center is to cooperate with entrepreneurs and influence policy at the legislative level.

GSB BUSINESS DIGEST – POPULARIZING RESEARCH

The GSB business digest are small articles summarizing key insights from fundamental research aimed to make it accessible to a broader audience of captains of industries and policy makers. We have launched three new business digests, which can be downloaded from the GSB web site or below:

- **2022/7** The habit that creates a culture of distrust at work by Mayowa T. Babalola
- **2022/8** Opportunities and pitfalls in digital platforms' geographic expansion: Strategic implications for Kazakhstani platforms by Jiyang Dong
- **2022/9** Kazakhstan's growing entrepreneurial ecosystem at a glance by Leila Farraj, Aminanur Chaia, Shumaila Yousafazi

NUGSB working paper series

- **2022/03** **Wage dispersion and firm performance: evidence from Kazakhstan** by Dinara Alpysbayeva, Jozef Konings, Venkat Subramanian.

Accepted Peer Reviewed Articles

- **Mayowa Babalola** and co-authors: Sometimes enough is enough: Nurses' nonlinear levels of passion and the influence of organizational politics. In press at *Human Relations*. (ABS Ranking 4*; FT 50, Impact Factor = 5.732).
- **Mayowa Babalola** and co-authors: Losing compassion for patients? The implications of COVID-19 on compassion fatigue and event-related post-traumatic stress disorder in nurses. *Journal of Managerial Psychology*. (ABS Ranking 3, Impact Factor = 3.614)
- Mary Amiti, Oleg Itskhoki and **Jozef Konings**. "Dominant Currencies: How Firms Choose Currency Invoicing and Why it Matters", forthcoming *Quarterly Journal of Economics* (ABS Ranking, 4*, Impact Factor = 20.935)

GENDER CONSORTIUM OF SCHOLARS

SPRING NEWSLETTER

We are pleased to share the following highlights of work of the Organizing and Executive team of the Consortium of Gender Scholars (GenCon) in local and international funded research, practice and networking. Related work addressing gender equity and social justice can also be seen in this newsletter as shared by GSB and the NU Library.

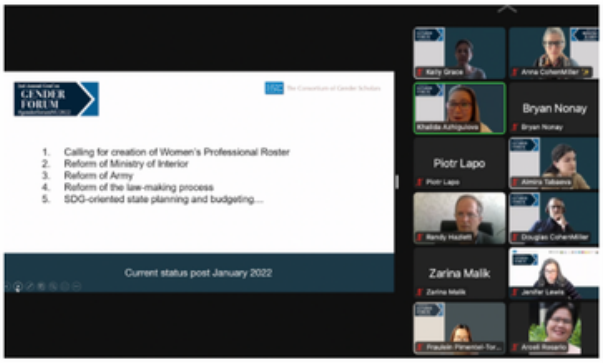
Anna CohenMiller (GSE)
Jenifer Lewis (GSB)
(Co-Founding Directors GenCon)
in collaboration with Kelly Grace (Executive Team Lead)

Inside this issue:

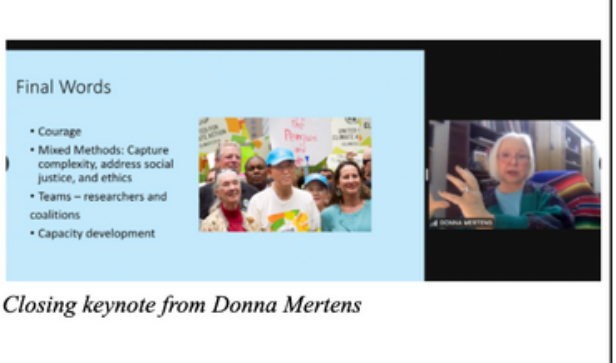
The Forum was externally supported by a British Academy grant, Inha University, ESD-Global and internally sponsored by the Provost's Office, multiple NU schools and the NU Library.

Participants and presenters attended from around the world such as from Kazakhstan, France, Philippines, Korea, Pakistan, the US and the UK

The Forum brought together interested parties to explore a range of areas related to gender with the goal of raising awareness and building bridges between researchers, policy makers, and practitioners to advance gender equity in Central Asia. This year included keynotes by well known researcher in human rights, gender equality, SDGs, forced and labor migration in Central Asia, Khalida Azhigulova, and internationally renowned academic and founder of transformative mixed methods and international consultant for social, economic and environmental rights, Professor Emeritus, Donna Mertens.



