Quarterly Newsletter Issue 2 2017

EURAXESS ASEAN

EURAXESS ASEAN Newsletter is a quarterly electronic newsletter, edited by EURAXESS ASEAN, which provides information of specific interest to European researchers in ASEAN and international researchers who are interested in the European research landscape and conducting research in Europe or with European partners.

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Please email to asean@euraxess.net for any comments on this newsletter, contributions you would like to make, if you think any other colleagues would be interested in receiving this newsletter, or if you wish to unsubscribe.

Editors: Dr Susanne RENTZOW-VASU and Simon GRIMLEY, EURAXESS ASEAN, Regional Representatives

Dear Colleagues,

Welcome to our 2nd quarterly newsletter for 2017. It has been a very busy few months during which we were very pleased to support the launch of the Southeast Asia Chapter of the Marie Curie Alumni Association. We also conducted our fourth annual flagship event “Advancing your Research Career in Europe: Funding and Fellowship Opportunities for Researchers in Southeast Asia“ in Kuala Lumpur and Ho Chi Minh City, and we coupled these events with two workshops on effective proposal preparation for European post-doctoral fellowships.

Skills in science communication are essential to the development of any researcher’s career. Being able to communicate their research effectively can help researchers write stronger research papers, secure research funding, and even find a job. In this newsletter Dr Sanna Fowler, an expert in science communication from EPFL in Switzerland, provides some excellent advice on how to communicate science effectively.

In the coming months we are planning additional proposal writing workshops as well as a series of science communication events. Please follow us on Facebook as well as visit the EURAXESS ASEAN portal for details

We hope you enjoy reading this newsletter, and welcome your feedback.

Your EURAXESS ASEAN Team

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1 Briefing

The *Marie Skłodowska-Curie Actions* (MSCA) are **European grants** offered to **researchers at all career stages** and encourage **transnational, intersectorial and interdisciplinary mobility**.

ASEAN researchers are eligible to funding.

Organisations from any sector and country can participate in MSCA projects.

To discover more about MSCA and what's in it for researchers and organisation in ASEAN, click here.

Figures:

Between 2007 and 2014, the European Commission funded almost 250 researchers and staff in ASEAN to take part in MSCA projects, either with individual fellowships or to take part in RISE projects (then called IRSES).

Under Horizon 2020 (2014-2020), the MSCA are expected to support 65 000 researchers, including 25 000 PhD candidates from all over the world.

1.1 Marie Curie Fellows from Across ASEAN Join Forces to Launch the Southeast Asia Chapter of the Marie Curie Alumni Association

The Marie Curie Alumni Association (MCAA) is an international non-profit association created in 2013 to bring together all fellow scholars and former scholarship recipients of the prestigious Marie Skłodowska-Curie Actions funding programme of the European Union.

In April this year, 15 Marie Curie Fellows from across ASEAN launched the Southeast Asia Chapter of the Marie Curie Alumni Association under the very capable leadership of Dr Tatas H. Brotosudarmo, a renowned Indonesian scientist whose work in photosynthesis pigments has led to significant changes in government policy (please see his profile below).

The establishment of this chapter is important not only in fostering dissemination of the MSCA programme, but also supporting increased research cooperation between Europe and Southeast Asia.

The first meeting of the MCAA Southeast Asia Chapter took place on 12 June in Singapore, where the Chapter objectives for 2017-2018 were agreed upon, including:

- Promoting the Marie Skłodowska-Curie Actions (MSCA) and other European funding programmes to researchers and research administrators across Southeast Asia
- Mentoring young researchers in applying for the MSCA
- Promoting the MCAA and the Southeast Asia chapter by recruiting and attracting new members

1.2 Call for current and past MSCA fellows

All MCAA members residing ASEAN, or nationals of ASEAN member states residing elsewhere, are welcome to become members of the Southeast Asian Chapter. Membership of the MCAA is free of charge, and open to any past or present Marie Curie researcher, regardless of the type of MSCA grant received, length of mobility period, nationality, scientific discipline or current occupation.

