

# RESEARCH

Research Services Office Newsletter

Issue 6, December 24, 2015



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# NEWSLETTER HIGHLIGHTS

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## Dear NU Community!

As the holiday season is once again upon us, we would like to take this opportunity to wish everyone Happy Holidays! We hope your year has been full of valuable research and academic achievements, and that *our newsletter* has helped to play a role in providing useful information in the NU research world!

We are grateful for the positive interactions we have had with so many of you throughout the year in many venues, including this newsletter, in-person meetings, workshops, and social media. We look forward to continuing to engage with you on research issues in 2016.

As a nice ending of the year we prepared for you a special interview with Provost, who is in our *Spotlight* column. You also can find plenty useful information on the events that has happened in the last months of the year, as well as information on the new funding opportunities provided by the Royal Academy of Engineering, UK, the USAID, and the Volkswagen Foundation.

Don't forget to take a look at our *New publications* section to congratulate your colleagues on recent achievements in publishing and at the *176 funding opportunities* section to find a suitable grant for yourself.

As we all hopefully slow down to enjoy time with family and friends and ring in a New Year, let's remember to bring the cheer and gratitude we feel back with us to our 2016 newsletter communications.

Happy Holidays!!!

**Sincerely,  
Your Research Team**

For any further information please contact:  
Assel Narymbetova ([assel.narymbetova@nu.edu.kz](mailto:assel.narymbetova@nu.edu.kz))  
Aiman Temirova ([aiman.temirova@nu.edu.kz](mailto:aiman.temirova@nu.edu.kz))

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# TALK WITH PROVOST

## ANNE LONSDALE

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### Spotlight

The position of Provost is important to the overall strength of our University. The Provost is supposed to oversee all of Nazarbayev University's academic programs and research policies and projects. We are fortunate that our current Provost, Anne Lonsdale, brings to her position deep knowledge of Nazarbayev University and of Higher Education gained from her years working at Oxford University, at the Central European University as Secretary-General from 1991-6 and as a Deputy Vice-Chancellor in Cambridge and President of Murray Edwards College. She has also been adviser to the Ministries of Education and Science in Greece, Ukraine, Uzbekistan and Georgia and to the European Commission. She has the qualities of leadership and vision that are essential to creating a university that is internationally distinguished and financially sound—one that is capable of inspired teaching, path-breaking research, scholarship and creativity, as well as transformative public engagement.

Research Team decided that an interview with the Provost would be a perfect ending to 2015 for our Newsletter – it will permit us to summarise the year's activities and set up new goals for the coming year.

**Research Team:** Provost Lonsdale, thank you so much for speaking with us today.

**Provost:** It's a pleasure.

**RT:** You have the unique experience of being the Provost at NU twice – in the establishment period and now. What do you think has changed at NU in the meantime?

**P:** **The difference is significant. In metaphorical language, when I first came to NU in 2009 it was a young, ambitious pony, but very wild; five years later it has grown into a beautiful strong horse that can carry a great weight of responsibility. In the beginning Schools were dealing with so many establishment problems of their own, so there was no time to think about 'the University'. It wasn't wrong; it was natural for that period. Nowadays, the situation has changed drastically. I can feel how the NU community is coming together, how the University's solidity and stability is growing and it is strongly supported by a growing 'University' spirit in Schools and Research Centers.**

**RT:** What area of your job do you feel is toughest to deal with? What do you think is Nazarbayev University's biggest long-term challenge?

**P:** **From all my professional experience I am sure that 'people' are always the most important and the most difficult resource to deal with. If money is tight but the people are right, good work can be done, but if the people are not in tune with the Mission, no amount of money will help. Running a University is like running the Opera House. You need**

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to make sure that the building reflects the purpose, that stage sets and lighting (the infrastructure) are properly set up, that the orchestra (the administrative workers) are doing the right things, and of course, you need to deal with the chorus and Divas and Prima donnas (students and faculty) of your Opera House. There are a great number of skills you should apply to set up the right vectors for the human talents of your employees and nurture all parts of the University to make it grow and prosper. I see academic administrators as gardeners (transplanting and watering, and occasionally pruning and weeding, so that things grow better), not technologists.