Opening keynote from Khaliza Azhigulova

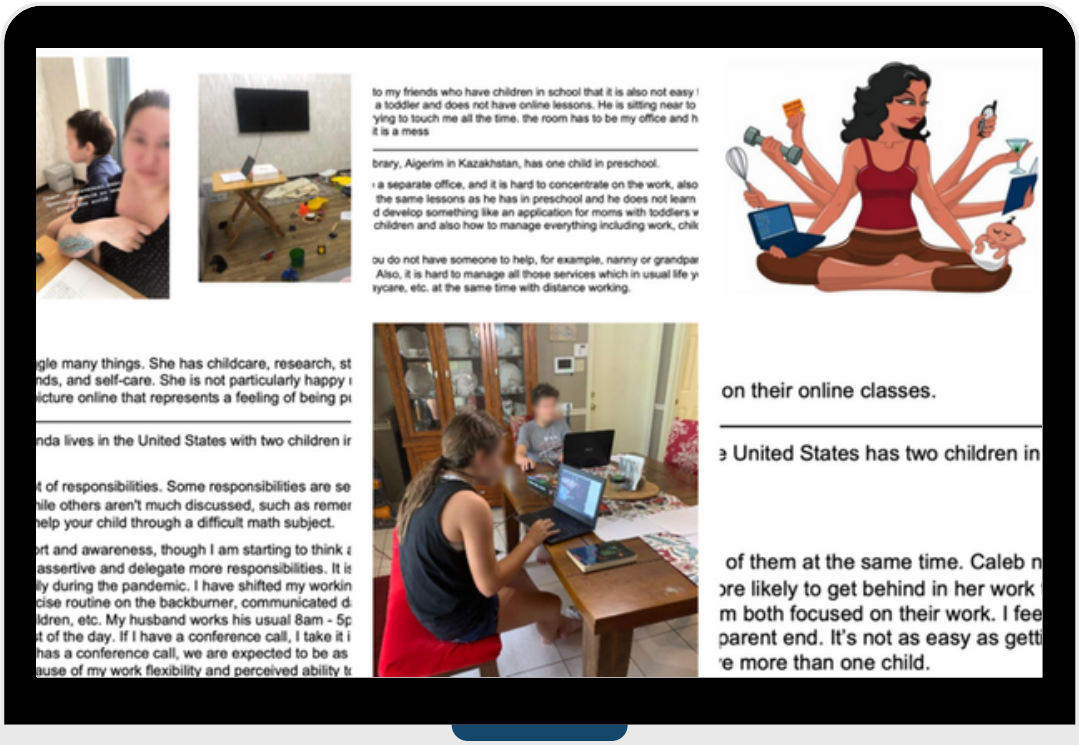


Closing keynote from Donna Mertens

Gender Forum 2022

Focus on Motherscholars

As part of the Forum, an innovative arts-based study was showcased which highlights the reality for mothers in academia when suddenly forced to work from home while also guiding their children's online learning during COVID-19. The study led by Anna CohenMiller (GSE) in collaboration with Zhanna Izekenova (GSE, PhD student) includes a gallery that can be accessed at photovoicemotherscholars.wordpress.com.



To make the Forum more accessible for local researchers and practitioners, simultaneous translation was available for the event funded by the School of Mining and Geosciences. The full program can be http://gen-con.org/2022-gender-forum and relevant PowerPoints will be available through the NU Repository.

Gender Forum

Organizing team members and partners in front of the banner printed by the NU library

Almira Tabaeva (GSE), Kelly Grace (NUFYP), Anna CohenMiller (GSE), Douglas CohenMiller (Umbrella Works graphic design), Jenifer Lewis (GSB), Stefanos Xenarios (GSPP), Piotr Lapo (NU Library)

Looking Ahead

Next year's Gender Forum is planned to take place during the **Week of Women 2023** as a hybrid event. If you are interested in sharing research and/or practice around gender equity and social justice, look for the call for papers posted on the GenCon website, **www.gen-con.org**, and join the mailing list, **www.gen-con.org/join**, for updates