About Dr Tatas H.P. Brotosudarmo, MRSC

Tatas is the Chair of Marie Curie Alumni Association (MCAA) Southeast Asia Chapter. He is an Indonesian scientist with degrees from Ludwig Maximilans University, Munich Germany and the University of Glasgow, UK. He serves as director of research centre for photosynthetic pigments at Ma Chung University, Indonesia since 2011. He also holds position as honourable associate professor at Shizuoka University, Japan. He has received several awards including the 22nd Toray Science and Technology Award (2016 Fellow of the Indonesia Young Academy of Science (2016), and Study UK Alumni Award-Professional Achievement Award (2017) from the British Council.

1.3 Voice of the Researchers – Reflections on Research in Europe

On 12 June 2017, EURAXESS ASEAN together with the European Union Delegation to Singapore hosted the 2nd Voice of the Researchers event in Singapore.

'Voice of the Researchers', or VoR for short, is a European Commission initiative to facilitate the direct communication between researchers and policy-makers in the realm of science and innovation. VoR was formed in March 2012, when the European Commission launched a call for expressions of interest on the EURAXESS portal targeting researchers of all ages, nationalities and disciplines residing in Europe. A total of 25 researchers were selected to form the "multipliers" of the VoR network thus creating the first formal communication channel between researchers, decision-makers and other relevant stakeholders in Europe.

The first VoR event outside of Europe was held in Singapore in 2014 when over 80 researchers shared their ideas how to make the European Research Area more attractive for European and international research talent in a direct open exchange with European policy-makers. This year's edition of this unique dialogue focused on exploring strategies to encourage more participation by Singapore and ASEAN-based researchers in collaborative European research projects, particularly those funded under the EU Framework Programme for Research, Technology and Innovation, Horizon 2020.

More than 50 scientists and researchers, including 15 former Marie Curie Fellows, representing a total of 16 countries in the EU and in ASEAN followed the invitation of EURAXESS ASEAN and the EU Delegation to share their views on the attractiveness of research in Europe and the accessibility of European research funding. There was broad consensus among the participants that international research collaboration remains a key ingredient to frontier research. Participation of ASEAN-based researchers and research institutions in European research consortia was seen as beneficial to all partners involved given the specific research expertise each partner can bring to the table. In the format of two lively roundtable discussions the researchers set about identifying potential obstacles to inter-regional research collaboration and mobility and – most importantly – brainstorming possible solutions to those. In a live videoconference, the suggestions were shared with representatives of the European Commission's Directorate-General for Research & Innovation who in turn shared new and forthcoming policy developments aimed at further increasing international participation in ERA and Horizon 2020.

A detailed report of VOR 2017 will be published on the EURAXESS ASEAN portal shortly.

2 Hot topic – Five ideas for better communicating your science

By Dr Sanna Fowler

As researchers, most of us still report our science in the same old way we've done it since school: title, authors, materials and methods, results, conclusions etc….you know the deal. This works for publications and peer-to-peer but are you increasingly being asked to explain what you do to 'non-experts'? Maybe you love this aspect of your work, maybe you find it challenging – in any case it requires a very different approach. Here are a few ideas that might help.

About the author

Originally an immunologist, Sanna decided shortly after her PhD at Oxford that the lab bench was probably better off without her. She now works in communication and fundraising at EPFL (the Swiss Federal Institute of Technology).

Sanna will be leading a series of science communication workshops in Thailand this September. Please check the EURAXESS ASEAN portal for details.

1. Ask yourself who is your 'end user'?

Everyone will tell you that one of the first rules of communication is "tailor your message to your audience… blah, blah blah…"

I think we can safely assume that you would never consider going into the depths of String Theory with a class of school kids, opting instead to explain things in a way that they'll understand. A different way of looking at it is to try and set up a chain reaction, allowing the person you communicate with to then use the information for something. This could be passing it on to someone else, or rethinking their opinion or behaviour for example. Your audience should never be the end user, try giving them the tools to be able to pass the message along.

