

## EURAXESS ASEAN Quarterly Newsletter

Dear Colleagues,

Welcome to the first edition of the EURAXESS ASEAN quarterly newsletter in 2017.

This March we are celebrating the 10<sup>th</sup> anniversary of the European Research Council (ERC), the first European funding organisation for excellent frontier research. Every year, it selects and funds the very best, creative researchers of any nationality and age, to run five-year projects based anywhere in Europe.

Since its creation in 2007, the ERC has awarded research grants worth nearly 12 billion euros to nearly 7,000 scientists and scholars from all over the world, both early-career and senior, carrying out their ambitious research projects in all scientific disciplines. Of these, nine are ASEAN nationals working in prestigious institutions across Europe. An estimated 300 ASEAN researchers work as team members on ERC-funded research projects.

In the spirit of the ERC's motto 'Open to the World' EURAXESS ASEAN is committed to promoting the opportunities for conducting cutting edge research to the research community in ASEAN.

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

Your EURAXESS ASEAN team



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to Assist you!**

Watch our [new video](#) to  
find out how we can help  
you launch your research  
career in Europe.



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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](mailto: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.

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# 1 Ten years of the ERC – a European success story

Imagine developing new anticancer therapies or tackling Parkinson's disease? Or discovering Earth-like worlds in outer space? Can research develop batteries that make our mobile devices last longer? This is the type of cutting-edge research that the EU is promoting through the European Research Council (ERC), set up ten years ago. Some 7,000 top researchers have been supported in Europe to expand the frontiers of our knowledge and draw us nearer to the solutions. Many already led to breakthroughs.

The ERC, established by the EU to support excellent researchers in Europe, has backed scores of them, including six who later received Nobel Prizes. ERC grants also created career opportunities for some 50,000 research staff, resulted in numerous scientific breakthroughs and led to over 800 patent applications that lay the foundations for growth and jobs, and the improvement of people's daily lives.

For example, Deniz Kirik at Lund University in Sweden developed a promising gene [therapy for Parkinson's disease](#). Valeria Nicolosi at Trinity College Dublin in Ireland created batteries that last even 5,000 times longer, using [two-dimensional materials](#). And astronomer Michaël Gillon at the University of Liège, Belgium, discovered [potentially inhabitable planets](#) orbiting another star that recently made news worldwide. The ERC believed in their ideas and encouraged them to follow their scientific curiosity; there are countless other examples that help putting Europe on the map.

On the occasion of the tenth anniversary of the ERC, Commissioner for Research, Science and Innovation Carlos Moedas said: "*When the European Union acts boldly, wonderful things happen. The European Research Council, part of the EU's Horizon 2020 programme, is proof of it. In its first ten years, the ERC has funded almost 7,000 research champions across Europe to pursue their best ideas. Beyond the academia, innumerable people are already benefitting from the positive impact of the ERC and its funded discoveries.*"

The President of the ERC, Professor Jean-Pierre Bourguignon, said: "*For the past ten years the European Research Council has supported high-quality research projects proposed by ambitious scientists. Their endeavours have a positive impact on thousands across Europe. ERC grants led to many scientific breakthroughs, such as the recent discovery of potentially inhabitable planets beyond the solar system. There is ample proof that the ERC is fulfilling the mission it was given to make Europe the place to be for the world's best brains.*"





To mark the tenth anniversary, research institutions and national authorities in Europe held various events during the "ERC Week" from 13 to 19 March 2017. Celebrations also took place throughout 2017 and around the world, in the USA, India, Japan, and other countries. The ERC Week concluded with a scientific conference and celebration in Brussels on 21 March.

## 2 The ERC: It's all about excellence!

The ERC is a flagship component of Horizon 2020, the EU's programme for research and innovation. It was set up by the EU in 2007 to fund excellent scientists and their most creative ideas. It supports cutting-edge 'blue sky' research in all fields, and helps Europe keep and attract the best researchers of any nationality.

The ERC funds ground-breaking frontier research projects across all fields of science to facilitate and encourage world-class research in Europe. Support is given to individual outstanding Principal Investigators (and their teams, where applicable) on the basis of scientific excellence.

ERC grants are open to excellent researchers of any age, any nationality and at any place of work. The research must be carried out in a public or private research organisation in one of the EU Member States or Associated Countries. However, ERC grantees can keep their affiliation with their respective home institute outside Europe. Team members can be based outside Europe. ERC grantees also have the option of moving within Europe with the grant.

### Recognition and independence

The ERC offers selective and generous grants, independence, recognition, and visibility. The ERC's 'bottom-up' approach allows successful candidates to work on a topic of their own choice, with a team of their own choice. Grantees gain true financial autonomy for 5 years. The ERC is a global quality label recognised by the international research community. ERC Grantees not only attract top team members, both from Europe and the world, but also succeed in attracting additional funding.



