RESEARCH

Nazarbayev University Office of the Provost Newsletter
Issue 4, November 9, 2015





NEWSLETTER HIGHLIGHTS

Dear colleagues and students,

You are reading the fourth edition of our Newsletter. We are happy to announce that

we introduced new design of it to make it more interesting for you, our reader.

In this newsletter, you'll find out about what's been happening in the research life of

NU, successes of your colleagues on being published or receiving grants, new fund-

ing opportunities as well as much more useful information and new announcements.

If you haven't checked in with us lately, we think you'll be surprised and excited

about all the wonderful things happening in our University.

In every issue there will be a "Spotlight" article on a faculty member in order to get

to know the faculty better. In this issue Prof. Inglezakis will tell us about a success

of the School of Engineering - the opening of a new fully equipped and active

Chemical Engineering lab 3.143.

If you have any questions, suggestions, or concerns, please address them to us -

Assel Narymbetova (assel.narymbetova@nu.edu.kz) and Aiman Temirova

(aiman.temirova@nu.edu.kz). We hope to hear from you soon, and we welcome

your feedback!

Sincerely,

Research Team

2

CONTENTS

EVENTS	
Presentation: SciVal opportunities for NUSOM	4
Presentation: SciVal Presentation for GSB	
Information session: FameLab Kazakhstan science communication competition	
Joint workshop: Integrated water resources management in Kazakhstan	7
SPOTLIGHT	
Talk with Dr. Vasileios Inglezakis about Chemical Engineering lab 3.143	8
USEFUL INFORMATION	
Horizon 2020: Possible collaboration opportunities with UK Universities	12
Horizon 2020: Useful links	
Funding opportunities awaiting you!	
New publications at NU	
Research performance evaluation: Updates	
10 tips on how to apply for research funding	15
CONGRATULATIONS!	
To Prof. Neil Collins on winning the Horizon 2020 grant	
To Prof. Zhumabay Bakenov on winning the "Science Leader" award	
To Prof. Konstantinos Valagiannopoulos on winning the 2015 JOPT research excell award	
awai u	1/
UPCOMING EVENTS	
Horizon 2020 Information Day at NU	18
Workshop: Water Management and Environmental Impact Assessment in the Oil a Industry	
Workshop: Resilient Structure and Infrastructure	
Newsletter's previous issues	21
Contact us inside bacl	k cover

SCIVAL OPPORTUNITIES FOR SCHOOL OF MEDICINE

Presentation

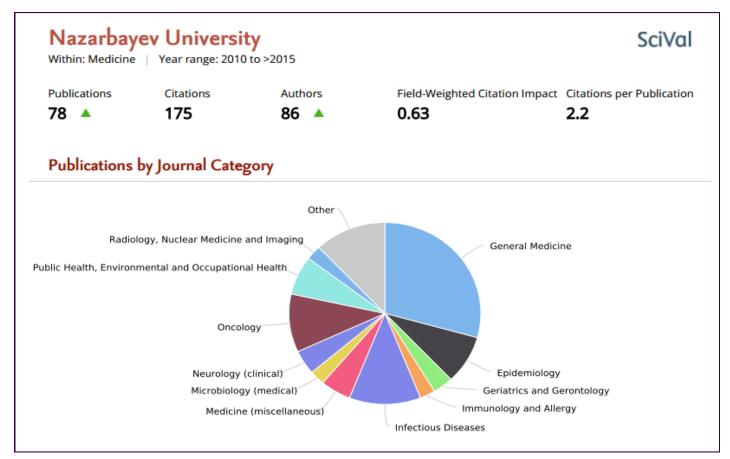
Aiman Temirova, Manager for Research Monitoring and Assessment, made a customized presentation on the SciVal and SciVal Funding research solutions for the Faculty of the School of Medicine (October 29, 2015).