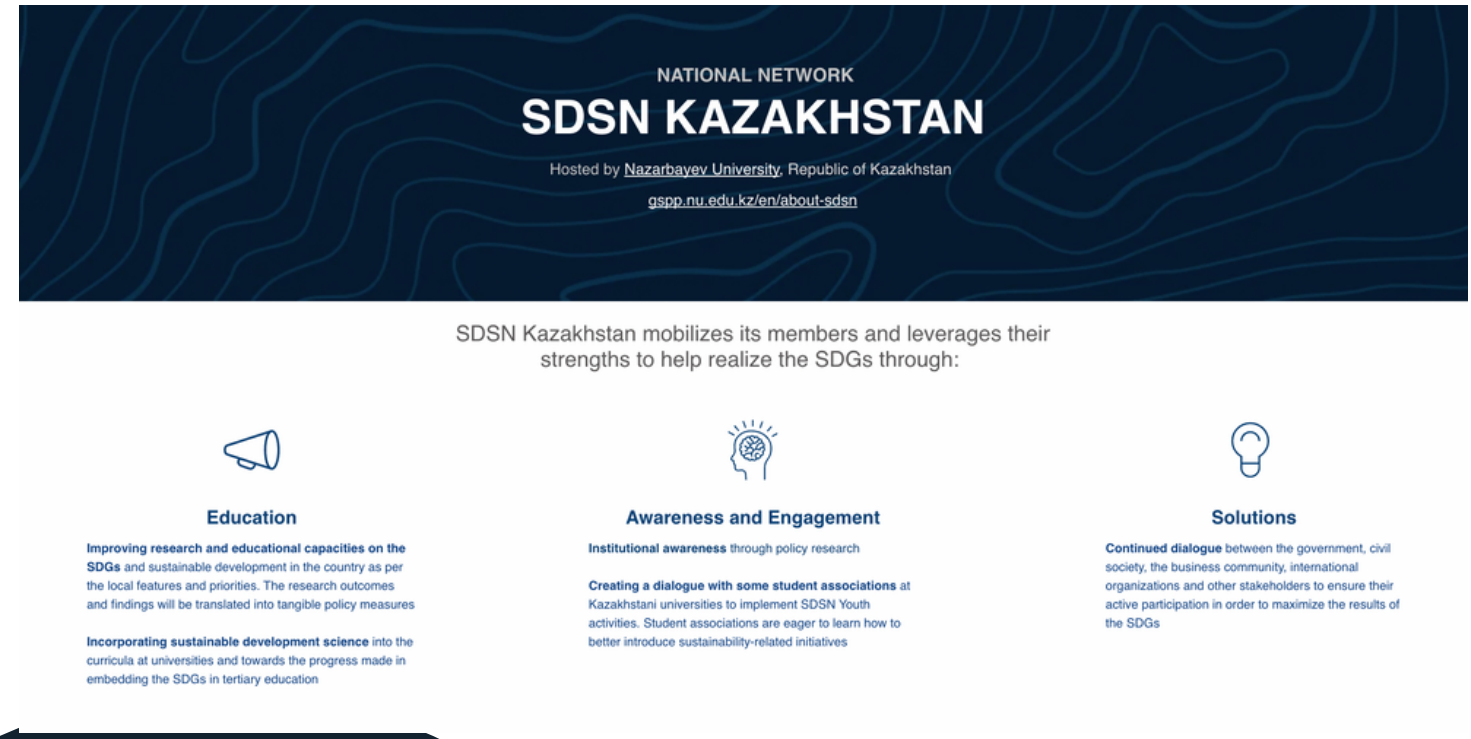
Connect with us

WWW.GEN-CON.ORG

WWW.GEN-CON.ORG/JOIN

DEVELOPING RESEARCH & EDUCATION ON SDG'S WITH GENDER AS A CENTERPIECE

Stefanos Xenarios (GSPP), along with a team chaired by NU President Shigeo Katsu, established the national network of the Sustainable Development Solutions Network (SDSN) - a worldwide organization making positive change through research and education of Sustainable Development Goals (SDGs).



FOR MORE INFORMATION

https://www.unsdsn.org/kazakhstan

New Research Funding

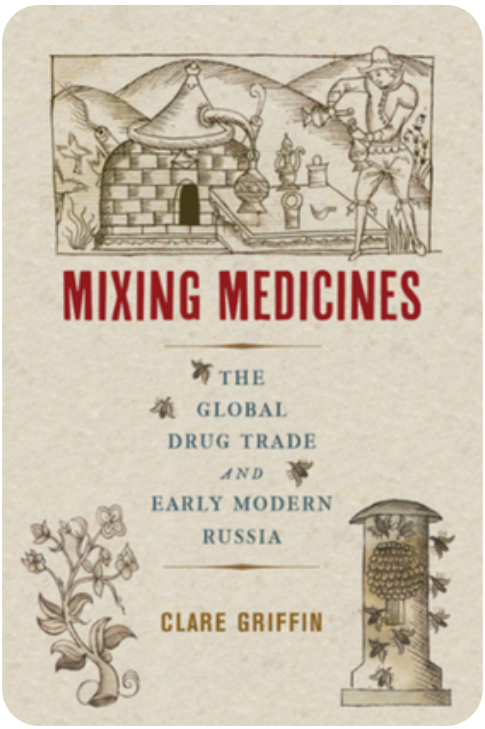
Empowerment Self-Defence

GenCon has received external funding through the US Embassy to work with ESD-Global to bring Empowerment Self-Defense to Kazakhstan as a means of reducing gender based violence through training and research. The grant is led by **Anna CohenMiller (GSE)** in collaboration with **Dinara Kussain** (formerly working at NU and now with UN Women Kazakhstan) and the Alliance of Female Power of Kazakhstan, GenCon has hired **Dinara Zhanxynbek** (formerly Programme Assistant at UN Women MCO for Central Asia in Almaty) to join GenCon and the project as the local coordinator. The project, "Tools for Empowered Living in Kazakhstan" includes a three-pronged approach to address gender-based violence in professional, social service and community settings to create a replicable model through (1) individual knowledge and action; (2) institutional changes in policies and programs; and (3) community awareness and action around gender-based violence.

Publications

GenCon supports knowledge sharing by showcasing the **recent peer-reviewed publications** of our members

Books



Coming out later this year is **Clare Griffin's** (SSH) new book, Mixing Medicines: The Global Drug Trade and Early Modern Russia (McGill-Queen's University Press). **A book launch with the NU Library is expected soon, so stay tuned!**

Mixing Medicines explores the dynamic and complex world of early modern Russian medical drugs, from its enthusiasm for newly imported American botanicals to its disgust at Western European medicines made from human corpses. Clare Griffin draws from detailed apothecary records to shed light on the early modern Russian Empire's role in the global trade in medical drugs. Chapters follow the trade and use of medical ingredients through networks that linked Moscow to Western Europe, Asia, and the Americas; the transformation of natural objects, such as botanicals and chemicals, into medicines; the documentation and translation of medical knowledge; and Western European influence on Russian medical practices. Looking beyond practitioners, texts, and ideas to consider how materials of medicine were used by one of the early modern world's major empires provides a novel account of the global history of early modern medicine.

Soon to be available is **Neil Collins'** (SSH)
Keep Calm, Teach On: Education Responding to a Pandemic

Edited by Dina Vyortkina, Florida State University, Neil Collins, Nazarbayev University and Timothy Reagan, University of Maine; University of the Free State

Abstract

COVID-19 has had massive social, political, and economic consequences, not least in education. Schools and universities globally closed their doors and sought to provide educational services to students in other, alternative ways. This book is a collection of essays, several by NU scholars, about how different institutions and systems of education around the world have attempted to meet the challenges created by COVID-19. It reports the impact of the pandemic in both developed and developing nations and at all levels of education. The collective responses and lessons learned are analysed to explain the relative success of different coping strategies.

