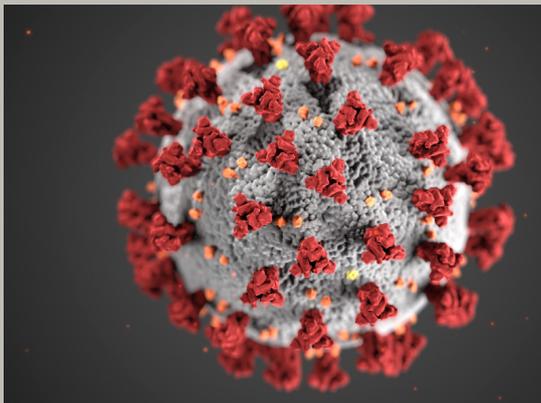




RESEARCH NEWSLETTER

OFFICE OF THE PROVOST - RESEARCH ADMINISTRATION
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School of Sciences and Humanities News



SUMMARY FOR THE COVID-19 PROJECT: BATTLING HOST PROTEASES TO PREVENT PRODUCTIVE INFECTION BY SARS-COV-2 AND SEVERE COMPLICATIONS OF COVID-19

BY TIMO BURSTER

Zhadyra Mustafa and **Timo Burster**. Comments on thrombosis after vaccination: The leader sequence of the spike protein might be responsible for thrombosis and antibody-mediated thrombocytopenia.

2021. Viral Immunology. Comment. Peer reviewed. IF: 2.257, SJR: 0.78, Q3

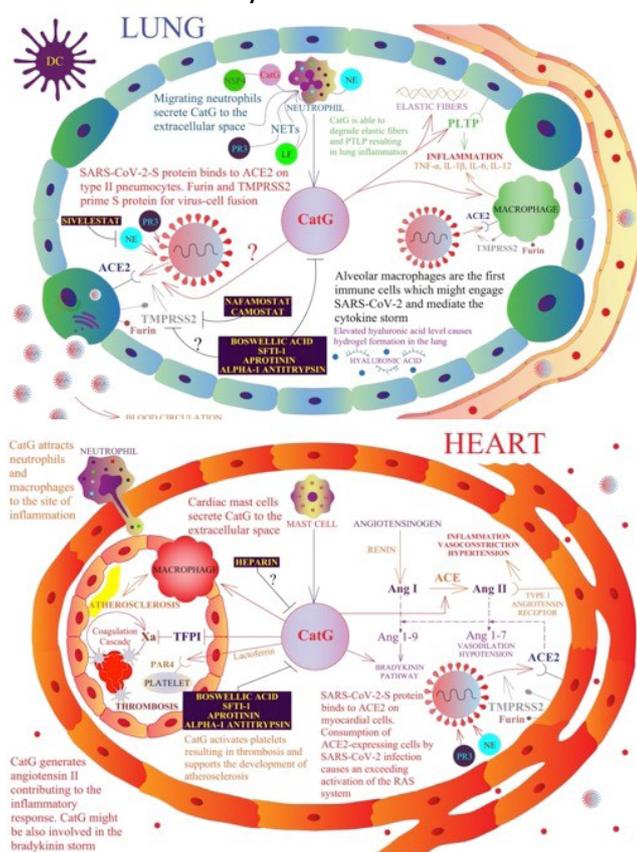
Thrombosis and thrombocytopenia are risk factors of the SARS-CoV-2 infection, but, in rare cases, also of two SARS-CoV-2 vaccines. ChAdOx-S and Ad26.COV2.S vaccines include the adenoviral vector to deliver a full-length SARS-CoV-2 encoded spike protein (S protein), which harbors the tissue plasminogen activator (tPA) leader sequence for increased S protein secretion purposes. We propose that the S protein can be integrated into the membrane of infected cells due to the tPA leader sequence, thereby promoting thrombotic incidents by binding to the host ACE2. The infection of thrombocytes (and possibly megakaryocytes) and attachment of antibodies to the S protein on these cells might result in antibody-mediated reduction of progeny thrombocytes and binding of antibodies to the FcγRIIIa receptor on endothelial cells might promote thrombus formation. The homology of the tPA leader sequence with platelet factor 4 (PF4, also known as CXCL4) could be an additional factor in the destruction of platelets by antibodies, indicating the need to further investigate the leader sequence and the possible association to thrombosis.

Timo Burster, Zhadyra Mustafa, Dinara Myrzakhmetova, Anuar Zhanapiya, and Michal Zimecki. Hindrance of the proteolytic activity of neutrophil-derived serine proteases by serine protease inhibitors as a management of cardiovascular diseases and chronic inflammation. **2021. Frontiers in Chemistry. Invited Review.** IF: 5.221. SJR: 1.03, Q1

During inflammation neutrophils become activated and segregate neutrophil serine proteases (NSPs), such as cathepsin G, neutrophil elastase, proteinase 3 and neutrophil serine protease 4, to the surrounding environment in order to support a natural immune defense. However, an excess of proteolytic activity of NSPs can cause many complications, such as cardiovascular diseases and chronic inflammatory disorders, which will be elucidated on a biochemical and immunological level. The application of selective serine protease inhibitors is the logical consequence in the management of the indicated comorbidities.

Priming of the SARS-2 S protein is an essential step in the process of viral entry, which can be efficiently blocked by serine protease inhibitors. Venous thromboembolism might be the main cause of death in patients with severe COVID-19, indicating that the treatment of severe cases with low-molecular-weight heparin, even though it should be used with caution (rare cases of heparin-induced thrombocytopenia), is a logical course of action. Tissue damage is mediated by an excess of proteolytic activity of different proteases of neutrophils and timing is crucial for the effectiveness of treatment. While Sivelestat might

interfere with the impact of SARS-CoV-2 infection of host cells, blood thinners and anti-inflammatory drugs are beneficial to interfere with a severe outcome of COVID-19 (a summary is illustrated in the figure below). Additionally, various serine protease inhibitors pose a logical therapeutic approach for different cardiovascular and inflammatory diseases.



A model of a possible role of NSPs in the respiratory and cardiovascular systems in the context of COVID-19

The multivariate role of CatG in the human organism, including promotion of inflammation, hypertension, thrombosis, and possible involvement in COVID-19 pathogenesis. Resident macrophages, also called alveolar macrophages, are the first immune cells that might engage SARS-CoV-2 (upper panel). At the site of infection, migrating neutrophils and mast cells secrete CatG to the extracellular space and induce the expression of proinflammatory cytokines by macrophages. SARS-CoV-2 S protein binds to angiotensin-converting enzyme 2 (ACE2) on type II pneumocytes and myocardial cells (lower panel). Furin and transmembrane protease serine 2 (TMPRSS2) prime the SARS-CoV-2 S protein for virus-cell fusion with the host cell membrane. Consumption of ACE2-expressing cells by SARS-CoV-2 infection causes an excessive activation of the renin angiotensin system (RAS). Angiotensinogen is converted by renin to angiotensin I (Ang I); Ang I is progressively digested to angiotensin II (Ang II) by the angiotensin-converting enzyme (ACE) and also by CatG. Ang II binds to the type I angiotensin receptor to induce vasoconstriction, hypertension, and inflammation. ACE2 digests Ang I to angiotensin 1-9 (Ang 1-9) and Ang II to angiotensin 1-7 (Ang 1-7), which binds to the Mas receptor and triggers vasodilation. CatG is able to degrade elastic fibers and the phospholipid transfer protein (PLTP) resulting in lung inflammation. Moreover, CatG can attract more macrophages and neutrophils at the site of inflammation, while lactoferrin (LF) increases the activity of CatG, which further activates platelets resulting in thrombosis and supports the development of atherosclerosis. Camostat and Nafamostat prevent trypsin-like serine protease TMPRSS2-mediated entrance of SARS-CoV-2 into the target cell. Whether boswellic acid, which inhibits CatG, interferes with the proteolytic activity of furin and TMPRSS2 needs to be clarified.

