Marie Skłodowska-Curie Actions

20 Years
100 000 Fellows
30 Exemplary Researchers

Marie
Skłodowska-Curie
actions

European Commission

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Introduction

The EU is celebrating one hundred thousand fellows supported by the Marie Skłodowska-Curie Actions since its launch 20 years ago. To mark this milestone, 30 highly promising researchers have been selected to showcase the EU's actions dedicated to excellence and worldwide mobility in research. 18 of the group of 30 high-calibre researchers are women.

Tibor Navracsics, Commissioner for Education, Culture, Youth and Sport, said: *"Celebrating the award of the 100 000th Marie Skłodowska-Curie fellowship is a great moment to recall the importance of this programme, which supports our brightest and best researchers in tackling the big societal challenges facing Europe. Marie Skłodowska-Curie paved the way for future generations of female researchers. On the eve of International Women's Day, I am especially proud that the Marie Skłodowska-Curie Actions pay particular attention to gender balance, and with more than 40% of fellowships awarded to female scientists, are the best performing part of Horizon 2020 with respect to gender."*

The 30 chosen researchers represent the 100 000 fellows who have been supported by the Marie Skłodowska-Curie Actions over the past two decades. The group includes 28 European nationals, one from each EU Member State, and one fellow each from Colombia and New Zealand.

Their research topics cover an impressive spectrum, ranging from tackling climate change and ground breaking cancer research to the prevention of radicalisation. For every single one of them, the EU grant is a crucial boost for their career and the chance to improve citizens' lives by advancing knowledge and innovation.

By enabling researchers to go abroad and supporting cooperation between institutions and industry, the Marie Skłodowska-Curie Actions play a vital part in strengthening Europe's research and innovation capacity. Therefore, these 30 have outstanding potential: they achieved the highest evaluation scores in the 2016 call for proposals for individual fellowships. They competed with 8 916 proposals submitted by other researchers; of these nearly 1 200 proposals were selected for funding.

http://ec.europa.eu/msca

Judith SCHLAGNITWEIT from Austria going to Sweden

About Judith

I come from Linz in Austria, where I studied chemistry at Johannes Kepler University. Back then I thought that this is where I will grow old. However, during my PhD I discovered that I like the idea of moving abroad to become a researcher. Since then I have carried out research in the field of nuclear magnetic resonance (NMR) in Austria, France, the UK, and now the Karolinska Institute in Sweden. Lately I have been focused on challenges in pharmaceutical science, working in a close collaboration between academia and industry.

When not at the spectrometer I divide my time reading, hiking, visits to the theatre and art museums.

Making sense of 'anti-sense'

As researchers learn more about how diseases such as cancer develop and spread, biomarkers are increasingly taking centre-stage as potential keys to diagnosing and treating them. Biomarkers like RNA, or ribonucleic acid, contain information that has been copied from our genetic information (DNA). Body cells produce different types of RNA molecules, including a complex form known as microRNAs (miRNAs). These are master cell regulators, and excellent biomarkers, but they are poorly understood, according to Austrian biochemist Judith Schlagnitweit.

This could change thanks to the RNAatHD project and a Marie Skłodowska-Curie individual fellowship, which gives Schlagnitweit the chance to work with leading scientists in Sweden on both how and when each mRNA is targeted by a miRNA. One promising lead is synthetic 'anti-sense' oligonucleotides (AONs), which are being tested as cancer drugs, but progress is slow. Not enough is known about how AONs target mRNAs. Schlagnitweit's project is focusing on this problem. The findings could support new drug development for cancer, but also treatments for other diseases affecting millions of people every year. The research also looks to cement Europe's position, and the individual fellow, as leaders in translational medicine.

Tom FRANKEN from Belgium going to the USA

About Tom

I am a neurologist trained at the KU Leuven in Belgium. My interest in physics and medicine led me to focus my studies on the brain, with its trillions of connections a fascinating organ that allows us to entertain social relationships, generate art and science, but which is still poorly understood, and this hampers our progress in treating brain diseases. In 2015 I obtained my Ph.D. supported by a fellowship from Research Foundation-Flanders (FWO), studying neural circuits in sound localization. I currently receive further research training at the Salk Institute for Biological Studies (La Jolla, U.S.A.) as a Fellow from the Belgian American Educational Foundation.

In my free time I enjoy swimming, running and playing the piano.

So, what are we looking at?

Tom Franken is a Belgian neuroscientist whose quest to understand how the brain processes complex visual scenes is taking him all the way to the USA – thanks to the EU-funded Marie Skłodowska-Curie individual fellowships. The visual cortex is the engine room of the brain's cerebral cortex, taking in and processing impulses from the optic nerves. Driving a car, for example, requires supercomputer processing power and split-second decisions, yet is done with seeming ease for most people.

We know that the visual cortex is made up of several connected layers. When neural activity passes from lower to higher areas it is called 'feedforward', and the reverse is called 'feedback'. So far so good. But more complicated processing also takes place in the higher cortex areas where neurons make sense of visual issues, like which side of a border belongs to a drawn figure. Brain scans suggest the importance of neurons in perception and cognition, but their true function is still poorly understood. Tom Franken's OptoFeedback project seeks to fill that knowledge gap by studying more closely what happens in the higher cortex of animals trained to 'detect' certain figures, and to infer relationships between the lower and upper cortical areas in visual perception.

Project name: OptoFeedback - Causal study of the role of feedback in the perceptual inference of figure location in the primate visual cortex using targeted optogenetics

Antoaneta NIKOLOVA from Bulgaria going to Germany

About Antoaneta

I was born in Sofia, Bulgaria on 26th of June 1961. I hold a MA in philosophy from the Sofia University "St. Kliment Ohridski" and a PhD in philosophy from the Bulgarian Academy of Sciences with the thesis "Ecology and Religion". I am currently an Associated Professor in the South-West University, Blagoevgrad, Bulgaria. I am an author of a book and many articles on Eastern and Comparative philosophy and religions. I am a translator in Bulgarian of three collections of Old Chinese poems and an author of 6 books of my own poems. I am a member of the Association of Bulgarian Writers, Haiku Club "Sofia" and World Haiku Association.

I am married and have one daughter. My husband is a physicist and my daughter is an actress.

When East meets West

Globalisation, climate change, conflicts, mass migration, ethnic differences… Tapping into a zeitgeist of regional and global tensions, Antoaneta Nikolova-Georgieva, a Bulgarian social scientist, wants to better understand the perception of eastern religions in Europe and explore ways of promoting tolerance. Thanks to a Marie Skłodowska-Curie individual fellowship, her work in the Ginger project takes her to Germany, where intercultural relations are under the microscope following a documented influx of migrants of eastern descent. This innovative project explores the machinations of change and whether these unique challenges can in some way transform the dominant European worldview, as well as whether (and indeed how) eastern religions influence this process.