Articles

As linked to the 'Gender and schooling in Kazakhstan: A mixed methods study' project funded by Nazarbayev University, Kazakhstan under Faculty Development Competitive Research Grants Program (No. 110119FD4522), a team of researchers published the following article in the top qualitative research journal. The article has drawn attention of founding members of the qualitative research community, including the lead editor of *Critical Studies ← → Critical Methodologies*, Norman Denzin.

CohenMiller, A., Durrani, N., Kataeva, Z., & Makhmetova, Z. (2022) Conducting focus groups in multicultural educational contexts: Lessons learned and methodological insights. International Journal of Qualitative Methods. https://doi.org/10.1177/16094069221076928

First presented at the 1st Annual GenCon Gender Forum, **Sejin Koo** (previously from NU SSH, and now at Inha University, Korea), has just published insightful research around the gender gap in politics.

Koo, S. (2022). Leading or Cheer-Leading? The Gender Gap in Political Smiles. Politics & Gender, 18(1), 183-211. doi:10.1017/S1743923X20000379

As part of a British Academy grant**, Anna CohenMiller (GSE), Aigul Rakisheva (GSE alumni), Zhanar Saniyazova (NU alumni)**, and **Aray Saniyazova (GSE PhD alumni)** published a country report Identifying steps forward for equity and Inclusion In higher education.

CohenMiller, A, Rakisheva, A., Saniyazova, Z., Saniyazova, A. (2022). Kazakhstan Country Report. Gender on the Higher Education Learning Agenda Internationally: Co-Constructing Equitable Futures. British Academy. Available from https://mainstreamgenderhighereducation.wordpress.com/reports/_

From the Handbook for the Promotion of Gender Sensitive Teaching-Learning funded by Horizon2020, three case studies were highlighted from the GenCon team and are available from: https://www.brookes.ac.uk/ocsld/publications/.

- Hinton-Smith, T., Aiyelaagbe, O. CohenMiller, A., Kahime, K., Samuel, N., Haeri Mazanderani, F., Rakisheva, A., Shurweryimana, F., Srinivasan, S., Uko, I. (2022). Gender on the Higher Education Learning Agenda Internationally: Co-Constructing Foundations for Equitable Futures.
- CohenMiller, A. & Lewis, J. (2022). Developing institutional and community awareness to the legitimacy and visibility of gendered topics, research, and partnerships.
- Lewis, J. & CohenMiller, A. (2022). Gender audit as pedagogical tool. In Kitchener, M. (Ed). Handbook for the Promotion of Gender Sensitive Teaching-Learning.

- Share your thoughts about a GenCon event
- Suggest a new topic or event
- Provide ideas for a speaker
- Offer support (e.g., organization, social media, networking)

Email us at gencon@nu.edu.kz
Join our mailing list at www.gen-con.org

NAZARBAYEV UNIVERSITY
LIBRARY

#BREAKTHEBIAS: CELEBRATING WOMEN THROUGH NU LIBRARY'S WEEK OF WOMEN (WOW) ACTIVITIES

YELIZAVETA KAMILOVA AND APRIL MANABAT
Reference Office

While equality will always be a rule of thumb, women will always have a special place in society. Their beauty, grace, and uniqueness, alongside their firmness, hardworking, and commitment makes them really stand out.

Joining the world in celebrating the **International Women's Day**, the Nazarbayev University (NU) Library in partnership with Consortium of Gender Scholars (GenCon), and in collaboration with the schools and student clubs annually celebrates the **Week of Women (WoW)** every March. The event supports the global campaign and international programs to raise awareness, value diversity and inclusion, and understand the importance of women's contribution to society. This year, the NU Library joins the global campaign ***#BreakTheBias***, which aims to imagine a gender equal world, a world free of bias, stereotypes, and discrimination, and a world that is diverse, equitable, and inclusive.

To commemorate women's achievement, a series of programs has been lined up for the week of March 7-11, 2022. A wide range of online and onsite events have been organized to encourage the public to celebrate women's contributions in the society. These activities include Virtual and Offline Book Display, Essay Competition, Instagram Photo Flashmob,

SASA Women's March, 2nd Annual GenCon Gender Forum, Roundtable Discussion on #BreakTheBias, and a Book Talk event.

A week-long run of display, this virtual and offline book display event aims to get the public inspired with the selected books authored and written by women in various disciplines.