## Which ERC Grants are available?

There are 3 main types of ERC grants:

- Starting Grant (StG) for researchers 2-7 years after award of PhD.
- Consolidator Grant (CoG) for researchers 7-12 years after award of PhD.
- Advanced Grant (AdG) for established research leaders.

Additionally, ERC grant holders can apply for top-up funding (Proof of Concept Grant; PoC) to explore the innovation potential of their research results.

## General features

- Funding schemes set up "**for scientists, by scientists**"
- Open to top researchers of **any nationality, age and gender, from anywhere in the world**, to perform research in Europe
- Long-term, individual grants for **ground-breaking, high-risk/high-gain research**: Starting Grants (€1.5 million), Consolidator Grants (€2 million) and Advanced Grants (€2.5 million)
- **No thematic priorities**; any field of research (life sciences, physical sciences & engineering, social sciences & humanities)
- **Bottom-up**, curiosity-driven approach
- Sole selection criterion: **scientific excellence**
- Selection based on international **high-quality peer review**

## Key achievements after 10 years

- Researchers: some **7,000 "research champions"** and over **50,000 team members**, mostly PhD students and post-docs, **funded with €12 billion**
- The majority of these 7,000 ERC winners are **less than 40 years old**
- **Over 70%** of completed projects led to **discoveries** or major advances
- **6 Nobel Prizes, 4 Fields Medals** and dozens of important prizes awarded to ERC grantees
- **100,000 articles** published in scientific journals, including over 5,500 articles in the 1% most cited scientific journals. In 2014, Europe surpassed the US for the first time in this respect, and ERC grantees contributed to this.



- Global recognition: ERC highly praised by the scientific community also beyond Europe. **9 countries signed international agreements** with the Commission to allow short-term visits for their non-European researchers to ERC projects.
- Over **180 researchers moved to Europe** with the ERC grant, of which most are returning Europeans. The ERC is invited to the most prestigious science congresses in the world, and also to other events, such as the annual Davos Summit of the World Economic Forum.
- National research funding: **8 countries** have set up national research councils inspired by the ERC model; **17 countries** have adapted their funding to follow or to complement ERC competitions.
- Innovation: ERC projects have led to **over 800 patent applications** and **over 75 new ventures**.

## Where do I find more information?

- Official webpage of the [European Research Council](#).
- [ERC Funding Opportunities Explained](#) – Presentation by Dr Martin Penny, ERC Executive Agency
- [Information for Applicants](#)
- [ERC Work Programme 2016](#)
- [Interview](#) with Dr Martin Penny, ERC Executive Agency on Youtube
- View the ERC's [step-by-step video](#) – An introduction to the application process, including tips & tricks for the interview



## Examples of breakthroughs in ERC projects

### ERC-funding behind exoplanets discovery

This discovery of the Trappist-1 system, recently announced by NASA, was made in the context of 'SPECULOOS' (Search for habitable Planets EClipsing Ultra-coOL Stars), an ambitious project led by ERC grantee Michaël Gillon (University of Liège, Belgium). Dr Gillon led an international team that already in 2016 discovered three potentially inhabitable exoplanets transiting a nearby ultra-cool dwarf star thanks to the ERC grant.

According to Dr Gillon: *"Without the EU funding it would not have been possible to arrive at this discovery. I'm very grateful that the European Research Council invested in our idea and believed in our intuition back in 2013".*

After the first discoveries, SPECULOOS aims to detect more systems of this type, thanks to four telescopes currently being installed on the European Southern Observatory of Paranal (ESO) in Chile that will be able to observe more targets than this prototype.

### Mapping the ocean beds to understand climate change

ERC grantee Dr Veerle Huvenne (National Oceanic Center, Southampton, UK) has developed an automated method for classifying hundreds of kilometres of the deep sea floor in a way that is more cost-efficient, quicker and more objective than previously possible. The new method could help collect more information to understand the impact of climate change on the sea flora and fauna.

### Nanovaccines join the fight against cancer

How close are we to developing a successful and comprehensive vaccine for cancer? ERC grantee Prof. Yvette van Kooyk (Stichting VUmc, Amsterdam, NL) believes that a combination of glycobiology and immunology will lead us closer than ever before. Thanks to her multidisciplinary team and her new approach based on sugar receptors, she has developed a nanovaccine that promises to represent the future for cancer treatment.



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## Where can I learn more about ERC Funded Projects?

The ERC operates according to a "curiosity-driven", or "bottom-up", approach, allowing researchers to identify new opportunities in any field of research. The portfolio ERC funded projects spans a wide range of topics and research questions.