Ginger combines the fields of comparative philosophy and religion with elements of sociology and anthropology thrown in for added cultural and religious context. Nikolova-Georgieva's ultimate goal is to publish a book, under the working title Eastern religions in Europe, which investigates why and how Eastern religions penetrate and exist within the European worldview and society. Studying abroad is a professional and personal journey for the Bulgarian, who sees the training and research fellowship as an opportunity not only to build her academic career, but also to broaden her organisational and teaching skills, and to pave her way to full professorship.

Project name: Ginger - Perception of Eastern Religions in Europe

Martina PAVLEK from Croatia going to Spain

About Martina

My main interest is speleology, professionally and as a hobby. Caves and their surrounding nature are just so beautiful and interesting that I could spend my whole life doing that. And I hope I will. One more important thing about caving is that it is a team activity, you never go to a cave alone. So it is also a quality time with the people I love hanging out with.

When I'm not caving I'm riding a bike, mountaineering, skiing, traveling, going to concerts (I love music!), watching movies and spending time with friends and family.

The hidden lives of cave-dwelling spiders

Ecosystems are under threat around the world. Documenting and explaining the risks of climate change to flora and fauna is a major research challenge. Without such knowledge, halting biodiversity loss and further degradation of ecosystem services – key targets of the EU 2020 Biodiversity Strategy – becomes that much harder. Croatian scientist Martina Pavlek's HIDDENLIFE project is exploring a biodiversity hot spot in Europe – the Dinarides mountain chain, and its unique cave fauna – to safeguard its future.

The Dinerades span Italy in the north-west and run through the Balkans towards its south-east limit. Despite reports that caves enjoy stable climatic conditions, recent studies suggest that global warming may be having more of an impact on them than previously thought. But because caves are difficult to explore and troglobiont (cave-dwelling) organisms are often rare and sensitive, the study of the subterranean realm has lagged behind that of other ecosystems. Pavlek, a Marie Skłodowska-Curie fellow in Spain, is combining state-of-the-art molecular and statistical tools to delve into the hidden lives and environmental preferences of three distinct cave spiders. Untangling the web of events that shaped their origins and present-day diversity and distribution, her goal is to predict habitat adaptability and assess the vulnerability of fragile fauna to future global warming scenarios.

Project name: HiddenLife - Understanding the role of environmental and climatic changes in shaping subterranean diversity to preserve Europe's unique hidden biodiversity

Evgenia MESARITOU from Cyprus going to Canada

About Evgenia

Evgenia Mesaritou holds a PhD in sociology from the University of Cambridge. Her interests lie in the sociology and anthropology of religion, ritual and pilgrimage, heritage and material culture, conflict and conflict resolution. These interests will be pursued during her MSCA-IF, in the framework of which she will undertake research on the restoration of the Apostolos Andreas monastery (Cyprus) and the revival of associated pilgrimages to it, in conditions of ongoing division.

She enjoys music and dancing of all sorts and she loves traveling and meeting new people and their ways of living.

A rather special pilgrimage

Growing up on the divided island of Cyprus teaches you a thing or two about how religion, politics and heritage affect a deeply divided European society. Cypriot Evgenia Mesaritou, an EU-funded Marie Skłodowska-Curie fellow, wants to explore these notions in the context of pilgrimages. Her T.A.MA project, conducted from Canada, has the potential to inform EU policy on heritage and conflict resolution. Mesaritou will focus on the Christian-Orthodox shrine of Apostle Andreas located in the Karpass peninsula. The shrine is mainly visited by Greek-Cypriots and, to a lesser degree, Turkish-Cypriots, and it is currently being restored by both communities with EU support.

Combining interviews with pilgrims and officials involved in the shrine's management and restoration with observation and background research, Mesaritou is keen to uncover any symbolic, cultural, ethnic and political associations ascribed to the shrine and the pilgrimage to it by locals and international visitors. She hopes to gain fresh insight into cooperation on the restoration of the shrine and the revival of pilgrimages despite ongoing division between the two communities.

Project name: T.A.MA - Sharing without Solidarity: Politics, Heritage and Pilgrimage in a Divided European Society

Lukas CERMAK from the Czech Republic researching in the Czech Republic

About Lukas

Lukas Cermak is a molecular biologist whose scientific focus is the role of protein stability in cancer progression. He currently serves as a deputy head of the Laboratory of Cancer Biology at the Institute of Molecular Genetics in Prague, Czech Republic. Lukas Cermak spent his postgraduate and postdoctoral studies at the Albert Einstein College of Medicine and New York University, respectively. He published his work in major scientific journals such as Nature or EMBO Journal. He actively participates in science popularization, and his comprehensive articles, interviews and commentaries appeared in established Czech periodicals and newspapers. Lukas Cermak lives in Prague.

He is married and raising two sons.

When cells go haywire

Despite decades of dedicated research, cancer is still a leading cause of death around the world. Every year, around 12.7 million people discover they have cancer and 7.6 million die from it. The hunt goes on for new treatments. With EU support, Czech scientist Lukas Cermak is delving into the body's proteome – the entire complement of proteins expressed by a cell, tissue or organism – in search of new drug leads to combat this complex, stubborn disease. It is known that cells rely heavily on the proteosome-ubiquitin system (UPS) to regulate protein health and turnover. Drugs that target this system are already in use against certain blood-related cancers, and show promise against diseases affecting the immune system – like rheumatoid arthritis – as well as for treating parasite infestation.

Cermak, a Marie Skłodowska-Curie fellow, has set up the LIGER project to identify new ubiquitin ligase-substrate pairs – the workhorse of this challenging field of proteomic research – with a focus on E3 ubiquitin ligases involved in cancer progression, or more specifically cell growth and migration. This work is crucial for understanding the fundamental role of UPS in regulating diverse biological processes and the diseases that can result when cells go haywire. Once identified, the crucial next step is finding new potential therapies to treat the cancer scourge.

Project name: LIGER - Identification of novel substrates for ubiquitin ligases involved in cell cycle and cell migration

Kristian LARSEN from Denmark going to Norway

About Kristian

I am a Danish scholar working on ancient philosophy. I am generally fascinated by everything Greek, but my great love is Plato. To me, his manner of combining poetic brilliance with the profoundest reflections on the desires of our hearts and minds, the limits to human knowledge, and the importance of wisdom in our lives, singles him out as one of the greatest thinkers of all time.

I live with my wife and two young daughters; we are excited about moving to Bergen and the opportunities the city's beautiful surroundings offer. In my spare time, I enjoy running, good beer and listening to heavy metal.

