

Academic Women Now:

experiences of mid-career
academic women in Scotland



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experiences of
mid-career academic women
in Scotland

edited by

Aileen Fyfe, Ineke De Moortel

and Sharon Ashbrook

2016

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Dame Jocelyn-Bell Burnell**

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Academic Women Now

The RSE Young Academy of Scotland was founded in 2011, as part of the European (and now global) movement of Young Academies. It is currently (2016) the only such academy in the UK. The 151 members of the Young Academy have won their places in open competitions, run by the Royal Society of Edinburgh, to seek out able and innovative young academics, entrepreneurs and professionals to address the most challenging issues facing society in Scotland and beyond. We were among the founding members, and one of the things we have especially enjoyed about our years in the Young Academy has been the opportunity to get to know people from other disciplines (and professions). Like the Royal Society of Edinburgh, the Young Academy covers the full range of academic disciplines. At a time when the organisational structures of our universities divide us into faculties of arts, social sciences, life sciences, engineering and so forth, the chance to talk to academics from other fields is increasingly rare, and consequently valuable.

Something that has struck us again and again is that there are many things that we individually regard as unproblematically 'normal' – from the organisation of teaching to the uptake of sabbatical leave and practices of research collaboration – that turn out to work quite differently in other people's departments, even within the same university. One of these is the attention paid to women's career paths. In the sciences, thanks to years of campaigning by various groups and to such schemes as Athena SWAN and Juno, there is widespread awareness that many talents are still left untapped, and that there is a leaky pipeline and too few senior women. This is often seen as a science problem, but it doesn't take many conversations over coffee to realise that many of the issues identified as preventing women's career progression in science departments are just as much of an issue in humanities and social sciences.

One might wonder why women in other disciplines did not self-organise until much more recently. True, there seemed to be more women in the arts, humanities and social sciences disciplines, so maybe it did not seem so necessary. But the perception of the humanities and social sciences as much more female-friendly has led to (mistaken) complacency. It is true that, in 2014-15, there was a higher proportion of women in humanities (45%) and social sciences (42%) disciplines than in the natural sciences (30%) or engineering (17%); but the only fields where women academics outnumber men are in medical sciences and education. And the continuing small numbers of senior women in all fields shows that the sciences are not the only fields with a leaky or, perhaps, blocked pipeline. [Source: HESA].

We thought it would be interesting to compare the varied experiences and trajectories of the academic women in the Young Academy. We are grateful to our thirty colleagues who agreed to help us spot the differences – if there are any – between careers in the arts and the sciences. The women showcased here are all, by definition, successful: to be members of the Young Academy they had to show both academic excellence and a commitment to engaging with wider social issues. They may all be described as mid-career women, having passed the PhD years but (although a few are now professors) not yet seeing themselves as senior. The good gender balance in the Young Academy may be a sign that there are plenty of successful women academics in our generation; or it may be an effect of the open application process (in contrast to the traditional nomination process used in the senior academies). The fact that we are all close in age (75% born between 1974 and 1979) means that our career paths ought to be comparable.

We asked each woman to tell us about her research, about the career challenges she has faced and the things she felt have enabled her success. We also asked them to tell us certain key dates from their careers – such as PhD graduation, and job changes and promotions. We have used these to construct timelines, to show at a glance how often our women have moved jobs (and, in many cases, countries), and the pattern of their progress up the career ladder. We also asked for basic information to illuminate their family situation: birth of any children, and whether a partner was affected by moving institutions to follow the job market. To this relatively standard set of entries, we added entries for what our women considered as their first significant service activities (to both institution and wider discipline) and their first major grants, and asked them to select four further career milestones of their own choice. These milestones include books and Nature papers; lots of prizes; and a variety of grants and fellowships. Over the course of this project, careers kept moving, more grants came in, more promotions arrived, and some people moved institutions. What you see on the timelines is the situation at the end of 2015.

A few things caught our attention, though perhaps others will catch yours...

- Our PhD graduation dates are less tightly clustered than our birth dates. And thus, since a decade (or not) of post-PhD experience makes a significant difference during the early to mid-career phase, our group ranges from 6 lecturers to 7 professors, as well as everyone in between.
- The professors have all held PhDs since at least 2005; of the other women who have held PhDs that long, almost all have been promoted to either senior lecturer or reader. (This is hardly surprising, given the selection criteria for the YAS...)

- We noticed a lot of moves, including international moves, in the timelines. Only 10 of our women have made their careers entirely in Britain. The rest include 14 migrants (predominantly from the EU and North America); and 7 Britons who have spent some time abroad.
- Two-thirds of our women supplied some details about the personal relationships affected by their institutional moves; and we notice that for two-thirds of those, their partners managed to follow them, rather than vice versa.
- Two-thirds of our women have children; none have more than two children (yet); and the children are all at nursery and primary school. In other words, the mothers in our group are still in the midst of the busy, time-consuming years of child rearing.
- Of the professors in our group, over two-thirds have children; in other words, being a mother doesn't necessarily hold you back from promotion.
- 15 of our women have held long-term (5+ years) personal fellowships, such as a Royal Society URF or an RCUK fellowship, early in their careers. We suspect that these fellowships have been extremely important in enabling those women to gain permanent positions, establish their research teams and, in some cases, start their families. We notice that no one in the humanities has had such fellowships (unsurprisingly, because AHRC, ESRC and the British Academy focus their fellowship funding on two- or three-year early career fellowships, and on teaching-relief for established academics). We suggest this is something that ought to be investigated further.

A further thing that caught our attention while undertaking this project was how very busy we all are. This may not be apparent from the pages of the brochure, but it was apparent to us as we communicated with the women featured here; we were on the receiving end of out-of-office email messages which revealed the vast amount of travel (to academic conferences, to grants committees, to society committees) being undertaken and the huge array of different activities – not well described by that typical shorthand 'research, teaching and admin' – involved in being an academic now. For ourselves, we had to block out days in our diaries two months in advance to get the initial editing done; and it took us several weeks to find a mutually free time when we could get together to have this photo taken. We thought this project could be done over cups of coffee, buttered toast and the occasional glass of wine in the evenings. It sometimes was, but more often, it was done asynchronously, virtually, with one of us located hundreds, if not thousands, of miles from our home institution. Such is academic life now.

We realise this booklet does not feature sufficient women for a meaningful statistical analysis. What it can do, we hope, is act as a talking point and an inspiration for further discussion and study about the career progression of women in different disciplines across the entire academy. In the Young Academy, we have had the opportunity to get to know colleagues from other disciplines. We have realised how often our assumptions about the Other (what scientists think about how life works in the humanities disciplines, and what humanists think they know about what it's like to be a scientist) are flawed. The Athena SWAN programme is currently being extended to the arts, humanities and social sciences. It will be interesting to see what it reveals. And we would encourage those who have already been through it, to share their experiences with their colleagues in other fields who are just embarking on the process.

We also offer this booklet to those at the start of their academic careers. We know there are young women of all disciplines who still fear that an academic career is not for them: we have met them at discussion events and we mentor some of them. This booklet is not about the most eminent and successful women academics, who, almost by definition, began their careers many decades ago. This booklet is about women academics in the midst of their diverse careers now. This is what academia looks like now.

Aileen Fyfe, Ineke De Moortel and Sharon Ashbrook
University of St Andrews, 5 May 2016



Aileen Fyfe

History, University of St Andrews

What is your research about?

I study the ways in which scientific knowledge has been communicated and popularised, particularly through books and journals. Until recently, I focused on the nineteenth century, but I am now leading a research project investigating the history of the scientific journal from 1665 to the present day.



What do you think was crucial in making your career successful?

I was fortunate to be well-networked early in my career. This was partly down to where I did my PhD, and to my supervisor's connections; but it was also a result of serving on my learned society's council as a postgraduate. Some of these contacts have led to research collaborations, and all have been a fantastic source of informal advice and moral support.

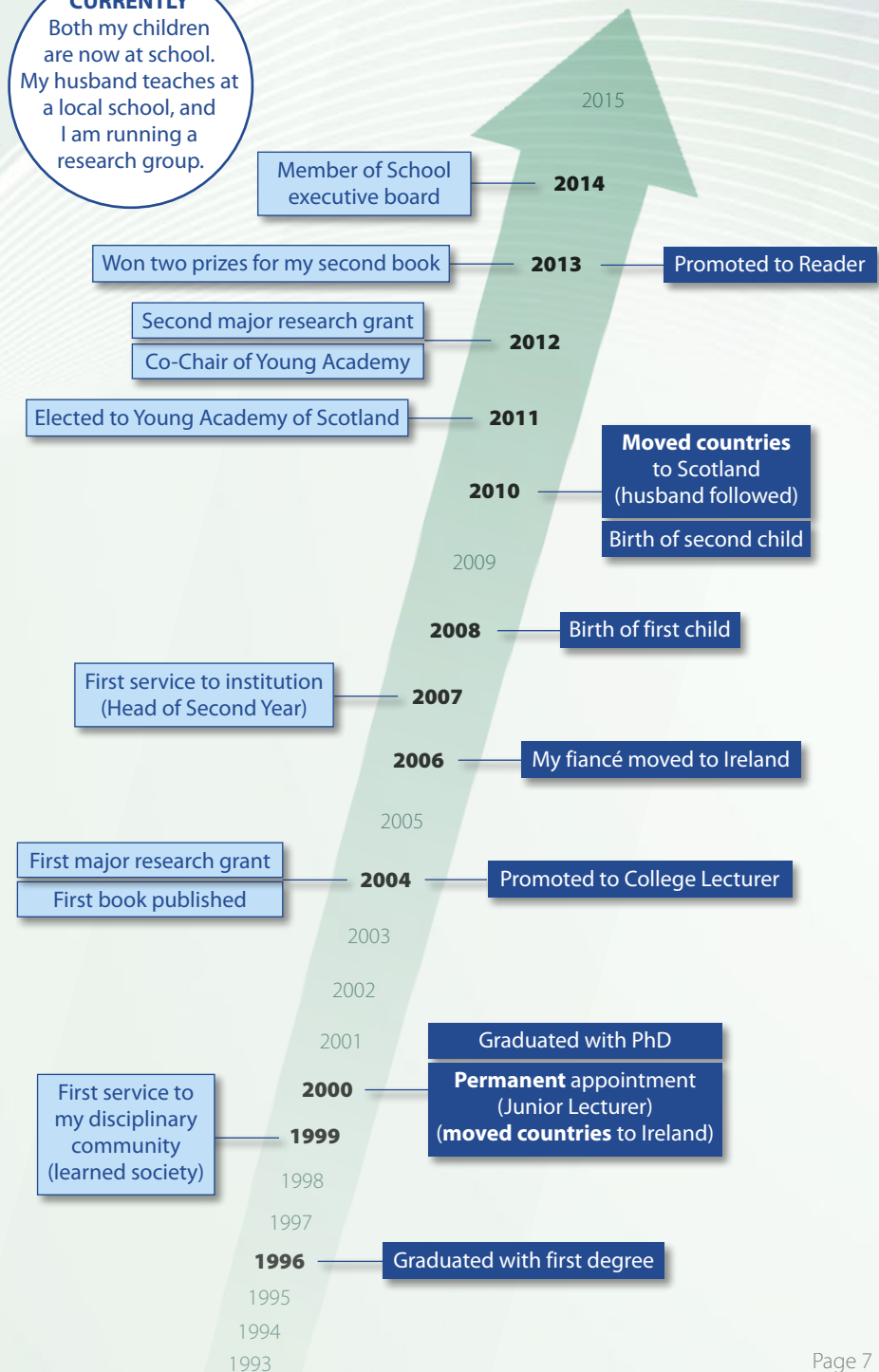
What aspects of your career have you found challenging?

The transitions between career stages. I went straight from PhD to a lectureship, in a different country. In retrospect, I think the challenges there were largely, if subconsciously, about trying to prove myself in the new role of lecturer. My subsequent move between institutions was much easier because I was in essentially the same job. Since then, however, my role has changed, and now involves more leadership responsibilities on top of everything else.



On holiday with my daughters in France, summer 2015

CURRENTLY
Both my children are now at school. My husband teaches at a local school, and I am running a research group.