Since 2007, more than 7,000 projects have been selected to receive ERC funding throughout the EU Member States and the associated countries. The ERC has received over 65,000 project proposals for its calls.

You can use the search facility on the ERC website to quickly and easily find examples of ERC funded projects.

Projects can be filtered according to funding scheme, call year, research area (panel/domain) and/or country of host institution. You can also use the search box and enter free text words, for instance names of universities or principal investigators.





## 3 Researcher Profiles: Southeast Asia's ERC Grantees

The ERC is the first European funding organisation for excellent frontier research. Every year, it selects and funds the very best, creative researchers of any nationality and age, to run five-year projects based anywhere in Europe.

Since its creation in 2007, the ERC has awarded research grants worth nearly 12 billion euros to nearly 7,000 scientists and scholars from all over the world, both early-career and senior, carrying out their ambitious research projects in all scientific disciplines. Of these, nine are ASEAN nationals working in prestigious institutions across Europe. An estimated 300 ASEAN researchers work as team members on ERC-funded research projects. The ERC encourages more top ASEAN researchers to join the ranks of ERC grant holders.

On the occasion of the ERC's 10<sup>th</sup> anniversary we have invited some of the Southeast Asian trailblazers to share their research story with us.

### Dr Liow Lee Hsiang – University of Oslo, Norway

#### Liow Lee Hsiang

I am a biologist who studies how quickly (or slowly) species originate and become extinct. I do so by combining what we can learn from organisms that are still living today, and the very rich information we can obtain from the fossil record. I am an associate professor at the Natural History Museum of the University of Oslo and a research associate at the Centre for Ecological and Evolutionary Synthesis at the same university.

**Dr Liow, EURAXESS is an initiative that supports mobile researchers. Can you share with us the different stops of your research career so far?**

*I did my Bachelor's degree in Singapore where I was born and schooled. Then I got a scholarship for a Master's program in conservation biology in Uppsala, Sweden. During that program, I did my field work in Malaysia. Then I lived for a while in Berlin, Germany, volunteering at the Natural History Museum there. For my Ph.D. I went to the University of Chicago in the United States on a full fellowship. I based my postdoctoral years in Oslo, Norway but have had research stays of various durations in places including Dunedin in New Zealand, and North Carolina in the United States.*

**Norway is a very unusual choice for a Singaporean researcher. What attracted you to live and work there?**

*Norway has a great work-life balance philosophy which I appreciate. I was also invited to build a brand-new research group there, which was both challenging and (ultimately) rewarding.*



**You have just been awarded an ERC Consolidator Grant (2016) to work on a rather fascinating topic. Can you tell us a little about it and what you are setting out to achieve?**

*To find out more about my research, check out this link*  
<https://titan.uio.no/node/2043>

Dr Liow conducting field work in Norway



**Will you be looking toward Asia in the selection of your team members?**

*I will simply select the best people for the jobs that need to be done and if they can be found in Asia, why not. Science has no geographic boundaries!*

**What encouraged you to apply for this specific grant?**

*I do not engage in applied research and hence there really are very limited grants I can apply for. The ERC personal grants (Starting, Consolidator and Advanced) are great for my kind of research because as long as the science is interesting, well-thought out and potentially ground-breaking, there is a chance for the research to be funded.*

**There are many highly talented researchers in Singapore, and in ASEAN at large, but only very few apply to the ERC grants. What is your reading why this is so?**



*Honestly, I do not know. But it is always hard for anyone to move far away from their homes and families. And ERC grants require that grantees work for extended periods of time in the EU and associated nations.*

**What are your ambitions for the next 10 years?**

*Do fun research, figure out answers to cool questions, share my knowledge with colleagues, students and the interested public, be a responsible citizen of the world, play music more often and exercise more consistently, and magically find more time for myself, my friends and family.*

## Dr QueeLim Ch'ng – King's College London, UK



**EURAXESS is an initiative that supports mobile researchers. Can you share with us the different stops of your research career so far?**

*I grew up in Singapore. I did my undergrad studies in Molecular Biology at Princeton University in the US, where I got my first taste of research by working in the lab of Yasushi Hiromi. There, I studied how cells decide what type of nerve cells to develop into. Then I did a PhD at UCSF (University of California, San Francisco) with Cynthia Kenyon, where I studied how cells decide which direction to migrate, and how different parts of the body become specialised along the head to tail axis. After the PhD, I joined Josh Kaplan's Lab at UC Berkeley as postdoc. During my postdoc, the Kaplan lab moved to Massachusetts General Hospital, which is part of Harvard Medical School, and I moved with the lab to Boston. There we studied how nerve cells secrete chemicals and hormones to communicate with other nerve cells and with the rest of the body. I've been very fortunate to have worked with such superb mentors.*