Understanding Method in Plato

My project is focused on the technical core of Plato's philosophy, that is, his conception of dialectic, the method that distinguishes philosophical inquiry from other kinds of inquiry. The project challenges the now prevailing understanding of this method as radically changing in the course of Plato's life. I propose that Plato's conception of dialectic is unified and intimately connected with his understanding of reasoning. To Plato, the abilities to see likenesses between things, on the one hand, and to differentiate them, on the other, are defining features of the human intellect.
I will set out from the assumption that dialectical inquiry is a refined performance of these abilities, applied to crucial but misunderstood and disputed matters—like the nature of justice or the role of beauty and knowledge in our lives.

Project name: DICTUM - Divide and Collect: Understanding Method in Plato

Eve RANNAMÄE from Estonia going to the UK

About Eve

My studies in archaeology started at the University of Tartu, Estonia, in 2004, and came to an end with a doctoral degree awarded in 2016. The main field of my research is zooarchaeology, that is, studying human culture and animal biology through the faunal remains from archaeological sites. One of the focus points of my work has been the consumption of animals in Iron Age and medieval Estonia, to which archaeogenetic information contributes in an extent. I am specifically interested in the history of sheep, including their domestication and husbandry, development of populations, and the role they had in human culture.

Animals and nature by and large constitute an important part of my life: when outside the office and lab, I love to hike in the woods, work with horses or travel to new places.

Nothing sheepish about this

Sheep are in our fairy tales and folklore perhaps more than any other creature. But Estonian scientist Eve Rannamäe thinks the origins of the humble sheep (Ovis aries) deserve more attention. They are, in fact, the most widely distributed domestic species worldwide and considered one of the 'big five' livestock alongside cattle, goats, pigs and chickens. The rich variety of breeds and shared history with humans makes them a fascinating, yet difficult species to study. While useful data exist on the history of domestic sheep, obtained from animal remains using 'traditional' methods (osteology and morphology), much less is known about the genetic make-up of ancient sheep.

Rannamäe, a Marie Skłodowska-Curie fellow in the UK, is leading the EU OVinE project which is training young researchers in state-of-the-art methods, including zooarchaeology and ancient genomics (a branch of molecular biology dealing with the structure, function, evolution, and mapping of genomes, DNA). The goal is to document the introduction, spread, and development of domestic sheep. OVinE plans to clarify the timing and origins of the first sheep in north-eastern Europe, deciphering the development and improvement of sheep populations from the Late Neolithic (c. 3000-1800 BC) through to the Modern period (AD 1800-1950). It also seeks to explore the affinities between ancient sheep populations and local indigenous breeds. The results could feed into better sheep welfare, breeding and farming conditions.

Project name: OVinE - Ovine origins and diversity in north-eastern Europe

Salla MARTTONEN-AROLA from Finland going to the UK

About Salla

Salla Marttonen-Arola received her D.Sc. (Technology) in Industrial Engineering and Management in 2013 at Lappeenranta University of Technology, Finland. In her research she is interested in finding solutions for optimal life cycle management of physical and other industrial assets (for example machines, equipment, and inventories) in supply chains. Her interests also include assessing the costs and value of data-based services related to the industrial assets.

In her free time she enjoys listening to music, playing volleyball, reading, and travelling

Finding value in small data, too

Lean management techniques, which work on the basis of doing more with less, are popular in resource-strapped businesses today. But the lean concept is a hard sell to Big Data advocates in companies focusing on better customer insight and value from more (not less) data. Finnish researcher Salla Marttonen-Arola is a lean maintenance data management specialist studying how smarter practices can be used to tackle the mountains of data and thus increase business value. Her project, LeaD4Value, is building data decision-support tools based on careful modelling and statistical analyses.

Results include a map of ways to exploit data, a process model, and a performance measurement system for lean maintenance data management. The tools can reveal missing or obsolete data, unnecessary data collection and maintenance, and ways to optimise business value through better data maintenance. Using these could keep manufacturing chains productive and help European industry to remain competitive. Marttonen-Arola is leading the project as a Marie Skłodowska-Curie fellow in the UK. Her multidisciplinary project combines aspects of business value management, reliability and maintenance engineering, and data sciences. Brought together, these different specialties offer long-term solutions to harnessing and, indeed, harvesting data for maximum business value.

Project name: LeaD4Value - Lean data management for maintenance value

Eric TREPO from France researching in France

About Eric

I am a MD/PhD researcher. I received my degrees from the Université Libre de Bruxelles, Brussels, Belgium. My research interests include using statistical and bioinformatic methods to study genetic susceptibility to liver diseases, especially cancer. I am currently a postdoc in the laboratory of functional genomics of solid tumors of the Université Paris Descartes, Paris, France.

My favourite leisure time activity is sport and more specifically fencing, a great way to loosen up. I also like hiking with some friends to discover new places and I am a fan of going to the movies.

Liver cancer has a genetic secret

Liver cancer, or hepatocellular carcinoma (HCC), is the second most common cause of cancer death worldwide and poses a special challenge to science. Exposure to environmental triggers, such as alcohol abuse or chronic infection, is no guarantee that an individual will develop HCC. Genetics may explain why, but this rare inherited defence mechanism is proving difficult to pin down, despite advances in genome sequencing and better understanding of exomes (the part of the genome likely to reveal the secret). Eric Trépo, a Marie Skłodowska-Curie fellow in France, wants to get to the bottom of this. His HEGEMONIC project is taking advantage of the extensive clinical and 'whole exome sequencing' (WES) data already available on common cancers, to locate rare variants in the genome implicated in HCC risk.

Trépo plans to compare the WES data from 350 liver cancer patients with a control group of around 70 000 compiled by the Exome Aggregation and UK10K consortia. The 'top signals' that most likely explain this genetic good fortune then need to be further sequenced and validated before any genotype-phenotype associations can be established, using the patient data for genetic clues. The genotype is basically the set of genes in our DNA responsible for a particular trait, while the phenotype is the physical characteristics of that trait. With more knowledge about the genetic workings of liver cancer, new biomarkers and treatments can be followed up.

Project name: HEGEMONIC - HEpatocellular carcinoma GErmline MutatiONs ImpaCt

Claudia RÖDL from Germany researching in Germany

About Claudia

Claudia Rödl's field of interest is theoretical solid-state physics with a focus on many-body excitations and theoretical spectroscopy. After a doctoral degree at the Friedrich-Schiller University Jena (Germany), Claudia spent several years as a postdoc at the Ecole polytechnique in Palaiseau (France). Back in Germany, she will investigate the impact of lattice excitations on excitons and develop tools for their theoretical description.