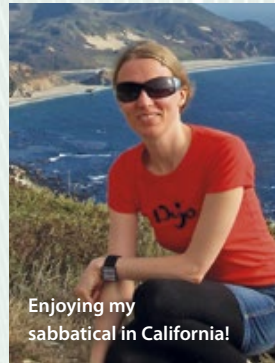


Anne Schwan

English, Edinburgh Napier University

What is your research about?

My current fields of research are nineteenth-century British literature and culture, gender studies and critical prison studies (especially the representations of female prisoners in a range of media). I am also interested in prison education and university-prison partnerships.



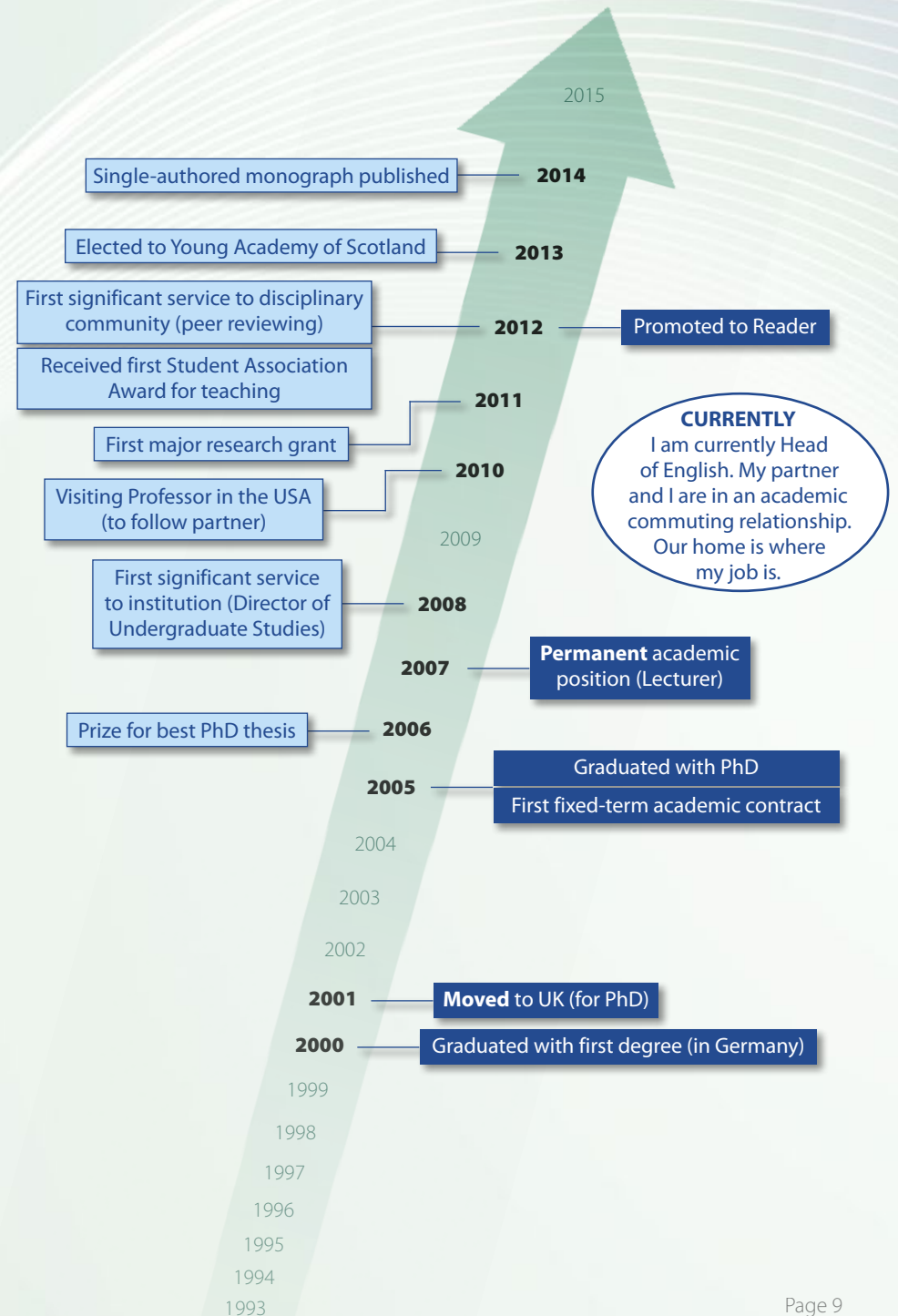
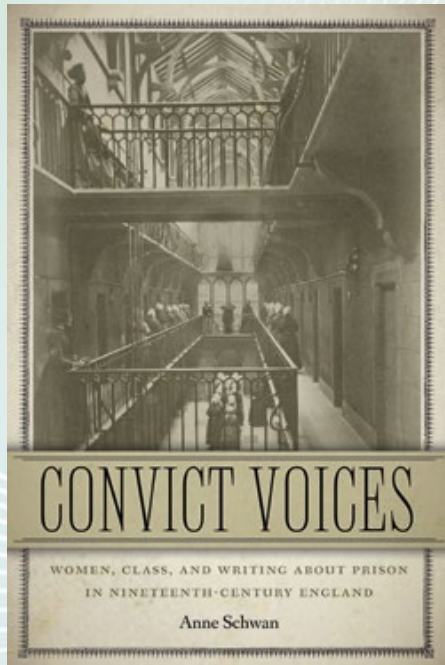
Enjoying my sabbatical in California!

What do you think was crucial in making your career successful?

Supportive parents who didn't 'interfere' with my career choices were crucial in my success. I have an international outlook (my time spent in Wales as an Erasmus exchange student laid the grounds for my future career path). I was helped by doctoral scholarships and an AHRC Early Career Fellowship. I have benefited from a number of key mentor figures (including my PhD supervisor) and a diverse and inspiring environment in graduate school. I also had supportive colleagues early on in my career who were willing to give me opportunities in leadership roles.

What aspects of your career have you found challenging?

I found the need for perseverance while on the academic job market a challenge. Since I started my academic position, it has been difficult to maintain a good work-life balance (negotiating the demands of teaching and administration while trying to produce high-quality research), while holding on to my scholarly vision (e.g., for my first research monograph). My first permanent post involved delivering a brand new English degree, which was daunting, but a great opportunity in hindsight!



Annie Tindley

History, University of Dundee



What is your research about?

I am a modern historian, who specialises in Scottish, British and imperial history, from c. 1700 to 1945. My particular research interest has been in landed estates and their aristocratic owners and management, especially when faced with the challenges of land reform and state intervention from the 1870s. I have also worked on a number of collaborative and interdisciplinary projects with scientists and health professionals.

What do you think was crucial in making your career successful?

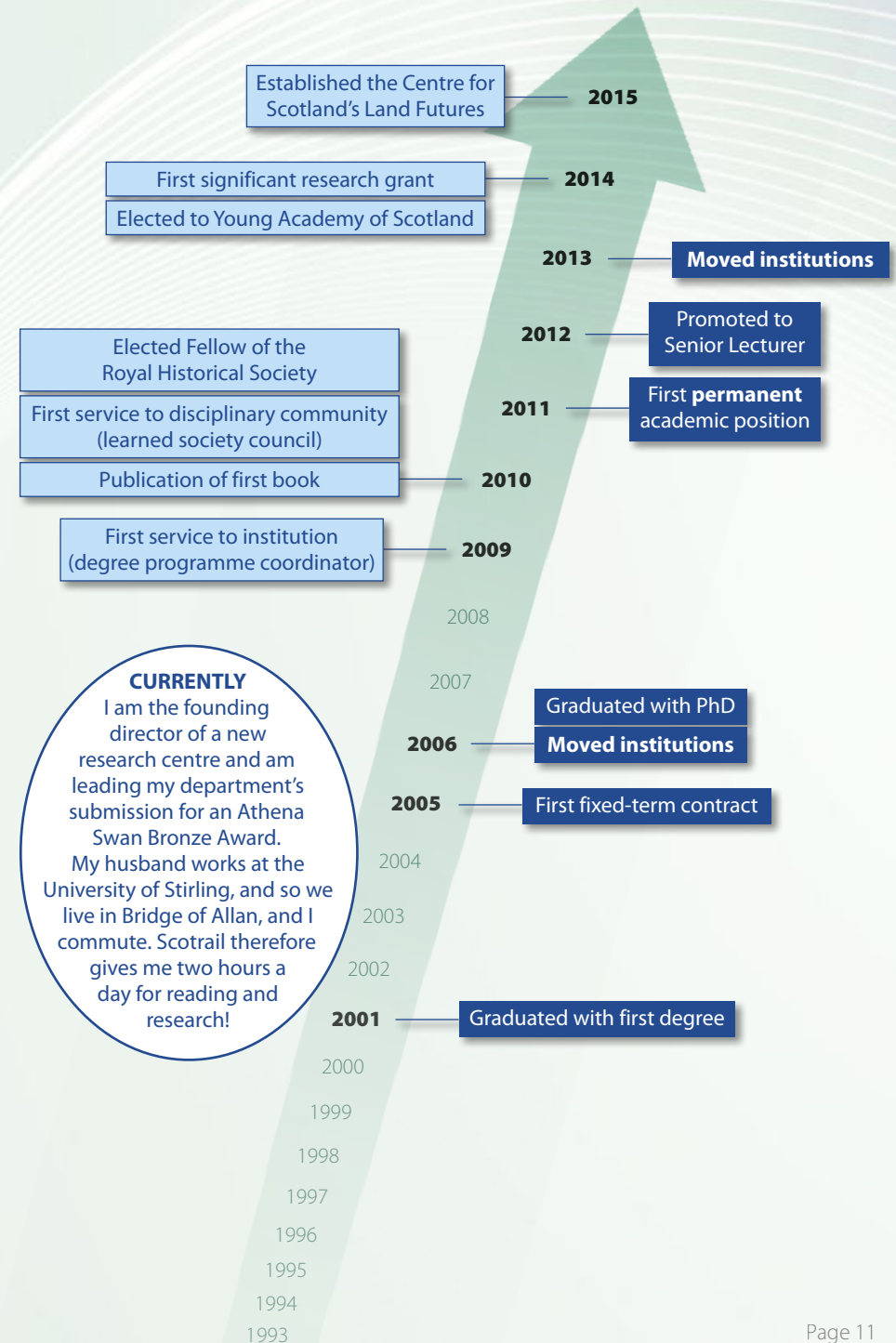
I have been lucky enough to have worked under a number of inspiring senior colleagues, who taught me how to balance many competing demands, how to prioritise work and how universities operate. Being open-minded and collaborative, with a commitment to working to assist the discipline, has also been crucial.

What aspects of your career have you found challenging?

One of the most challenging aspects of my career has been negotiating the rapidly shifting higher education context in Scotland, and the pressures put on Arts & Humanities programmes and departments in the institutions I have worked at. Additionally, working at newer institutions meant that there was limited support for research, and I had to build up my publications and grant awards on top of sometimes challenging teaching loads.



On top of the world, in Assynt, Scotland



Ashleigh Jane Fletcher

Chemical and Process Engineering,
University of Strathclyde



What is your research about?

I synthesise and characterise materials that have internal structures on the nanoscale. The properties such materials exhibit enable them to be used in a range of applications, e.g., from water treatment to gas masks, because of their ability to attract target molecules from gas or water streams. This process is similar to the forces involved in the condensation of water on windows.

What do you think was crucial in making your career successful?