**You made the move to Europe after spending a long time in the US? From a researcher's perspective, how does Europe differ from the US?**

*While I've been there for a long time, I only lived in a few places within the US, so my sense of the US is limited as it's a very diverse country, even in research. Nonetheless, the research in Europe seems more diverse, probably because different countries have different funding styles and traditional strengths. I get a general sense that, on average, labs might be smaller in Europe, so the style of science might be a bit more boutique.*

**You were awarded an ERC Starting Grant in 2009. What was your research about? How did you select the members for your team?**



**QueeLim Ch'ng** is a lecturer at the Centre for Developmental Neurobiology at King's College London. His lab combines experimental and computational approaches to study how neuroendocrine networks process environmental information to orchestrate physiology. As a postdoc at Harvard/Massachusetts General Hospital, he co-pioneered the first large-scale RNAi screens for synaptic function in *C. elegans*, followed by large-scale analysis of synaptic protein localisation, implicating many new genes in specific aspects of neurotransmission, insulin secretion and ageing. In his own lab, he led an international collaboration of nine labs to perform a systems analysis of the 40 *C. elegans* insulin-like peptides (ILPs). This work showed that the ILPs regulate one another in a gene regulatory network, whose connectivity explained the functional specificity of the ILPs. A long-term interdisciplinary collaboration with Hang at Georgia Institute of Technology created a high-throughput imaging pipeline that uses machine-learning to automate image processing. This pipeline showed that food abundance is encoded by gene expression in multiple neurons to modulate lifespan, and revealed that serotonin and TGF $\beta$  pathways control the information processing functions performed by this gene expression code. This work uncovered new genetic mechanisms for controlling cooperation among cells when they encode external stimuli.

*Our research was aimed at understanding how neuroendocrine circuits link environmental inputs to physiology. The idea was that animals sense things in the environment such as food using the nervous system. The nervous system would respond by activating the production of specific hormones which in turn alter the physiology of the animal. In this research, we studied insulin-like peptides, which is a family of related hormones that includes insulin. By studying how production of these hormones were switched on or off, we found that these insulin-like peptides regulate each other's production in a complex network that could explain their roles in many physiological processes. We also discovered how other hormones provide information about the amount of food in the environment, and how they regulate these insulin-like peptides. In the process, we cracked a part of the code in the nervous system that senses the level of food in the surroundings. Interestingly, the genes we identified by studying a round worm also act in the human brain to control food-related processes in humans such as fat storage and obesity.*

*A key collaborator in our project was Prof Hang Lu at the Georgia Institute of Technology – we got in touch through other colleagues and found we had many complementary skills. She had developed a set of devices that could automate our experiments and speed them up. For the postdoctoral researchers in the team, I hired them through open advertisements and interviews.*

#### **What encouraged you to apply for this specific grant?**

*The ERC grant was very generous and its goal to fund basic research and frontier science very appealing. It allowed me to move my research in a direction that conventional grants didn't.*

#### **In which ways has the ERC grant influenced your research career?**

*This grant enabled me to do several things that would not be possible alone with smaller grants from the UK at that time. It allowed me to lead collaborations with many labs, so that we could do bigger, and more ambitious projects. This grant also allowed me to advance our work by adding many computational approaches to our toolkit. It has changed my style of science; previously I largely focused on using experimental biology techniques. The grant gave me exposure to tool development by engineers, as well as advanced statistical methods and modelling by physicists.*

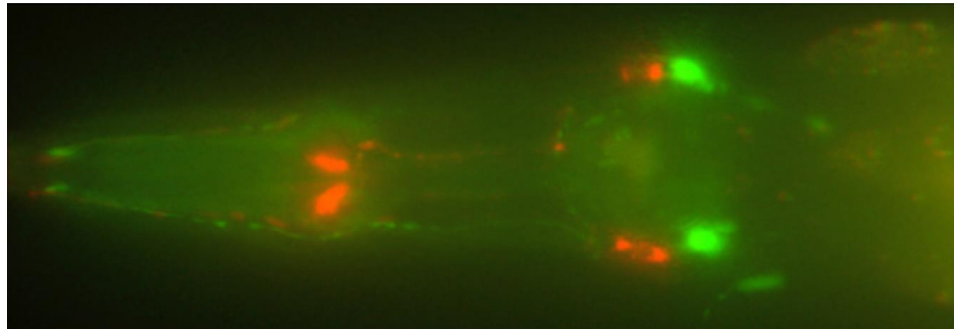


Image of the head of a roundworm called *C. elegans*, studied in Dr Ch'ng's lab. Labelled in green and red are nerve cells that detect the levels of food in the environment to change the animal's lifespan.