Claudia enjoys lunch discussions on the most obscure and remote subjects and spends a good share of her spare time on badminton courts.

Exciton-Phonon Coupling from First Principles

My MSCA project focuses on improving the theoretical description of excitons in solids. Excitons are many-body quantum phenomena that occur when a negatively charged electron is excited in a solid, e.g. by light in a photovoltaic absorption process, and couples to the positively charged hole that it leaves behind. The other electrons in the solid as well as the polarizable atomic lattice screen the interaction between electron and hole and have a crucial impact on the exciton's properties. I will investigate the coupling of excitons to the atomic lattice and develop software tools that rely on the first principles of quantum theory only and do not require empirical assumptions.

The ultimate goal is to predict the properties of excitons even for materials where no experimental data is available. My research will have an impact in various technologically highly relevant fields such as photovoltaics, LEDs, or modern display technologies.

Project name: EXPHON - Phonon Coupling from First Principles

Ioannis TSANAKAS from Greece going to Belgium

About Ioannis

I come from Greece, yet I proudly consider myself a European Citizen and Researcher, having lived already in Greece, France and Norway, performing Doctoral and Postdoctoral Research in a mobility context. I hold a BSc/MSc in Electrical and Computer Engineering, and a PhD in Production Engineering and Management. Over the last three years, I had the opportunity to deepen my experience, extent my interests and grow my ambitions in solar energy research, as Postdoctoral Researcher of CNRS and CEA-INES, in France. My research interests are particularly found in failure diagnostics, reliability and degradation mechanisms of photovoltaic modules and solar cells.

In my off-work time, I like travelling, photography, nature and hiking.

Here comes the sun… but is it enough?

Solar panels are a mature technology, powering houses and even feeding energy back to grids all over the world. This sustainable, clean source of power is key to hitting renewable energy targets in the EU and elsewhere. But there is a problem… reliability. Not enough is known about the predictability of photovoltaic (PV) yield, how much energy you get from the panels, and subsequent electricity cost reduction. The latest models cannot predict long-term performance taking into consideration factors such as degradation and failure rates.

Greek scientist Ioannis Tsanakas, a Marie Skłodowska-Curie fellow in Belgium, is leading research within the EU PVMINDS project. He plans to develop the first bottom-up reliability model for selected PV failure/degradation modes. From that, he intends to develop an innovative protocol on designing for reliability. In Belgium, Tsanakas is able to apply his PV field diagnostics and reliability skills, and to use advanced tools for modelling energy yields. He also benefits from multidisciplinary training in a respected industrial research centre.

Project name: PVMINDS - Bottom-up PV module energy yield and integrated reliability model for site-specific design optimization

István MOLNÁR from Hungary going to the Czech Republic

About István

I am married and father of two girls (Zsófia 19, Boglárka 12). In my free time I like fishing and gardening.

My research focuses on structural genomics of wild wheats (Aegilops). Using chromosome-based approaches, I am currently developing new marker systems and genetic maps for Aegilops species for use in association genetics and introgression breeding. I am also interested in identifying genomic regions linked to leaf rust resistance, tolerance to heat and drought and to nutritional quality of wild gene source species. My work seeks to translate structural genomic information into cost-effective selection of wheat-Aegilops introgression lines.

Getting to know wheat's wild cousins

Bread is a key part of the European diet, and wheat (Triticum aestivum) is an important ingredient. Good harvests are essential, but wheat crops face threats from disease and the changing environment. The hunt goes on for new wheat strains that are resilient to diseases like leaf rust, more tolerant to non-biological stress (high rains, intense heat, etc.) and high in nutritional quality. For Hungarian scientist István Molnár, who leads the AEGILWHEAT project, wild genetic strains could hold the answer. But poor knowledge of the genomes of wild wheat relatives, and inefficient testing methods have held back this promising line of research.

Molnár, a Marie Skłodowska-Curie fellow in the Czech Republic, is looking to combine skills gained in molecular genetics, genomics and bioinformatics to develop innovative genomic (using knowledge of the genetic make-up) approaches to speed up his wheat pre-breeding programmes in Hungary. AEGILWHEAT expects to deliver valuable information to geneticists and breeders on chromosome structure and wheat evolution, as well as provide molecular tools and markers to support development of cost-effective, stress- and disease-resistant wild wheat hybrids.

Project name: AEGILWHEAT - Widening gene pool of bread wheat by hybridization with Aegilops biuncialis supported by advanced genetic and chromosome genomic approaches

Ruairí BRANNIGAN from Ireland researching in Ireland

About Ruairí

Ruairí completed his undergraduate studies at DCU in 2011 receiving a 1st class honours in Chemical and Pharmaceutical Studies. In 2011 he joined the Dove group at the University of Warwick to commence his PhD. studies into the synthesis of biodegradable elastomers, obtaining his doctorate in 2015. After working with Prof. Khutoryanskiy at the University of Reading, he has joined the Heise group at RCSI to investigate the synthesis of novel biomaterials. Ruairí is interested in bridging the gap between synthetic chemistry, materials science and biomedical applications such as tissue regeneration, degradable implants, advanced drug delivery systems etc.

Outside of research Ruairí very interested in music and enjoys playing guitar in his spare time. He also has a keen interest in sport and enjoys watching and playing hurling, a national sport in Ireland, and rugby.

Creating next generation medical devices

Irish scientist Ruairi Brannigan is using his Marie Skłodowska-Curie Fellowship grant to identify and develop new biomaterials that can be used in the manufacture of next-generation medical devices. Biologically compatible materials that can be engineered to treat, repair or replace tissue could provide medical professionals with affordable and effective tools, and help to ease the financial burden on healthcare delivery. Brannigan's focus will be on bio-absorbable and biocompatible polymeric biomaterials, which can be broken down and removed after they have served their function. Specific applications include surgical sutures and implants; after the devices have served their function, they simply degrade. There is no need for further surgery, which leads to cost savings and greater patient comfort.

To achieve all of this, Brannigan's project will combine polymer chemistry with biomaterial science. This will enable him to deliver a new class of ester-peptide hybrid material, fully based on natural raw materials. Brannigan then intends to demonstrate the feasibility of processing this new material into a biomedical scaffold for tissue engineering. This project will help to advance European medical research in a promising field, and provide Brannigan with a world-class environment from which to launch his scientific career.

Project name: EsterPep - Polyester/Polypeptide hybrid biomaterials for biomedical scaffolds

Dalia DE SANTIS from Italy going to the USA

About Dalia

I will start saying that I love nature, both for its beauty and the soothing effect that has on me mood when walking, hiking or even driving. I am also incredibly fascinated by the miracle represented by our brain and us as human beings. This great interest brought me closer to research and finally to enthusiastically working to discover more and more about the incredible potentialities of our nervous system in reshaping itself to comply with our changing body, especially after injuries.