2. Don't just educate…engage!

One of the biggest mistakes we make as scientists is feeling that our audience needs to understand how things work before we can begin to explain our research. This works fine with an intellectually curious audience but can actually be negative with non-experts – when people don't understand, they feel stupid and just switch off. There's a great article over at Slate that goes into more details on this with references to some nice studies if you want to know more, but essentially, ask yourself how much your audience really needs to know to be interested in what you say. Ok, so no schoolroom lectures - how do you really engage your audience?

3. Get personal and make your audience look good

The great American writer John Steinbeck noted rather sceptically "If a story is not about the hearer he/she will not listen." It's obviously much easier to talk to an audience on a subject that affects them directly, like a possible cure for Alzheimer's or how much their water costs them, for example. But Steinbeck was only half right, probably because he lived in an age before social media. We naturally pick up on things that are new/crazy/funny/odd/frightening (delete as appropriate). So, if you can't make your research personal, ask yourself if you have something that will surprise or impress people.

CERN is a great example of this – not many of us can see the direct application of the Higgs Boson in our daily lives, but the idea of a 27km underground accelerator filled with superconducting magnets and cooling systems that use as much electricity as a small town is fascinating!

Can you give your audience something that will make them look good at a dinner party or get plenty of likes on social media when they relate what they've heard?

The last option is scandal, but unless you're willing to falsify a few results, get a couple of papers retracted, and ruin your career, this isn't the recommended option!

4. Pitch your science

If you've ever been to a start-up seed night, you'll have noticed that there is a pretty standard formula for pitching:

1. There's a problem,
2. I can fix it,
3. This is how much money I need and it can make you rich.

Ok, so you're not a start-up but you still have to 'sell' your idea. So set the stage, make sure people know what the problem or the question is (and if it affects them directly – see 3 above) and don't start with your science. Once they're tuned into the issue, then tell them about how you're trying to fix/answer it. Leave the money part for later.

5. Use your platforms & take yourself out of your comfort zone

Nobody gets good at anything by chance - sure genetics help, but you got your brain didn't you? Even if you think you're never going to be the Usain Bolt of the academic world, the old adage about practice goes for science communication too. This means you can't wait to be asked – get out of your comfort zone and sign up for Science Slams, 3 minute thesis, FameLab, Soapbox Science, local TEDx's, school's outreach programmes and many more.

Offer articles for your department's or university's websites/blogs/social media and if you're working for an institution with some kind of central communication unit, make sure they know who you are and when you publish. At first it might be the most frightening thing you've ever done but jump out of a plane (with a parachute!) enough times and that stomach-churning fear starts to come with a buzz.

What if none of these platforms exist where you are? Well, maybe you're just the right person to start one!

EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development.

This pan-European effort is currently supported by over 40 countries, of which we will profile one in each of our quarterly

EURAXESS ASEAN newsletters. In this edition, we zoom in on Greece.

3 EURAXESS members in focus: GREECE

Research and Development in Greece

Greece has a number of research institutions conducting cutting-edge basic research. Five of the Top-50 research organisations that receive funding through the EU's Framework Programme for Research and Innovation (Horizon 2020) are from Greece. The capacity of Greek research institutes to conduct excellent research is also reflected in the relatively good performance in terms of outstanding scientific publications[1]. Greece's performance (2015) is above the EU average for some individual indicators such as: International scientific co-publications (120% of the EU average), non R&D innovation expenditure in the private sector (127%), SMEs marketing/organisational innovations (124%) and innovative SMEs collaborating with others (120%)[2].