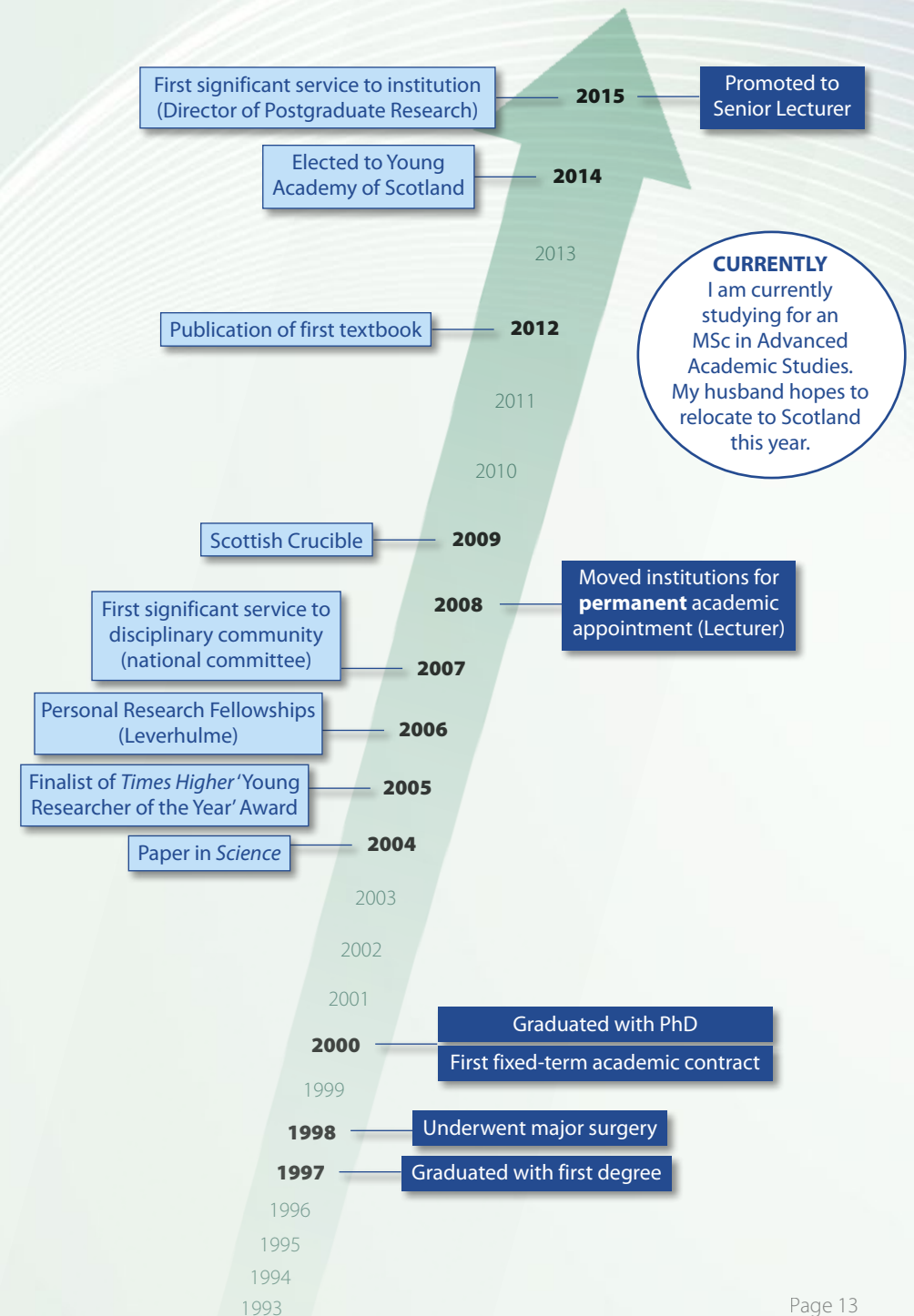
I had an amazing chemistry teacher at secondary school and very supportive parents. My Dad's engineering background gave me an insight into how and why things worked and I wanted to take that further. After gaining my BSc in Chemistry, I was fortunate to find a PhD in a field that sparked a lifelong interest, and was supervised and mentored by an inspirational academic.

What aspects of your career have you found challenging?

I have always found my working environments to be inclusive but being geographically so far from my husband and family is difficult; I have lived alone in Glasgow since 2008. I also suffer from a number of medical conditions, and although I minimise the impact on my work, the time required for check-ups and scans etc., this does affect my work-life balance.



On holiday in Greenland



Bernadette O'Rourke

Languages, Heriot-Watt University

What is your research about?

My research focuses on the role of language in the construction of social difference and social inequality. I examine these processes as they unfold in minority language contexts with a particular focus on Ireland and Spain. I am currently exploring the native/non-native-speaker dichotomy and the concept of the 'new speaker'. While my earlier studies looked mainly at indigenous minority languages, my more recent work incorporates issues surrounding the provision of translation and interpreting services for speakers of migrant languages in Ireland and the UK.

What do you think was crucial in making your career successful?

I have been fortunate to have had inspiring academic mentors at different stages of my career who have provided excellent role models. They have encouraged me to apply for grants and supported my promotions. My partner, Pierre, has also been influential, and his moral and intellectual support along the way has been crucial. A key turning point in my career was when I was awarded an AHRC Early-Career Fellowship in 2013. This provided me with the time and space to develop my research and develop a pan-European project.

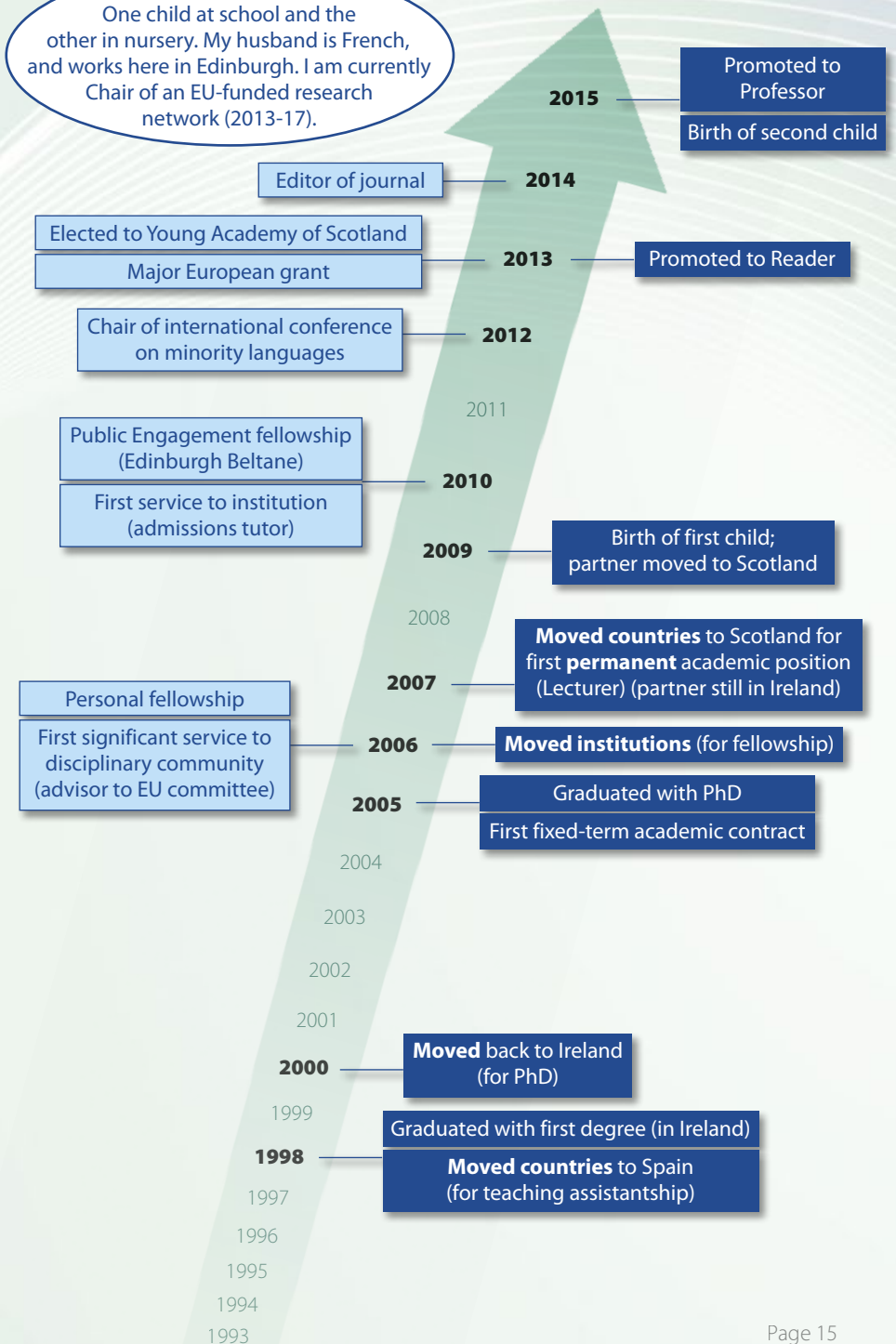


At the seaside in Galicia with Oisín and Aoife

What aspects of your career have you found challenging?

As an early-career researcher one of the challenges was trying to find time to do research because of heavy teaching loads. When my first child was born in 2009, the biggest challenge was to organize my time to keep a work-life balance. Since the arrival of my second child in 2015, I have become better at managing my time.

CURRENTLY
One child at school and the other in nursery. My husband is French, and works here in Edinburgh. I am currently Chair of an EU-funded research network (2013-17).



Daniela Sime

Social Work and Social Policy,
University of Strathclyde

What is your research about?

My research concerns issues of poverty, inequalities and social justice and I'm particularly interested in how these affect children and young people. I am keen that research has an impact on policy and practice, so I work closely with teachers, social workers and voluntary sector organisations to make my research findings accessible.

What do you think was crucial in making your career successful?

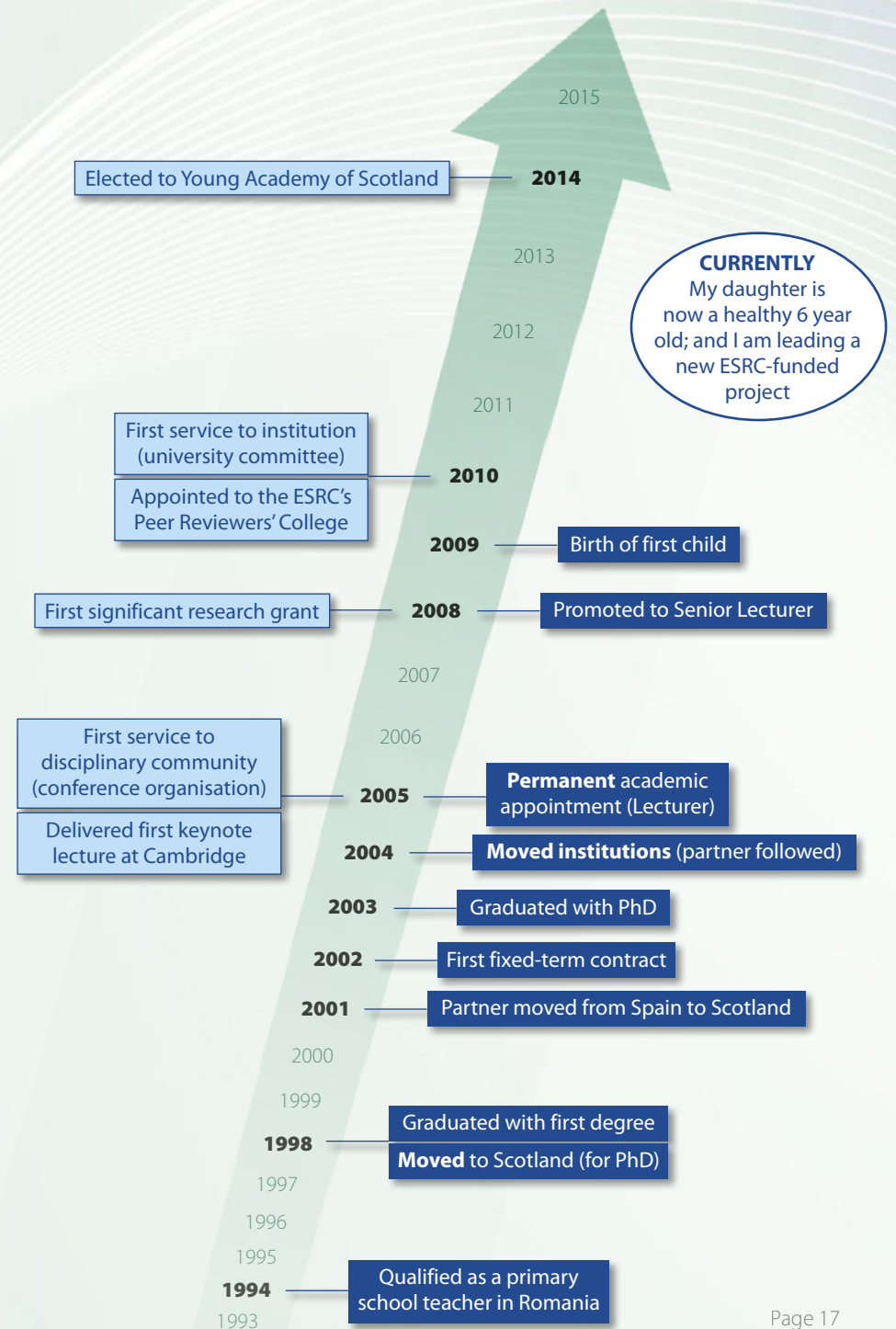
Being given a fully-funded scholarship for my PhD and having good mentors, as well as a strong work ethic (and admittedly working long hours!) were key to my success in the early stages. Now that I am more established, I rely on advice from inspiring colleagues and learn from my own mistakes, as well as persevering when things don't work out (i.e., when a proposal or article is rejected!).