I have always loved art and playing and listening to almost any kind of music. After moving to Chicago, my passion for jazz and blues genres has grown and brought me to start swing dancing. Nevertheless, my life would be incomplete without the company of my amazing friends.

Retraining the brain after injury

Can the brain be "retrained" to recover sensorimotor function after a severe neck or cervical spinal cord injury (SCI)? Marie Skłodowska-Curie fellow Dalia De Santis intends to find out. The Italian scientist wants to know the extent to which pathways in the brain, interrupted by SCI, can be bypassed through progressive rehabilitation. Her project will help doctors understand the extent to which motor skill re-learning can induce changes in the central nervous system, and whether or not new connections made in the brain can lead to functional recovery. De Santis will assess SCI patients practising upper-body control and measure movement in the arms and shoulders.

To do this, she will use a Body Machine Interface (BMI), which will allows users to interact with various external virtual devices (such as a virtual wheelchair) as well as physical devices (such as a robotic arm or a robot assistant). The BMI will encourage and measure the contribution of specific muscles, and is intended to strengthen residual motor abilities. De Santis hopes to show that this technique is highly effective in identifying changes in the nervous system and the brain – and ultimately contributing to rehabilitation.

Project name: REBoT - Re-Empower the BOdy after Tetraplegia

Alesja IVANOVA from Latvia going to the United Kingdom

About Alesja

The interplay between different disciplines has always fascinated me, with the intercept between fields giving rise to many exciting new research directions. Currently I am working on bio-inspired photonic materials at the University of Cambridge in the Vignolini group. I completed my PhD at LMU Munich, where I developed nanomaterials for photovoltaics.

Outside of research, I enjoy modern dance, which by combining aspects of classical ballet, acrobatics and theatre, continues my passion of merging disciplines in new and unexpected ways!

Bio-INspired GOld metamaterials

The development of nanomaterials has opened new opportunities for designing novel devices in the fields of optics, energy conversion and medicine. Although significant progress has been achieved in this emerging area, fabrication of nanoscale materials by using sustainable and scalable approaches remains a challenge. Cellulose, sourced primarily from wood, is the most abundant polymer in the world. Taking inspiration from nature, my research focuses on developing new functional materials from cellulose. In particular, I exploit the self-organization of cellulose nanocrystals extracted from plants. Such crystals can assemble into colourful photonic structures, which opens new horizons for designing bio-inspired optical materials.

Project name: Bio-INspired GOld metamaterials

Rasuole LUKOSE from Lithuania researching in Lithuania

About Rasuole

Dr Rasuole Lukose received an M.Sc degree in Inorganic Chemistry in 2006 from the University of Vilnius, Lithuania. The PhD degree in Chemistry was obtained from the Humboldt University, Germany in 2010, in the field of synthesis and developments of functional thin oxide films. The experimental work was performed at the Institute of Crystal Growth (IKZ) in Berlin. After parental leave she joined the National Centre of Physical Sciences and Technology, Vilnius, Lithuania, and is currently involved in several R&D projects of magnetic materials and their practical applications.

During her free time, she likes reading books, going to theatre or felting. With her family, they typically go for skiing during winter holidays and they usually spent some time near the sea in the summer time.

Sensing new possibilities in graphene

Lithuanian scientist Rasuole Lukose is developing a new innovative way of combining graphene – a carbon sheet just one atom thick – and manganite layers in order to manufacture highly sensitive sensors. These sensors will be used to measure pulsed magnetic fields, opening up important research capabilities in fields such as materials science. Magnetic field sensors are also used in medical and biomedical applications such as MRI and molecule tagging. While graphene offers manufacturers amazing strength, flexibility and electrical conductivity, a key barrier to transferring graphene-based innovations from the lab to the market has been a lack of large-scale, cost-effective production techniques.

With the help of a Marie Skłodowska-Curie Fellowship grant, Lukose aims to address this by developing new methods for transferring single layers of graphene onto the top of manganite layers. This will increase the magnetoresistance of the new material, believes Lukose. Lukose will carry out a range of investigations to determine the right composition of materials and the crystallinity of the films, and then assess the electrical and magnetic properties of the new material.

Project name: GRAMAS - Graphene-Manganite Nanostructures for Novel Pulsed Magnetic Field Sensors

Michelle LEGER from Luxembourg going to Spain

About Michelle

I grew up in Luxembourg, and completed a B.Sc. at the University of York (UK) and an M.Sc. at the University of British Columbia (Canada), before embarking on a PhD under the supervision of Andrew Roger at Dalhousie University (Canada). For my postdoctoral research, I chose to join the Multicellgenome lab, under the direction of Iñaki Ruiz-Trillo, at the Institut de Biologia Evolutiva (Spain).

My research interests lie in microbial eukaryotic diversity and evolution, particularly in mitochondrial evolution and the origins of multicellularity.

The secrets of life in cells

Luxembourg researcher Michelle Leger is using a Marie Skłodowska-Curie Fellowship grant to delve into our biological past to better understand how complex, multi-celled animals evolved from single-celled organisms. She will do this by focusing on programmed cell death (PCD), a natural process that occurs in multicellular organisms such as us, and is essential to regulating normal development and responding to cell damage. Leger believes that PCD mechanisms in our unicellular ancestors were probably critical to the eventual emergence of all the complex multicellular animals we see around us today. What we don't know however is whether significant changes in these PCD mechanisms took place, or how significant these changes might have been to the eventual creation of more complex life.

This project will provide the first comprehensive reconstruction of programmed cell death machinery across a study group that includes animals and their unicellular relatives. Components of PCD machinery already present in the unicellular ancestor of animals will be identified, and the functional and regulatory changes that they might have undergone recorded. Leger is confident that her findings will be of interest not only to evolutionary biologists, but also to microbiologists and to cell and developmental biologists.

Project name: HoloCellDeath - Origins and evolution of programmed cell death machinery during the emergence of animal multicellularity

Marija SCIBERRAS from Malta going to Spain

About Marija

Originally from Malta, I have been living and working as a researcher in marine ecology in the UK for the last 7 years. My research mainly focusses on gaining a quantitative understanding of the effects of disturbance (in particular fishing) on the biodiversity and functioning of marine benthic communities, and on assessing management tools for mitigating these effects. To date, most of my work has been in temperate waters. My Marie-Curie project is a great opportunity for me to expand my current knowledge of marine ecosystems to include others in warmer waters; seagrass beds in the Mediterranean Sea.