**There are many highly talented researchers in Singapore, and in ASEAN at large, but only very few apply to the ERC grants. Why do you think that is?**

*I would probably joke that the food is much better in SE Asia. The food in Europe is amazingly delicious and diverse, but just trying to find a proper laksa here in London is a major challenge. The ERC grants require people to spend a significant amount of time in Europe. And I think that many researchers in ASEAN might prefer to live close to their family, so moving somewhere else may not be something they would consider. I haven't lived in Singapore for over 20 years, but I return home once a year to visit family, and I find the quality of life in Singapore to be excellent, so I imagine that there is less incentive to move as well. I think that if people had trained in Europe as students or postdoc, they might be more familiar with the advantages here and will be more likely to come to Europe to pursue a research career.*

**If someone gave you 1 billion euros, what would you set out to achieve?**

*I would set out to understand how complex cues such as food are interpreted by the nervous system to impact health.*

*Food is complex – every time you read a nutritional label in the supermarket, there are so many things to consider. Food provides immediate cues such as combinations of taste and smell, as well as longer term cues such as different types of nutrients that we absorb after eating. How are all these long and short term cues recognised individually and in combination? Do combinations of these cues evoke effects from the individual components? What combinations make something delicious or healthy?*

*This question is really important because our diets are complex but exert a huge impact on our health. It's not well known, but food impacts many aspects of physiology through the brain. The best way to approach such a multifaceted question is to combine approaches from many disciplines. I imagine we'll need*



engineers to develop automated tools for experiments, biologist to perform these experiments, and computational people to analyse and integrate all the data to generate real understanding of the relationship between food and health.

## Prof Danupon Nanongkai, KTH Royal Institute of Stockholm, Sweden



**EURAXESS is an initiative that supports mobile researchers. Can you share with us the different steps of your research career, and how you arrived at KTH in Sweden?**

*I grew up and received a bachelor degree in Thailand. Then I spent five years doing a PhD in the USA, more than a year each in Austria and Singapore as a postdoc, and a number of months in Germany and Hong Kong for research visits. After living and working in different environments, I decided to settle in Europe and especially at KTH in Sweden because this was where I could enjoy a high quality of life and do good research: the infrastructure was efficient, the society was progressive, it was easy to travel and collaborate, and most importantly it was possible to independently explore ambitious research directions with an ERC grant.*

**Please tell us about your research in distributed and dynamic algorithms and its practical applications.**

*This research concerns mathematical questions about how computers can work collaboratively when the data is so big and spread out, and how they can analyse rapidly-changing information. These questions arose decades ago from computer network applications, such as routing information in networks and testing network's reliability. But they are also relevant to a wide range of other applications, such as analysing social networks' evolution or enabling your phone to find the best route to your destination.*

**What encouraged you to apply for an ERC grant?**

*The unique opportunity to carry out my ambitious long-term research plan. For a while, I have been desiring to pursue some research directions that I believed could lead to breakthroughs in my field. Due to the risks and the scale of the plan, it was hard to get sufficient and steady support to pursue it. ERC grants were essentially the only kind of support that allow me to do this.*

**Danupon Nanongkai**

Danupon Nanongkai is a theoretical computer scientist, currently holding an assistant professor position at KTH Royal Institute of Technology, Sweden. He grew up in Thailand, where he received a bachelor degree in Computer Engineering. He received a Ph.D. in Algorithms, Combinatorics, and Optimization from Georgia Institute of Technology, USA, in 2011. His thesis received the Principles of Distributed Computing Doctoral Dissertation Award in 2013. Between 2011-2014 he has held postdoctoral positions at the University of Vienna, Austria, and Nanyang Technological University, Singapore. His research interest is on graph algorithms and complexity theory, with the current focus on distributed, dynamic, and approximation algorithms.

**In which ways has the ERC grant influenced your research career?**

*Since my ERC project just started a few months ago, I cannot say much more beyond that the grant amount and its prestige made me feel secure to conduct high-risk high-gain research without worrying about finding new funds or adapting to political agendas in the next few years.*

**There are many highly talented researchers in Thailand and in ASEAN, but only very few apply for ERC grants. Why do you think that is?**

*I can speak mostly only for my home country Thailand, but this might hold for other countries in ASEAN as well. Also, there are many possible explanations, but I will only discuss two which I personally found interesting.*

*First, many Thai talents took scholarships to study for their PhDs and were obliged to work in Thailand afterwards, sometimes for more than ten years. Although the ERC rules are flexible enough that they can still apply and receive grants, and despite the fact that this can benefit Thailand too, some certain rules in Thailand seem to make this hard to happen.*

*Second, the government has been focusing much more on funding research with immediate applications, which might not necessarily be at the frontier of science. Many talents either turned into such research which might be out of ERC's scope, or struggled to conduct a frontier research at the level that meets the standard of the ERC.*

**What is your ultimate research goal?**

*I view myself as half mathematician and half computer scientist. As a mathematician, I want to develop some deep mathematical theory that helps us completely understand some hard-abstract questions. As a computer scientist, I wish to see practical applications of my work. So, my ultimate goal is to first build a theory, and then show its practical impact. In particular, I would like to resolve some mathematical questions related to network algorithms, and extend this study to its wide range of applications.*

**What single piece of advice would you give young researchers beginning their careers in ASEAN?**

*Shoot for excellent research, and for that it is very helpful to expose yourself to different ways of thinking in different cultures and environments.*

EURAXESS ASEAN would like to thank all interviewees for their much-appreciated contributions!



