EURAXESS LINKS
North America

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EURAXESS Country in Focus: THE NETHERLANDS

The Netherlands, often referred to as Holland, was created by the Dutch in the delta where three large rivers flow into the North Sea. Due to its strategic location, the country is known already for centuries for its international traders and the world’s first multinational corporation, which originates from the 17th century. Presently ranked 5th on both Global Innovation Index and Global Competitiveness Report 2015-2016, the Netherlands offers a truly innovative and creative environment.

The Dutch research environment stands amongst the best in the world. All 14 Dutch universities are ranked in the top 200 of Times Higher Education Rankings. A study commissioned by the European Commission, in relation to the Europe 2020 strategy, places the Dutch research system among the very best in terms of openness, excellence and attractiveness.

1.1 The Netherlands’ Research, Development & Innovation System

The Dutch government follows a top sector approach where nine sectors have been identified as priority areas including Agri-Food, Horticulture, High-Tech, Energy, Logistics, Creative industries, Life Sciences & Health, Chemicals, and Water. The Government, private sector and academia together form a ‘Golden Triangle’ also known as ‘Triple Helix’ model, in which interactions among each other are highly encouraged. In the Netherlands, the private sector is a major contributor to overall R&D expenditure and there exist strong linkages between academia and industry.

Public sector research institutions in the Netherlands consist of 14 universities, 18 KNAW Institutes1, six Netherlands Organization of Scientific Research (NWO) Institutes, five Large Technological Institutes (GTIs)2, 14 TNO3 Institutes, and a number of other state owned research and advisory centres.

All Dutch universities are ranked in the top 200 of Times Higher Education Rankings. Together, these universities and institutes form the backbone of the research and innovation landscape in the country.

In 2014, Dutch institutions published 72,000 publications, ranking fifth in the world. In terms of excellence (share of highly cited publications, top 10%), Clinical Medicine, Biomedical Sciences, Basic Life Sciences and Physics

1 So called because KNAW acts as the umbrella organization for these institutes.
2 Conducting applied research in aerospace, water management, hydraulic engineering, maritime research and energy research.
3 TNO stands for Netherlands Organization for Applied Scientific Research which is an independent organization focusing on applied science.
& Material Science were top research areas. The total number of European patents with Dutch origin in 2015 stood at a total of 1998.

1.2 Research Excellence in The Netherlands

The Netherlands is very successful in securing European research funding both from the Marie Skłodowska-Curie Actions (video) and European Research Council funding (video). In order to promote research excellence, NWO offers two types of funding – ‘Innovation Research Incentive Scheme’ for talented, creative researchers who engage in innovative research, which provides three types of grant (Veni, Vidi, Vici) geared to different stages in a researcher’s career and ‘Spinoza prize’ which is offered yearly to three or four excellent researchers, who stand out with groundbreaking research conducted in the Netherlands.

1.3 Recruitment Opportunities

1.3.1 Public Sector Recruitment Opportunities:

The Netherlands offers various recruitment opportunities for international candidates. All university research positions that are open to international researchers, are listed on the job portal www.euraxess.eu and www.academictransfer.org. One can also visit FOM Research vacancy page, which lists vacancies available at FOM research institutes. Individual institutes also list such opportunities on their websites, further details can be found here. PhD position

The Netherlands is a very attractive destination to pursue a PhD degree where it is not regarded as study but as serious research and PhD candidates are often paid. A PhD from a Dutch university is highly regarded because of high academic standards. The Netherlands has an excellent international ranking for number of publications per researcher (2nd) and for the impact of research publication (4th). Almost all PhD positions are linked to a university, but PhD-candidates may find a place at other institutes or even in industry. More information can be found here: https://www.studyinholland.nl/education-system/degrees/phd.

1.3.2 Private Sector Recruitment Opportunities: (see Note 1)

Many Dutch companies, both large MNCs as well as SMEs, such as Philips, ASML, Xelvin, Cosine and OctoPlus among others are continuously looking for Bachelors, Masters and PhDs with specialist knowledge. To give an example, Cosine, which is high-energy optics specialist, recruits PhDs in physics from time to time. To apply, candidates should hold a PhD degree in physics related to high-energy optics with 3 years of experience in development and testing of high-energy optics during or after his/her PhD. For more information regarding this position, please contact Dipl.-Ing. Max Collon.
1.4 Funding Opportunities

There are various funding agencies in the Netherlands – The Netherlands Organization for Scientific Research (NWO), Dutch Technology Foundation (STW), The Netherlands Organization for Health Research & Development (ZonMW) and The Royal Netherlands Academy of Arts and Sciences (KNAW), which offer various grants and fellowships for individual researchers.