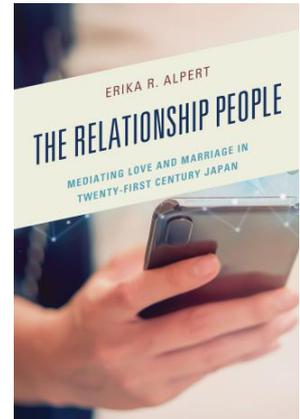
THE RELATIONSHIP PEOPLE

MEDIATING LOVE AND MARRIAGE IN TWENTY-FIRST CENTURY JAPAN

BY ERIKA R ALPERT



Japan has often been portrayed as a mysterious, sexless, troubled land. Birth rates and marriage rates have been decreasing for decades, and national surveys show that Japanese people are simply having less sex overall. But Japan is not so different from anywhere else—it's simply on the leading edge of worldwide demographic shifts. Because of rigid norms around gender, marriage, childbearing, and work, and relatively strict immigration policies, Japan is also experiencing these shifts more acutely. In *The Relationship People*, Erika R. Alpert starts by exploring some



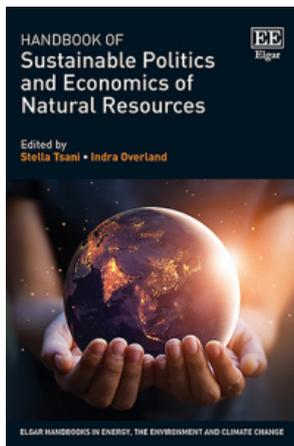
of the factors that have contributed to later and less marriage and childbearing in Japan and elsewhere. Alpert then goes on to explore the disjuncture between what Japanese singles report as preventing them from getting married and popularly proposed solutions to this problem. Japanese singles point to economic factors, such as low income, as one of their most significant barriers to marriage. However, much of the popular discourse aimed at Japanese singles elides these economic concerns; instead, it encourages them to exert more personal effort to meet people in order to get married. These “marriage activities” (*konkatsu*) may take the form of signing up with a professional matchmaker, using an online dating site, or...



Graduate School of Public Policy News

POWERING THE UPLANDS: CONTROVERSIES OF DEVELOPING HYDROPOWER IN UPSTREAM CENTRAL AND MAINLAND SOUTHEAST ASIA

Elgar Handbooks in Energy, the Environment and Climate Change
Edited by Stella Tsani, Assistant Professor, Department of
Economics, University of Ioannina, Greece and Indra
Overland, Research Professor,
Norwegian Institute of International Affairs



This timely Handbook draws together insightful analyses of natural resource management challenges and solutions in the face of sustainable development targets and a changing global climate.

Expert contributors illustrate the ways in which resource- and region-specific challenges shape national and global strategies, exploring the institutional aspects of resource management and their implications for policy making. They consider the economic, legal, environmental, social, financial and technological dimensions of resource management, consolidating interdisciplinary knowledge and setting the agenda for future research. Advancing scientific knowledge in the field, the Handbook offers a roadmap for well-informed policy making, highlighting the uncertainties and risks

associated with climate change, energy and sustainability transition, and the need for a forward-looking approach to resource management.

Assembling state-of-the-art contributions to provide a clearer understanding of the transformative policy developments ahead, this Handbook is crucial reading for academics and researchers of resource management, public policy, sustainability, energy transition, climate change and environmental studies. It also offers critical empirical insights for policy makers and practitioners developing innovative strategies to meet sustainability targets.

Contributors: Elettra Agliardi, Ingilab Ahmadov, Stella Apostolaki, Eduardo Araral, Heli Arminen, Matthias Busse, Joost Buurman, Matondo Estrela Garcia Cardoso, Jean-François Carpentier, Leonor Coutinho, Ayelet Davidovitch, Emmanuella Doussis, Oliver Dreute, Ilaria Espa, Matthew Gidden, Victoire Girard, Gavin Hilson, Roula Inglesi-Lotz, Vladimir Isaila, Aidai Isataeva, Yelena Kalyuzhnova, Wee Chian Koh, Phoebe Koundouri, Mariia Kozlova, Volker Krey, Alma Kudabayeva, Murodbek Laldjebaev, Igor Makarov, André Månberger, Sarah Najm, Indra Overland, Ruslana Rachel Palatnik, Andreas A. Papandreou, Tiia-Lotta Pekkanen, Aloysius Damar Pranadi, Keywan Riahi, Haakon Fossum Sagbakken, Jorma Sappinen, Titus Sauerwein, Dietrich Schmidt-Vogt, Willem Spanjers, Beni Suryadi, Nathan Sussman, Gerhard Toews, Stella Tsani, Roman Vakulchuk, Wessel N. Vermeulen, Lúcio Vinhas de Souza, Cyril Widdershoven, Stefanos Xenarios, Fabio Zagonari

EDWARD ELGAR PUBLISHING. (2021). Handbook of Sustainable Politics and Economics of Natural Resources.

Sustainability and Environmental Challenges in the Caspian Sea

Two GSPP professors Stefanos Xenarios and Serik Orazgaliyev are the editors in International Journal of Water Resources Development' (with Impact Factor 4.66). They would like to share Special Issue on Sustainability and Environmental Challenges in the Caspian Sea:

The Caspian Sea is the most extensive inland water system globally, situated at the crossroads between Europe and Asia. It resembles marine ecosystems, but it has similar characteristics to lakes with some salinity which vary as per the location and the regional water balance. Being an endorheic basin, the Caspian Sea is highly susceptible to climatic and hydrological changes from natural and human-induced factors.

Five countries, namely, Russia, Kazakhstan and Azerbaijan in the north, and Turkmenistan and Iran in the south, share the Caspian Sea with increased economic interests by exerting different pressures on the aquatic and coastal environment. Significant economic empowerment and environmental challenges can be attributed to the development of the vast hydrocarbon reserves extracted from the seabed of Caspian as early as the beginning of the 19th century, with uninterrupted exploitation till today. The recent discoveries of vast oil and gas reserves have increased the drilling operations in nearly all the riparian countries while energy transportation corridors are developed mainly for the markets of China, Russia and Europe.

Extensive fishing of the flagship sturgeon species that peaked in the early 20th century has increased the economic wealth in the riparian countries but also resulted in considerable disturbance to the food web of the Caspian Sea. The navigation activities in the Caspian and the human interventions in the Volga river- the primary freshwater supply, are also a socioeconomic driver for local communities but also an environmental concern for the water resources. There is further a growing tourism cluster of developments, mainly in Kazakhstan and Turkmenistan, which is expected to increase economic activities and local employment but also raise environmental implications in the Caspian Sea. Significant concerns have also been raised on the effects of climate change on the water volume of Caspian by observing a receding over the last years, mainly in the northern parts.

There have been intergovernmental agreements on the sustainable management of the Caspian Sea, like the Framework Convention for the Protection of the Marine Environment, which was signed in Tehran on 4th November 2003 (the Tehran Convention). Another important agreement is the Convention on the Legal Status of the Caspian Sea (Aktau Convention), signed between the five littoral states in 2018.

The objective of this Special Issue is to identify the major sustainability and environmental challenges and the initiatives and policies to be adopted for sustainable water management of the Caspian Sea in a national and regional context. We invite studies focusing on the following topics of the Caspian Sea:

- Historical background, water use practices and environmental implications;
- Legal, cultural and institutional context, water agreements and sustainability prospects;
- Water governance, local and regional practices, environmental considerations;
- Pollution from effluents and wastewater management systems;
- Hydrological status and regional water balance;
- Ecological status and vulnerability, environmental protection and conservation;
- Mineral resources and fuels, effects on regional socioeconomic welfare and environmental sustainability;
- Fishery practices, common water resources, transboundary water challenges;
- Coastal processes and sea ice variation, effects on ecosystem services;
- Climate change and variability in the basin, aquatic and coastal environment;
- Tourism industry in coastal areas, economic and environmental implications;
- Transportation corridors, Belt and Road Initiative (BRI), Eurasian geopolitics

This extract is taken from the [website](#)

Sustainability Challenges of Urban Water Supply and Wastewater Systems and Services

A session on "Sustainability Challenges of Urban Water Supply and Wastewater Systems and Services" in the annual European Geoscience Union Assembly (EGU) 3-8 April 2022. The deadline for the abstract is 12 January 2022.