In the beginning of the presentation, Aiman highlighted the main software features of SciVal, such as the research performance overview of the NUSOM faculty, benchmarking the NU to other national



and international institutions, and the emerging research trends in the field of Genetics and Molecular Biology.

The presentation drew a particular attention of the NUSOM faculty to the potential collaboration opportunities with other research institutions that SciVal suggests, based on the research topics that the NUSOM researchers have their publications on.



Source: SciVal. Research performance overview. Selected discipline: Medicine. Timeline: 2011-October 2015.

SCIVAL OPPORTUNITIES FOR **GRADUATE SCHOOL OF BUSINESS**

Presentation

Ayhan Saracoglu, Account Manager at Elsevier, and Aiman Temirova, Manager for Research Monitoring and Assessment at the Office of the Provost, made a presentation on "SciVal: Research Evaluation Solution" and "SciVal Funding: New Funding Opportunities" for the Faculty of the Graduate School of Business (October 22, 2015).

Ayhan made an extensive presentation of the SciVal research solution. A particular attention of the GSB faculty drew the benchmarking the NU to the European research entities that work in the field of Accounting and Marketing.



Aiman continued the interactive presentation with showing the SciVal Funding opportunities, such as finding the most suitable research and travel grants based on the key words of the research project and researcher's publication profile mation.

During and after the presentation, the GSB faculty had a chance to ask more indepth questions on Scopus, Science Direct, and other products offered by the Elsevier.

Performance indicators

Outputs in Top Percentiles 🔅



Publications in top 10% most cited worldwide



Nazarbayev University:

14.3%

Kazakhstan: 3.3%

Publications in Top Journal Percentiles 💢



Publications in top 10% journals by SNIP



Nazarbayev University:

28.6%

Kazakhstan: 15.8%

International Collaboration 📚



Academic-Corporate Collaboration 🗯



Publications co-authored with Institutions in other countries Publications with both academic and corporate affiliations



Nazarbayev University:

71.4%

Kazakhstan: 26.3%



Nazarbayev University:

0.0%

Kazakhstan: 0.0%

Source: SciVal. Research performance overview. Selected discipline: Business. Timeline: 2011-October 2015.

FAMELAB KAZAKHSTAN SCIENCE COMMUNICATION COMPETITION

Information Session

Research Team organized an information session with a British Council representative on the FameLab Kazakhstan Science Communication Competition for the NU community (October 20, 2015).

From 28 September to 25 October, 2015 British Council Kazakhstan, JSC NATD and Cheltenham Festivals organized the FameLab Kazakhstan science communication competition.

Contestants were asked to explain the concept of their scientific work or research in no more than three minutes in English. The competition was open to people working in science and innovation aged between 18 and 40.

The experience gained from organizing this competition over the years in other countries shows that the most active and successful participants are postgraduate students, post-docs and other researchers. Therefore, the Research Team of the Office of the Provost, in collaboration with British Council Kazakhstan, organized a meeting with prospective participants at Nazarbayev University. During the information session, the British Council representative presented the competition, spoke about its history, relevance, and terms, gave recommendations on how to prepare for the competition, and answered the questions.



During this first year of the competition in Kazakhstan, the JSC NATD and British Council Kazakhstan offer the following prizes: winner and two runner-ups of the National Final will win cash prizes in the amount of 7.5 million KZT, 2.5 million KZT, and 1.5 million KZT, respectively. In addition, they will go to FameLab International's final in Cheltenham, UK in June, 2016, where national finalists from 30 countries will compete for the title of the best science communicator.



INTEGRATED WATER RESOURCES MANAGEMENT IN KAZAKHSTAN

Joint Workshop



Nazarbayev University, in collaboration with Kazakh-German University, has organized a joint workshop on Integrated Water Resources Management in Kazakhstan (October 19-20, 2015).

The primary goal of the first joint event was to start a network of experts, young professionals and junior scientists in the context of academic education and research in all fields of integrated water resources management.