Talking about long-term challenges, I can list a number of them – distance, money, growth of trust between the faculty, administration and management, and external reputation and rankings. All well-known universities in the world have been struggling with these challenges every day, sometimes over centuries, before they gained their reputation, and they are still only as good as their last year's results, so we are at the beginning of a long and adventurous journey.

**RT:** What were the main challenges and the main successes of 2015 in your opinion?

**P:** The main challenge was the flotation of the tenge, which substantially cut the budget of the University. However, all negative events usually have positive sides as well. In this tense financial situation, the top



management of NU took care of the continuing hard currency demands on international faculty and staff with a generous salary adjustment. The faculty responded with gratitude, and with concern for local faculty and their Kazakhstani colleagues in University management. Schools worked to find ways to cut costs for teaching and research and create new ways to generate income. This was a real success in 2015 –the sense of coming together as one big family to meet, and hopefully overcome, the challenges of the economic situation. I hope this sense of shared responsibility will continue in 2016. Just as in the Opera House, every section needs to play its part, the faculty as much as the management, to create the University's success.

**RT:** Taking into account your academic experience in the past, how would you define your personal benchmarks for University success, one year, five years, ten years, down the line?

**P:** I would say that you cannot really measure it objectively. Of course, we can and must make sure that every-

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**thing is working properly and that all parts of the system are accountable for their actions. We can count the number of publications, research projects, PhD students, Faculty with PhDs, quantity and diversity of research grants, even international rankings, but these do not show the whole picture. You know how things are at the University when you simply walk through the atrium. Are people (Faculty, students, administrators) alert, interested in each other's ideas, busy, enthusiastic? People's behavior and attitudes towards the institution – these are the deep criteria of success. A successful University is a place where people, through their work and their dedication, help each other to grow, where everyone is dedicated to developing their part of the shared whole, where people know their talents can be nurtured. This is why in a previous question I said that NU has changed in the last five years, because peoples' attitudes have changed. We are growing into a community, which means that we are on the right path.**

**RT:** What initiatives will you be working on in the coming year?

**P:** An important next step in the development of the University is to set up an integrated information management system for NU. Every modern University has one – it will permit the consolidation of information for example for student management or for HR, do away with time-consuming and risky migration of materials from one small database to another and give us all easier access to up-to-date information, helping create a wide range of evidence-

**based planning and management solutions.**

**RT:** What will be the main directions for research policy at NU next year?

**P:** Integration is an important trend in the research world and it will become one of our next targets –first, between disciplines, secondly, better integration between Schools and Research Centers, to create joint research teams and apply for international grants and partnerships at home and abroad, attract additional research money and keep pace with world research trends. Ultimately we need to integrate the different Offices on the NU campus designed to support and facilitate research funding and management, in order to create a fully-functioning 'one-stop shop' for all research needs at NU.

**RT:** In this coming holiday time, what Christmas and New Year wishes do you have for our NU community?

**P:** Health, Happiness, Peace to all at NU and their families. And in 2016 I hope we will use the extraordinary talents we have here at NU to keep building an extraordinary University, which will benefit Kazakhstan and the world community in the future. Merry Christmas and Happy New Year!

**RT:** Thank you again for speaking with us and Research Team also wishes you success in all your beginnings in the coming year!

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# CENTRAL ASIAN SYMPOSIUM ON EMBEDDED SYSTEMS AND VLSI (CASEV2015)

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## Event at School of Engineering



**Author: Dr. Alex James, Assistant Professor, School of Engineering**

The 1<sup>st</sup> Central Asian Symposium on Embedded Systems and VLSI (CASEV2015) was held on 28-29 November 2015 at Nazarbayev University, Astana, Kazakhstan. The conference featured the long-standing core electronic engineering topic on integrated circuits, and embedded sys-

tems with a focus on practical implementations of connected devices and internet of things. The conference was student focused with experienced speakers from industry and academia providing excellent inputs to the current state of the art.