The EGU General Assembly 2022 will bring together geoscientists from all over the world for one meeting covering all disciplines of the Earth, planetary, and space sciences. The EGU aims to provide a forum where scientists, especially early career scientists, can present their work and discuss their ideas with experts in all fields of geoscience.

The last two General Assemblies, Sharing Geoscience Online in 2020 and vEGU21: Gather Online, were organized as virtual meetings due to the Covid-related restrictions. In 2022, the EGU aims to provide an on-site experience again for those attending in-person, while at the same time introducing new concepts to include virtual attendees as much as possible. The EGU General Assembly 2022 (EGU22) will be a conference with a virtual component where everybody is welcome, in person or online! We plan for the format of the conference to be flexible, giving us the opportunity to more easily adapt to the uncertain global context.

For more information please visit the [website](#).

SHARED BY PROFESSOR STEFANOS XENARIOS

Dr. Maxat Kassen published an article in a prestigious international impact factor journal



Dr. Maxat Kassen, Assistant Professor of the Graduate School of Public Policy at Nazarbayev University, has recently published an article in a famous international peer-reviewed research journal: *Information Systems* (Impact Factor: 2.309. Scopus CiteScore: 7.3). The article titled “Blockchain and e-government innovation: Automation of public information processes” studies the emergence of blockchain-driven innovations in e-government systems. This phenomenon affects various aspects of human life. Public sector reforms are also influenced by this trend. E-government leaders around the world are tentatively beginning to grasp the potential of blockchain and other distributed ledger technologies, especially with regard to their promise to provide more decentralized information management solutions

in e-government and make public digital platforms more transparent and efficient. Software developers around the world have come up with a range of digital solutions to accelerate these reforms. Given the multidimensional nature of e-government, it is interesting to understand in which areas blockchain has the potential to promote innovations, what processes and procedures can be automated using blockchain technology, and what illustrative examples of government efficiency can be observed in this area.

The full article can be read by the following academic reference:

Kassen, M. (2022). Blockchain and e-government innovation: Automation of public information processes. *Information Systems*, 103, 101862. <https://doi.org/10.1016/j.is.2021.101862>



Graduate School of Education

POLITICAL ECONOMY OF EDUCATION RESEARCH NETWORK UPDATES



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Vanessa Ozawa
Research Assistant, Central
Asia Hub, Nazarbayev
University

Provision of education is often highly politicised, with a range of power dynamics at play for control of resources and curriculum content. This can lead to decisions that negatively impact social cohesion and inclusion and result in unequal access to education and the distribution of education resources. Political Economy Analysis (PEA) can play a critical role in helping to unpack the political and economic interests underpinning educational policies and interventions and can help support local, national and international actors responsible for delivering education to make socially just decisions. At the same time, one of the problems with current approaches to PEA is the reliance on international consultants whose assessments of education provision may lack sensitivity to local history, politics, culture and knowledge of power-relations. Seeking to democratise and redress the North/South imbalances in the current knowledge base and practices of PEA, researchers from four universities (Ulster, Cape Town, Nazarbayev and Sussex) initiated a project "Political Economy of Education Research Network" ([PEER Network](#)), which is funded by the Global Challenge Research Fund (GCRF) via UK Research and Innovation (UKRI). Aiming to strengthen PEA of Education, the PEER Network provides free access to online tools and resources, commissions research studies as well as works towards developing regional hubs of expertise in Central Asia and Africa. The Central Asia hub includes four post-Soviet countries (Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan) and is led by Professor Naureen Durrani (**Graduate School of Education**) in collaboration with Dr H el ene Thibault (**School of Sciences and Humanities**).

In this research update, we would like to share the key activities of a very busy first year for the Central Asia Hub of the PEER Network, including:

- Research and Practice Fellowships
- Online research seminar series
- Research publications

RESEARCH AND PRACTICE FELLOWSHIPS

One of the ways the hub is working towards developing PEA of education expertise across Central Asia is the Research and Practice Fellowships in the Political Economy of Education for early career researchers. These Fellowships aim to advance conceptual and theoretical understandings of the PEA of education, provide development funding, training and mentorship on applying for research funding and developing a new cohort of researchers working on issues of education through a critical political economy lens.

From 23rd to 25th November, the Central Asia Hub of the PEER Network, together with partners from the Centre for International Education, University of Sussex, hosted a 3-day workshop in Almaty. The Central Asia Hub Director, Prof Naureen Durrani and the PEER Network joint Principal Investigator, Prof Mario Novelli, welcomed 13 Fellows across Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan.



Three days of the workshop were full of stimulating conversations about ideas, approaches and tools of political economy analysis in researching education as well as potential areas of research in the Central Asia context. During the workshop, fellows also had the opportunity for one-on-one mentoring sessions with Prof Mario Novelli (University of Sussex) and Prof Naureen Durrani (Nazarbayev University).





The workshop ended with all fellows presenting their project idea and methodology and received feedback from peers and the workshop facilitators, Prof Mario Novelli, Dr Helen Murray (University of Sussex), Prof Naureen Durrani, Dr H  l  ne Thibault and Dr Assel Sharimova (Nazarbayev University).

Fellows Reflections on Social Media:

“Coming back with lots of new impressions and knowledge. Many thanks to Graduate school of Education at Nazarbayev University and the PEER research network for the Workshop program and Mentoring sessions.” – Zilola Khalilova (Uzbekistan).

“I just can’t keep quiet about the unforgettable experience I had recently in Almaty within a PEER Network fellowship, a joint project between the Universities of Ulster, Sussex, Cape Town and Nazarbayev University. I am really happy to become a Research Associate of the project!” – Zhazira Bekzhanova (Kazakhstan).



Online research seminar series

This year Central Asia Hub of PEER Network organised two online research seminar series, inviting scholars of Central Asia presented their completed and on-going research in Central Asia within a political economy analysis framework. This freely available seminar series were recorded and are available to watch by clicking the following links:

<https://peernetworkgcrf.org/resources/central-asia-hub-seminar-series-may-2021/>

<https://peernetworkgcrf.org/resources/central-asia-hub-seminar-series-sep-dec-2021/>

Online seminars: May - June 2021

“Happy Soviet childhood”: forging “new citizens” in schools - **Anel Kulakhmetova, Suleyman Demirel University.**

Global Citizenship Education: its contribution to multicultural education in Kazakhstan - **Natalya Hanley, University College London.**

Multilingualism: Soft skill or social practice? - **Juldyz Smagulova, KIMEP University.**

Pedagogy of the Queer: A case of participatory action research and education in Bishkek, Kyrgyzstan - **Mohira Suyarkulova, American University of Central Asia.**

Beyond the Western Horizon: Rethinking Education, Values, and Policy Transfer in Post-Socialist Transformations - **Iveta Silova, Arizona State University.**

A beginning of the end: Learning to look at social diversity in Central Asia through a gender lens - **SvetLana Peshkova, University of New Hampshire.**

Educational Research & Knowledge Production in Post-Soviet Central Asia: Revisiting the Global Discourses of Decolonization, Recolonization and Indigenization - **Sarfaro Niyozov, University of Toronto.**

Online seminars: Sep - Dec 2021

Common Patterns of Religious Revival in Central Asia and Challenges to Develop Human Rights and Inclusive Society - **Galym Zhussipbek, Suleyman Demirel University.**

Nation-Building Narratives in Kazakhstan: State, Media and Society - **Aziz Burkhanov, Nazarbayev University.**

Lessons from women’s spaces of empowerment, power and knowledge in Uzbekistan: Informing formal education practices - **Zulfiya Tursynova, Guilford College.**

Education, Development and Peace in the service of authoritarian elites: the case of Post-Soviet Tajikistan - **Laila Kadiwal, UCL Institute of Education.**

Gender and Nation in Post-socialist Transformations: early literacy textbooks in Kazakhstan and Kyrgyzstan - **Olga Mun, University of Oxford**



**CENTRAL ASIA HUB
ONLINE RESEARCH SEMINAR SERIES**

Research publications

The team from Central Asia Hub produced a scoping literature review:

Tabaeva, A., Ozawa, V., Durrani, N. & Thibault, H. (2021). The Political Economy of Society and Education in Central Asia. A Scoping Literature Review. [PEER Working Paper 2](#).