What aspects of your career have you found challenging?

People tell you that having children can put pressure on your career. I didn't believe this would happen to me (until it did!). Balancing motherhood and a demanding job has been the most challenging aspect for me—parenthood is great, but it brings moments of frustration at not being able to do it all!



With the family at the Kelpies



Eva Hevia

Chemistry, University of Strathclyde

What is your research about?

My main research is to apply polar organometallic reagents incorporating special cooperative effects to key transformations used worldwide in producing important chemicals and commodities. Some of our recent contributions have opened up exciting new areas of organic synthesis, Green chemistry and cooperative catalysis.

What do you think was crucial in making your career successful?

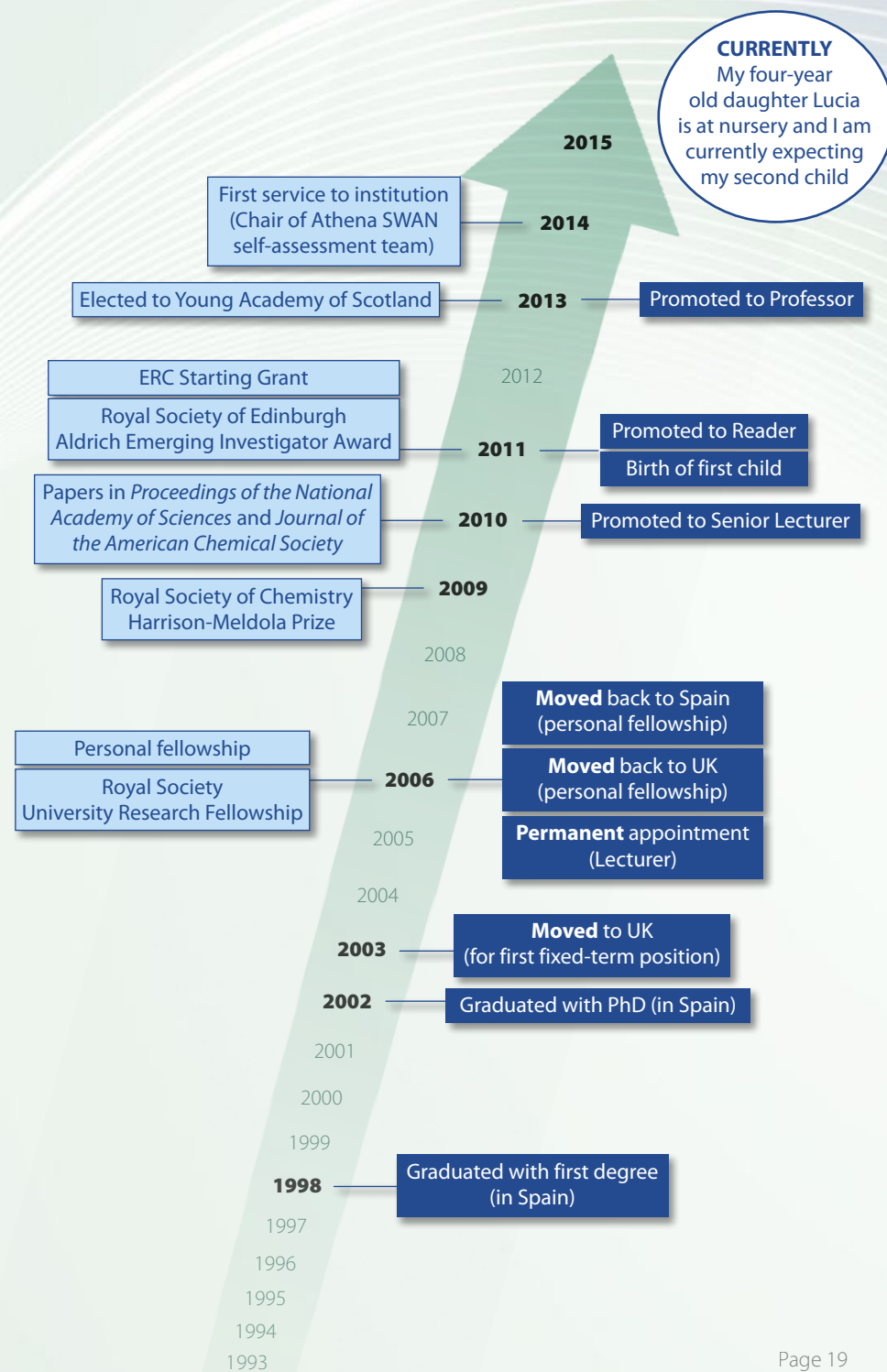
I have been very fortunate to have excellent, inspiring mentors during the different stages of my career, who have not only supported and encouraged me to keep moving forward with my research but also have been excellent role models for me, and from whom I keep learning new things every day.

What aspects of your career have you found challenging?

Initially establishing my own group and securing research funding was incredibly challenging. However, with the arrival of my first daughter in 2011, the greatest challenge of all has become to be extremely organised and able to effectively prioritise tasks to ensure I keep the right balance between my research progression and a happy family life. Key to this has been the unreserved support and help from my partner Gordon, who is also a scientist.



With the family in my home town, Gijón (Spain)



Faye Hammill

English, University of Strathclyde

What is your research about?

My research concerns literary and print cultures in the early twentieth century. I explore ideas about cultural hierarchy (high, middle and lowbrow) in relation to fiction and periodicals. I am also interested in the concept of "sophistication", and the different meanings that this has in modernist and popular cultures. I have a special focus on Canada, but also study American and British writing.



What do you think was crucial in making your career successful?

A crucial first step was submitting work for publication at an early stage, and learning from peer reviews. Later, collaborative relationships became more important, and I benefitted from working with literary and digital humanities scholars in Canada, the US, and Australia. Most recently, my professional and disciplinary knowledge was extended through serving on a REF panel.

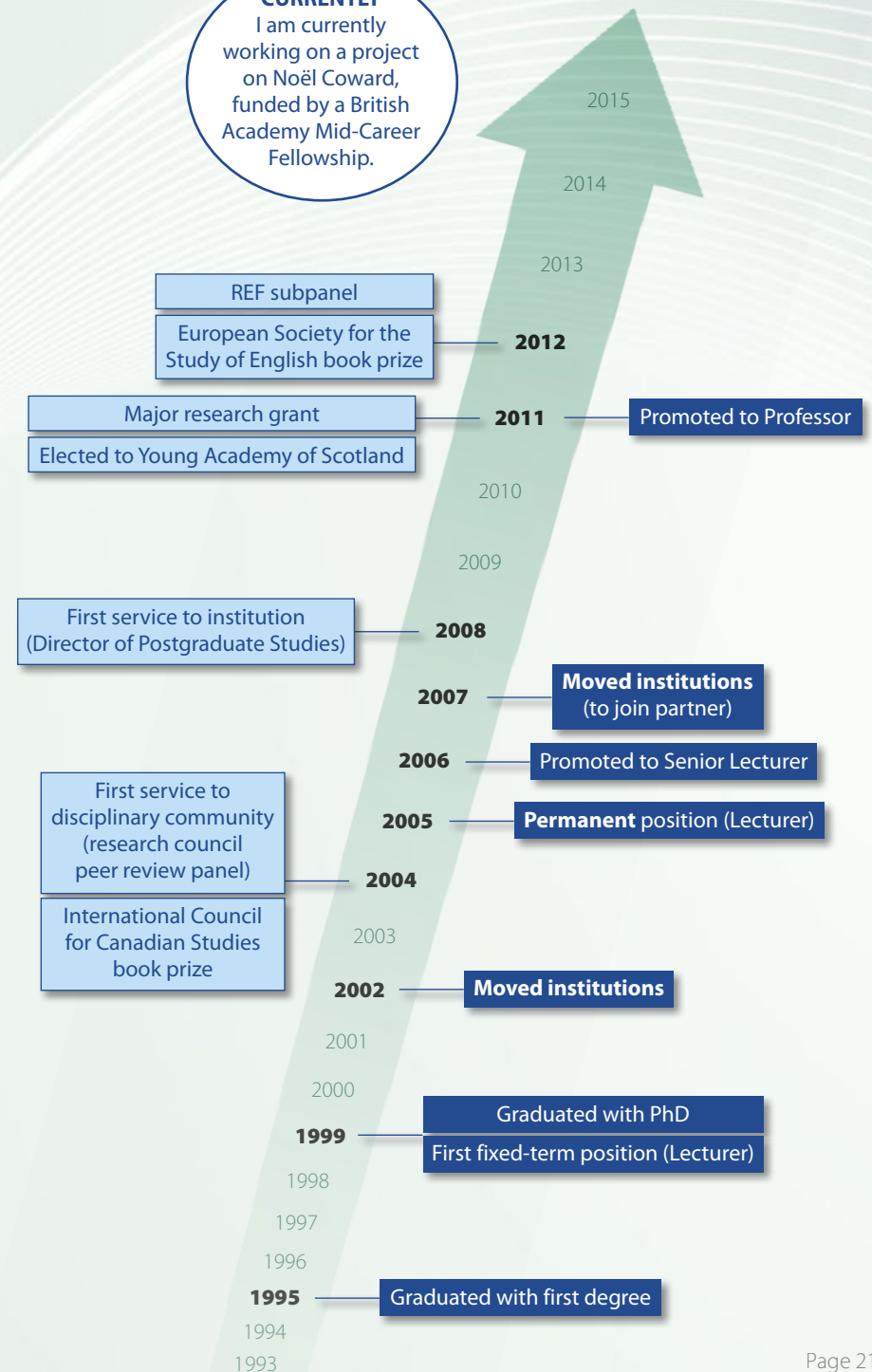
What aspects of your career have you found challenging?

Learning about the different educational systems in the different parts of the UK where I have worked (England, Wales, and Scotland) was a challenge. Research supervision has also been both rewarding and challenging, in terms of achieving a balance between supporting researchers as fully as possible and enabling them to gain independence.



At Torridon on my 40th birthday, taken by my husband

CURRENTLY
I am currently working on a project on Noël Coward, funded by a British Academy Mid-Career Fellowship.



Fiona McNeill

Computer Science, Heriot Watt University

What is your research about?

I work in automated data interpretation, developing techniques to allow data from different sources to be mutually comprehensible, even though people use different words, different terminologies and different formats when creating their data. I particularly look at the application of this in emergency response and crisis management where fast, efficient and reliable data sharing from multiple sources is essential so that responders have the information they need at the time they need it.



What do you think was crucial in making your career successful?