At CASEV'15, we received 226 papers from 15 different countries, out of which,

*(Continued on page 8)*



Image: property of Dr. Alex James

*(Continued from page 7)*

through a two-stage review process with an international program committee with more than 60 reviewers taking part in the review process, six papers were selected in the full paper category, and nine papers were selected in the short paper category. Also, the conference provided a venue for EEE students from Nazarbayev University to showcase their projects in the form of posters.

The conference was inaugurated by Prof Anatoli Vakhguelt (Dean, SENG) and Prof Nazim Mir-Naziri (HoD, EEE), Nazarbayev University on 28<sup>th</sup> Nov 2015. This was followed up by industry talks from Anton Borovich (Cadence), and Kirill Rogozhin (Intel), giving in-depth insight into the physical design of VLSI chip using Cadence tools, followed up with an industry

talk on implementing Internet of things with Intel boards, these sessions were chaired by Prof Alex James. The sessions on poster demonstrations proceeded after this, with the majority of interesting demonstrations indicating real-time applications of embedded systems. The day one of the conferences also featured a panel discussion chaired by Prof Refik Kizilrmak, with a diverse panel on different views from industry and academia. The panel addressed the importance of cyber security and reflected on human factors and its coexistence to policies and newer information technologies. The day concluded with full paper presentations, discussing on several of concurrent issues and applications of embedded technologies in practical and real-life conditions.

The day two of the conference featured

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Image: property of Dr. Alex James

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two sessions on short paper presentations, a panel discussion, and four keynote talks. The first keynote talk was from the engineers from CDAC, India, who provided insights into the newly opened supercomputing facility at Astana, citing the importance and relevance of the opportunities in scientific progress.

This was followed up a presentation by Michael Starkey, a distinguished engineer and CTO of IBM Central and Eastern Europe, emphasizing on the challenges and opportunities in Cognitive Computing era.

The next two talks focused on providing application of data analysis and imaging in remote sensing, by Prof Zhanay Sagintayev from Nazarbayev University, and Maxim Alexandrov and Polina Medvedeva from Geo-Alliance. The afternoon session featured an engaging panel discussion on career opportunities in higher education, chaired by Prof Jong Kim, with a panel involving academia,

and industry; providing several key insights into the practical challenges a student faces when considering higher education. The excellent works were awarded best papers and was presented to the authors by Prof Loretta O'Donnell, Vice Provost of Academic Affairs, who also stressed the relevance and appreciated the importance of conference as a means for providing real-world experience to the students.

*"I would like to express my deep appreciation to the conference sponsor, Intel Software for their financial support. Also, the tireless efforts of Ruslan Seidamatov Executive Director of SENG for engaging in legal and financial discussions, Prof Prashant Jamwal, Prof Nicolas Rognin and Prof Amin Zollanvari for actively engaging in chairing the sessions, and in helping with finalizing the decisions for best papers. The final year undergraduate student volunteers from EEE department, Irina Fedorova, Olga Krestinskaya, Aigerim Tankimanova and Akzharkyn Izbassarova, for setting an example and easy organization of the event. The success of the event is indeed without words to the commitment shown by the 3rd year students, from the Embedded Microcontroller course, through their active participation in the conference, through discussions on posters, and paper presentations; and provides inspiration to the future generation of students. Finally, the support of the university management is without doubt have been a key factor in getting things done on time, from Career center, student support to provost office, were instrumental in the implementation of the conference."*

Dr. Alex James  
Organizing chair  
School of Engineering  
Nazarbayev University

# THE UK-KAZAKHSTAN INDUSTRY-ACADEMIA PARTNERSHIP

Call for Proposals. Deadline: 18/01/2016

The Royal Academy of Engineering and JSC NATD are pleased to announce the launch of a new call for the Industry-Academia Partnership Programme under the Newton-Al-Farabi Programme.