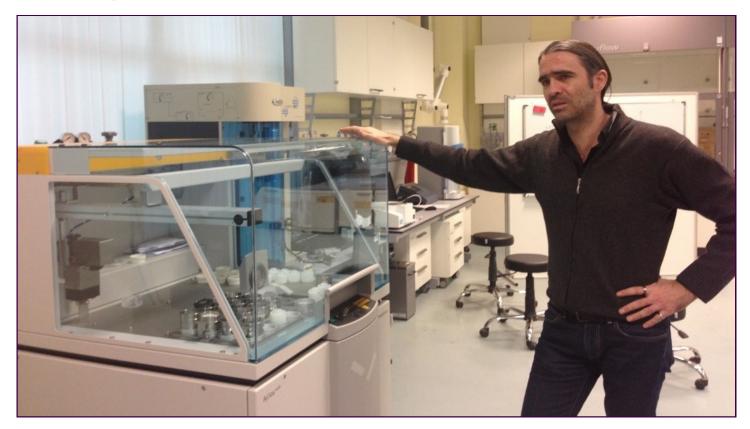
The meeting drew a particular attention to capacity-building in policy analysis, economics, law, technology and innovation, GIS, disaster management and education. Further possibilities of incorporating the innovative approach of interdisciplinary and cross sectoral management of water resources into the traditional IWRM approach were discussed during the 2nd day of the workshop.

For any questions, related to this event, please contact Dr. Zhanay Sagintayev (zhanay.sagintayev@nu.edu.kz).



TALK WITH DR. VASILEIOS INGLEZAKIS ABOUT CHEMICAL ENGINEERING LAB 3.143

Spotlight



Research Team: Why do you think that Chemical Engineering lab 3.143 is a real success story?

Vasileios Inglezakis: Chemical Engineering lab 3.143 has become a real success story for School of Engineering, since it is first fully equipped and 100% functional common use laboratory in our School.

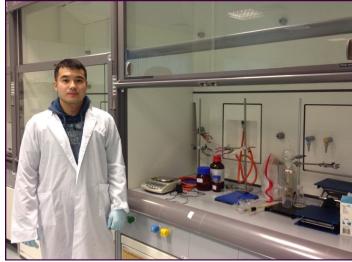
I personally led the design of the laboratory in early 2014, in collaboration with contractors and USM and initiated the purchase of equipment in summer 2013. As responsible for Chemical Engineering

labs since 2013 I have been heavily involved in the selection of this equipment. The first equipment arrived in summer 2014, which permitted us to open the laboratory for teaching and research in January 2015.

Since 2014 then we became the first laboratory that systematically organizes trainings on our equipment by professional trainers and in house trained operators, which is also quite a success. Up to date we have organized 30 training sessions and the number of participants is 127,

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21% of which coming from outside SoE.

Furthermore, since the beginning of the year we have received a number of requests for equipment and executed successful measurements for colleagues from SoE, NURIS/NLA and SST.

This success led us to the next step which was the development of a handy database providing access to our laboratory items and facilitating the use and booking of equipment - "Quartzy".

RT: Can you please explain what is "Quartzy"? What is the advantage of having it?

VI: Our database includes all the information you need for reagents and gases, big and small equipment and all kinds of consumables that are available in our laboratories.

According to my knowledge this is the first database of this kind in our University and we are really proud to present it to you. It is also a good example of how a lab database should look like and is really not difficult to create one in NU-level - something that we have not succeeded so far. I want to express my gratitude to Technicians our Lab team, Aliya Kudarova (senior LT), Anuar Andasbayev and Dastan Nurmukhambetov (on the right picture above).

RT: Can you please specify what kind of research or work in general can this type of laboratory help you with?

VI: There are a number of types of research that can conducted in our lab but the areas we are already active is material science and environmental research (water and soil).