Other than marine research, I am also passionate about rock climbing, hill walking and SCUBA diving.

Healthy meadows below the sea

Maltese scientist Marija Sciberras has a particular interest in seagrass meadows. These habitats found around coastal waters are hugely beneficial to fisheries, as they provide rich feeding areas capable of supporting a wide diversity of fish. They also play a vital role in maintaining a sustainable marine environment. Worryingly however, these habitats have been in decline worldwide for years. Scientists do not at present have the data to fully understand how this will impact fisheries and the marine environment as a whole, but Sciberras intends to find out.

A Marie Skłodowska-Curie Fellowship grant will enable her to study seagrass meadows off Spain's Balearic Islands. She will assess the economic as well as environmental impact of seagrass meadow decline, and focus in particular on the roles these meadows play as nurseries for juvenile fish, and in sustaining adult fish populations. Findings from this project will be used to strengthen the conservation and management of these habitats across Europe, and to support implementation of the EU's Marine Strategy Framework Directive, intended to achieve Good Environmental Status in all waters across EU countries by 2020.

Project name: PIONEER - The effect of seagrass bed habitat quality on selected ecosystem services

Guusje COLLIN from the Netherlands going to the USA

About Guusje

I have a long-standing interest in the brain, particularly in disorders of the brain that interfere with behaviour and cognition. As a medical doctor, I combine research with clinical work as a resident in psychiatry. I am most fascinated by disorders on the borderline between psychiatry and neurology. Increased understanding of the neurobiology of these illnesses will contribute to better treatment in the future. With the help of the MSCA, my current project allows me to pursue new research skills that will support my development as a neuroscientist and psychiatrist.

I will be moving to Boston with my boyfriend Rik. We both love (American) sports, and will probably catch more than a couple of Boston Red Sox and Celtics games while in Boston.I also enjoy hiking, travel, movies, reading, spending time with friends/family.

How our brains are wired

Schizophrenia affects how a person thinks, feels and behaves. Although not as common as some other mental disorders, the symptoms can be very disabling, and because the causes are still unknown, treatments tend to focus on simply eliminating the symptoms. Dutch researcher Guusje Collin wants to explore whether there are certain brain processes that could help medical professionals identify the onset of schizophrenia earlier. Scientists already know that changes in behaviour can precede a patient's first psychotic episode by many years, but the exact mechanisms behind this remain unknown. Filling this knowledge gap could help scientists to develop more effective treatments.

A Marie Skłodowska-Curie Fellowship will provide Collin with access to a unique sample of adolescents and young adults with early signs of impending psychosis. Collin will study the brain network architecture of these young people to see if early identifiers of emerging psychosis can be found. This sample has been collected as part of ongoing collaborative research between Harvard/MIT in the US and the Shanghai Mental Health Centre in China.

Project name: PRE-PSYCH - The Prelude to Psychosis: Brain network analysis in emerging schizophrenia

Lidia TRUSILEWICZ from Poland continuing her career in Poland

About Lidia

I defended my doctorate with honors (cum laude) at the Technical University of Madrid (2014) on the basis of the dissertation: "Determination of reactive alumina content from pozzolanic natural and artificial additions". For over 10 years I have conducted R&D activities in several prestigious Spanish research centers. By now, my interests include mineral additions, active (pozzolanic and blast surface slag) and no active (fillers), and their direct/indirect influence in mechanical-resistant and durable behavior in front of sulfates, chlorides, sea water attack, hydration heat and rheological behavior (durability understood as wider concept) when mixing, transport, spill, placement and start up in concretes and mortars.

I like to spend my leisure time doing yoga, reading, practicing trekking.

Building value from waste

A circular economy is all about identifying and exploiting value in what society might typically see as a waste product. Polish scientist Lidia Trusilewicz hopes to tap into this concept by using sewage sludge from municipal water treatment plants as a raw material in building products. Through a Marie Skłodowska-Curie Fellowship, Trusilewicz plans to assess the potential of organic and inorganic waste matter in making cement, and identify the most effective processes for extracting the right ingredients. She hopes to demonstrate that waste streams converted into by-products can be used to manufacture concrete and mortar that deliver exactly the same properties as conventional cement products.

Final building products will be tested for quality and consistency, while an impact assessment will weigh legal, economic, market and environmental aspects. The concept would create win-win situation for both the economy and environment, creating new revenue streams for businesses while reducing the need for waste disposal. Trusilewicz hopes that his research will help to boost regional work programmes in the Central Poland region through promoting better use of waste materials.

Project name: Sewage Sludge in PC - Management of Municipal Water Waste Treatment Plants Potential by-Products of Sewage Sludge Ash type, as Active or non-Active Additions to Portland Cement-based Binders

Nuno CAMBOA from Portugal going to Italy

About Nuno

I graduated in Biology from the University of Porto, Portugal. Afterwards I joined the GABBA PhD program that allowed me to move to University of California, San Diego to study cardiovascular biology.

In San Diego I met my girlfriend, a MSCA fellow from Italy. Importantly, the MSCA fellowship I got awarded will allow us to move back to Europe together.My number one hobby is photography and in my free time I enjoy hanging out with friends, traveling, going to the beach, watching movies, as well as watching and playing football and tennis.

Transcriptional regulation by TBX18 in vascular development and disease

All cells in our body have a similar genome and the fate adopted by any given cell is dictated by the combination of genes it expresses. Transcription factors are proteins that function as major regulators of gene expression networks, dictating what genes get activated and what genes get silenced. We identified a transcription factor that is selectively expressed in cells of the wall of blood vessels. Ablation of this transcription factor in the blood vessels of mice results in dysfunctional vascular networks and lethality.

The MSCA fellowship will allow me to study gene networks regulated by this transcription factor and assess its potential involvement in human aneurysmal disease.

Project name: TBX18 - Transcriptional regulation by TBX18 in vascular development and disease

Elena OLARIU from Romania going to the UK

About Elena

My passion lies in improving people's health and well-being, with special interest in developing effective and accurate ways to measure self-reported health. During my doctoral studies in public health, I worked in the field of mental health, developing two questionnaires designed to improve doctors' detection levels of depression and anxiety disorders. With a background in pharmacy, I have work experience in industry, academia and consultancy. Most recently, I have worked for a research consultancy conducting systematic reviews of drugs efficacy and general burden of disease studies.

In my spare time I enjoy traveling, learning foreign languages and baking for food markets.

What does 'quality of life' really mean for vulnerable people?