At the end of 2013 (most recent available data), **Gross Domestic Expenditure on R&D (GERD)** was at 1,47 billion euro, increasing from 0,67% of GDP in 2011 to 0,8% of GDP in 2013[3]. In the context of the revision of the National Reform Programme (for the year 2014), the Greek authorities have proposed a more ambitious target of as much as 1,2 % of GDP[4]. The Higher Education sector is the largest R&D performer, accounting for 38,2 % of the total R&D expenditure in 2015.

At the end of 2015, the Higher Education sector was composed of 22 public universities and 14 public Technological Education Institutes (TEI). In addition to the public institutions, there are 28 private universities of various types operating in the country and accredited by the Ministry of Education, Research and Religious Affairs. There are 15 public research organisations, of varying sizes, supervised by the **General Secretariat for Research and Technology (GSRT).**

Greece is strategically located at the crossroads of Europe, Asia, and Africa.

The R&I strategy for the next programming period (Revision of the implementation law (Law 4386/2016) of the National Strategy for Research, Technological Development and Innovation-ESETAK), which includes the **Smart Specialisation strategy (RIS3)**, focuses on the following priorities:

- areas of traditional strength for the country (examples: shipping, tourism, energy)
- areas of recent successes in terms of critical mass and on-going activities (examples: IT, pharmaceuticals, engineering, energy);
- areas of high added value and able to deliver major economic benefit and employment prospects (examples: energy, nutrition – food sciences and culture, energy, defense, biomedicine).

Greece is a developed democratic country with a high standard of living. A founding member of the United Nations, Greece was the tenth member to join the European Communities (precursor to the European Union) and has been part of the Eurozone since 2001.

[i]*Foundation for Research and Technology Hellas (FORTH)- www.forth.gr/*

Center for Research and Technology Hellas (CERTH)- www.certh.gr/root.en.aspx,

National Center for Scientific Research "Demokritos"- www.demokritos.gr/?lang=en,

Institute of Communications and Computer Systems (ICCS)- www.iccs.gr/en/,

[1] The impact of research on Greek economic growth, German Institute for Economic Research DIW ECON, november 2016
[2] RIO Country Report Greece 2016, Science and Policy Report by the Joint Research Centre, 2017
[3] RIO Country Report Greece 2014, Science and Policy Report by the Joint Research Centre, 2015
[4] Researchers' Report 2014 Country Profile: Greece, prepared by Deloitte

Establishment of a Foundation for Research and Innovation (ELIDEK) October 2016 by Law 4429/2016. ***www.eib.org/projects/loan/loan/20150747***

In total, **8 technological areas** were identified matching the priorities; Biosciences, Agro-Biotechnology Nutrition, Energy and Environment, Computer Science and Mathematics, Physical Sciences, Engineering, Social Sciences and Arts and Humanities, with about 28% of the funding for the next programming period 2014-2020 allocated to Biosciences, followed by Engineering (18%) and Physical Sciences (12%)[5]. Approximately 27% of the total funding is expected to be dedicated to societal challenges.

Greek R&D Strategy

Enterprise Greece promotes investment and foreign trade in Greece ***www.enterprisegreece.gov.gr/en/about-us***

The **New R&D&I Strategy for the Programming Period 2014-2020[6]** aspires to strengthen the Greek research system (human capital and infrastructure), conduct research relevant to the needs of the country and thus make R&D an indispensable tool for the further development of the Greek economy. In this context, it is intended to launch programmes focusing on the development of human capital for research in a knowledge economy (including support to excellent researchers, support to mobility of researchers to work in enterprises, and support to training for innovation activities, as well as starting grants for new researchers).

The main funding body is the General Secretariat for Research and Technology (**www.gsrt.gr/**)

Entrepreneurship and Innovation

The Business Sector is the second largest R&D provider of funds and performer in Greece (31,8% and 33,3% of the total GERD respectively). Based on EU2016 Industrial R&D Investment Scoreboard, **five Greek companies (one more than the previous year) featured among the top EU companies on R&D spending**: PHARMATHEN (Pharmaceuticals & Biotechnology,), INTRALOT (Technology Hardware & Equipment), the National Bank of Greece (Banks), GALAXIDI Marine Farmand (fish farm) and Creta Farm (meat and deli meats). A large number of SMEs and start-ups are also declaring R&I activities mainly in service and incremental innovations[7]. According to the National Reform Programme 2016, Greek enterprises are expected to increase their Business Expenditures on Research and Development (BERD) to approximately 0,38% of the GDP in 2020[6]. A large number of SMEs and start-ups have been undertaking R&I activities mainly in services and incremental innovations.