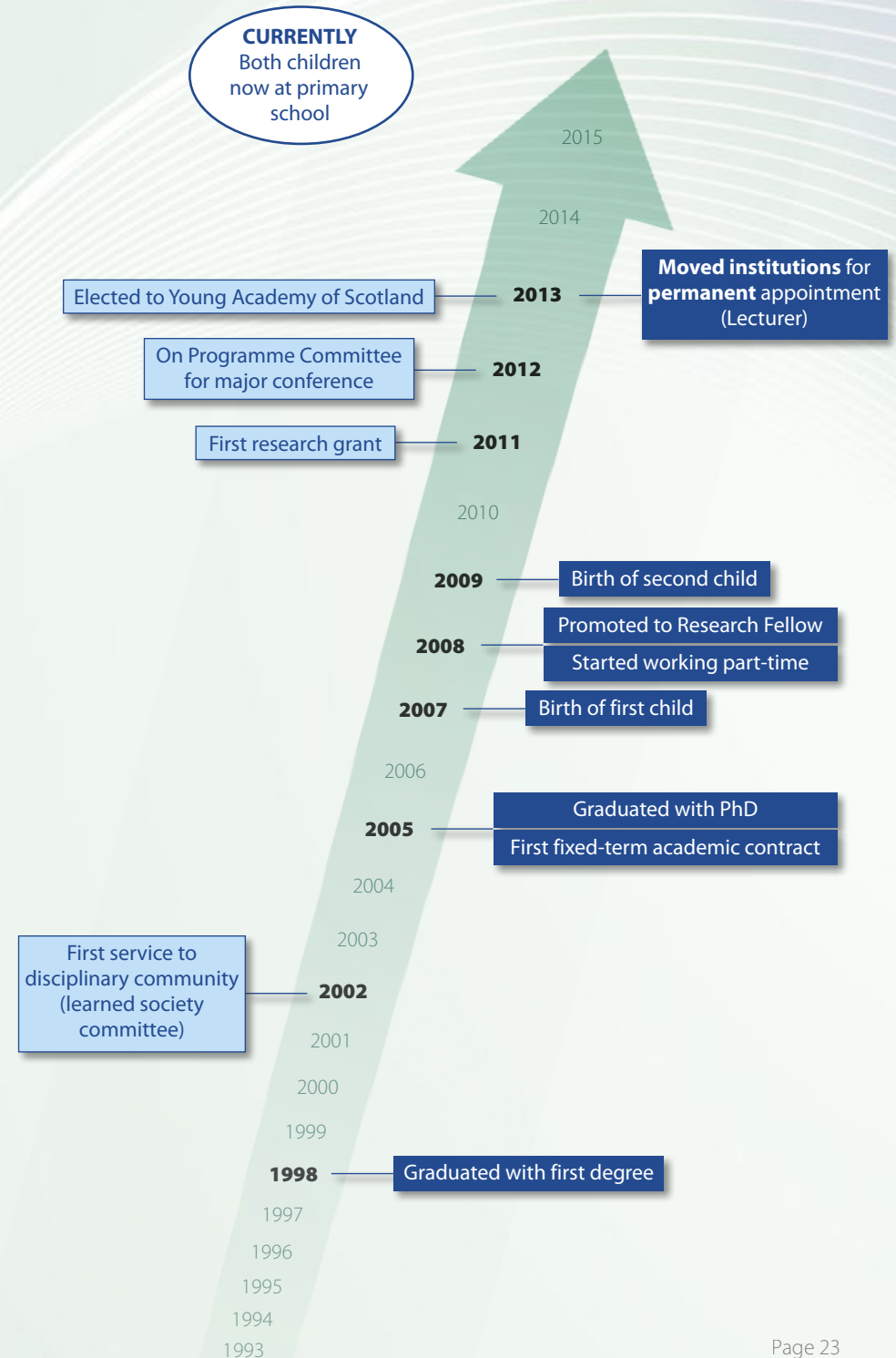
Having a great PhD supervisor who focussed a lot on my career development, introduced me to a lot of interesting people and formed my ideas of how to be an effective researcher was crucial in my career. Furthermore, working on large projects allowed me to collaborate with different people in different laboratories, even though I was always mainly based in Edinburgh. Having a partner who is both willing and able (in terms of flexible work arrangements) to take an equal share of childcare once we had children and to cover for me when I needed to travel for work has been a huge help.

What aspects of your career have you found challenging?

Succeeding in pursuing an academic career and especially making the transition from researcher to lecturer when I was very inflexible geographically (because my partner is based in Edinburgh) was tricky and stressful – but in the end possible because of great support (and luck!) Keeping on top of academic commitments is a struggle for everyone, but especially so when you have to leave early to do the school run and balance the needs of all the family.



CURRENTLY
Both children
now at primary
school



Heather Ferguson

Ecology, University of Glasgow



What is your research about?

I am a disease ecologist, specializing in study of the ecology and control of malaria transmitting mosquitoes. Most of my work involves collaborative studies of mosquito ecology based in East Africa and South East Asia. I have a passion for global health, and the main motivation for our work is that it can contribute to improving the lives of people in the developing world.

What do you think was crucial in making your career successful?

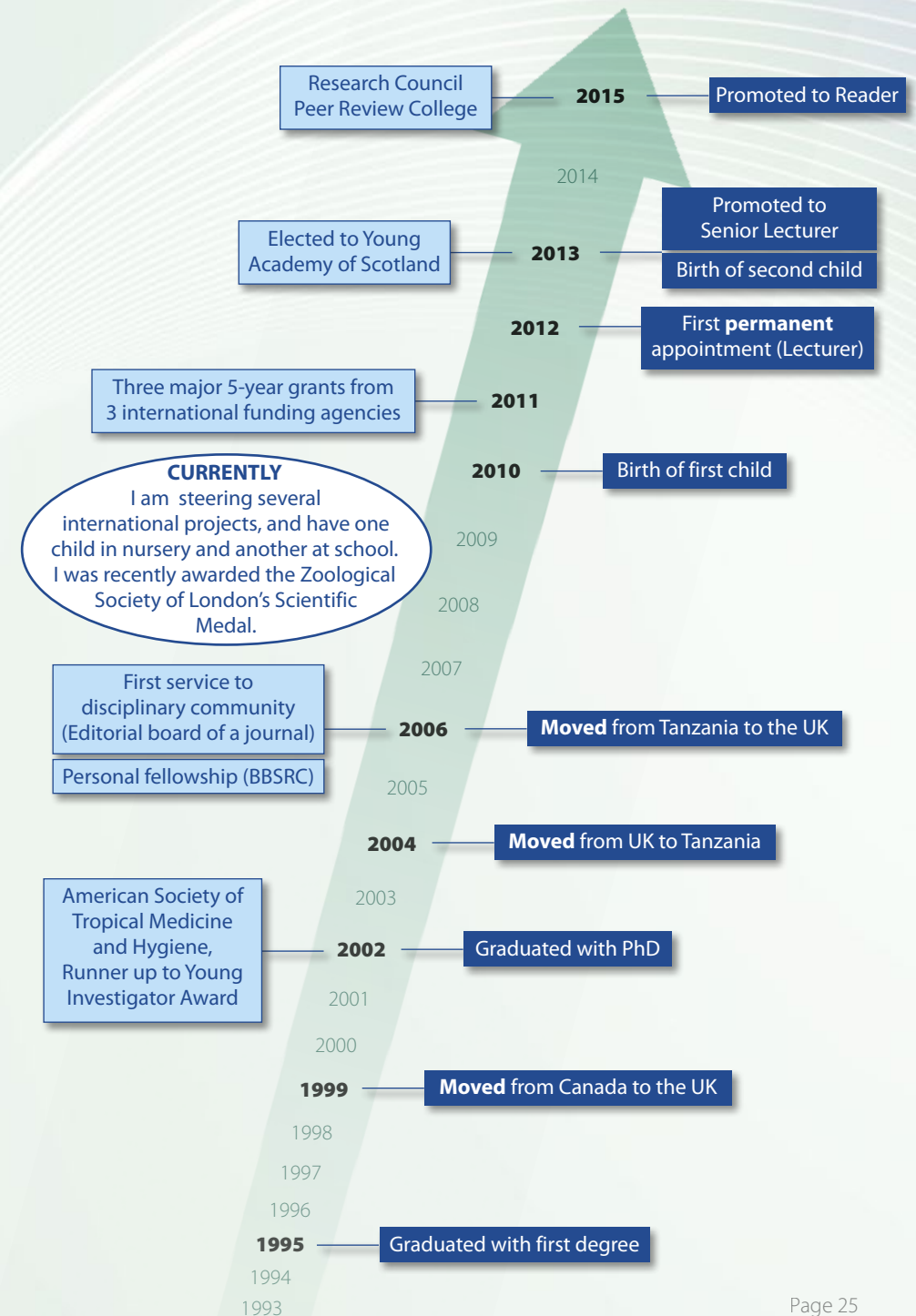
There have been a number of key events that have been instrumental in catalysing my career success. All of them involve meetings, sometimes by chance, with mentors who provided just the right advice and encouragement at crucial transition stages in my career to keep me going. This ranges from getting an undergraduate internship in an ecology lab, having a Master's supervisor who encouraged me to write to approach the best scientists in my field despite feeling unconfident, and excellent support at both PhD and postdoctoral level.

What aspects of your career have you found challenging?

The uncertainty of employment and short-term nature of postgraduate and postdoctoral contracts was very stressful and difficult to plan around personal life commitments.



With the kids at Culzean



Heather Haynes

Energy, Geoscience, Infrastructure & Society,
Heriot Watt University



What is your research about?

Most sediment eroded from the Earth's land surface is carried by rivers to the sea. During that journey it adsorbs pollutants, provides habitat and constantly moves around so as to change the river channel's shape. My research monitors and models sediment movement and the consequences for water quality, flora and fauna, flood risk etc.

What do you think was crucial in making your career successful?

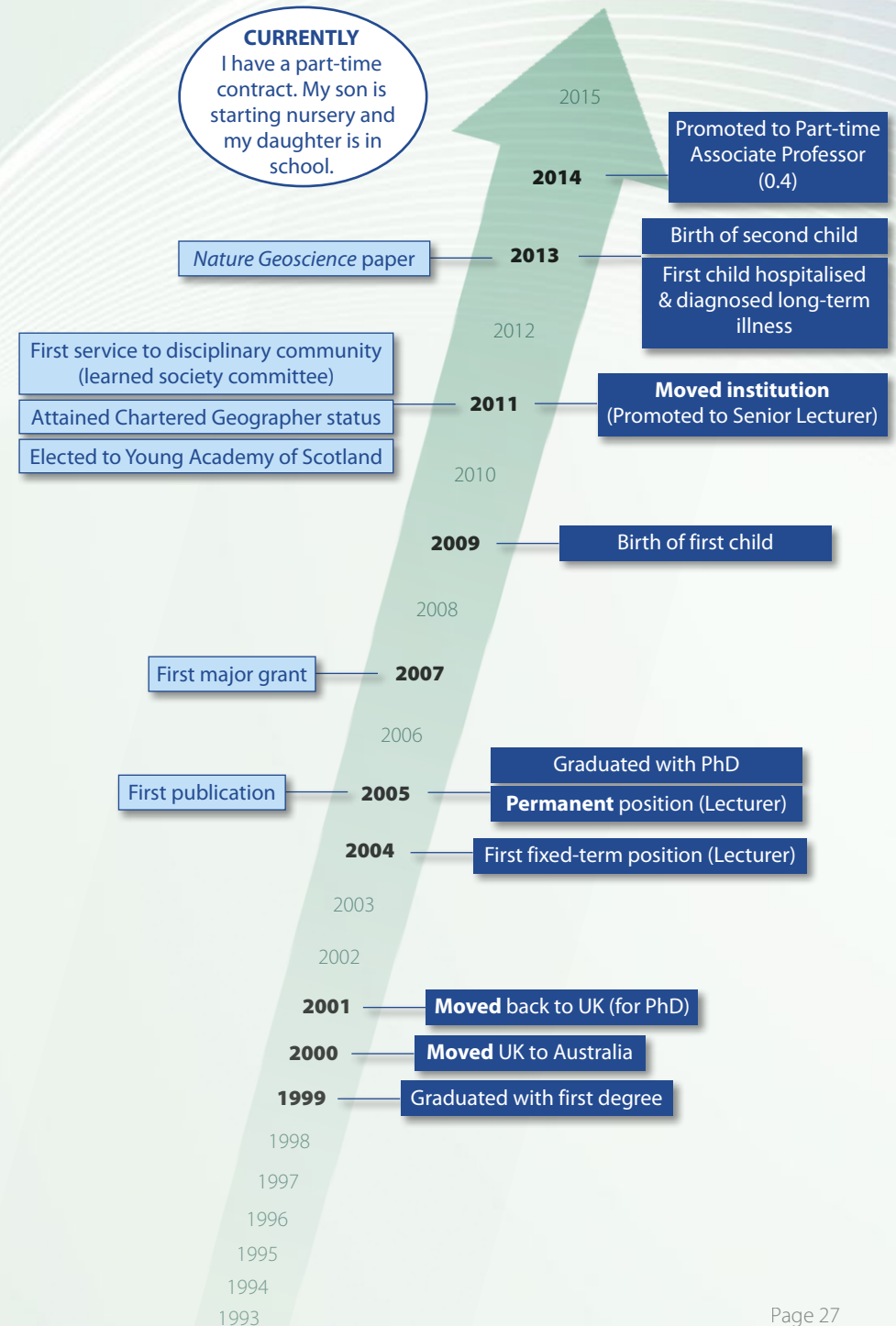
My parents (an engineer and a geography teacher) enthusiastically encouraged me to take opportunities to go on field expeditions with the British Exploring Society (age 17) and Earthwatch/UNEP (age 20), which shaped both my interests and self-determination. A defining moment was covering a lecturer's maternity leave at the end of my PhD; this proved a crucial stepping stone to a permanent lectureship. I have been fortunate to have exceptionally supportive mentors whose faith in my abilities meant that my career successfully survived the unexpected personal events of my daughter's illness since 2013.