Romanian social scientist Elena Olariu will use a Marie Skłodowska-Curie Fellowship grant to assess a wide range of data on the health and quality of life experienced by Romania's Roma minority. Achieving an accurate assessment of wellbeing and quality of life is crucial information decision makers can use to understand and solve the challenges that minorities such as the Roma face. For example, Olariu's findings could eventually feed into policy on healthcare cost reimbursement and better public health approaches to improve the quality of life for vulnerable groups such as the Roma. She plans to identify their specific health and economic needs by applying an approach that goes beyond traditional measurements of population health and life expectancy to include physical, mental, emotional and social well-being.

The approach is increasingly used by social scientists to deliver accurate assessments of a community's needs that can then inform policymaking. People who form a representative sample of the Romanian general population and Roma minority will be recruited for face-to-face interviews. The fellowship means that Olariu will be able to study at Newcastle University in the UK, where she will benefit from expertise on health economics. She will also take up a three-month secondment at the EuroQoL foundation. Both placements will help her develop the skills needed to undertake her fieldwork.

Project name: QoLRO - Measuring Quality of Life in the general population and Roma minority in Romania: implications for health policies and economic evaluations

Andrej ONDRACKA from Slovenia going to Spain

About Andrej

Born and educated in Slovenia, Andrej obtained his PhD in cell biology and molecular genetics from Rockefeller University in New York City in 2015. After his PhD, he became interested in evolution, and is currently pursuing his postdoctoral studies at the Institute for Evolutionary Biology in Barcelona, and has just obtained the MSCA fellowship to continue working on this project for two more years.

In his free time, Andrej has traveled extensively around the world, and he enjoys playing beachvolley on summer evenings after work.

Origins of complex life ...revealed?

How exactly did animals evolve from single-cell organisms into complex creatures capable of social interaction, language and even technological prowess? This is not just a matter of scientific curiosity, but a fundamental biological question about what underpins life itself. Through an EU-funded Marie Skłodowska-Curie individual fellowship, Slovenian scientist Andrej Ondracka aims to fill some of the gaps in our understanding. To do this, he is focusing on the role of genome regulation, a hallmark of all animals. This process plays a crucial role in determining different cell types, and is fundamental to creating complex life.

What Ondracka wants to know is this: were genome regulatory mechanisms already present in our unicellular ancestors? And if not, how on earth did they come about? To seek answers, Ondracka is going to Spain to study one of the closest unicellular relatives of animals, a Creolimax fragrantissima. This single-cell organism can easily be grown in the lab, and will help Ondracka develop genome editing tools that enable him to delve into our ancient past. His data will provide fascinating and perhaps significant insights into the nature of the regulatory genome within the very last unicellular ancestor of animals.

Project name: PREMETAZOAEPIGENOME - The role of genome regulation in the origin of animals

Marieta CAGANOVA from Slovakia going to Germany

About Marieta

(A woman, scientist, mother, cook, eater, reader, traveller, snowboarder and sleeper)

I was born in Slovakia, where it all started: as a 19-year-old student of Biology at Comenius University I have joined a group of fellow students and science enthusiasts at the Medical School. I spent my free time doing first experiments and during the years my interest in science and experimentation only grew. I finished University and moved to Milano, Italy, where I fell in love with B cell immunology and got my PhD degree. After such an intense start, me and Immunology decided to have a break, only to find out four years later that we missed each other.

So to get back, I "knocked on the door" of Prof. K. Rajewsky, and shortly my postdoc experience as a Marie Curie alumnus in Berlin will start. Me and Immunology back together

Why B cell behaviour matters

Understanding better how our immune system works helps medical professionals develop new treatments to fight infections and diseases. Nowhere is this more crucial than the fight against cancer. Marieta Caganova from Slovakia is contributing to this endeavour through her EU-funded Marie Skłodowska-Curie individual fellowship, which focuses on the behaviour of B cells. These are a specialised type of lymphocyte (or white blood cell), which play a crucial role in the functioning of our immune system. They work by recognising foreign bodies like viruses and bacteria and then producing antibodies to eliminate them.

Caganova's project has taken her to Germany, where she will focus in particular on B cell receptors (or BCRs). It is through the BCR that these cells recognise foreign antigens. She wants to understand why B cells without BCRs are eliminated, and suggests that one possible reason could be competition with other cells. Another factor could be the existence of a "danger signal" initiated in a B cell upon BCR removal, which then causes the cell to disappear. Her pioneering work in this field could have implications in particular for the treatment of lymphoma, a group of blood cell tumours that develop from lymphocytes.

Project name: BCRdangerCOMPETITION - The role of danger signal and cellular competition in the elimination of B cells lacking the B cell receptor

Francisco CORNEJO from Spain going to France

About Francisco

I would describe myself as a very lively person. In the last years I have been in between two passions, science and music. Particularly, on the musical side, I have been delving into what I consider the "Spanish jazz" or, what is the same, Flamenco music. In this sense, I am learning (or, at least, trying to…) the different flamenco disciplines: the singing, the guitar playing, and, lately, the dancing.

If I had not chosen science as a professional career, I would have invested my time in becoming a professional musician.

Exploring the mechanisms underlying the evolution of plastids

On the scientific side I am interested in how species work together to succeed in nature. One of the major innovations in nature was postulated by Linn Margulis in the Theory of Endosymbiosis, which posits that plastids and mitochondria originated from bacterial cells living within eukaryotes. However, the underlying processes remain difficult to address because they occur over geological time scales. Of the few known associations, those involving nitrogen-fixing bacteria are essential in global biogeochemical cycles as nitrogen acts as a limiting nutrient in environmental systems such as the world's oceans.

I will explore a symbiotic system formed by a nitrogen-fixing cyanobacterium living within a single-celled alga. The parallelism between this symbiosis and the one that originated the plastids makes this system a unique model to gain insight into the evolution of plastids, and further poses the question of whether we are currently witnessing an evolutionary process that will eventually lead to the establishment of a nitrogen fixing organelle.

Project name: UCYN2PLAS - Exploring the mechanisms underlying the evolution of plastids through the study of an unusual nitrogen-fixing symbiosis

Mattias BJÖRNMALM from Sweden going to the UK

About Mattias

Mattias Björnmalm grew up in Stockholm, Sweden, before going to Lund University to study bioengineering and nanoscience. In 2013 he moved to Australia to pursue a PhD in chemical and biomolecular engineering at the University of Melbourne, which he completed in 2016. He is currently a postdoctoral researcher, and his research is focused on using strategies from science and engineering to develop nanomaterials for biomedical applications.

When he is not busy in the lab he likes engaging in discussion and debate–about anything and everything, and he can be reached via his Twitter handle @bearore.