Selected open access papers were translated into the Russian language for the [PEER Learning Platform](#):

- Bush, K. D. & Saltarelli, D. 2000. **The Two Faces of Education in Ethnic Conflict: Towards Peacebuilding Education for Children**. Florence, Italy: UNICEF Innocenti Research Centre. Translation available: <https://canvas.sussex.ac.uk/courses/20396/files/2096656?wrap=1>
- Daoust, G. & Novelli, M. (2020). **Background study on political economy of education tools**. Political Economy of Education Research Network, PEER Working Paper 1. Translation available: https://peernetworkgcrf.org/wp-content/uploads/2021/03/PEER-Network-Working-Paper-1-Rus_-Daoust-and-Novelli-2020.pdf
- Durrani, N., & Halai, A. (2018). **Dynamics of gender justice, conflict and social cohesion: Analysing educational reforms in Pakistan**. International Journal of Educational Development, 61, 27-39. Translation available from: <https://canvas.sussex.ac.uk/courses/20396/files/2232139?wrap=1>
- Halai, A., & Durrani, N. (2018). **Teachers as agents of peace? Exploring teacher agency in social cohesion in Pakistan**. Compare: A Journal of Comparative and International Education, 48 (4). pp. 535-552. Translation available: <https://canvas.sussex.ac.uk/courses/20396/files/2232853?wrap=1>
- Higgins, Sean and Novelli, Mario (2020) **Rethinking peace education: a cultural political economy approach**. Comparative Education Review, 64 (1). pp. 1-20. Translation available: <https://canvas.sussex.ac.uk/courses/20396/files/2272932?wrap=1>
- Novelli, M., Higgins, S., Ugur, M. & Valiente, O. (2014). **Political Economy of Education Systems in Conflict-Affected Contexts**. Project Report, UK Department for International Development. Translation available: <https://canvas.sussex.ac.uk/courses/20396/files/2233100?wrap=1>
- Novelli, M., Lopes Cardozo, M.T.A., Smith, A (2015), **A Theoretical Framework for Analysing the Contribution of Education to Sustainable Peacebuilding: 4Rs in Conflict-Affected Contexts**. Translation available: <https://canvas.sussex.ac.uk/courses/20396/files/2125962?wrap=1>
- Paulson, J. (2015). **“Whether and how?” History education about recent and ongoing conflict: A review of research**. Journal on Education in Emergencies, Vol 1, No 1 (October 2015), pp 115 - 141. Translation available: <https://canvas.sussex.ac.uk/courses/20396/files/2258862?wrap=1>
- Selenica, E. & Novelli, M. (2021). **The Political Economy of Education Systems in Conflict-Affected Contexts in a Changed World Order 2021: A Narrative Literature Review**. Political Economy of Education Research Network, PEER Working Paper 3. Translation available from: https://peernetworkgcrf.org/wp-content/uploads/2021/08/Selenica-Novelli-Report-PE-EDU-CAFS-2021_Russian-language.pdf
- Tabaeva, A., Ozawa, V., Durrani, N. & Thibault, H. (2021). **The Political Economy of Society and Education in Central Asia. A Scoping Literature Review. PEER Working Paper 2**. Translation available: https://peernetworkgcrf.org/wp-content/uploads/2021/07/Scoping-Review_translation-with-references-in-Russian.pdf
- UNICEF (2015) **Does horizontal education inequality lead to violent conflict?** Translation available: <https://canvas.sussex.ac.uk/courses/20396/files/2285535?wrap=1>

GENDER CONSORTIUM OF SCHOLARS FALL NEWSLETTER

Inside this issue:

Gender Forum 2022
Fall Research Talks
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A Note from the Directors

As Directors of the Consortium of Gender Scholars (GenCon), we are pleased to share excellent work across the Organizing and Executive team in local and international arenas to further gender scholarship including mentorship. The following provide insight to the work of the Executive and Organizing Teams from these last months. A full year in review will be available online in the coming months at www.gen-con.org.

-Anna CohenMiller (GSE) & Jenifer Lewis (GSB)



The Consortium
of Gender Scholars



The Consortium of Gender Scholars

GENDER FORUM

**Opportunities and Challenges for Gender Equity in Central Asia:
Bridging Researchers, Policy Makers, and Practitioners**

#genderforumNU2022

Announcing the 2nd Annual GenCon Gender Forum January 19, 2022, online

The 2nd Annual Gender Forum at Nazarbayev University, “Opportunities and Challenges for Gender Equity in Central Asia: Bridging Researchers, Policy Makers, and Practitioners.” The Forum seeks to bring 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.

The primary language of the Forum is English with translation provided for some sessions in Russian.

Registration in advance for this meeting:

https://nu-edu-kz.zoom.us/meeting/register/tJltfuCvrj4vE9e5FtQ8uJhhN8_N453zclth

Abstract and poster presentation submission (student submissions welcome):

<http://gen-con.org/2022-gender-forum> until Dec 30, 2021

Certificates of participation can be provided upon request.

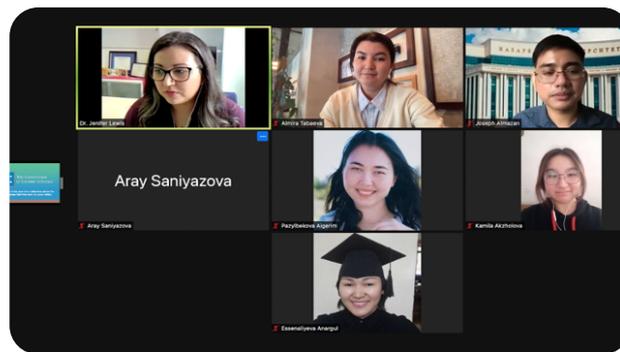
All are invited to also attend the two-day follow-up conference funded by the British Council, *Gender on the Higher Education Learning Agenda Internationally* (hosted by the University of Sussex, with GenCon as a partner). [Eventbrite registration here](#)

FALL VIRTUAL RESEARCH TALKS

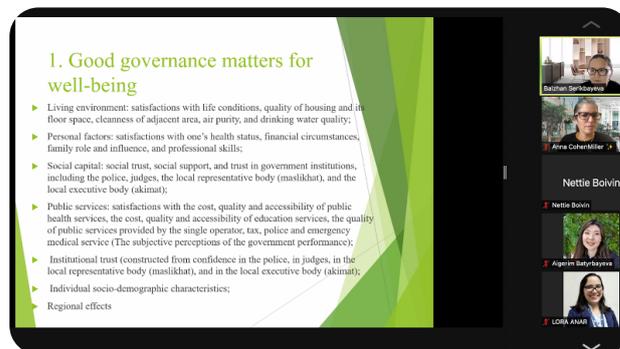
2021.09.22. "Endometriosis: A clinical challenge with significant impact on women's life" by Antonio Sarría-Santamera, MD PhD, Department of Medicine, NUSOM. [link](#)

2021.10.06. "The importance of cervical cancer screening for women in Kazakhstan" by Torgyn Issa, MPH, Research Assistant, NUSOM.

2021.10.22. "Nurses' Kangaroo mother care practice implementation and future challenges across the world" by Joseph Almazan, Nazarbayev University School of Medicine.