Greece has **three University Business Incubators** and **6 Science and Technology Parks**: Technology & Science Park of Attika "Lefkippos", Science and Technology Park of Crete, Thessaloniki Technology Park, Patras Science Park, Epirus Science and Technology Park and Lavrion Technological and Cultural Park. **Technology Transfer Offices** (called "Innovation Liaison Offices") exist in major Higher Education Institutions and in 64% of Public Research Organisations[7].

Brain drain has been recognised as a key challenge in the Operational Programme for Competitiveness, Entrepreneurship and Innovation as well as the Greek Strategy for the European Research Area – Roadmap 2015-2020 (GSRT, 2016). The recently established (L.4429/2016) **National Foundation for Research and Innovation (NFRI-ELIDEK)** in the footsteps of the National Science Foundation (NSF) of the US, and Germany's Deutsche Forschungsgemeinschaft (DFG) aims to address this challenge. The Foundation, co-sponsored by the European Investment Bank (EIB) and national funds, aims to fund combined with Greek national funds. The aim is to **attract**

[5] *National Strategic Framework for Research and Innovation 2014-2020, National Council of Research and Technology*
[6] *Greek National Reforms Programme 2014, April 2014*
[7] *RIO Country Report Greece 2016, Science and Policy Report by the Joint Research Centre, 2016*

and to keep highly qualified scientists in Greece, through funds devoted both to curiosity driven research and entrepreneurship & innovation. To this end, the Greek Research and Innovation Foundation will allocate 240 million euro by 2019[6].

Greece has valuable assets that contribute to the transition of an innovation-driven economy:

- leading research institutions,
- medium and high-tech firms, e.g. in the IT and pharmaceutical sector, as well as a certain number of innovative startups in the information technology sector in Athens,
- a considerable diaspora in research, finance and business

Enterprise Greece is designed to promote and support Greek exports of goods & services and investments in Greece.

Funding and Recruitment Opportunities

The government constitutes the largest R&D source of funds (in 2015, 52,7% of the GERD was funded by GOV) and the third largest R&D performer (after Higher Education Institutes and Business). The National Council for Research and Innovation (NCRI) is the supreme State advisory body for national policy for research, technology and innovation. The responsibility of funding research is shared between the Ministry of Education, Research and Religious Affairs and the Ministry of Economy, Development and Tourism. Funds coming from the EU Regional Operational Programmes fall typically under the competence of the Regional Authorities. The Ministry of Rural Development and Food supervises the National Agricultural Research Foundation (NAGREF), which undertakes research and technology in agricultural, forest, animal and fish production and other related areas in Greece. The Higher Education sector is the largest R&D performer accounting for 38,2 % of the total R&D expenditure in 2015. The Business Sector is the second largest R&D funder and performer in Greece (31,8% and 33,3% of the total GERD respectively) [6].

The new Law on Research Technological Development and Innovation (L.4310/2014), acknowledges the pivotal role of the General Secretariat for Research and Technology (GSRT), part of the Ministry of Education, Research and Religious Affairs, in the design of R&D programmes and the allocation of funding.

4 EURAXESS ASEAN recent activities

4.1 EURAXESS ASEAN Annual Flagship event returns to Malaysia and Vietnam with an extended programme

Earlier in June, the fourth edition of the EURAXESS ASEAN annual flagship event “Advancing your Research Career in Europe: Funding and Fellowship Opportunities for Researchers in Southeast Asia“ returned to Malaysia and Vietnam with a combined information event and proposal writing workshop series.