ROYAL  
ACADEMY OF  
ENGINEERING



national agency for technological development  
технологиялық даму жөніндегі ұлттық агенттік



Newton – Al-Farabi  
Partnership Programme

The **Industry-Academia Partnership Programme** aims to enhance engineering teaching, research and innovation capacity in Kazakhstan through building bilateral industry-academia linkages. It offers **grants of between £1,000 and £50,000**, to support Kazakhstani universities in improving their engineering education and research output through partnership with industry and UK stakeholders.

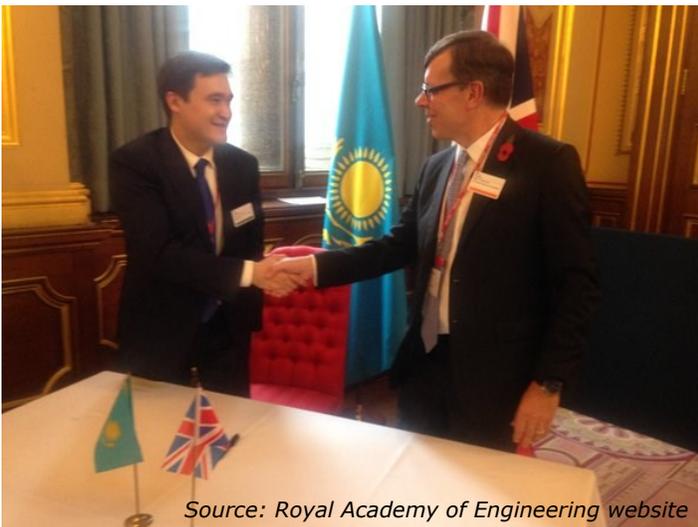
All collaborations under this call must begin between **1st March 2016** and **31**

**March 2016** and end by **28th February 2018**.

The **deadline for submitting proposal for this call is 15:00 Astana time on 18 January 2016**.

For more details, please [click here](#).

For further information on this call, please contact representative of the Royal Academy of Engineering Mr. Shaarad Sharma at [shaarad.sharma@raeng.org.uk](mailto:shaarad.sharma@raeng.org.uk) or [international@raeng.org.uk](mailto:international@raeng.org.uk).



Source: Royal Academy of Engineering website

David Thomlinson FEng and Sanzhar Iztelevov, Chairman of the NATD Board

## GOOD NEWS!

Starting in 2016, Nazarbayev University will have a university-wide subscription to Scopus and Pure.

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# "MIXED METHODS" IN THE HUMANITIES: COLLABORATIVE "HYBRID PROJECTS"

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Call for Applications. Deadline: 18/02/2016

The call "'Mixed Methods' in the Humanities?" supports projects in the humanities and cultural studies that combine and synergize qualitative-hermeneutical and digital procedures, and explore their combination on the example of a shared research question.

## OBJECTIVE

Present-day research in the humanities and cultural studies is faced with a previously unimaginable body of research data from more or less heterogeneous sources, necessitating application of new computer-aided methods of knowledge acquisition. The aim of this funding scheme is to explore how such new procedures of digital humanities can be combined with "qualitative-hermeneutical" approaches, and to evaluate potential for "added value". The call addresses projects that reach beyond mere collaboration on a specific research question and explore the interface between the two procedures on a theoretical-methodological level.

## SCOPE OF FUNDING

The call comprises two funding lines: The first one addresses collaborative "hybrid projects". The second offers support for workshops and small-scale sum-



mer schools. Applications are invited from researchers across all historical-hermeneutical disciplines (e.g. language and literature studies, history, philosophy, history of law and comparative law, art history, musicology) who work in equitable cooperation with partners in the areas of digital humanities or informatics.

Details of the application requirements and procedure can be found under [Information for Applicants \(pdf\)](#). Applications must be submitted electronically via the electronic application system.

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

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# USAID FUNDING OPPORTUNITY

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**The U.S. Agency for International Development (USAID) and U.S. Global Development Lab invites applications for the Development Innovations Ventures (DIV) program.**



**USAID**  
FROM THE AMERICAN PEOPLE

DIV supports the piloting and rigorous testing of innovative approaches to solving international development problems and supports transitioning innovations with evidence of impact and cost effectiveness to scale. DIV is to create a portfolio of innovations that improves lives of millions of the poor around the world, especially individuals in poverty or extreme poverty, and other vulnerable groups.