2021.11.03. "Gender-related implications of the study on the importance of good governance for well-being" by Balzhan Serikbayeva, Graduate School of Public Policy. [Link](#)



2021.11. 17. "Gender and Kazakh names", Zhazira Agabekova, School of Sciences and Humanities, Kazakh Language and Turkic Studies. [link](#)

2021.12.08. "Identity Construction of Young Muslim Women in Turkish Literature" by Funda Guven, School of Sciences and Humanities, Kazakh Language and Turkic Studies. [link](#)

Recent Publications

Books

Questions in Qualitative Social Justice Research in Multicultural Contexts

Anna CohenMiller, PhD
Nazarbayev University
November 4, 2021



“Questions in Qualitative Social Justice Research in Multicultural Contexts take readers on an accessible and inspiring journey to critically self-reflect on current or future research practices to encourage and facilitate greater equity, inclusion, and social justice in qualitative research.”

CohenMiller, A., & Boivin, N. (2022). Questions in Qualitative Social Justice Research in Multicultural Contexts. Routledge.

"Questions in Qualitative Social Justice Research in Multicultural Contexts, authored by Anna CohenMiller and Nettie Boivin, is a unique textbook that provides a much-needed guide to help researchers engage in reflexivity and criticality...Simply put, this inspirational book begins to fill a void in a way that will make a significant contribution to the literature."

-- **Anthony J. Onwuegbuzie, Ph.D., University of Cambridge, UK; Distinguished Visiting Professor University of Johannesburg, South Africa**

Articles



Durrani, N., CohenMiller, A., Kataeva, Z., Bekzhanova, Z., Seitkhadyrova, A., & Badanova, A. (2021). "The fearful khan and the delightful beauties": Doing gender in secondary school textbooks in Kazakhstan. IJED. <https://www.sciencedirect.com/science/article/pii/S0738059321001619>

Durrani, N., Helmer, J., Polat, F. & Qanay, G.. (2021). Education gender and family relationships in the time of COVID-19: Kazakhstani teachers', parents' and students' perspectives. Partnerships for Equity and Inclusion (PEI) Pilot Project Report. Graduate School of Education, Nazarbayev University.

https://www.researchgate.net/publication/352283100_GENDER_AND_FAMILY_RELATIONSHIPS_IN_THE_TIME_OF_COVID-19_KAZAKHSTANI_TEACHERS'_PARENTS'_AND_STUDENTS'_PERSPECTIVES_PILOT_PROJECT_REPORT

Malik, Z., Kussain, D., & **Koo, S.** (2021). "Speaking Up about a Taboo: The NeMolchi Movement in Kazakhstan." The Korean Journal of Slavic Studies. 37(3): 1-40.

Yap, J. M., & Manabat, A. R. (2021). Are We in-Sync? Students' Virtual Instructional Experience and Perceived Information Literacy Skills in Time of Pandemic. Internet Reference Services Quarterly, 25(4), 169-184.

<https://doi.org/10.1080/10875301.2021.1988796>

Awards and Research

Award Highlights

Joseph Yap received the "**Philippine Librarians Association, Inc. - Distinguished Service Award 2021**" November 26, 2021, for his outstanding contribution for the success of the association. It was presented by its president Emma M. Rey and Executive Vice President Elisa V. Garcia.



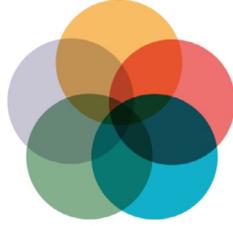
GenCon Program's Week of Women in partnership with NU Library is featured in the international SDG Stories from Asia and Oceania. You may access it from IFLA Reposit <https://repository.ifla.org/handle/123456789/1761>



GenCon team member **Aray Saniyazova, PhD** became one of the 33 participants selected from 81 applicants from 25 ASEAN countries to participate in Capacity Building Workshop: Equitable Access and Success in Higher Education to be held online from November 15 to December 17, 2021. This project is part of the Asia-Europe Foundation (ASEF)'s mission to promote diversity, equity and inclusion in higher education. The project is also considered as a spin-off activity of the 8th ASEF Regional Conference on Higher Education (ARC8). The workshop series is a 5-week long online learning and exchange journey for managers, academics, researchers in charge of diversity, access and success initiatives at their universities.

"The four key objectives of this workshop series are:

- Increase knowledge on the concept of inclusion in higher education internationalisation and tools to improve it
- Facilitate exchange of good practices among universities in ASEAN and the European Union
- Inspire participants to take action in their home institutions
- Build a network of practitioners sharing a joint mission to keep improving equity in international higher education" (https://asef.org/projects/cbw_equitable_access_he/)



Gender on the higher education learning agenda internationally
Co-constructing foundations for equitable futures

Research Highlight

This semester, GenCon team members including **Anna CohenMiller, PhD (GSE)**, **Aray Saniyazova, PhD (GSE alumni)**, **Zhanar Saniyazova (SHS alumni)** and **Aigul Rakisheva (GSE alumni)** conducted surveys and interviews among students, faculty and staff across disciplines as related to the **British Academy funded Gender on the Higher Education Agenda Learning Internationally: Co-constructing Foundations for Equitable Futures(GOTHELAI)** project.

The project is a research collaboration between the University of Sussex, UK; University of Cadi Ayyad, Morocco; University of Ibadan, Nigeria; Nazarbayev University, Kazakhstan; and OP Jindal University, India. It explores gender inclusion and sensitivity in both formal and informal curricula in universities across five countries. Using mixed method research design the research aims to collaboratively generate new insights from staff and students and develop strategic outputs tailored to diverse international audiences.
<https://mainstreamgenderhighereducation.wordpress.com>

**TIME
TO
ENGAGE**

- 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)

Still accepting proposals for speakers for the Spring 2022 GenCon Online Research Series

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

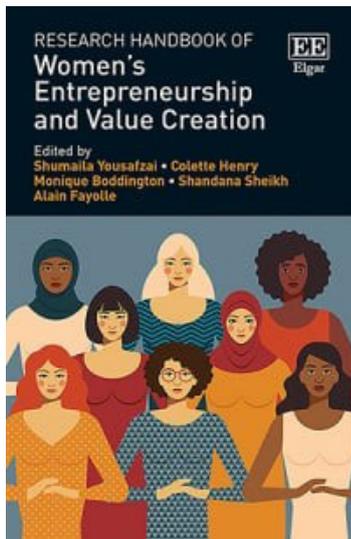


Graduate School of Business

BUSINESS DIGEST SERIES

October- December 2021

New Research Handbook on Women's Entrepreneurship and Value Creation



GSB faculty Shumaila Yousafzai was one of the editors of a newly published research handbook, which highlights the importance of women as agents of change, acknowledging women entrepreneurs' efforts and supporting their value-creation activities. With important implications for policy making, contributing authors direct attention to and provide evidence for the positive contribution of women entrepreneurs to the economy, regardless of their businesses' size and formal status. Challenging the underperformance hypothesis associated with women entrepreneurs, chapters present evidence that women do not underperform in their businesses, but that they add value even in constrained environments. This intends to shift the focus of research from questions like 'what do entrepreneurs do?' to 'how do they do it?', focusing on the unique ways in which each women entrepreneur creates value, and 'for whom do they do it?', looking at the multiple value outcomes women entrepreneurs create and

the beneficiaries of that value. With a global perspective on women's entrepreneurship and their value creation, this Research Handbook will be vital reading for researchers of entrepreneurship, as well as government agencies and policymakers interested in promoting entrepreneurial activity.

New Collaborative Research Grants at GSB

Congratulations to GSB faculty attracting new collaborative research grants!

Shumaila Yousafzai (GSB) together with **Ona Akemu (GSB)**, **Atanu Rakshit (GSB)** and **Naureen Durrani (GSE)** obtained funding for a project on *Value creation within Kazakhstan's Entrepreneurial Ecosystem: Towards an Understanding of Informal and Formal Entrepreneurs (2022-2024)*. In implementing this project, the aim is to propose actions, recommendations and policy interventions for employing entrepreneurship and Human capital development as a sustainable conduit for improving Kazakhstan's economy and well-being. In doing so, it is hoped to promote a holistic, gender-just perspective among Kazakhstan's strategic planning circles about the Human capital development gaps and socio-economic contribution of entrepreneurs. One of the goals of this project is to establish an **Interdisciplinary Entrepreneurship Research Center** at GSB, the "Nazarbayev University Research Centre for Entrepreneurship" (NURCE). Its launch is expected in the spring of 2022.