This highly popular event kicked off in Kuala Lumpur, Malaysia hosted by the Asia-Europe Institute at Universiti Malaya and then moved on to Ho Chi Minh City in Vietnam. More than 300 researchers and research administrators from universities and research institutes and universities across Malaysia and

Vietnam participated in the day-long information fora in both Kuala Lumpur and Ho Chi Minh City to learn about the multitude of research opportunities and funding programmes in Europe.

Representatives of the British High Commission (UK), the British Embassy, the Embassy of France, the German Academic Exchange Service (DAAD), the Embassy of Switzerland, Nuffic-Neso, and EURAXESS ASEAN briefed the researchers with detailed information on the available opportunities and offered practical advice for future applicants, for example on partner finding tools, personal relocation assistance, or application procedures.

The programmes also contained two interactive sessions dedicated to providing practical advice pertaining to finding a suitable host for a research stint in Europe and identifying the key steps in the preparation of a successful European Fellowship proposal. The hands-on sessions were led by a team of European experts including Jesús Rojo González, EEN Project Coordinator and National Contact Point (NCP) for the Marie Sklodowska-Curie Actions in Spain and Ms Melanie ten Asbroek-Braamhaar, EU Officer at the University of Twente in the Netherlands.

Roundtable discussions provided a platform for Marie Curie Fellow Alumni and alumni of other European funding programmes to share their research experience in Europe with the audience and to pass along their invaluable tips and advice.

Complementing the information forum, a comprehensive and interactive full-day workshop covering all aspects of effective proposal preparation for a European Postdoctoral Research Grants with a focus on the Marie Skłodowska-Curie Actions (MSCA-IF) was held on the following day in both Kuala Lumpur and Ho Chi Minh City. In Kuala Lumpur, the workshop was attended by 30 Malaysian post-doctoral researchers.

In Ho Chi Minh City, EURAXESS ASEAN partnered with CIRAD and IRD, two French research institutes with a strong presence in Vietnam, to provide hands-on training in proposal preparation for 40 Vietnamese post-doctoral researchers.

EURAXESS ASEAN would like to express our sincere thanks to the wonderful support from the team at the Asia-Europe Institute at Universiti Malaya led by Prof Azirah, and to Prof Mai Thanh Phong, Vice-Rector in Charge of R & D and External Relations, and his team at the Ho Chi Minh City University of Technology. We would also like to thank Mr Nicholas Dross, Head of the Trade and Economic Section at the Delegation of the European Union to Malaysia, and Mr Tom Corrie, Deputy Head of Cooperation & Development Section at the Delegation of the European Union to Vietnam, for joining these events and delivering welcome remarks.

The presentation slides for the Mobility information event in Kuala Lumpur are now available for download here and for Ho Chi Minh City here. The presentation slides for the Proposal Writing Workshop held in Kuala Lumpur can be accessed here and for Ho Chi Minh City here.

Winner of FameLab Thailand 2017 and recipient of the EURAXESS Prize 2017 Parinya Khinnongjok visited the world-renowned Institute Pasteur to explore career advancement opportunities. Mr Parinya Khinnongjok is a 5th year Pharmacy student at the Faculty of Pharmaceutical Science, Khon Kaen University, Thailand. His research interest is combatting viruses.

4.2 EURAXESS Prize Winners 2017 Visit Labs of their choice in Europe

FameLab is a one of the world's best known science communication competitions. It is designed to engage and entertain by breaking down science, technology and engineering concepts into three-minute presentations. Contestants from around the world take part armed only with their wits and a few props – the result is an unpredictable, enlightening and exciting way to encourage your curiosity and find out about the latest research.