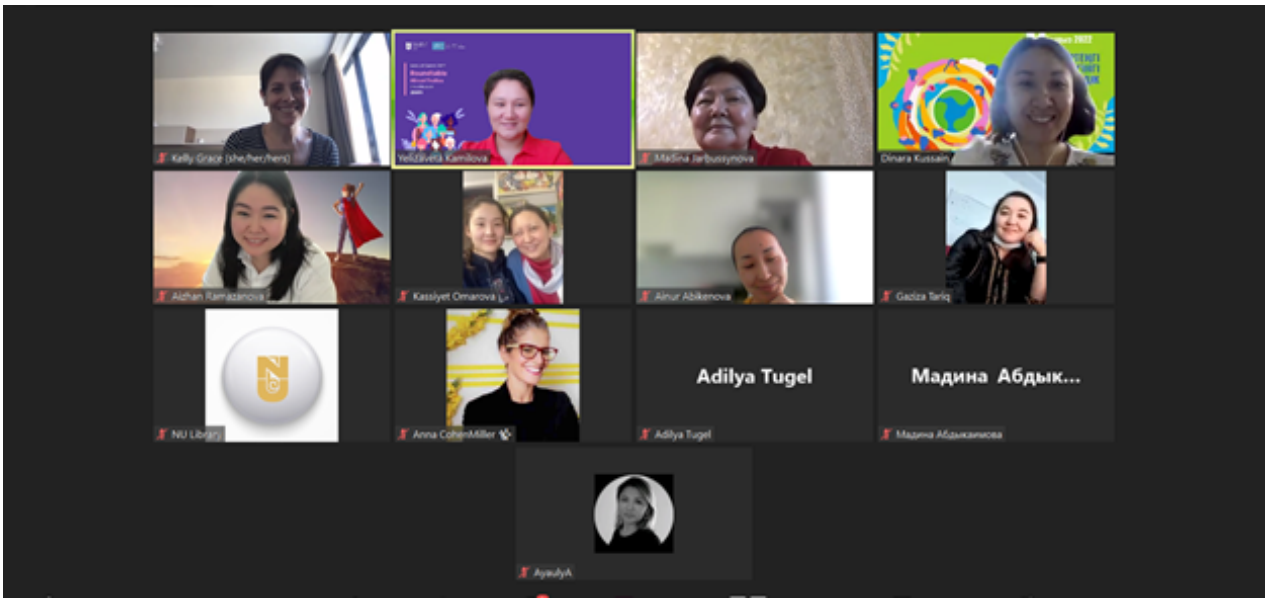
Organized by the NU Department of Student Services, an essay competition entitled "*The Woman Who Inspires Me*" invites students to submit articles celebrating the women in their lives who have inspired them.

To join the international campaign to celebrate women's contribution, an Instagram Photo Flashmob was also launched wherein anybody can take a photo where their arms were crossed and join the flashmob to support the #BreakTheBias global campaign and post it on Instagram.

For this year, organized by the NU Sociology and Anthropology Student Association (SASA), a women's march was held to raise awareness of the problems women face on campus such as sexism from peers and faculty, sexual and verbal harassment, sexual objectification and to support women in academia. It was attended by more than a hundred participants.

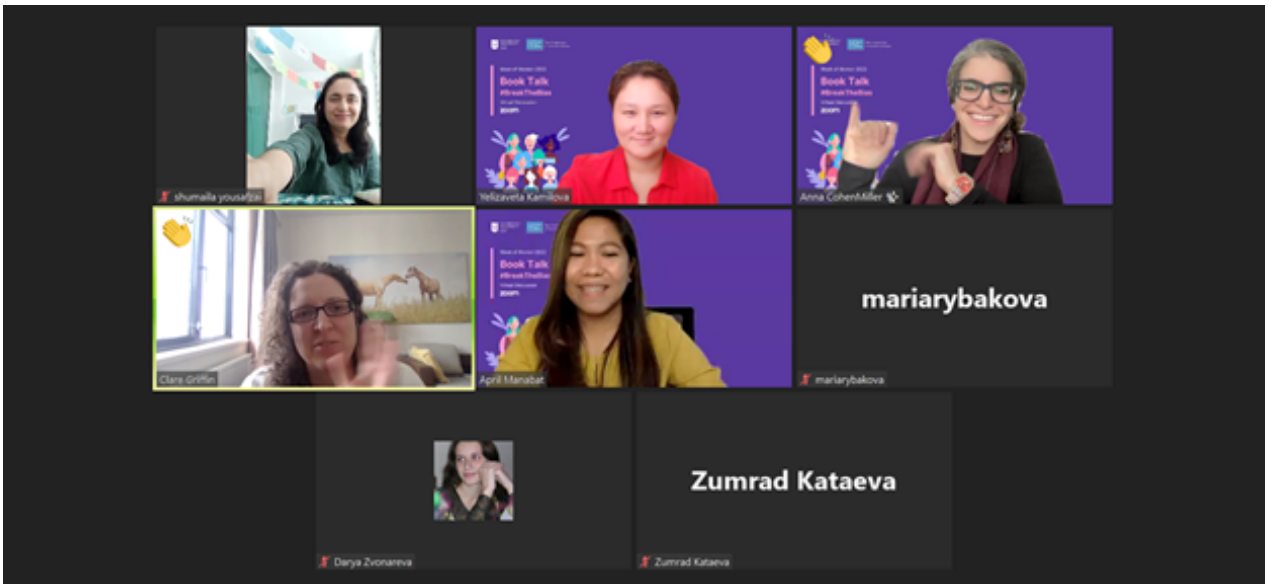
The 2nd Annual GenCon Gender Forum was also held in celebration of the International Women's Day with the theme *Opportunities and Challenges for Gender Equity in Central Asia: Bridging Researchers, Policy Makers, and Practitioners*. It was an online event which was attended by 174 participants from various countries.

A fruitful discussion was also held with notable women speakers and their achievements. Roundtable #BreakTheBias has invited Madina Dzharbussynova, OSCE Special Representative on Combating Trafficking in Human Beings; Kassiyet Omarova, Consultant UNDP Kazakhstan; Aizhan Ramazanova, co-founder of a NGO Institute of Childhood OYNA; and Dinara Kussain, Analyst, Communications and Advocacy UN Women Kazakhstan to talk about their experiences and achievements.