NWO provides 71 grants for researchers, from PhD candidate level onward. Veni is a very attractive grant for international researchers, which allows those who have recently obtained their PhD to conduct independent research and develop their ideas for a period of three years. KNAW has 15 funding instruments amongst which are the NIAS Individual Fellowships. These fellowships are provided to senior scholars with at least three years of post-PhD degree academic experience, who have already made a considerable contribution to their field. The aim is to carry out advanced research in humanities and social sciences through individual projects, lasting one or two semesters at the institute.

1.5 Important information for incoming researchers

The Netherlands belongs to the EURAXESS initiative that provides support to researchers and their families when coming to the Netherlands (in key areas such as visas, housing, schooling, etc.). EP-Nuffic is the national coordinator of the Dutch network. Additional information can be found at www.euraxess.nl.

The Netherlands has easy residence permit procedures.

Easy residence permit procedures

The Netherlands has a very flexible immigration procedures system for researchers and highly educated persons. Your host institution will take care of your residence permit application; it will be dealt with swiftly and includes a free work permit for your research activities. Your possible spouse will also be taken on in this procedure and will receive a residence permit which allows him/her free access to the labour market (no work permit required).

If you want to come to the Netherlands but have not found a job yet, you may be able to use an orientation year. This allows access to the Netherlands and the Dutch labour market for a year to people who received a Master or PhD at a university in the top 200 of the rankings.
The **German Academic International Network (GAIN)** is a network of *over 5,500 German scientists and researchers* of all disciplines, currently working at leading research institutions in the United States and Canada. It aims to provide support for early-career researchers with their careers at German universities, research institutions and the private sector.

GAIN was created in 2003 as a joint initiative of the Alexander von Humboldt Foundation, the German Academic Exchange Service (DAAD), and the German Research Foundation (DFG) and is supported by the Federal Ministry of Research and Education. In close cooperation with all major German research organizations, GAIN fosters a strong network among German researchers, keeps them informed about current developments and debates in the German academic and scientific landscape, and enables international cooperation.

The **GAIN annual conference**: the largest career fair outside of Europe on research and career opportunities in Germany

One of the highlights among GAIN’s activities is its annual conference, which features the largest career fair outside of Europe on research and career opportunities in Germany.
Over 130 representatives from all areas of research, funding, and the private sector offer advice to researchers and scientists at over 70 exhibition booths. Workshops, round table discussions, and presentations provide ample opportunity for personal interaction with top-level experts from academia, politics, and industry. The conference constitutes a cornerstone of German research marketing in the USA and Canada. **The 16th GAIN Conference will take place from September 9-11, 2016 in Washington, DC.** It will also feature a special workshop on career and funding opportunities in Germany directed at international researchers who are interested in a transatlantic career or partnership.

For further information on the GAIN Conference 2016, please visit: [gain-network.org/RIG](http://gain-network.org/RIG)

**Over 50 regional chapters in the U.S. and Canada**

GAIN, together with the German Scholar Organization (GSO), has over 50 regional chapters all over the U.S. and Canada, with frequent informal meetings of researchers. These meetings foster exchange among our network and regularly host special workshops and expert talks on a variety of topics such as career prospects in different sectors, challenges related to dual careers or the creation of start-ups.

The monthly GAIN newsletter keeps the GAIN community updated on developments in the German academic and scientific landscape and provides information on the latest funding programs and career opportunities in Germany.

The GAIN office is located on the premises of the German Academic Exchange Service in New York. The director of GAIN, Dr. Gerrit Roessler, is happy to answer any questions and discuss possibilities for collaboration.


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**Participants of the GAIN Conference 2015 by academic discipline**

**Participants of the GAIN Conference 2015 by degree**

**ACADEMIC DISCIPLINE**

**SOURCE:** GAIN

**DEGREES**

**SOURCE:** GAIN
Meet Alexander Suma – CEO of IBISPower ‘Invented in the US – funded in Europe’

Dr. Suma, would you please tell our readers about yourself and your connection to the US?