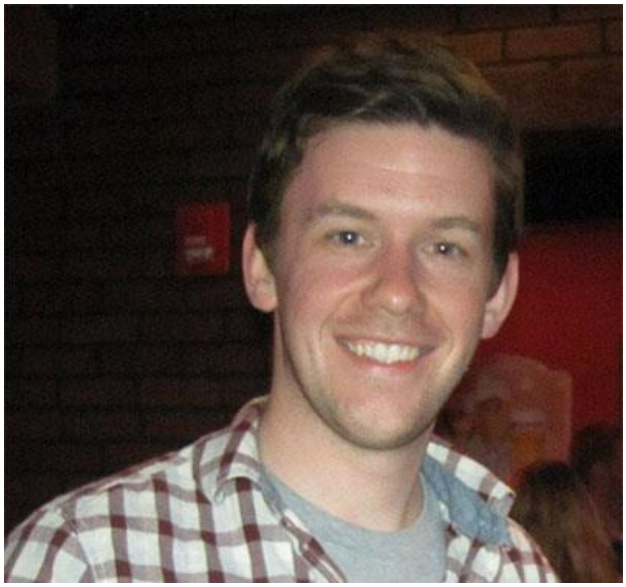
Getting closer to solving the riddle of incurable diseases

Swedish scientist and Marie Skłodowska-Curie fellow Mattias Bjornmalm is developing a technique to allow scientists to observe living cells in 3D at the nanoscale, without destroying them. It's a difficult task. Current nanoscale 3D techniques tend to destroy the cells. By observing biological processes at this scale — a nanometre is a billionth of a metre — scientists seek medical breakthroughs that improve people's health, provide cures for currently incurable diseases, and save lives.

Bjornmalm will work as part of the qBioNano project under the supervision of Prof Molly Stevens at Imperial College London in the UK. Stevens runs a world-class interdisciplinary biomaterials team with extensive experience in cell and tissue biology. Her team's recent efforts have focused on using nanoparticles to enable the most sensitive detection of cellular process to date with the aim of applying the techniques to diseases such as cancer.

Project name: qBioNano - Quantifying bio-nano interactions of nanoparticles through microfluidic live cell Raman spectroscopy

David PARKER from the UK going to Denmark



About David

Since graduating with a PhD in War Studies from King's College London in 2016, I have combined a Postdoctoral Research Associate and Teaching Fellow position at King's College London with delivery of the UK government's Prevent Strategy (counter-radicalisation) in West London. My research, as part of the EU funded 'Preventing, Interdicting and Mitigating Extremist Events' (PRIME), has focused on analysing and designing communication measures and requirements to respond to the challenge of lone-actor terrorism in Europe.

In my free time I enjoy marathon running, live music and (attempting) to play football.

Sharpening anti-radicalisation strategies

While anti-radicalisation communication strategies have been rolled out across Europe, there is uncertainty over how impactful these have been, or what should be done to make them more effective. Given that Europe is on a state of high alert, this is something that needs to be addressed. Through a Marie Skłodowska-Curie-funded project, British social scientist David Parker is analysing and comparing anti-radicalisation strategies in Denmark and the UK, with the ultimate aim of delivering recommendations on how communications can be improved and how individuals vulnerable to radicalisation can be more effectively reached.

This project will therefore make a valuable contribution to an underexplored but hugely relevant and evolving area of research. It has also been widely recognised that Europe-wide coordination of anti-radicalisation messages has not always been effective, and this cross-border project aims to address this as well. Parker aims to achieve his objectives by accessing new primary data in both Denmark and the UK, carrying out interviews and conducting online surveys. In this way he hopes to gain a deeper and more nuanced understanding of why certain counter-terrorism communications are not as effective as they could be.

Project name: CPR - A cross-country comparison of Communications designed to Prevent Radicalisation

Ximena ALARCÓN from Colombia going to Norway

About Ximena

Dr Ximena Alarcón is a sound artist and researcher interested in listening to interstitial spaces, such as dreams, underground transportation, and the 'in-between' space in the context of migration. Her work focuses on the creation of telematic sonic performances and networked environments to expand our sense of place, using field recordings and spoken word. She received a Leverhulme Trust Early Career Fellowship 2007-2009 (IOCT- DMU), and a Deep Listening Certificate in 2012. Since 2011 she has been a Research Fellow at CRiSAP, University of the Arts London. She has been awarded with the Marie Sklodowska Curie Individual Fellowship 2017-2019 to develop the project INTIMAL at the University of Oslo.

As part of her Deep Listening practice Ximena has engaged since 2013 in Elemental Chi Kung practice, which she enjoys practicing and learning in her free time.

Interfaces for Relational Listening

In the European context of migration and diasporas, and at the intersection of sound art, music cognition, psychology and human-computer interaction, this project will develop INTIMAL: a novel physical-virtual "embodied system" for relational listening. Through the artistic practice of telematic sonic performance this system will interconnect people's bodily motion and voice with their memories and dreams of distant locations. As a case study, nine Colombian migrant women in Europe will test INTIMAL in their listening experiences as a catalyst for healing and reconciliation within the context of Colombian post-conflict and peace building. At the University of Oslo the researcher will gain artistic, conceptual and technological skills, reaching academic and non-academic audiences, opening career opportunities for her unique profile for the design of interfaces for relational listening, within a variety of dislocation contexts.

Project name: INTIMAL - Interfaces for Relational Listening: body, telematics, memory, migration

Nancy COULING from New Zealand going to the Netherlands

About Nancy

I am a New Zealand architect who discovered the richness, history & diversity of European architecture through a post-grad scholarship in Venice after NZ practice experience. Curiosity and ambition then led me to work in Italy, Germany and briefly in Hong Kong, combining teaching and practice, before a family move to Switzerland where I completed a late-career PhD at the EPFL.

I love discovering new places through travel, follow the arts and swim or row whenever I can. In between I am slowly renovating an historic house with our group of owners and our family way to unwind is canoeing and camping around rivers and lakes in Europe and further afield.

A new way of looking at oceans

With the help of a Marie Skłodowska-Curie Fellowship grant, New Zealander Nancy Couling will conduct research from the Netherlands on current urbanisation processes in the North Sea. An architect by training, Couling's cutting-edge research could form the basis for the sustainable development of Europe's ocean regions within an urban context. She aims to provide a full analysis of the potential of the North Sea region, including its role as a major shipping route. Her research will take into account activities on both land and sea.

The world's oceans and seas play host to an enormous amount of economic activity, from fisheries and offshore drilling through to the global transportation of goods. As these activities increase, it becomes increasing important for urban planners to ensure coastal and maritime development is sustainable. Couling's destination – the Netherlands – is a highly urbanised country that has reclaimed land from the sea and therefore provides an excellent research environment.

Project name: OCEANURB - The unseen spaces of extended urbanization in the North Sea