DIV funds innovation that targets USAID's Mission Statement, i.e. to partner to end extreme poverty and promote resilient, democratic societies while advancing security and prosperity. Innovations could include new technologies, new ways of delivering and/or financing goods and services, more cost-effective adaptations of existing solutions, new ways to increase uptake of existing proven solutions, or policy innovations based on insights from behavioral economics.

To attract the best innovations, applications on all development topics and sectors are welcome.

There are several types of projects that are not a good fit for DIV's objectives. This includes standard development practice (e.g. building schools), basic scientific research (e.g. laboratory research), a planning tool or diagnostic

that is unlikely to result in measurable development impacts, innovations that are applicable only in very limited context, or private sector applications to expand businesses in developing countries that are unlikely to lead to significant development impacts.

*Source:*

*FY2015 & FY2016 Development Innovation Ventures Annual Program Statement (APS): APS-OAA-15-0000016, CFDA#98.001.*

**To see the FY2015 & FY2016 Development Innovation Ventures Annual Program Statement, please [click here](#).**

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# HORIZON 2020: COLLABORATION OPPORTUNITIES WITH UK UNIVERSITIES

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UK Trade  
& Investment

Education



**UKTI Education can help NU researchers find suitable UK University partners in order to bid in Horizon 2020 calls.**

One of the possible partner institutions for NU is the Middlesex University. This UK university has a long successful history of collaboration with Kazakhstani institutions and is very much interested in collaborating with Nazarbayev University. One of the **areas of strength of the Middlesex University is Public Health**. For more details, please [click here](#).

For more information, please send an e-mail to Aiman Temirova ([aiman.temirova@nu.edu.kz](mailto:aiman.temirova@nu.edu.kz)).

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## HORIZON 2020: USEFUL LINKS

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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](#)



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# 176 FUNDING OPPORTUNITIES AWAITING YOU!

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## SciVal Funding

We have identified **176 funding opportunities**, all of which are suitable for the researchers based in Kazakhstan. 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](#)



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# NEW PUBLICATIONS AT NAZARBAYEV UNIVERSITY

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## 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 you to the recent alerts (*since November 29, 2015 – December 24, 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

Nazarbayev University researchers are active in many research fields. SciVal offers to us a great opportunity to keep track of our research performance and benchmark our progress to other national and international institutions.

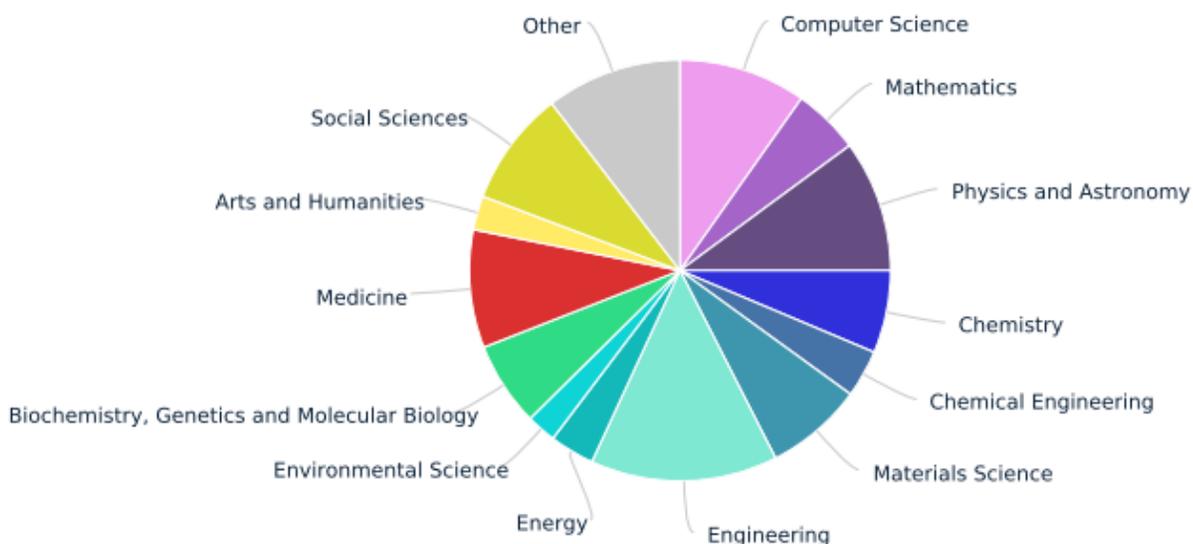
At the end of 2015, we are delighted to share with you a summary of NU's Research Performance Evaluation using the SciVal research solution. Thanks to our