We are planning to start a new course in January 2016 "Interdisciplinary design project", which will permit students to conduct research in our laboratory. There will be a set of subjects available for research. Students can choose among them with option to continue the research after the completion of the course, following an agreement with the supervising professor(s).

RT: What impact the laboratory has already had on NU?

VI: The laboratory had a number of positive impacts on our School.

First of all, at Chemical Engineering department level, there are courses, as Chemistry and Separation Processes that are supported by this lab. Before its creation it was a big challenge to conduct them. Furthermore, we were able to initiate our experimental research activities and of course to support running re-

(Continued on page 10)

search projects and our PhD program. Is indicative of our success the fact that the lab supports 5 funded SoE/SST experimental projects and we have already agreed to support 2 more, one from SoE and the other from ANL.

As a result and indication of our success, since the commencement of our experimental work back in February 2015 my research group and project collaborators have already published 4 international conference papers and two more papers that are under submission to high impact factor Journals, all 100% products of this lab. One more paper is under preparation for submission to one of the best conferences relevant to water, organized by the International Water Association in Europe in 2016. Taking into account that the lab produced 5 conference and 2 Journal papers in only 9 months is part of the success of our lab. The papers are:

JOURNALS

 V.J.Inglezakis, Simos Malamis, Aigerim Omirkhan, Jamilya Nauruzbayeva, Zhibek Makhtayeva, Tamirlan Seidakhmetov, Aliya Kudarova, Studies on the inhibitory effects of toxic compounds on the activity of municipal recycled sludge – submitted to the

- Journal of Environmental Management *Impact Factor 2.723*
- 2. Charles Gilman, Vadim Yapiyev, Vasileios Inglezakis, Jong R. Kim, Roza Demeisinova, Akmaral Suleimenova, Aliya Kudarova, Daniyar Malgazhdar, Abdrakhmanova, Tolganav Ainagul Kabdullayeva, Aizhan Shagadatova, Til Dieterich, Samat Kozhakhmetov, Al-Kushugulova, magul Christian Schönbach, Soil quality assessment, potential climate change implications and management options; The case of Kazakstani arid soils - under preparation, to be submitted to the European Journal of Soil Science - Impact Factor 2.649

CONFERENCES

1. V.J.Inglezakis, Simos Malamis, Aigerim Omirkhan, Jamilya Nauruzbayeva, Zhibek Makhtayeva, Tamirlan Seidakhmetov, Aliya Kudarova, Investigating the inhibitory effect of 4nitrophenol, phenol and cyanide in the activated sludge process employed for treatment petroleum the of wastewater, International Conference on Industrial Waste & Wastewater Treatment & Valorization, IWWATV 2015, Athens, Greece (Oral)

(Continued on page 11)





- 2. G. Itskos, A. Koutsianos, V. Inglezakis, N. Koukouzas, D. Torkmuzin, C. Vasilatos, Zeolite formation utilizing fly ash from Greece and Kazakhstan, International Conference on Industrial Waste & Wastewater Treatment & Valorization, IWWATV 2015, Athens, Greece (Oral)
- 3. V.J.Inglezakis , S. Malamis, A. Omirkhan, J. Nauruzbayeva, Z. Makhtayeva, T. Seidakhmetov, A. Kudarova, A.A. Abirov, N.S. Serikbayev, Activity testing of recycle activated sludge (RAS) from the municipal wastewater treatment plant of Astana, Kazakhstan, International Water Association (IWA) 7th Eastern European Young Water Professionals Conference, Belgrade, Serbia, 17 19 September 2015 (Poster)
- Charles Gilman, Vadim Yapiyev, Vasileios Inglezakis, Jong R. Kim, Roza Demeisinova, Akmaral Suleimenova, Aliya Kudarova, Daniyar Malgazhdar, Ainagul Abdrakhmanova, Tolganay Kabdullayeva, Aizhan Shagadatova, Til Dieterich, Samat Kozhakhmetov, Almagul Kushugulova, Christian Schönbach, KSMBP: Kazakhstan Soil Microbiome Project, GIW / InCoB 2015 at MIRAIKAN, Odaiba, Tokyo, Japan, 2015 (Poster)
- Vasileios Inglezakis, Aliya Kudarova, Daniil Tarassov, Albina Jetybayeva, Yernar Myngtay, Dinara Zhalmuratova, Inhibitory effects of polar and non-polar organic substances on activated sludge, 13th IWA Specialized Conference on Small Water and