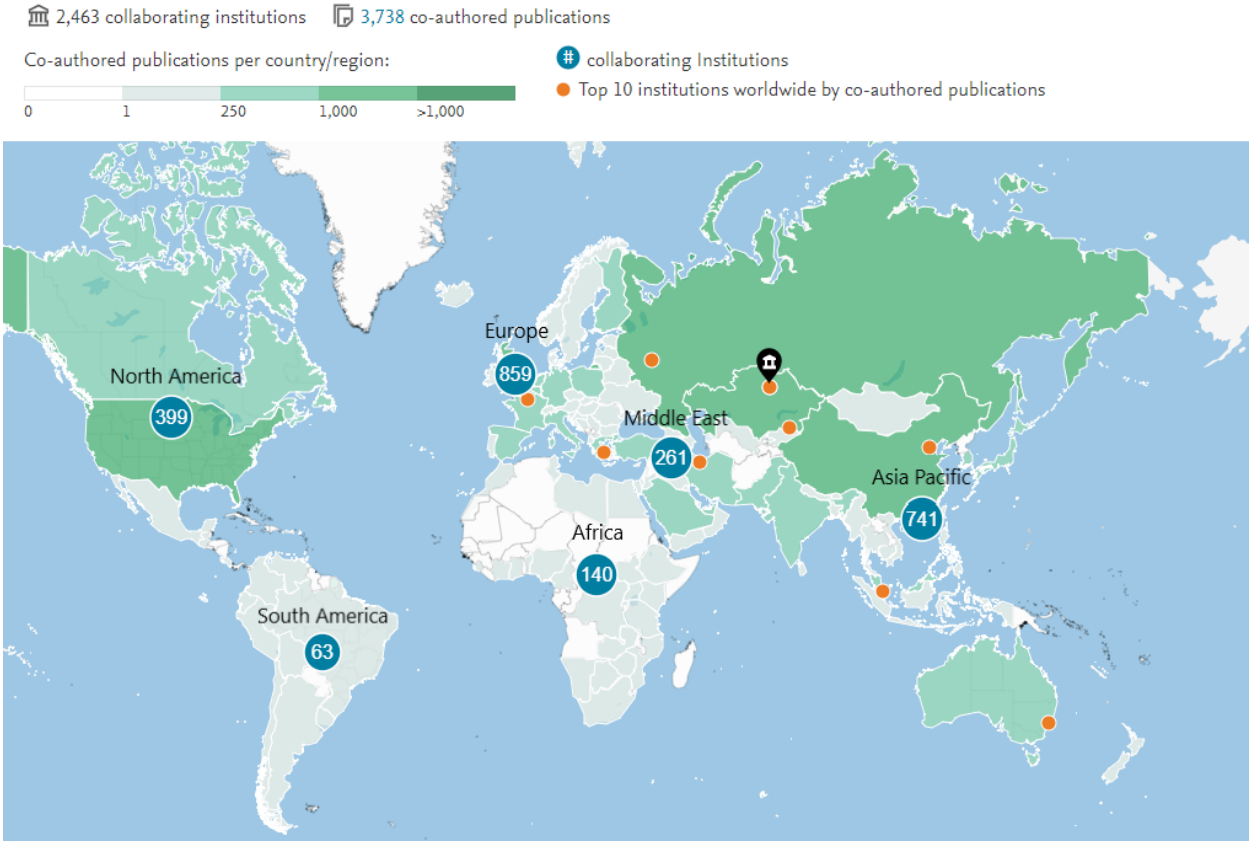
Lastly, a BookTalk with notable NU Women authors was also organized by NU Library. These women authors generously discussed their books and their experiences in writing it as well as its target audience and its impact on women's research in shaping the society. Clare Griffin's *Mixing Medicines: The Global Drug Trade and Early Modern Russia* offers unique insight on how the drug trade in Russia has evolved over the years and the place of American herbal medicine in Russian medicine trade. Shumaila Yousafzai's *Research Handbook of Women's Entrepreneurship and Value Creation* highlights women's work and contribution as agents of change and its value and implications with policymaking and entrepreneurship. *Jenni Lehtinen's Doña Bárbara Unleashed:*

From Venezuelan Plains to International Screen offers an exciting way of studying film and telenovela adaptations of a well-known story of Dona Barbara and how it changes societal norms such as the women's role in Latin American context and audience expectations. Finally, Anna CohenMiller's *Questions in Qualitative Social Justice Research in Multicultural Contexts* intends to provide readers with the self-reflections and research journeys including emerging research practices that encourages inclusivity and social justice in the qualitative research.



Indeed, it was a successful week-long event to celebrate women's contributions to society. Empowering and forging women's equality will help to #BreakTheBias.

RESEARCH PERFORMANCE EVALUATION



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 5,892 peer-reviewed publications indexed by Scopus, and have been cited 48,358 times for 2011-2022 period (Source: SciVal, March 2022). The approximate number of citations per peer-reviewed publication is 8.2. The overall H-index of NU is 73, whereas H5-index is 45. The field-weighted citation impact is 1.32, meaning that our publications have been cited 32% more than would be expected based on the world average for similar publications.

The map above demonstrates the collaboration between NU and other institutions across the globe based on co-authored publications over the period from 2016 to 2022. There are 3,738 NU research papers published in collaboration with international institutions, which accounts for 68.7% of the total number of publications produced by our University. The Field-Weighted Citation Impact is 1.38.