Family time at the beach, flying the kite at our favourite "bolt-hole" in Northumberland

What aspects of your career have you found challenging?

Scientists and engineers have different mind-sets hence, transitioning between disciplines challenged me in learning new knowledge and teaching practices. Also, since working part-time I have had to moderate my expectations, accepting that some opportunities will pass by (this time) and that boundaries between work and home need to be maintained. Contrary to general expectation, working in a male-dominated discipline has given me little cause for concern; rather, it has enhanced professional opportunities for supporting the ever-growing number of female students and researchers aspiring to be our future engineers.



Helen Bridle

Engineering & Physical Sciences,
Heriot-Watt University

What is your research about?

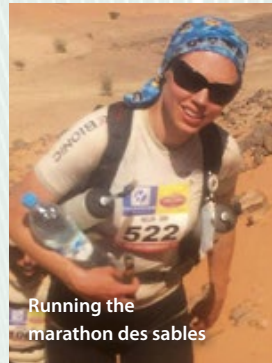
I work on methods for detecting bacteria and other pathogens in drinking water. We develop 'lab-on-a-chip' systems with tiny channels no wider than a single human hair, that can concentrate and isolate pathogens as well as determine their infectivity (i.e. health risk). My work is now expanding into applying the isolation methods to bioprocessing applications, and exploring the use of nanoparticles in detection and treatment of waterborne pathogens.

What do you think was crucial in making your career successful?

I moved to Sweden to do my MSc and during that time spent two summers working at ETH Zurich before returning to Gothenburg for my PhD. I think working abroad in different institutions was a real help in establishing an international network and was instrumental in gaining my research fellowship.

What aspects of your career have you found challenging?

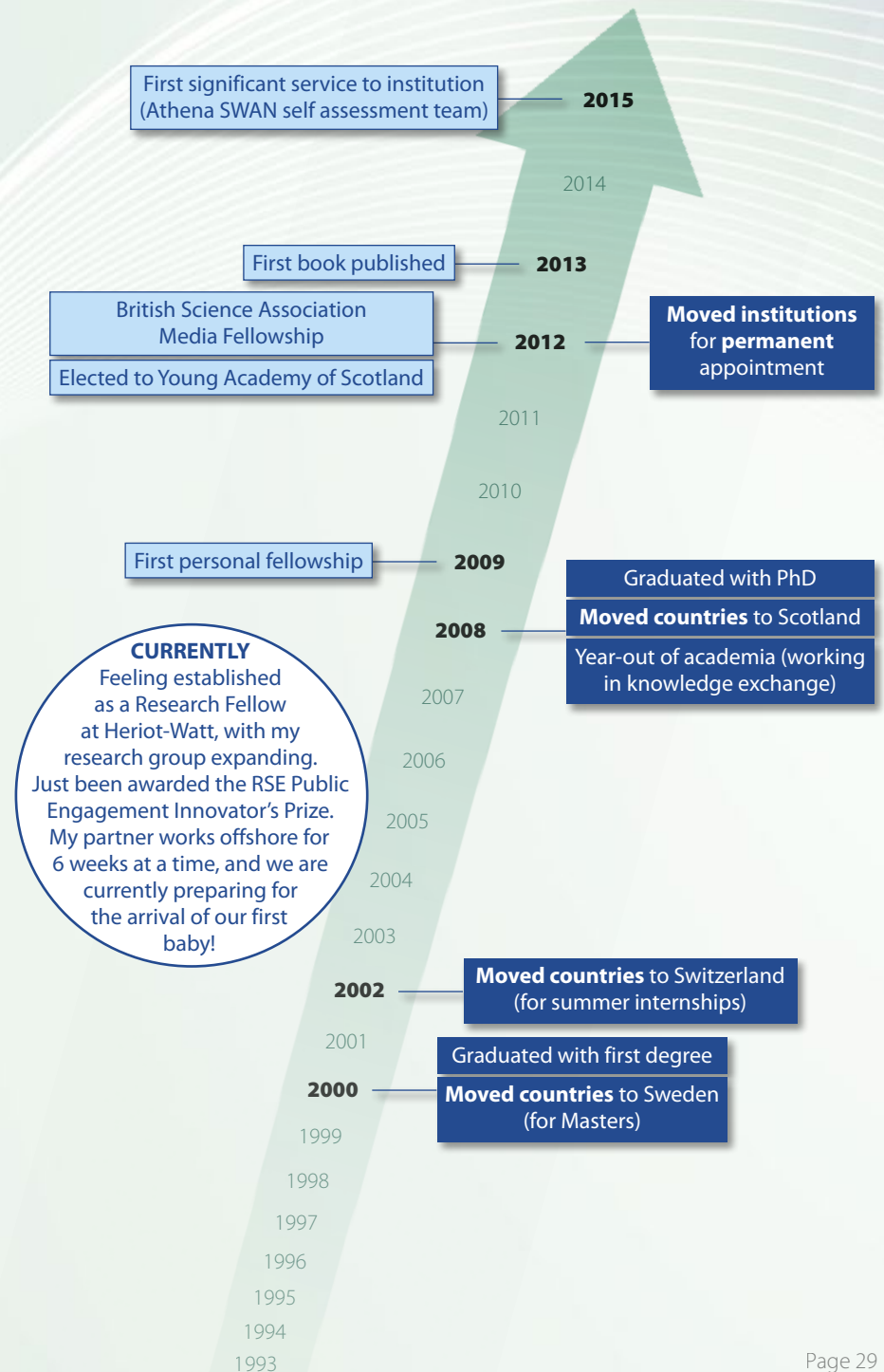
I found finishing up my PhD very tough and was really undecided what I wanted to do afterwards. After a year out, trying other career options, I realised I missed the opportunity to explore my own ideas offered by research and returned to academia. It is always a constant challenge juggling many different projects and keeping a good work-life balance.



Running the marathon des sables



Sorting waterborne parasites at an outreach event



Ineke De Moortel

Mathematics & Statistics,
University of St Andrews



What is your research about?

The Sun's atmosphere is more than 100 times hotter than its surface. In my research, I compare computational models with observations to understand how the Sun's magnetic field is able to transport energy from below the surface to the atmosphere and how this magnetic energy is then converted into heat.

What do you think was crucial in making your career successful?

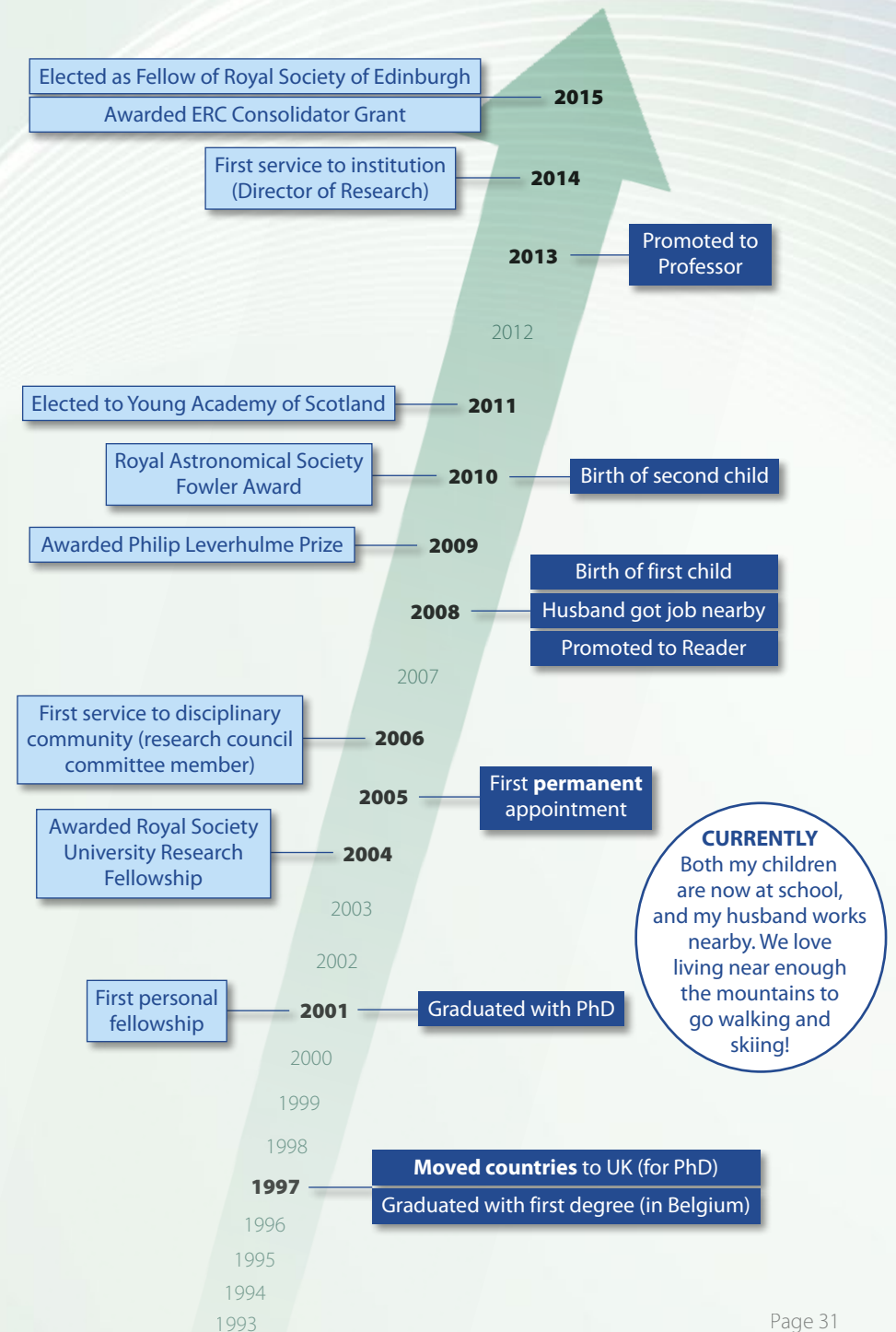
I was lucky to be able to do my PhD in a very well-respected research group, with supportive staff members. Throughout my career, they have encouraged me to apply for personal fellowships and/or promotions. Obtaining a Royal Society University Research Fellowship played an extremely big part in getting a permanent job and, because it is such a long fellowship, being able to have children and then "catch up again".

What aspects of your career have you found challenging?

I have always found it difficult to impose boundaries on my work. For the moment, I struggle most to keep the administrative/service aspect of my job under control and create enough time for my research. At times, I have also suffered from doubting whether what I was doing was enough or good enough.



Walking in the Scottish Highlands with the kids.



Jane Stanley

Culture & Creative Arts, University of Glasgow

What is your research about?