Wastewater Systems and 5th IWA Specialized Conference on Resources-Oriented Sanitation – Athens, Greece, 14 September, 2016 (submitted)

RT: What plans School of Engineering has for the lab?

VI: Our main plan for the coming months – to involve more faculty members and students to work in our laboratory, to support ongoing research and PhD program and to apply for funds. It will also be a big success for us if we can hire more laboratory technicians. I have the opinion that at the stage we are and under the financial crisis, we NU must prioritize lab technicians hiring. We are building high-end labs and the government invests big amounts in infrastructure and viability of this is possible only when we have the human resources to manage it.

RT: Congratulations again Prof. Inglezakis to you and to School of Engineering! We wish you success in all your work and looking forward to hear about new achievement of your laboratory!

HORIZON 2020: COLLABORATION OPPORTUNITIES WITH UK UNIVERSITIES

UKTI Education can help NU researchers find suitable UK University partners in order to bid in Horizon 2020 calls. For more information, please send an e-mail to Aiman Temirova (<u>aiman.temirova@nu.edu.kz</u>).



HORIZON 2020: USEFUL LINKS

The European Commission will invest almost €16 billion in research and innovation in the next two years under Horizon 2020, the EU's research and innovation funding scheme, following a new work programme for 2016-2017 adopted on 13 October 2015.

For more information, please see the documents below:

News on Horizon-2020 work programme



Calls for proposals

FUNDING OPPORTUNITIES AWAITING YOU!

SciVal Funding

We have identified **135 funding opportunities** that you might find suitable for yourself. For your convenience, we have split them into Science, Technology, Engineering, Medicine (STEM) and Humanities and Social Sciences (HSS) fields. For more information, please click on the following links:

All selected funding opportunities
STEM funding
HSS funding



NEW PUBLICATIONS AT NAZARBAYEV UNIVERSITY

Google Alerts

Google Alerts is one of Google's tools to keep track of trends, interesting topics, or anything really new that appears on the web. We would like to introduce to you the recent alerts (since October 13, 2015 – October 29, 2015) on the published papers by our colleagues so you can keep track on the NU research success.

For more information, please click here.



NU RESEARCH PERFORMANCE EVALUATION

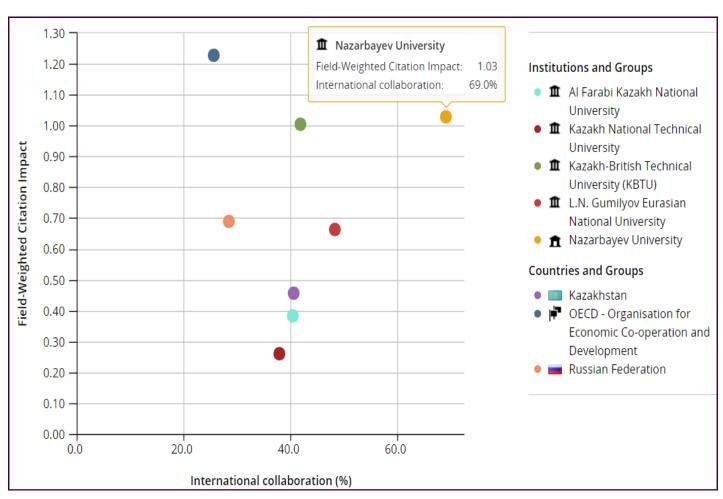
Using SciVal and InCites

Nazarbayev University researchers are active in many different research fields. Several research solutions, such as **SciVal and InCites**, offer to us a great opportunity to keep track of our research performance and benchmark our progress to other national and international institutions.