In 2007, I was finalizing my two Masters degrees in Eindhoven and I was informed about a scholarship opportunity to go to Florida for three months. This scholarship was organized by The Netherlands South Florida Scholarship Foundation (NSFSF). I applied, got accepted, and selected the College of Engineering at the University of Miami for my studies. Although it is a great location, I chose it predominately for the inspiring professor with whom I was in contact with – Dr. Antonio Nanni. I worked closely with him for three months. At the end of my scholarship period, he asked me to come back as soon as possible to start my PhD in his group. I was honored, accepted and went through the process in the most accelerated way possible in order for me to be able to start my program six months later.

In the US, my study was focused on the “Chemical and Acoustic Emission Evaluation Studies of Concrete Bridges” in a Marine Environment. I was partially funded by a student assistantship scholarship as well as partially funded by a fellowship from a National Science Foundation (NSF) grant called RB2C. I finished my PhD in three years.

During my PhD, which was purely engineering, my architecture fingers were itching, and I came up with the idea of PowerNEST (at the time called IRWES). I spent all my free time working on PowerNEST with a team of researchers from the mechanical engineering department. The University of Miami strongly supported my plans by immediately filing patents, assisting me with streamlining my plan, in addition to pitching investors and angel investors. Furthermore, they put me in contact with very interesting people – such as the Governor of Florida, Bill Clinton, CEO’s of the largest construction companies and capital investors.

Was returning to Europe your first choice after you completed your PhD or were you also thinking about staying in the US?

Going back to Europe was not as easy as I anticipated. Everything was going so well in the US as I had built up such a good network and team. However, my decision was clear. My two kids Sarah and Ruben had moved back to Europe earlier and I wanted to live close to them. In the beginning, I had to get readjusted to the European way of life. In the US, people are very optimistic and business minded whereas in the Netherlands it was much harder to secure and
Would you encourage our readers in North America to collaborate with Europe in research, science and innovation? In your opinion, why is it important?

I believe that research, science and innovation have no borders. It’s really only implementation that has borders due to the different legislative systems... In my opinion, Europe and the US are not working closely enough together at all. We have the potential to do so much more and we should be doing so much more. I especially feel strongly about EU-US collaboration when it concerns climate change. Ideally, the whole world should share their knowledge and advancements in real time in order to accelerate the energy transformation sector.

IBIS Power company, founded in November 2012, is currently testing and finalizing our new wind turbine PowerNEST - a product with a captivating history throughout Europe and the United States. In 2016, the first fully functioning PowerNEST’s will be implemented in Dutch urban environments to supply their owners with renewable energy. This is a big step for the company whose ultimate goal is to bring our modern society back in balance with nature.

The H2020 grant has been critical in speeding up our overall process and in making huge strides within the market. Our team is comprised of CFD (computational fluid dynamics) researchers, structural engineers, marketing specialists, business development and sales people. The cross integration of their different skill sets and expertise is vital for innovation to advance.

get opportunities. The business culture is different. It was very hard for a “new comer”. Nevertheless, we succeeded in receiving a FP7 (Framework Programme 7) Marie Curie Fellowship. Dr. Rossella Ferraro could work under this grant to further develop PowerNEST and started working with me at Eindhoven University of Technology. We received many awards and recognitions - things started to move forward really well. Within a year, we were awarded the Dutch STW Valorization Grant (Phase I and II) which truly helped us to start and grow as a company.

What motivated you to go back to Europe (funding, collaborative opportunities, good research environment, family reasons etc.)?

My children were the biggest motivation for me to go back to Europe. However, the Marie Curie Fellowship was a huge financial breakthrough and therefore an overwhelmingly convincing reason to potentially work in the United States again. One of the setbacks of the US was that it was not sustainability-minded at the time (far behind Europe). It was only in Europe that we were able to get funding to further develop the PowerNEST technology that was vital to moving forward with our plans. The Urban Environment department at the Eindhoven University of Technology was strong in the field of applied research. They were also working closely within that market already. So we worked with Professor Faas Moonen who specializes in the industrialization of construction. This was our next step towards developing this innovation after having done the fundamental research at the University of Miami.

Tell us please about IBIS Power?

The company inherently believes that renewable energy solution can be much more intelligent, efficient, integrated and aesthetically pleasing. The company in its efforts to challenge the status quo of science and engineering has combined solar and wind energy technology to upgrade PowerNEST towards an architecturally attractive renewable energy solution for high-rise buildings in urban environments.