I am a composer, specialising in contemporary classical music composition. I have composed music for orchestras, chamber ensembles and soloists. I continue to compose music for concert performance. Additionally, my recent research has taken me into areas concerning site-specific performance, for example, I composed a work for performance in Królikarnia Museum in Warsaw.



What do you think was crucial in making your career successful?

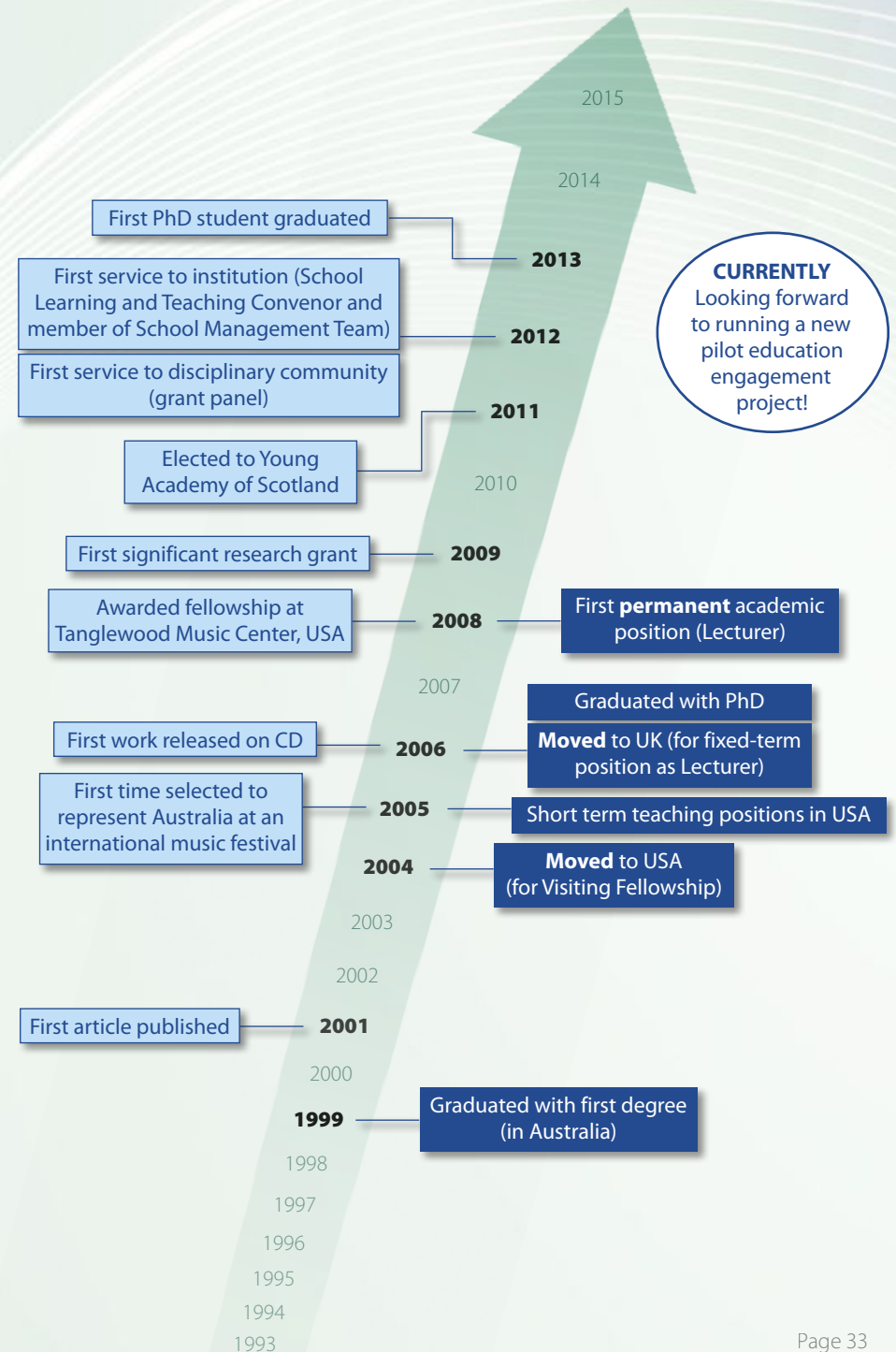
Studying overseas was very formative. I'm originally from Australia, and I spent a couple of years in the US prior to my move to the UK. It provided me with a new perspective on my field (music composition), and in concrete ways I appreciated how big the world is. Also, participating in international composer meetings and summer fellowships (such as Tanglewood Music Center and Gaudeamus Music Week) helped me to develop a professional network.

What aspects of your career have you found challenging?

Juggling the various aspects of a research-teaching position can feel like spinning plates (i.e. extending research activity, instigating new knowledge exchange projects, teaching, administration). In terms of research, much of my collaboration is with people based in Australia, so the geographical distance is a challenge.



At Balmoral Beach in Sydney



S. Karly Kehoe

History, Glasgow Caledonian University

What is your research about?

My research focuses on the relationship between religion, ethnicity and national identity in Britain (with a focus on Scotland and Ireland) and the British Empire.



What do you think was crucial in making your career successful?

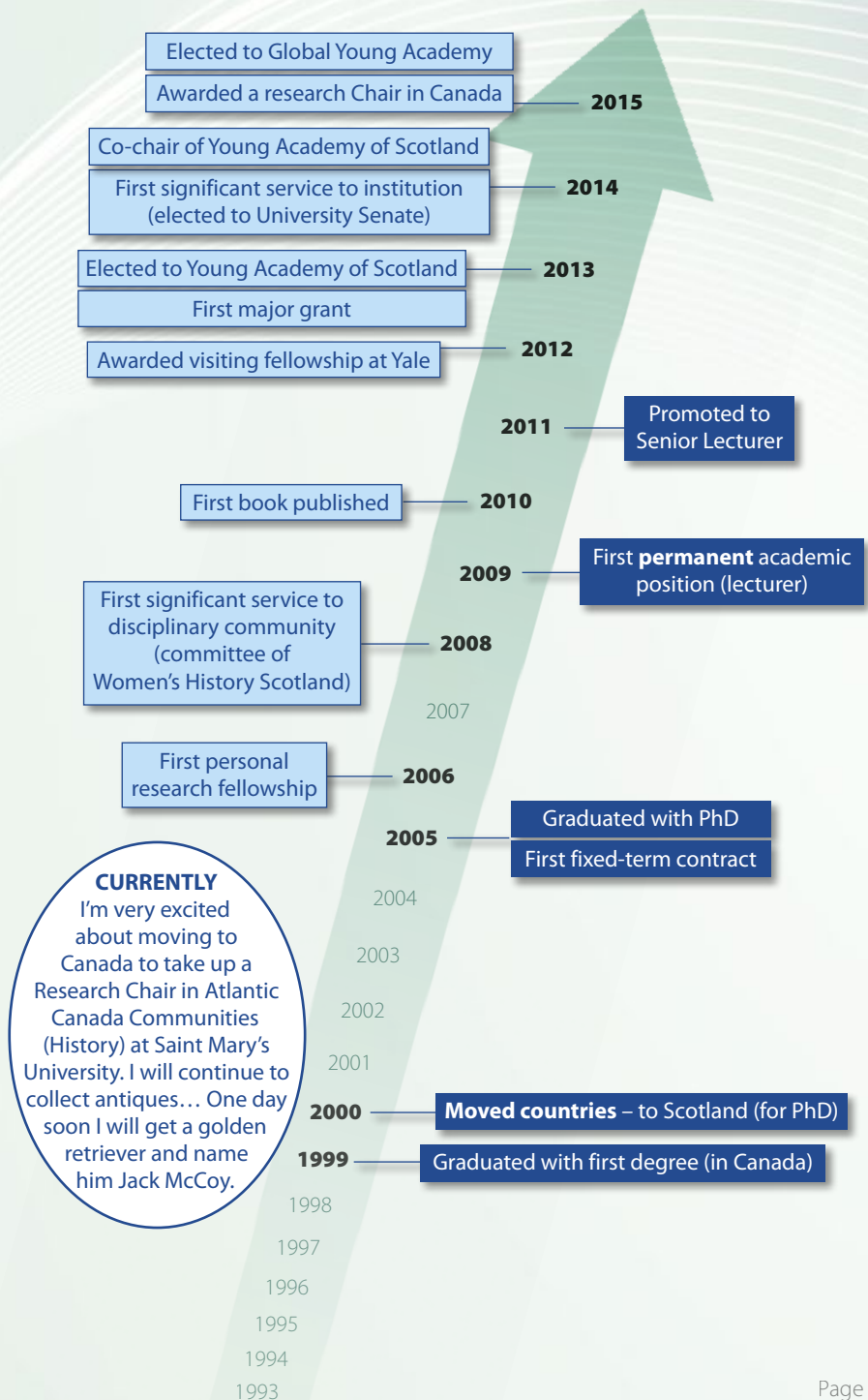
Hard work! There was a lot I had to learn about what it takes to survive in academia, let alone succeed. My first job was with the University of the Highlands and Islands at the Centre for History. Five of us, all young and relatively inexperienced, were told to build History programmes and a research culture. We ran with it and that was a defining phase of my career. I also made sure that I kept publishing, that I reached out to communities and that I learned how to apply for research grants.

What aspects of your career have you found challenging?

There have been a number of challenges and they often involve finding a way to balance the publishing, grant-getting, public engagement and teaching. The growing strain on finances and the ways in which universities are choosing to spend their money has also been a challenge because it seems that, more often than not, the Arts and Humanities are the most vulnerable.



On holiday in Cambodia



Kate Saunders

Geosciences, University of Edinburgh

What is your research about?

Volcanic eruptions occur daily. In the UK, they only occasionally impact our lives, but for other people, they are an everyday hazard. My research involves the chemical analyses of volcanic rocks to reveal the source and processes involved in the evolution of the melt, and most importantly, the relevant timescales. This involves the analysis of volcanic crystals down to nanoscales, and comparison of the data to the external monitoring networks at active volcanoes that are looking for signs of imminent eruptions.



What do you think was crucial in making your career successful?