We are delighted to present an updated version of the Overview of NU's Research Performance Evaluation using two competing research solutions, SciVal (Elsevier) and InCites (Thomson Reuters).

SciVal Presentation

InCites Presentation



Source: SciVal. Benchmarking NU research performance to national and international research entities.

Timeline: 2011-October 2015.

10 TIPS ON HOW TO APPLY FOR RESEARCH FUNDING

The Guardian Article

Grant writing is time-consuming, tedious and the success rates are depressing. How can researchers make the process less stressful?

Winning funding for your research ideas is tough, and there is growing pressure in all disciplines to get grants. While there's no easy way to write a successful application, there are some steps you can take to make the process less stressful.

The Guardian asked reviewers and researchers to share their advice and listed below 10 tips on how to apply for research funding:

- 1) Become familiar with grant writing early on
- 2) Decide what you most need the money for

- 3) Signpost your applications according to rigour, value for money, impact, scientific interest
- 4) Talk to colleagues who have applied to the same organization
- 5) Stay focused and avoid jargon
- 6) Talk over your interdisciplinary proposal with your partner
- 7) Don't be afraid to ask questions
- 8) Ask people outside of academia to read your application
- 9) If you get rejected, try try again
- 10) Always use your right of reply

To see the Guardian article, please click here.

CONGRATULATIONS TO PROF. NEIL COLLINS!

On behalf of Nazarbayev University, we would like to congratulate Prof. Neil Collins, Dean of Graduate School of Public Policy, on winning the Horizon 2020 grant.

A consortium of nine universities, including NU, has won a €2.5m grant under the EU Horizon 2020 programme. Leading universities in the UK, Belgium and Germany are participating in the project.

The research to be undertaken will look at the impact of cultural and scientific diplomacy, a major part of the EU's policy to influence world perceptions of Europe. The work package for which Nazarbayev University is responsible involves analysing European diplomatic efforts in countries outside the EU. The research will discuss cultural diplomacy in both member states individually and the European Union as an entity.

The NU research team will be led by Professor Neil Collins. Dr Aziz Burkhanov, GSPP, will also be part of the venture. This will be the first research project under the auspices of the proposed NU Centre for Regulation and Governance (NUREG). Once the administrative framework has been put in place, the research should begin in February or March 2016.



Professor Collins, in an interview for this newsletter, said he was particularly pleased that NU was the only Central Asian university to be chosen in this round. He expressed the hope that this project will provide NU with a learning experience for further successful bids in the highly competitive EU Horizon 2020 Programme.

CONGRATULATIONS TO PROF. ZHUMABAY BAKENOV!

On behalf of Nazarbayev University, congratulations to Dr. Zhumabay Bakenov, Associate Professor at the School of Engineering, on being awarded the "Science Leader" award from Thomson Reuters and National Center for Scientific and Technical Information.

Dr. Bakenov is the co-author of "Ternary sulfur/poly-acrylonitrile/Mg0.6Ni0.40 composite cathodes for high performance lithium/sulfur batteries" and "One-step synthesis of branched sulfur/poly-pyrrole nanocomposite cathode

for lithium rechargeable batteries", which are ranked among 1% most cited articles of the 2005-2015, in the field of material science.

Dr. Bakenov developed poly-pyrrole sulfur composites used in the production of cathodes of lithium batteries. The new composites can improve the technical quality of cathodes, to reduce the cost of their production.

To learn more, please click here.

CONGRATULATIONS TO PROF. KONSTANTINOS VALAGIANNOPOULOS!

On behalf of Nazarbayev University, we would like to congratulate Dr. Konstantinos Valagiannopoulos, Assistant Professor at the School of Science and Technology, on winning the 2015 JOPT research excellence award for his paper on perfect absorption in graphene multilayers.