This year, EURAXESS ASEAN supported FameLab competitions in Malaysia, Thailand and Vietnam. Dr Zaid Omar from Malaysia, Mr Parinya Khinnongjok from Thailand, and Ms Pham Ha My from Vietnam were this year's winners of the FameLab competitions in Southeast Asia. As part of their prize, EURAXESS offered them a research visit to a lab of their choice in European Research Area. Dr Omar visited CERN in Switzerland, Mr Parinya went to the Institut Pasteur in Paris, and Ms Ha My made her to way to Rotterdam to meet with researchers at Erasmus University. See their video diaries here, here, and here.

4.3 FameLab Malaysia 2017 Winner Dr Zaid Bin Omar shares his EURAXESS Prize experience in Europe

Dr Zaid Bin Omar is a senior lecturer with the Faculty of Electrical Engineering, Universiti Teknologi Malaysia (UTM). He completed his PhD at Imperial College London in 2012, where he worked on fusion algorithms of digital images, and his Master's degree from the University of Sheffield in 2008. Prior to that, Dr Zaid was an engineer with a security consultancy firm in Kuala Lumpur. He obtained his Bachelor's degree in Computer Engineering from UTM in 2006. Dr Zaid's primary research interests are in image and video processing, medical imaging and artificial intelligence. He holds several research grants and has close collaborations with Malaysia's National Heart Institute (IJN). He has published numerous works in the field and is currently a supervisor to several

postgraduate students. Outside of work, Dr Zaid maintains an active presence. He is the winner of FameLab Malaysia and the incorporated EURAXESS Prize 2017, and he has been a regular volunteer for FameLab activities since 2015. He is also the chair of IEEE Young Professionals Malaysia. Dr Zaid believes that engineers can, and should, play a larger part in communicating STEM topics to the wider public in an interesting and meaningful way.

FameLab Vietnam 2017 winner was Ms Pham Ha My. She used her EURAXESS Prize to visit the ViroScience Labaoratory at Erasmus MC - University Medical Centre in Rotterdam, Netherlands. While in the Netherlands, Ha My was hosted by Ms Ilse Schenk, Coordinator for EURAXESS in the Netherlands. Ms Pham Ha My is a lab technician at the Center for Tropical Medicine, Oxford University Clinical Research Unit in Vietnam.

You delivered the winning performance at the FameLab Malaysia competition? How did you win over the audience?

Thanks. Well, the short answer would be to just talk good for three minutes! But actually, a lot of effort goes into getting that three minutes just right. The judging criteria for FameLab are: content (the technical correctness and depth of our scientific topic), clarity (intonation, body language etc.) and charisma (the surprise and wow factor). So it's quite a challenge to package together a creative, interesting and relatable talk about my topic to win over the judges and audience.

In the final, I talked about a computer algorithm called the Artificial Neural Network (ANN), which mimics our own neurons and brain, and how the computer can utilise it to perform automatic face recognition. Altogether, I spent around a month preparing my script, editing, getting feedback from my friends, and just a whole lot of practicing. Thankfully my performance emerged the winner of FameLab Malaysia.

You represented Malaysia in the global Famelab Finals in Cheltenham? How did you prepare?

Yes I did; and although I did not win, it was an absolutely amazing experience in Cheltenham. Prior to going, I have been told that the international competition is slightly different in style from Malaysia. For example, the audience there tend to be a little more knowledgeable and sophisticated, so we can be afforded more liberty with our scientific jargons. Also, the judges emphasise quite a lot on the Q&A session after our talk so it's important to prepare the necessary answers well beforehand.

In the end, I tried my best and am proud of my efforts, but I guess I fell just short. The FameLab International winner was Tshioma from South Africa and her talk was really brilliant! You should definitely check out her performance on Youtube.

What do you find most fascinating about your research?

I work with computer vision and artificial intelligence, which means I try to work out how robots can see just like humans, how they can detect and recognise objects just like us. The field is fascinating to me because it opens up limitless possibilities for the future, where more and more human-based tasks and jobs are going to be replaced by machines. I like that my research can benefit a wide range of fields, from robot-guided cardiac surgery in the medical sector, to a mobile app for sign language recognition, and even contributing to 8K high resolution video formats of the future.