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	Research Grants on Education: Small	Spencer Foundation	12.04.2022	URL
2	Grants Program, Level I and Level II	National Geographic Society	13.04.2022	URL
3	Gilead Sciences Research Programs (Public Health)	Gilead Sciences	15.04.2022	URL
4	IKI Small Grants 2022A	International Climate Initiative	15.04.2022	URL
5	Inclusion & Diversity Fund	Royal Society of Chemistry	25.04.2022	URL
6	SBRI – digital technologies for robotic nuclear decommissioning	UK Atomic Energy Authority (UKAEA).	27.04.2022	URL
7	Call for Proposals for ERC Advanced Grant (ERC-2022-ADG)	European Research council	28.04.2022	URL
8	The 2022 Collaborative Research Grant Program	The Alagille Syndrome Alliance	30.04.2022	URL
9	The Einstein Foundation Award for Promoting Quality in Research	The Einstein Foundation	30.04.2022	URL
10	Gilead Sciences Research Programs (Liver Disease)	Gilead Sciences	01.05.2022	URL
11	Post-Ph.D. Research Grants	Wenner-Gren Foundation	01.05.2022	URL
12	Litwin IBD Pioneers	Crohn's & Colitis Foundation	05.05.2022	URL
13	The Konosuke Matsushita Memorial Foundation - Research grant 2022	The Konosuke Matsushita Memorial Foundation	11.05.2022	URL
14	Engaged Research Grants	The Wenner-Gren Foundation	15.05.2022	URL
15	REGIONAL SCHOLAR TRAVEL GRANT	Association for Slavic, East European, and Eurasian Studies	21.05.2022	URL
16	Perspectives on Wealth: The (Re-)Production of Wealth (international)	The Volkswagen Foundation	25.05.2022	URL
17	South and Central Asia Regional Research Program	Fulbright Association	31.05.2022	URL
18	2022 Silk Roads Youth Research Grant	UNESCO	31.05.2022	URL
19	General Research Grants	The Gerda Henkel Foundation	01.06.2022	URL
20	Research Grants on Education: Large	Spencer Foundation	15.06.2022	URL
21	Research and Innovation for Global Health Transformation - Call 5	National Institute for Health Research	29.06.2022	URL
22	The Progeria Research Foundation grants	The Progeria Research Foundation	01.07.2022	URL
23	2022 research grants program	The Merck	31.08.2022	URL
24	Grant Program	The Foundation for Prader-Willi Research (FPWR)	09.09.2022	URL
25	APDA DIVERSITY IN PD RESEARCH GRANT: ACADEMIC YEAR 2022-2023	The American Parkinson Disease Association (APDA)	03.11.2022	URL
26	IBD Plexus: Academic Request for Proposals	Crohn's & Colitis Foundation	N/A	URL
27	Foundation`s funding opportunities (education, health, global issues)	The Robert Bosch Foundation	N/A	URL
28	ESRC new investigator grant	Economic and Social Research Council (ESRC)	N/A	URL
29	Worldwide Cancer Research grants	Worldwide Cancer Research (WWCR)	N/A	URL

New research publications indexed by Scopus (count: 259 as of March 25)