## 4 Hear it from the expert - Twelve tips on how to prepare an ERC grant proposal



[Andreas Zeller](#) is a full professor for software engineering at [Saarland University](#) in Germany. His research concerns the analysis of large software systems and their development process; his students are funded by companies like Google, Microsoft, or SAP. In 2010, Prof Zeller was inducted [as Fellow of the ACM](#) for his contributions to automated debugging and mining software archives. In 2011, he received an ERC Advanced Grant for work on [specification mining and test case generation](#).

Prof Andreas Zeller, a professor for Software Engineering at Saarland University in Germany, received an ERC Advanced Grant in 2011. Here he shares his advice on how to be successful in the competition for one of Europe's most prestigious research grants.

This article has been taken from Prof Zeller's [blog](#) with his kind permission.

In 2011, I have been lucky to obtain an ERC Advanced Grant. The European Research Council (ERC) is an EU institution that promotes *high quality research* in Europe. It funds individual investigators in any field of research – and it does so substantially: With up to 3.5 million euros, an ERC grant is Europe's highest research funding for individuals – and a very coveted prize: Only about 12% of proposals get funded, so competition is fierce.

Since I got my grant, other applicants have asked me again and again for hints and samples on how to prepare a proposal. Of course, there is no single recipe for success, but there were a few points which I found useful in preparing my proposal. While specific for ERC proposals (and from a computer scientist perspective), these tips should generalize for several other high-profile funding programs.

### The Process

#### 1. Understand the process.

The ERC publishes a *Guide for Applicants* as well as a *Guide for Reviewers*. Both should be your bible; at all times, ask yourself how your proposal will stand according to the criteria and the process listed. Find out what your panel is, who the chair will be, and which past members have been on the panel. Your proposal will need to win all of them.





## 2. Start many, many months before the deadline.

Unless your story is a winner straight from the inception, you will need lots of time for refining and revising the main idea and the many problems. In my case, I started writing the proposal 18 months before the deadline; although 6 months would have been okay, too, refining for another 12 months helped the proposal a lot.

## 3. Reserve several weeks for writing.

You will need lots of time for collecting data, shaping the story, and checking the references. Consider a 2–3 week retreat for the writing alone, plus appropriate time for polishing. Let your friends and family know when you'll be back.

## 4. Get plenty of feedback.

Your proposal will first be reviewed from people in your discipline, but not necessarily from people in your speciality. It may also be that your proposal will have to stand against proposals from totally different disciplines. Hence, your story must appeal to readers *no matter what discipline and speciality they're from*. Discussing your ideas and your proposal with as many people as possible and as diverse as possible will help. In my case, I had the proposal reviewed by 12 internal and 12 external people, and used every possible invited talk to present some sketches of the main ideas. (Such presentations not only help you to make your ideas explicit, but will also lobby for your ideas, and get feedback from the audience.)

## 5. Rely on local expertise.

ERC projects are huge, and thus involve substantial budget and resource planning. If your university has support for EU and/or ERC proposals, rely on their expertise. (If you have a colleague who is already funded by the ERC, check with her or him as well, of course!)

## Your Achievements

### 6. Sell yourself.

Your proposal will be assessed on two criteria. 50% is your project, and it will be up to you to come up with a great idea. 50%, however, is your past achievements, and you will have to work hard on these. What you need is irrefutable evidence for impact and excellence. That is, facts on awards, services, papers, talks, students, tools; lasting impact in academia and industry; your quality as networker and advisor; and, last but not least, your ability to shape and create research fields. Play by numbers: acceptance rates, citations, downloads. Check the list



of past grantees, their numbers and achievements to get an idea of what you're up against.