My interest in computer vision started during my PhD at Imperial College London, where I worked on a technique called image fusion. It's where we combine multiple images to create an altogether higher quality single fused image. It has actually been applied in satellite imaging and even the High Dynamic Range (HDR) function in our smartphone cameras!

You are also the winner of the EURAXESS Prize 2017. Tell us about that trip.

That's right, and a pleasant surprise it was too! The prize allows me to visit any research facility in Europe and I have chosen the European Organisation for Nuclear Research, or CERN, in Geneva, Switzerland. The chance to visit one of the world's foremost research institutions is too good to miss. I must thank Dr Susanne Rentzow-Vasu from EURAXESS and Cecile Grenier from CERN for kindly arranging the trip at such short notice.

I spent a whole day at CERN, but even then I did not manage a full tour of its campus. The place is really huge! My visit began in the morning with a group lecture conducted by our host, Professor Madjid Boutemeur. He then brought us to visit the synchro-cyclotron (SC), which was the predecessor to the Large Hadron Collider (LHC). We then visited the factory where all the materials and components of the LHC was especially built, all 27 kilometres of it! The tour gave me an even better appreciation of the field of physics and science. For example, one of the materials required to build the tube was a super-conductor called Niobium, which was native to Sweden and was extremely expensive. It gave us an interesting dilemma, in how much our pursuit of scientific answers really cost.

In the afternoon, I visited Dr Alberto Pace at the Computing Department of CERN, which is responsible for LHC's data analysis. The LHC collides huge amounts of particles at very fast speeds, which result in a big amount of residue data being created. The shape, pattern and behaviour of these data holds the key to some of the most fundamental scientific questions. It's therefore important to be able to analyse the whole data efficiently and accurately, the responsibility of which falls to Dr Pace and his team. Furthermore, the World Wide Web was invented by Sir Tim Berners-Lee at CERN and I had the chance to look at the very place where it all started. That was exciting.

The next day, I also had a meeting with the Research Services Office of the Universite de Geneve, where we discussed several research opportunities namely the Marie Skłodowska-Curie grant and the European Research Council (ERC). I learnt a lot about research in Switzerland in general, and I must thank Daniel Fuhrer for hosting my visit there.

What are your career plans now after your return from Europe?

I am still attached to Universiti Teknologi Malaysia (UTM) in Johor, Malaysia, as a senior lecturer. I see my career planning out as an academician, hopefully as an associate professor in a few years' time and a full professor after that. I hope to make my mark in the field of computer vision and image processing, both locally and abroad. For that, research constitutes a huge part of the criteria and I'm thankful for the exposure that FameLab and EURAXESS have given me so far.

I will be following up with Dr Pace from CERN to see if we can work together on a research endeavour. Also, Daniel has provided me with some very useful links and information on research collaboration with Universite de Geneve which I hope to benefit from in the near future.

Immediately though, I will be undertaking an industrial attachment position with AISB, a company specialising in robotics and software, in August. I will be working on a computer vision system for palm oil harvesting in estates. Wish me luck!

4.4 Are you looking for research funding opportunities? EURAXESS can help you!

The EURAXESS web portal makes it even easier for researchers, entrepreneurs, and businesses in Europe and ASEAN to interact with each other. The portal contains thousands of job postings as well as funding and fellowship opportunities.

Individual researchers: search for the funding programme you need for your mobility or research cooperation project.

Funding organisations: publish your funding opportunities and scholarships to increase your visibility and reach the best candidates worldwide.

Find out more here.

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About us

EURAXESS ASEAN is a networking tool for European researchers active in Southeast Asia and for international researchers wishing to collaborate and/or pursue a career in Europe. EURAXESS ASEAN provides information about research in Europe, European research policy, opportunities for research funding, for EU-ASEAN and international collaboration and for trans-national mobility. Membership is free.

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