Jenifer Lewis (GSB) together with **Dana Bazarkulova (SSH)**, **Galiya Sagyndykova (SSH)**, **Aziz Burkhanov (GSPP)** obtained funding to work on *The effect of tradition, culture and history on the economic outcomes in Central Asia and Russia*. The proposed research will examine the effect of tradition, culture, and history on the economic outcomes of women and families in the Central Asian and Russia regions. To this end, the team targets to administer a Kazakhstan-wide longitudinal population survey and expand their research agenda to the Kazakhstan region.

PRESENTATIONS OF GSB FACULTY IN CONFERENCES AND SEMINARS



David De Remer presented his work on «*The Effect of Abnormal Air Pollution on Crime*» on October 29 in Almaty, Kazakhstan at the International School of Economics (Kazakh-British Technical University) Applied Economics Workshop.

Joep Konings presented his work on “*Explaining the low level of investment in Slovenia*” at the European Commission, DG EcFin, on October 8.



Centre for Economic
Policy Research
Research Excellence, Policy Relevance

On October 21, joint work of Joep Konings, together with John Van Reenen (London School of Economics), Mary



Amiti (New York Fed) and Cedric Duprez (National Bank of Belgium) was presented at the annual ERWIT

workshop of the Center for Economic Policy Research (CEPR). The talk was focusing on *New insights about Foreign Direct Investment and Superstar Spillovers*. (<https://cepr.org/254/programme>)

On November 25, at the National Bank of Romania the work of **Joep Konings**, joint with Gert Bijnens (National Bank of Belgium), John Hutchinson (European Central Bank) was presented. The topic was on *the interplay between green policy, electricity prices, financial constraints and jobs*. This research has been published as an ECB working paper earlier.

GSB IS MOVING UP IN UT DALLAS BUSINESS SCHOOL RESEARCH RANKINGS

In 2021, GSB broke the top-200 in the UT Dallas Business School Research Rankings and climbed up to the 135th place out of 534 business schools ranked. This moves GSB up in the top 25% of the world’s best research led business schools! Clearly, the GSB has experienced a top year in terms of research output, with more than 20 published or accepted papers in the very top peer reviewed journals.

In the last three months of the year the following additional papers have been accepted for publication or are in press:

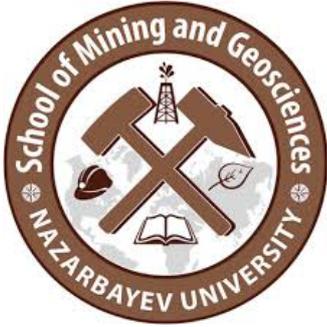
- **Babalola, M.T.**, Garcia, P. R. J., Ren, S., Ogunfowora, B., & Gok, K. (in press). “Stronger Together: Understanding When and Why Group Ethical Voice Inhibits Group Leader Abusive Supervision”. *Journal of Organizational Behavior*. (ABDC Ranking A*, ABS Ranking 4; Impact Factor = 8.174)
- Bijnens, G., **Konings, J.** and Vanormelingen, S. (2021). “The Impact of Electricity Prices on European Manufacturing Jobs”, *Applied Economics*, (ABDC ranking A, Impact factor=1.8).
- **Konings, J.**, Lecocq, C. and Merlevede B. (2021, in press). “Does a tax deduction scheme matter for jobs and investment by multinational and domestic enterprises?”, *Canadian Journal of Economics* (ABDC ranking A, Impact factor=1.02)
- Karimov, S. and **Konings, J.** (2021). “How lockdown causes a missing generation of startups and jobs”, *International Economics and Economic Policy*, Vol. 18, pp.456-473. (impact factor: 1.09)

NEW WORKING PAPERS GSB

GSB has launched its own working paper series, which covers fundamental work for discussion and circulation purposes, before it is sent to a journal of submission. The following to have been published, more to come!

2021/01 [The granular economy of Kazakhstan](#) by Joep Konings, Galiya Sagyndykova, Venkat Subramanian, Astrid Volckaert

2021/02 [M&A and Cybersecurity Risk: Empirical Evidence](#) by Gabriele Lattanzio, Jérôme P. Taillard



School of Mining and Geosciences

THE BEST INNOVATIVE TECHNOLOGY AWARD



Dr. Peyman Pourafshary, Associate Professor of the School of Mining and Geosciences at Nazarbayev University, has recently presented a paper at the international conference “Innovative technologies in oil and gas industry. Implementation experience and development prospects” which was organized by KazMunaiGas in Kazakhstan. The paper was selected as “The Best Innovative Technology” and was awarded in the event. The paper title is “Oil Displacement in Carbonate Formations by Novel Hybrid Engineered Water-Based EOR Methods.”

This paper presents a summary of the findings by the research team supervised by Dr. Pourafshary. This research is funded by an NU faculty development grant, and several SMG MSc students have been involved since 2019. Algerim Sekerbayeva, Damir Karimov, Meruyet Bazhanova, Marzhan Karimova, Aida Samanova, and Mariam Shakeel have completed their thesis in this group under the supervision of Dr. Peyman Pourafshary and Dr. Muhammad Rehan Hashmet.

Depleting oil reserves has steered the petroleum industry, especially in Kazakhstan, to develop novel enhanced oil recovery techniques. In this study, hybrid approaches utilizing engineered water and different oil recovery methods such as chemical injection, gas flooding, and nanofluid injection were investigated for carbonate reservoirs. Based on our studies, the hybrid method can reduce the chemical adsorption, increase the oil recovery, improve the stability of polymer and surfactants, increase the solubility of gas, and enhance the wettability alteration by nanofluids. Our studies showed that hybrid oil recovery methods for carbonate formations, especially in Kazakhstan, can expand the application envelope of chemical/gas/nanofluid methods to challenging carbonate, which was noticed by oil companies such as KazMunaiGas in Kazakhstan.

DR. SAFFETYAGIZ FROM SCHOOL OF MINING AND GEOSCIENCES (SMG) JOINED WORKING GROUP OF INTERNATIONAL SOCIETY FOR ROCK MECHANICS (ISRM) TEST STANDARDS:



Dr. Saffet Yagiz

- Suggested Method for Rock Boreability by International Rock Society for Rock Mechanics and Rock Engineering (ISRM)

Dr. Yagiz have published more than 20 journal manuscripts (most of which is Q1 and some Q2) and 10 high ranked proceedings papers and two keynotes with the affiliation of School of Mining & Geosciences at Nazarbayev University since Fall 2017. Most of these papers are related to his research area and the useful model and rock classification that he introduced to the literature. He established Rock Excavation Laboratory having rock brittleness and drillability tests equipment and portable linear rock cutting test machine at SMG. Undergraduate to PhD students having geomechanics, rock breakage and excavation courses may use this laboratory for research integrated teaching. Further, the laboratory is open for other engineering programs such as civil and mechanical.



Portable Linear Rock Cutting Test Machine



Rock brittleness, drillability and abrasivity test equipment

PREPARED BY PROF. SAFFET YAGIZ



School of Engineering & Digital Sciences

ENGINEERING EDUCATION RESEARCH: A BASIS FOR ASSESSMENT OF GROUP WORK



Desmond Adair

The use of group work can be found in many projects and laboratory experiments and therefore the assessment of group-work reports, etc. should be given special attention¹. Considerable research and debate has already gone into the assessment of group work²⁻⁴, and it is important to include group work within a course, as it is important for students to gain experience of working with others and of leadership⁵⁻⁶.



Kairat Ismailov

Of course, from a practical point of view, group work assessment can lead to more efficient use of instructor resources.

Effective group work, however, raises a number of questions. Not least of these is how to form the group? Also when it comes to assessment, the question arises; where does the balance lie between assessing the product and assessing the process? Ethical and emotional issues need to be recognized, as does the possibility of 'passengers' within the group⁷.