PowerNest is the breakthrough solution to overcome all shortcomings of existing renewable energy technologies. It is a rooftop-mounted, elegant structure with an internal turbine thereby making smart use of aerodynamics. To that end, it is more efficient than any free-standing small windmill as well as more efficient per square meter than solar panels at 20 metres or higher. The R&D program combines simulations in Computational Fluid Dynamic (CFD) for aerodynamic studies and Finite Element Method (FEM) for structural optimization together with full-scale prototype testing and validation. This has led to more efficient technology with optimized product parameters. We are now able to supply a full roof solution for a building of 5 levels or higher in a combination of wind and sun being over three times more effective than an only-solar solution. Solar can bring a building up to three levels off-grid while we are opening the market for buildings of more than 10 levels to become zero-energy.
Horizon 2020’s SME Instrument

Small and Medium-sized Enterprises that are EU-based or established in a country associated to Horizon 2020 can now get EU funding and support for innovation projects that will help them grow and expand their activities into other countries – in Europe and beyond.

Provided with about € 3 billion in funding over the period 2014-2020, the SME Instrument helps high-potential SMEs to develop groundbreaking innovative ideas for products, services or processes that are ready to face global market competition. Available to SMEs only, which can however organize a project in the way that best fits their business needs – meaning that subcontracting is not excluded – the new scheme has opened a new highway to innovation through phased, progressive and complimentary support.

You applied for and were awarded funding from Horizon 2020 - SME Instrument. Please elaborate on this project. Why was this funding crucial?

In December of 2014, I received a message from the European Commission that we received the SME Phase II grant. We received the highest score amongst the European Union applicants: 14.35/15.00 with all categories scored as excellent with regards to innovation, business plan, and potential impact for Europe. This was big news for a company at the time consisting of three employees plus an intern. We were ecstatic! Within three months, we grew our staff to twelve people. In addition, we were able to build the very first PowerNEST in full operation: https://www.youtube.com/watch?v=O4Is6nKOMmc.

You mentioned earlier that the idea was born in the US yet came to fruition in Europe. Do you consider your transatlantic experience important for your career? If so, why? Yes, the transatlantic experience has been crucial for my career. The US operates differently than Europe. It’s a great lesson to learn for everyone whether in science or business -- to see how things are done in another cultural environment that has different beliefs and points of reference. I still really enjoy moving and travelling to new destinations. I always like to learn from other cultures as well as how they do things in their culture. Currently, I am focused on my collaboration with the University of Miami, talking to customers, partner companies and attending conferences. We are excited about installing the very first one on a building in the US. We are eager to be able to offer our solution to US and Canadian high rises.

What would you recommend to Europeans who are currently based in North America that have an excellent innovative idea and wish to start their own company?

I would recommend searching for peers and support where you currently live. If you have a great idea, don’t keep it to yourself. Instead, share it with people who can help you grow it. It is very hard to be knowledgeable on everything so find the people with expertise you need such as patents, finance, and business development. In general, the US is friendlier in the early stages in terms of locating funding. On the other hand, Europe offers greater possibilities in certain fields (e.g. renewables). Try to take the best of both and always maintain your connections on both sides of the Atlantic. Never wait with starting a company as even the best ideas have an expiration date.
4 In case you missed it....

4.1 Event Outlook

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<td>23 June 2016</td>
<td>Yale University, New Heaven, CT, USA</td>
<td>Yale Postdoctoral Association &amp; the Office of Postdoctoral Affairs</td>
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<td>Horizon 2020 Workshop at the 58th NCURA Annual Meeting</td>
<td>10 August 2016</td>
<td>Washington, DC, USA</td>
<td>NCURA Global &amp; BILAT USA 4.0 project</td>
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<td>International Funding Opportunities for Postdocs</td>
<td>23 August 2016</td>
<td>University of Pennsylvania, Philadelphia, PA, USA</td>
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<td>GAIN 2016 Annual Meeting</td>
<td>9-11 September 2016</td>
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About EURAXESS Links North America

EURAXESS Links North America is a network of thousands of European and non-European researchers, scientists, and scholars throughout North America (USA and Canada). This multidisciplinary network includes members at all stages of their careers. It allows them to connect with each other and with Europe, ensuring that they are recognized as an important resource for European research, whether they remain in North America or return to Europe.

For further information about EURAXESS Links North America, please visit: http://northamerica.euraxess.org.

To sign up for membership in our network, and to the virtual SINAPSE community of members, please go to our website and click on the Login Community hyperlink on the top right-hand side of the page. Membership is free!

Editor: Viktoria BODNAROVA, EURAXESS Links North America, Regional Representative

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