According to the Journal of Optics (JOPT), the work is regarded as an outstanding piece of research in this field and the paper has exceptional merit.

The paper demonstrates that total light absorption can be achieved in a graphene-based hyperbolic metamaterial. The metamaterial consists of periodically arranged graphene layers that are tilted with respect to the interface. While fabrication of the proposed graphene asymmetric hyperbolic metamaterial is a challenging mission, the author believes that it is doable using modern technologies.

UPCOMING EVENT 1

HORIZON 2020 INFORMATION DAY AT NAZARBAYEV UNIVERSITY

26 NOVEMBER, 2015







We are pleased to invite you to an Information Day on the Horizon 2020 EU Framework Programme for Research and Innovation, which will be held from **10:00 - 17:00 on November 26 in Auditorium 3323 (3rd Block).**

The seminar is organized in collaboration with InExCB and the Horizon 2020 experts to provide detailed information on the new H2020 Work Programme and new rules for participation. One of the primary goals of the event is to answer any questions of NU researchers and provide an expert advice on the H2020 grant application.

The Information Day work programme will be shared later.

UPCOMING EVENT 2

WORKSHOP ON WATER MANAGEMENT AND EN-VIRONMENTAL IMPACT ASSESSMENT IN THE OIL AND GAS INDUSTRY

14-17 MARCH, 2016

The School of Engineering is glad to invite you to participate in the 'Workshop on Water Management and Environmental Impact Assessment in the Oil and Gas Industry' that will be held from 14-17 March 2016 in Nazarbayev University. The Conference will focus on sustainable water resources management for application in the oil and gas industry.

The workshop will:

- promote the participation of Young Water Professional and senior-young interaction
- serve as platform for promoting the science-policy-practice interface, where water professionals will exchange ideas and best practices, present the state-of-the-art and debate on key scientific & practical issues.

The workshop will be organized in parallel with another Workshop on "Resilient Structures and Infrastructure".

The subsistence allowance (travel and accommodation) is covered for 18 Kazakhstani participants.

To apply, please fill out the <u>Application Form</u> and send it to Dr. Vassilis J. Inglezakis (<u>vasileios.inglezakis@nu.edu.kz</u>).

For more information, please click here.

UPCOMING EVENT 3

WORKSHOP ON RESILIENT STRUCTURE AND INFRASTRUCTURE

14-17 MARCH, 2016

The School of Engineering invites you to participate in a Workshop on "Resilient Structures and Infrastructure" that will be held from 14-17 March 2016 in Nazarbayev University. The workshop will focus on the state-of-the-art for the understanding, design and development of civil engineering structures to withstand extreme hazards.

The workshop will:

- promote research links between leading, established and early-stage researchers from the UK and Kazakhstan
- serve as platform for promoting the science-policy-practice interface, where professionals will exchange ideas and best practices, present the state-of-the-art and debate on key scientific & practical issues.

The workshop will be organized in parallel with another Workshop on "Water Management and Environmental Impact Assessment in the Oil and Gas Industry".

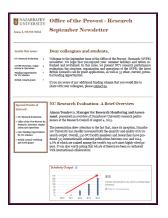
The subsistence allowance (travel and accommodation) is covered for 18 Kazakhstani participants.

To apply, please fill out the **Application Form** and send it to Dr. Dichuan Zhang (dichuan.zhang@nu.edu.kz).

For more information, please <u>click here</u>.

NEWSLETTER'S PREVIOUS ISSUES

Take a look back through the previous issues of our Newsletter!







Issue #1 Issue #2 Issue #3

YOUR FEEDBACK IS VALUABLE TO US

Your comments and feedback are welcome and necessary in order to ensure that this newsletter serves you in the best possible way. We also encourage you to share this newsletter with your colleagues and contacts who may be interested in this information.

If you have any questions, please do not hesitate to contact us:



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