### 7. Have unique selling points.

"So, you're Brad Pitt? That don't impress me much." When you're surrounded by supermen (and you will be), just being another superman is not enough. So:

- Don't just say: "I am an ACM Fellow". But say: "I am the first ACM Fellow from Spain", or "I am the youngest European ACM Fellow in concolic testing". Replace "European", and "concolic testing" by the most general feature you can find; and replace "ACM Fellow" by your most prestigious designation. (Hint: In my case, 6 out of 7 reviews began with "The applicant is an ACM Fellow", as if this would disperse all doubts on my abilities; so go for such designations if you can.)
- Don't just say: "Best Paper Award". But say: "First Best Paper Award for a Debugging Paper written on a one-legged stool". Exercise: generalize as above.
- Don't just say "700 citations". Also say: "Most cited testing paper since 1999".
- Avoid any claim that cannot be independently verified.

Coming up with such selling points is hard work; bibliographic query tools are your friends. Again, reserve lots of time for this work. (I spent two days googling and digging through the CVs of all European ACM Fellows, for instance; and a successful colleague of mine even has managed to get temporarily banned from Google Scholar.) Selling yourself this way is hard; if you need to take a shower by the end of the day, that's fine. But remember that every selling point you can come up with this way makes it harder for detractors to dismiss your achievements, and it makes it easier for champions to sell them to others. In the end, it will have to be clear that you are the only person on earth who can save the world from this terrible, important problem.

## Your Project Plan

### 8. No risk, no fun.

The ERC funds *high-risk, high-gain* projects. This means that there *have* to be substantial risks of failure (otherwise, others would have done this before). However, your specific research plans should help to mitigate these risks and thus bring the high gains promised. Focus on *novelty* (why is this new?) and *potential impact* (why is this needed?). Avoid standard clichés from your discipline ("If only everybody had used this formal method from the start, the Ariane failure could have been prevented..."); come up with fresh, real stories and insights instead.



### 9. Clear title, clear abstract.

The reviewer should get interested in your proposal after a short glimpse of ten seconds. The message has to be in the title, in the abstract, in the figures, in the diagram, in the examples. (Yes, *please* have a diagram that conveys the approach! And *please* have an example, too! All these are weapons in the hands of your champions.) If you fear the message could be too complex, try again. If you think the message sounds too trivial to you, it could start to be understandable for the rest of us. (If, after simplification, your approach no longer sounds as cool as before, don't hide this with words, but go back to the drawing board.)

### 10. Have a clear structure and plan.

You're a seasoned researcher, so you know how to organize things, don't you? Now all you need to do is to put this in writing: tasks, dependences, milestones, evaluations, and measurable success criteria. The point of this exercise is not for the ERC to ask you to follow the plan by the letter once the project starts; the point of this exercise is for the reviewers to see that you can organize things.

### 11. Get to the point.

The length of an ERC proposal is clearly limited, and that's a good thing. Get to the point quickly. Use a clear language: No buzzwords, no yada yada, no lingo. If your project on "Examining the security interoperability of cloud business process models" cannot be motivated in plain English, don't expect the computer science panel chair to pitch it against "Curing cancer once and for all".

### 12. Polish. Polish. Polish.

And polish again. With an ERC grant, you're applying for the highest individual funding one can get in Europe. Do your homework.

None of these tips guarantees success. What they do, though, is to prevent *misunderstandings*. If the reviewer does *not* get the point about you and your proposal, you will lose despite being great, and that sends you back to the drawing board. If the reviewers *do* get the point about your project and your past achievements, though, then it's a fair game: If you are better than the others, you win; and if you are not, you lose. Even if you're Brad Pitt, it's perfectly okay to lose against George Clooney. If you win, though... well, that's great and totally worth it, as I can tell from first-hand experience. :-)



## 5 Events

**1 March 2017, Hanoi, Vietnam**

**Conference: German Science Day "20 years of Science & Technology Cooperation between Vietnam and Germany"**

More than 350 participants from different regions of Vietnam as well as from Germany took part in the German Science Day 2017 that was organised by the Ministry of Science and Technology Vietnam (MOST) and the Federal Ministry of Education and Research (BMBF) the 1st of March in Ho Chi Minh City. EURAXESS ASEAN delivered a presentation.

**The presentation slides are now available on the website of the [DAAD Vietnam](#).**

**16 & 17 March 2017, Kota Bahru & Penang, Malaysia**

**Information session: Advance your research career in Europe**

EURAXESS ASEAN visited Universiti Sains Malaysia to brief the local research community on funding and fellowship opportunities in Europe. **The presentation slides are available [here](#).**

To arrange a visit to your university or research centre please email us at [asean@euraxess.net](mailto:asean@euraxess.net)

**21 March 2017, Jakarta, Indonesia**

**Seminar: European Union – Indonesia Research Cooperation and Innovation**

Presentation slides will be available on the [EURAXESS ASEAN portal](#) shortly.