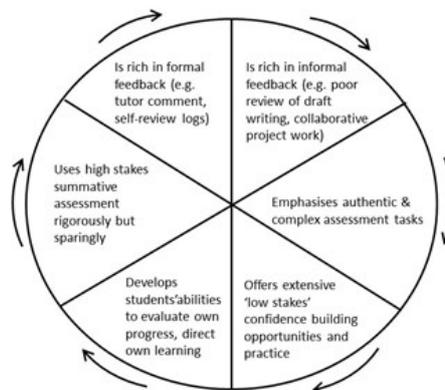


Figure 1: The core principles of the AfL⁸

The principles of Assessment for Learning (AfL)⁸ give a basis to help with some of the above difficulties. It is summarized on Figure 1. Briefly, informal feedback may come from peer review, use of real-world context seems to work better, the possibility of further research built on the present will give motivation, and summative assessment is better spread over smaller stake tasks. Also, the group-work process is also taken into account, usually through peer reports.

References

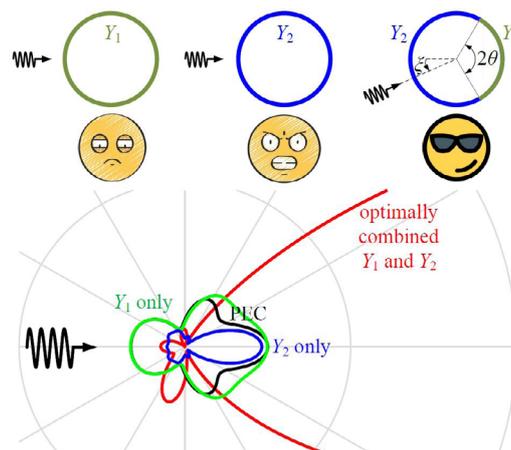
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RECENT FINDINGS BY PROF. VALAGIANNOPOULOS

Limits for scattering resonances in azimuthally inhomogeneous nanotubes

Two totally inefficient components may resonate together and a proper combination of them may lead to super-performing setups. Together with Prof. Ari Sihvola (Aalto University, Finland), we report upper limits for the electromagnetic scattering scores by nanotubes with use of angularly incomplete surface admittances. Our treatise has been published by *Journal of Optics* ([Institute of Physics](#), UK). A subscription-free version of our manuscript can be found [here](#). Credits to <https://www.flaticon.com/> for the emoticons. Nazarbayev University.



Stability of active photonic metasurface pairs

Gain is a blessing and a curse for modern photonic design. Active media are able to push the performance beyond global passive limits but if you overdo it, the system will turn to instability and exponentially growing fields will ultimately burn your device. Together with Professor Sergei Tretyakov ([Aalto University](#), Finland), we analytically derive the conditions for stability in a generic configuration of two coupled electromagnetic metasurfaces and identify the right dosage of gain that boosts reflectivity under stable operational regimes. The study is published at the *New Journal of Physics* by Institute of Physics (IoP), UK and is available [here](#).

World Bank Grant for the Commercialization of Medical Robots

Dr. Prashant Jamwal has received a World Bank Grant for the **second time** in a row. The grant shall be used for the commercialization of a **Gait Rehabilitation Robot** developed for the Stroke survivors' rapid recovery.



LLP «G R Robotics»

Background and current market problem

A Gait Rehabilitation System developed with state-of-art technologies at an affordable cost is proposed for this project. Disabilities due to neurological disorders (stroke and incomplete spinal cord injuries) are ever increasing and their treatment remains a severe burden on the health care system around the world. Kazakhstan is no exception, and the mortality rate here is one of the highest in the world with 239.9 per 100,000 compared to 75.8 and 48 in Japan and USA respectively [1]. Analyzing the data from 400 government and private hospitals in Kazakhstan, it was found that from approximately 260k cases of neurological disorders, close to 40k patients fell victim to stroke in a period of five years. Most of the survivors had disabilities and were required to undergo rehabilitation treatment for one hour every day. Unfortunately, only a limited number of therapists are available to cater for such demand of rehabilitation and not everyone get the required treatment. Furthermore, patients who were able to receive the treatment, only one fourth were able to reclaim their lost motions and strengths [2].

In order to manage disability treatments, it is recommended to use exoskeletons to help therapists in serving a greater number of patients simultaneously without getting tired. Treatment with the help of state-of-art exoskeletons equipped with mixed reality will be objective, personalized, and effective [2]. Currently there are few Gait exoskeletons developed by various researchers and few have also been commercialized [2]. The issue with existing exoskeletons is that they are heavy, provide constrained motion, and use electric motors which are not safe for humans. Moreover, the exoskeleton torques are not switched automatically low when the patients improve, and manual adjustments are required. We have developed the Gait exoskeleton to address these issues effectively.

Description of technological solution

Dr. Jamwal has developed a Gait Rehabilitation system comprising of an Exoskeleton and it will also have a virtual rehabilitation framework. The proposed system will expedite the treatment of human lower limb disabilities caused by neurological disorders or incomplete spinal cord injuries. With the help of a bodyweight support system, the disabled person shall be lifted from a wheelchair and will be supported to stand on a rehabilitation treadmill. A lower-limb exoskeleton has

Description of technology

been developed which will be fixed with the patients' lower limb (at hip, knee, and ankle joints) to help them walk on the treadmill.

Human joints (hip, knee, and ankle) are not perfect revolute joints and offer a small displacement motion during various leg motions. Therefore, an exoskeleton made of revolute joints will not always remain aligned with human joints during movements. Dr. Jamwal is developing special joints for the exoskeleton that will allow small displacements together with rotation. Moreover, the exoskeleton developed is lightweight to avoid any slippage and give comfort to the user. Lightweight actuators which are called "air muscles" are used in the exoskeleton which work similar to our skeletal muscles. The new actuators are less costly than the motors and weigh only 80 grams each while the motors weigh 2 kg.

If exoskeleton moves limbs of patients, the disability cannot be treated well. The patient will become dependent on the exoskeleton. An intelligent controller is being developed that creates an Artificial Intelligence-based musculoskeletal model of the user's lower limbs from sensor data to know the capabilities of the patient. The controller will first allow the users to move their limbs to the extent they can and then the exoskeleton will support further movements.

The proposed system shall also provide Virtual Rehabilitation based on mixed reality experience (a hybrid of virtual reality (VR), and augmented reality (AR)). Virtual rehabilitation helps in improving the cognitive capabilities of patients. While the exoskeleton system provides physical interaction to the patients, Virtual rehabilitation provides cognitive interaction in the form of gaming. Together with physical rehabilitation and virtual rehabilitation, brain plasticity is expected to improve rather quickly.

The exoskeleton prototype and the controller have been developed and tested. The design of virtual rehabilitation (VR & AR) is in progress. As a next step, the Gait Rehabilitation system shall be installed in the children's rehabilitation hospital for clinical trials.

Dr. Prashant Jamwal, tel. +7 775 458 6956

Email: prashant.jamwal@nu.edu.kz



[1] M. Zhumabayev, N. Maltabarova, and A. Kokoshko, "A cerebralstroke and the problem of inflammatory complications," *Research Journal of Medical Sciences*, vol. 10, pp. 492-497, 2016.

[2] P. K. Jamwal, S. Hussain, and M. H. Ghayesh, "Robotic orthoses for gait rehabilitation: An overview of mechanical design and control strategies," *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, vol. 234, pp. 444-457, 2020.

Description of technology



NAZARBAYEV
UNIVERSITY
NATIONAL
LABORATORY ASTANA

PROF. KALENDAR SHARES HIS RESEARCH NEWS



Professor Ruslan Kalendar (Leading Researcher, Laboratory of Bioinformatics and Systems Biology, “National Laboratory Astana”) as a Research Topic Editor is pleased to announce that in *Frontiers in Plant Science* (Impact Factor 5.75; Q1 Plant Sciences), section Technical Advances in Plant Science launched a Research Topic “*Interspecific Hybridization in Plant Biology*” together with an expert editorial team: Professor Andrew H Paterson (University of Georgia, Athens, United States) and Dr. Dayun Tao, Yunnan (Academy of Agricultural Sciences, Kunming, China).