faculty and researchers, in the past 5 years, NU has released over **500 peer-reviewed publications, 40% of which were published in 2015.**

To see a brief overview of the NU research performance, please [click here.](#)

Publications	Citations	Authors	Field-Weighted Citation Impact	Citations per Publication
522 ▲	1,073	376 ▲	1.11	2.1

### Publications by Journal Category



Source: SciVal. Research performance overview. Timeline: 2011-December 2015.

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# CONGRATULATIONS TO DR. THEODOROS TSIFTSIS!

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**On behalf of Nazarbayev University, congratulations to Dr. Theodoros Tsiftsis, Associate Professor, School of Engineering, on being appointed as Area Editor (Wireless Communications II) of the IEEE publication *Transactions on Communications (TCOM)*.**

The IEEE TCOM is a flagship journal released by IEEE Communications Society. The journal publishes high-quality papers reporting theoretical and experimental advances in the general area of communications. TCOM is committed to provide a timely and rigorous peer-review process for all submitted papers. The main focus of the TCOM journal is the physical

layer of communications systems, wireless communications, and optical communications.

To see a full list of editors of the IEEE Transactions on Communications journal (including Dr. Tsiftsis), please [click here](#).

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# CONGRATULATIONS TO AIMAN TEMIROVA!

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**On behalf of Nazarbayev University, congratulations to Aiman Temirova, Manager for Research Monitoring and Assessment, Research Services Office, on receiving a Letter of Gratitude from the Minister of Innovations and Development Mr. Asset Issekeshv.**

Aiman was one of the 10 finalists at the National Final of the FameLab Kazakhstan science communication competition, organized by the JSC NATD, Baiterek Holding and British Council.

As you may remember, in the Research Newsletter Issue#5, we sincerely congratulated our NLA researchers, Dr. Dana Akilbekova, Aidar Kemelbay, and Damel Mektepbayeva, on winning the Best Young Scientist Award of the FameLab Kazakhstan competition.

8 out of 10 national finalists of the competition had a Nazarbayev University affiliation. 4 of them were NU undergraduate students, 3 were NLA researchers and 1 was an administrative staff representative, i.e. our Research team member Aiman.

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# UPCOMING EVENT 1

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## WORKSHOP ON WATER MANAGEMENT AND ENVIRONMENTAL 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 [Application Form](#) and send it to Dr. Vassilis J. Inglezakis ([vasileios.inglezakis@nu.edu.kz](mailto:vasileios.inglezakis@nu.edu.kz)).

For more information, please [click here](#).

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# UPCOMING EVENT 2

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## 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”.

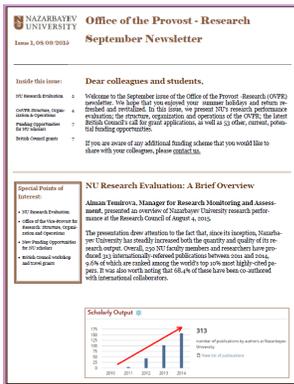
**The subsistence allowance (travel and accommodation) is covered for 18 Kazakhstani participants.**

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

For more information, please [click here](#).

# NEWSLETTER'S PREVIOUS ISSUES

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



Issue #1



Issue #2



Issue #3



Issue #4



Issue #5

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# YOUR FEEDBACK IS VALUABLE TO US

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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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