*„Science, technology and research are strong drivers of economic and social development. That is why they form a significant element of the EU-Indonesia partnership having great potential to be further expanded. We in the EU believe that science does not have any borders. We fully embrace that international mobility of researchers is crucial for building better research and innovation systems and for developing new knowledge. Therefore we are keen to find and financially support the most brilliant scientific talents all over the world – importantly from Indonesia and the other ASEAN member countries – and invite*



*them considering Europe as their chosen place to advance their research beyond frontiers.*

*The EU Delegation to Indonesia and Brunei Darussalam congratulates the European Research Council (ERC) on its 10<sup>th</sup> anniversary! The ERC has been established precisely with the aim to encourage excellent research proposals from top researchers of any nationality who wish to carry out a project in a host institution in the EU or in one of the Associated Countries to the Framework Programme Horizon 2020. We acknowledge the expansion of Indonesia's potential for research and innovation the EU and strongly encourage Indonesian researchers and scientists to look out for the opportunities and excellence grants offered by the European Research Council. The ERC does neither apply any quota nor pre-define the research areas to be funded. Grants are awarded based on the sole criteria of excellence!"*

**30 & 31 March 2017**

**Singapore and Bangkok, Thailand**

**Seminar: The state of research in ASEAN: Co-publication and co-patenting activity**

Southeast Asia has doubled its share of the world's research publication output over the last decade. The number of annual international patent applications involving ASEAN-based inventors has tripled from the early 2000s to the early 2010s.

A research team of the EU-funded SEA-EU-NET project carried out a study assessing the research output in ASEAN Member States from 2000 to 2014. The lead author of the study, Alexander Degelsegger, Centre for Social Innovation, Austria will present the key findings and other scientometric indicators on Southeast Asian research and discuss what lessons lie behind them.

**The presentation slides will be made available at [the EURAXESS ASEAN portal](#) from 5 April onward.**

**24 & 25 April 2017, Helsinki, Finland**

**Conference: InnoFrugal**

**<https://innofrugal.com/agenda/>**

InnoFrugal is a non-profit event. It's 2nd edition in 2016 gathered 196 participants from 17 different countries in Helsinki.



Engaging public & private sector along with other non-profits, we have created an innovation, thought leadership platform to respond to limitations in resources; whether financial, material or institutional, and turn these constraints into innovative ideas and quality, accessible, affordable & sustainable solutions for emerging economies as well as the developed world.

**15 – 17 May 2017**

**Yogyakarta, Indonesia**

**Conference: Open Science Meeting**

**<https://opensciencemeeting.org/>**

The eighth Open Science Meeting, entitled Towards Resilient Society, will be held from 15 to 17 May 2017 in Yogyakarta, Indonesia.

The OSM 2017 programme features scientific presentations, an innovation fair, public debates, workshops, keynote speeches, poster presentations, and science for policy sessions. Around the OSM plenary days, master classes on different themes will be held at several locations around the archipelago.

**22 – 24 May 2017, London, UK**

**Conference: Going Global 2017**

Going Global is an annual conference hosted by the British Council, which offers an open forum for global leaders of international education to discuss current issues. The event provides an opportunity for networking, and has become a fixture of the global education calendar. The conference consists of a series of collaborative sessions that focus on the year's chosen themes. Over 1,000 registered delegates from across the tertiary (further and higher) education sectors and various other sectors with perspectives on international education attend each year. Going Global 2017 explores how universities and colleges support city-regional economies and social and civic engagement, connecting the world's cities to global knowledge and talent and addressing global challenges. The following focus areas will be examined: Research and innovation, Talent development and flows, Societies and communities, Leadership.

**Details [here](#).**



**13 & 16 June 2017**

**Kuala Lumpur, Malaysia and Ho Chi Minh City, Vietnam**

**Mobility Platform: Advance Your Research Career in Europe: Funding and Fellowship Opportunities for Researchers in ASEAN**

In 2017, our annual flagship event will return to two of ASEAN's education and research hubs – Malaysia and Vietnam. The event addresses PhDs and Post-docs of all disciplines and all nationalities. Participants can look forward to interaction with representatives of leading research organizations and funding agencies from across Europe about the variety of fellowship and mobility schemes open to Southeast Asian researchers. The programme also includes hands-on advice from expert speakers and invited alumni of various European programmes.

Details will be announced on the [EURAXESS ASEAN web portal](#) shortly.

**Like us on [Facebook](#) for regular updates on events, funding and career opportunities.**

**About EURAXESS ASEAN**

EURAXESS ASEAN is a networking tool for European and international researchers active in ASEAN and for ASEAN 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.**

Visit us at [asean.euraxess.org](http://asean.euraxess.org) and [join](#) the EURAXESS ASEAN community.

EURAXESS Worldwide networks have thus far been launched in North America (USA & Canada) Japan, China, India, in ASEAN, and Latin America and the Caribbean States (CELAC).

You can watch a video about the [EURAXESS Global Network here](#).