This Research Topic aims to focus on interspecific hybridization for crop improvement, genomics of natural or synthetic polyploid formation, genomic responses to interspecific hybridization, and transmission genetics across species boundaries. Notoriously, plants can mate across taxonomically-determined species boundaries, and interspecific hybridization is widely used in plant genetics research. Interspecific hybridizations have conferred practical improvements to crops, some of which are unexpected based on the phenotypes of the parents. Genomics has provided insights into the fundamental consequences of interspecific hybridization for plant biology. Additionally, genomics has allowed the development of molecular tools for dissecting the genetic control of phenotypic variation in interspecific hybrid populations and manipulating interspecific introgressions in crop improvement. The Research Topic can be visited via the following [link](#).

A second Research Topic “*Mobile Elements and Plant Genome Evolution, Comparative Analyses and Computational Tools, Volume II*” together with an expert editorial team: Professor Gennady I. Karlov (Director of Molecular Biotechnology Centre, All-Russia Research Institute of Agricultural Biotechnology, Moscow, Russia).

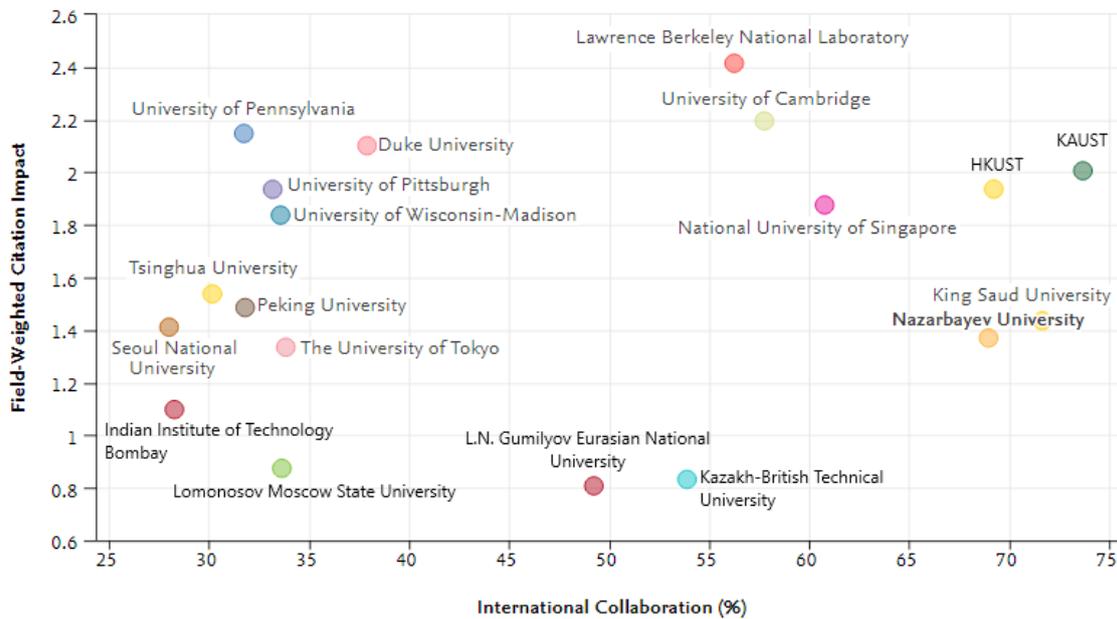
The previous Research Topic “*Mobile Elements and Plant Genome Evolution, Comparative Analyses and Computational Tools*” was successfully completed this year. An editorial manuscript titled «*Editorial: Mobile Elements and Plant Genome Evolution, Comparative Analyses and Computational Tools*» has been published by editors from different countries under the correspondence of Prof. Kalendar. The interest of researchers and the overall success of this Research Topic “*Mobile Elements and Plant Genome Evolution, Comparative Analyses and Computational Tools*” the *Frontiers* editorial office proposed to continue this topic in the form of Volume II.

This Research Topic aims to focus on mobile element and host genome evolution, discovery and comparative analysis of transposable elements, genome-wide profiling for transposable element analysis of repetitive elements and bioinformatic tools. Transposable elements are very common mobile genetic elements that are composed of several classes and make up the majority of eukaryotic genomes. The movement and accumulation of mobile genetic elements have been a major force in the formation of the genes and genomes of nearly all organisms. As dispersed and ubiquitous mobile elements, their life cycle of replicative

transposition leads to genome rearrangements affecting cellular function. Transposable elements are important drivers of species diversity, and they exhibit great variety in structure, size, and mechanisms of transposition, making them important putative actors in genome evolution. The Research Topic can be visited via the following [link](#).

Professor Kalendar is an Associate Editor in *Frontiers in Plant Science* at Technical Advances in Plant Science section, and Member of the Editorial Board of *BMC Biology* (Impact factor 7.431; Q1 Biology) in the Genetics and Genomics section; *BMC Plant Biology* (Impact factor 4,215; Q1 Plant Sciences) in the Genomics and Evolution section; Review Editor of *Frontiers in Genetics* (Impact factor 4.599; Q2 Genetics and Heredity); Academy Editor of *PLoS One* (Impact factor 3.24; Q2 Multidisciplinary Sciences) and *PeerJ* (Impact factor 2.984; Q2 Multidisciplinary Sciences).

RESEARCH PERFORMANCE EVALUATION USING SCIVAL



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 5,542 peer-reviewed publications indexed by Scopus, and have been cited 43,429 times for 2011-2021 period (Source: SciVal, December 2021). The approximate number of citations per peer-reviewed publication is 7.8. The overall H-index of NU is 61, whereas H5-index is 45. The field-weighted citation impact is 1.34, meaning that our publications have been cited 34% more than would be expected based on the world average for similar publications.

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

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

FUNDING OPPORTUNITIES

#	<u>Opportunity</u>	<u>Funder</u>	<u>Deadline</u>	<u>Source link</u>
<u>1</u>	IBD Ventures	The Crohn's & Colitis Foundation	03.02.2022	<u>URL</u>
<u>2</u>	The Small Research Grants on Education Program	Spencer foundation	23.02.2022	<u>URL</u>
<u>3</u>	Research grant	SmartTots	28.02.2022	<u>URL</u>
<u>4</u>	RESEARCH GRANTS: ACADEMIC YEAR 2022-2023	American Parkinson Disease Association (APDA)	11.03.2022	<u>URL</u>
<u>5</u>	Discovery Grants	American Brain Tumor Association	30.03.2022	<u>URL</u>
<u>6</u>	CURE Epilepsy Award	The CURE Epilepsy Foundation	30.03.2022	<u>URL</u>
<u>7</u>	Taking Flight Award	The CURE Epilepsy Foundation	30.03.2022	<u>URL</u>
<u>8</u>	GLOBAL TEAM SCIENCE AWARD	The Lupus Research Alliance (LRA)	01.04.2022	<u>URL</u>
<u>9</u>	Personalised blueprint of chronic inflammation in health-to-disease transition - HORIZON-HLTH-2022-STAYHLTH-02-01	Horizon Europe Framework Programme	21.04.2022	<u>URL</u>
<u>10</u>	MRC neurosciences and mental health programme grant:	Medical Research Council (MRC)	25.05.2022	<u>URL</u>
<u>11</u>	Open Application for Funding from NTAP	The Johns Hopkins University School of Medicine - Neurofibromatosis Therapeutic Acceleration Program (NTAP)	14.12.2022	<u>URL</u>
<u>12</u>	UKRI-SBE Lead Agency Opportunity	The Arts and Humanities Research Council and the Social, Behavioral and Economic Sciences Directorate (SBE) of the US National Science Foundation (NSF)	No Deadline	<u>URL</u>

New research publications indexed by Scopus (count: 271)

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