- Abbas, A. H., Abd Alsaheb, R. A., & Abdullah, J. K. (2022). Comparative study of natural chemical for enhanced oil recovery: Focus on extraction and adsorption at quartz sand surface. Petroleum, doi:10.1016/j.petlm.2022.01.007
- Abdulla, K., Serikbayeva, B., Oskenbayev, Y., & Taghizadeh-Hesary, F. (2022). Regional differences in human capital and occupational choice: Evidence from mexico. European Journal of Development Research, doi:10.1057/s41287-021-00497-8
- Abdullaev, A., Koshkinbayeva, A., Chauhan, V., Nurekeyev, Z., O'Connell, J., van Vuuren, A. J., . . . Utegulov, Z. N. (2022). Depth-resolved thermal conductivity and damage in swift heavy ion irradiated metal oxides. Journal of Nuclear Materials, 561 doi:10.1016/j.jnucmat.2022.153563
- Abedinia, O., & Bagheri, M. (2022). Execution of synthetic bayesian model average for solar energy forecasting. IET Renewable Power Generation, doi:10.1049/rpg2.12389
- Acuña-Díaz, O., Al-Halawani, N., Alonso-Barneto, M., Ashirbekov, A., Ruiz-Flores, C., & Rojas-Solórzano, L. (2022). Economic viability of phase-changing materials in residential buildings – A case study in alice springs, australia. Energy and Buildings, 254 doi:10.1016/j.enbuild.2021.111612
- Adekenov, S. M., Shaimerdenova, Z. R., Adekenova, K. S., & Kishkentayeva, A. S. (2022). Synthesis and biological evaluation of new derivatives of grossheimin. Fitoterapia, 158 doi:10.1016/j.fitote.2022.105154
- Adoko, A. C., Saadaari, F., Mireku-Gyimah, D., & Imashev, A. (2022). A feasibility study on the implementation of neural network classifiers for open stope design. Geotechnical and Geological Engineering, 40(2), 677-696. doi:10.1007/s10706-021-01915-8
- Adolfo, C. S., Albougami, A. S. B., Roque, M. Y., & Almazan, J. U. (2022). Nursing care toward older adults with dementia: An integrative review. Scandinavian Journal of Caring Sciences, 36(1), 173-182. doi:10.1111/scs.12974
- Afzal, M., Satti, J. U., Wahab, A., & Nawaz, R. (2022). Scattering analysis of a partitioned membrane-bounded cavity with material contrast. Journal of the Acoustical Society of America, 151(1), 31-44. doi:10.1121/10.0009025
- Aidarkhanov, D., Surya, C., & Ng, A. (2022). The roles of black phosphorus in performance enhancement of halide perovskite solar cells. Journal of Energy Chemistry, 67, 672-683. doi:10.1016/j.jechem.2021.11.006
- Aimagambetova, G., Sakko, Y., Gusmanov, A., Issanov, A., Ukybassova, T., Bapayeva, G., . . . Gaipov, A. (2022). The prevalence, incidence, indications and outcomes of peripartum hysterectomy in kazakhstan: Data from unified nationwide electronic healthcare system 2014–2018. International Journal of Women's Health, 14, 267-278. doi:10.2147/IJWH.S343387
- Aimagambetova, G., Terzic, S., Laganà, A. S., Bapayeva, G., la Fleur, P., & Terzic, M. (2022). Contemporary fertility-sparing management options of early stage endometrioid endometrial cancer in young nulliparous patients. Journal of Clinical Medicine, 11(1) doi:10.3390/jcm11010196
- Aitekenov, S., Sultangaziyev, A., Abdirova, P., Yussupova, L., Gaipov, A., Utegulov, Z., & Bukasov, R. (2022). Raman, infrared and brillouin spectroscopies of biofluids for medical diagnostics and for detection of biomarkers. Critical Reviews in Analytical Chemistry, doi:10.1080/10408347.2022.2036941
- Akarca, H. D. (2022). The imperial transformation of a russian-occupied ottoman city during the first world war. War and Society, 41(1), 21-35. doi:10.1080/07292473.2022.2021751
- Akhatova, A., Chan, C. K., Azizan, A., & Aimagambetova, G. (2022). The efficacy of therapeutic DNA vaccines expressing the human papillomavirus E6 and E7 oncoproteins for treatment of cervical cancer: Systematic review. Vaccines, 10(1) doi:10.3390/vaccines10010053
- Akhmetov, Y., Nurmanova, V., Bagheri, M., Zollanvari, A., & Gharehpetian, G. B. (2022). A bootstrapping solution for effective interpretation of transformer winding frequency response. IEEE Transactions on Instrumentation and Measurement, doi:10.1109/TIM.2022.3159012
- Akhmetzhanova, B., Nadeem, A., Hossain, M. A., & Kim, J. R. (2022). Clash detection using building information modeling (BIM) technology in the republic of kazakhstan. Buildings, 12(2) doi:10.3390/buildings12020102
- Akzhigitov, D., Srymbetov, T., Golman, B., Spitas, C., & Utegulov, Z. N. (2022). Applied stress anisotropy effect on melting of tungsten: Molecular dynamics study. Computational Materials Science, 204 doi:10.1016/j.commatsci.2021.111139
- Ali, M. H., Issayev, G., Shehab, E., & Sarfraz, S. (2022). A critical review of 3D printing and digital manufacturing in construction engineering. Rapid Prototyping Journal, doi:10.1108/RPJ-07-2021-0160

New research publications indexed by Scopus (count: 259 as of March 25)

- Alikhaidarova, E., Afanasyev, D., Ibrayev, N., & Nuraje, N. (2022). Plasmonic enhanced polymer solar cell with inclusion of Ag@SiO2 core-shell nanostructures. Polymers for Advanced Technologies, 33(3), 1000-1008. doi:10.1002/pat.5574
- Alina, D., Montillaud, J., Hu, Y., Lazarian, A., Ristorcelli, I., Abdikamalov, E., . . . Carrière, J. -. (2022). Large-scale magnetic field in the monoceros OB 1 east molecular cloud. Astronomy and Astrophysics, 658 doi:10.1051/0004-6361/202039065
- Almassov, N., Kirkpatrick, S., Alsar, Z., Serik, N., Spitas, C., Kostas, K., & Insepov, Z. (2022). Crosslinking multilayer graphene by gas cluster ion bombardment. Membranes, 12(1) doi:10.3390/membranes12010027
- Almawi, W. Y., Hajjej, A., Abdrakhmanova, S., & Turganbekova, A. (2022). Distribution of HLA-A, -C, -B, -DRB1, and -DQB1 polymorphisms in the korean minority in kazakhstan, and relatedness to neighboring and distant populations. Gene, 823 doi:10.1016/j.gene.2022.146386
- Almukhambetova, A., Hernández-Torrano, D., & Nam, A. (2022). Correction to: Fixing the leaky pipeline for talented women in STEM (international journal of science and mathematics education, (2021), 10.1007/s10763-021-10239-1). International Journal of Science and Mathematics Education, doi:10.1007/s10763-022-10261-x
- Almukhambetova, A., Kuzhabekova, A., & Hernández-Torrano, D. (2022). Hidden bias, low expectations, and social stereotypes: Understanding female students' retention in math-intensive STEM fields. International Journal of Science and Mathematics Education, doi:10.1007/s10763-022-10256-8
- Alshehry, A. S., Cruz, J. P., Alquwez, N., Alsharari, A. F., Tork, H. M. M., Almazan, J. U., . . . Balay-Odao, E. (2022). Predictors of nursing students' intention to receive COVID-19 vaccination: A multi-university study in saudi arabia. Journal of Advanced Nursing, 78(2), 446-457. doi:10.1111/jan.15002
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