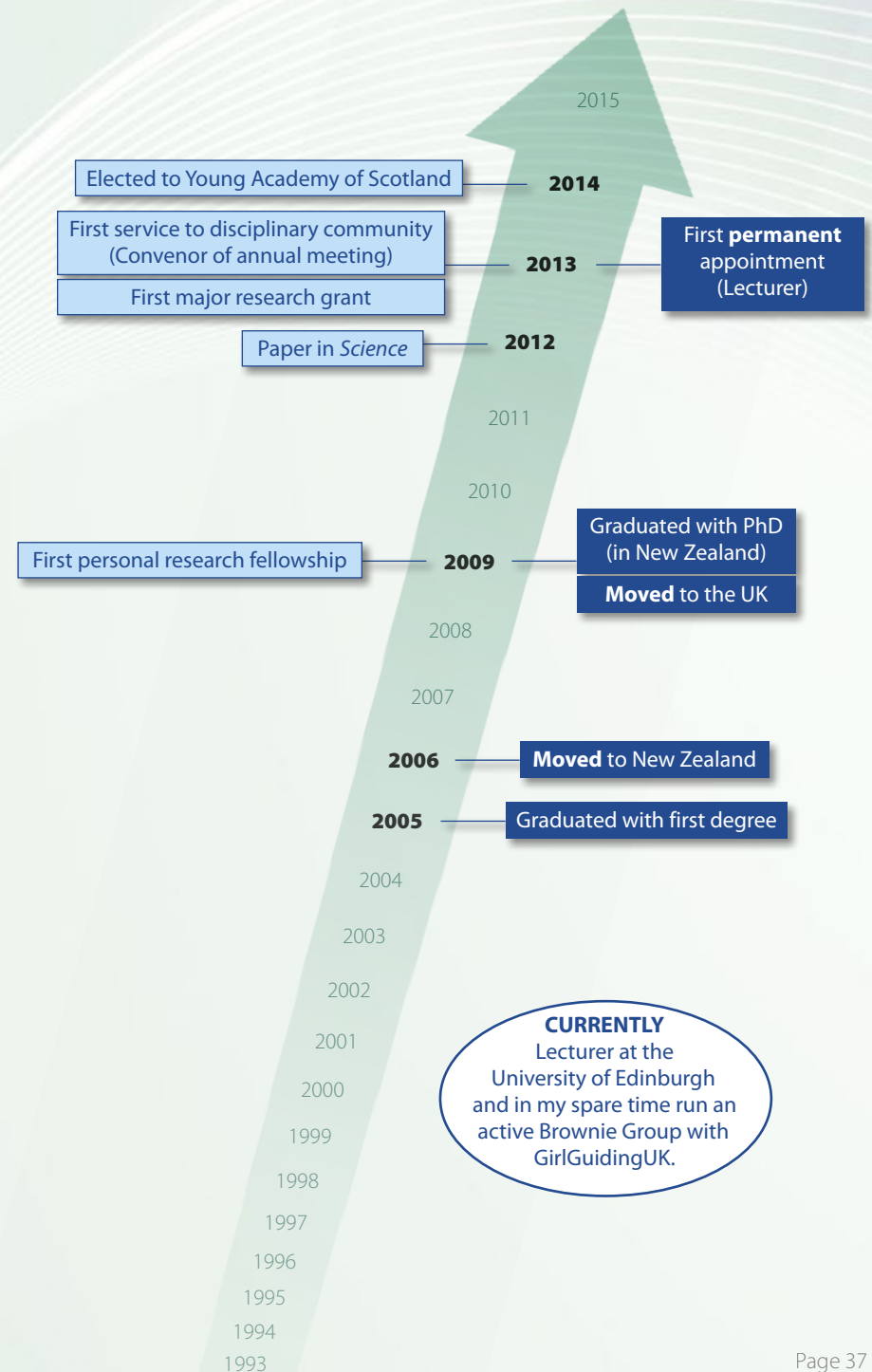
I've always found geology fascinating, volcanoes especially. I can remember sitting in a first year university class, thinking this material is really cool, but I could never work in this field. How wrong could I have been! But how did I make this my career? I took every opportunity the geology department (and GirlGuidingUK) threw at me, including the chance to spend a year studying in New Zealand. This was the best decision I could have made: the textbook suddenly came alive for me. I met so many people with different perspectives, including a really inspirational lecturer. I plucked up the courage to ask if they were looking for PhD students, and I haven't looked back since....

What aspects of your career have you found challenging?

I spent the early part of my career abroad which was sometimes isolating. This was challenging, but it also made me extremely independent and willing to chase opportunities. Geology has a great reputation for being nearly gender balanced but there are times when I have been the only female in a laboratory or at a meeting. This can be daunting, but I always remember that I have just the same right to be there as my male counterparts, and together we can solve the current research questions.



Enjoying the Swedish Archipelago with friends



Lisa DeBruine

Psychology, University of Glasgow



What is your research about?

My research focuses on kin recognition, facial resemblance and face processing from multiple perspectives, including evolutionary biology, social psychology, computer science, anthropology and behavioural economics. Specifically, I am interested in how humans use facial resemblance to tell who their kin are and how people respond to cues of kinship in different circumstances. I am also interested in how the visual system learns about faces and what visual adaptation effects can tell us about the face processing system.

What do you think was crucial in making your career successful?

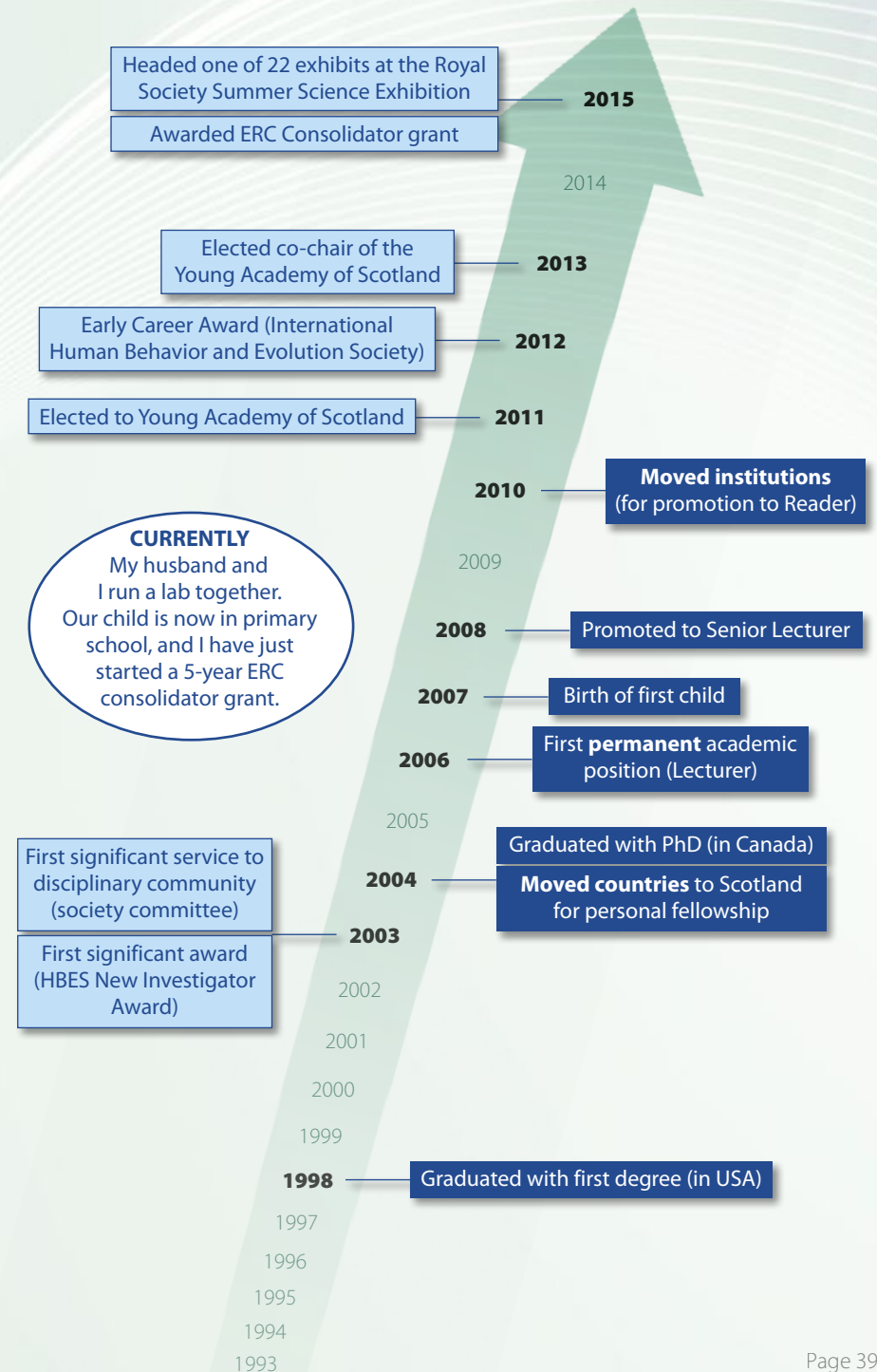
Being part of a collaborative network, and specifically having a very close collaborative partner (who is also my husband), has been crucial. We have ideal complementary strengths and can accomplish so much more together. I have also been lucky to have fantastic mentors, including women who were part of an academic couple and could advise me on the unique challenges that can pose.

What aspects of your career have you found challenging?

The most challenging aspects seem to turn out to be the most beneficial in the long run, such as moving countries or being part of an academic couple working in the same field.



Lab picnic in the Botanic Gardens, Glasgow



Louise Harris

Music, University of Glasgow

What is your research about?

I am an electronic and audiovisual composer who works across live performance and fixed media work, including large-scale installations. I am interested in the relationship between sound and the moving image in a range of media, including narrative film and tv, video game, music video and non-narrative/non-representational and experimental film.



What do you think was crucial in making your career successful?

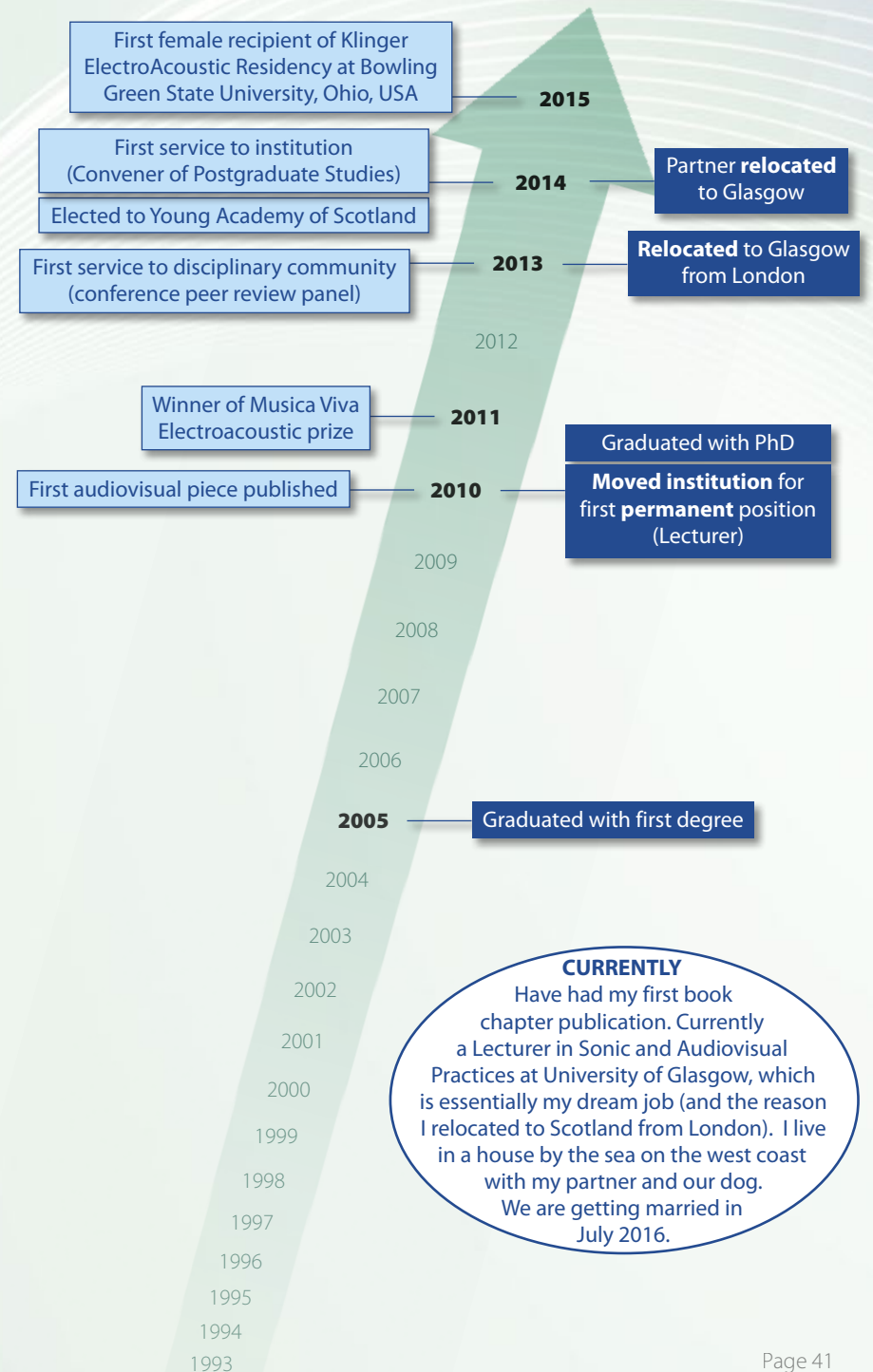
The support of my parents in encouraging me to pursue Music at University, even though it wasn't, on the face of it, the most sensible choice (I considered, for example, studying Law as I felt this would be more likely to guarantee a successful career, but my heart wasn't in it!). Also crucial was the support of Dr Dave Moore during my PhD at Sheffield University – he is most directly responsible for helping to shape my research into what it is today.

What aspects of your career have you found challenging?

My field is very technology-heavy, and being a young woman in that arena is particularly challenging – it can be difficult to be taken seriously, both by existing scholars and practitioners working in the field and, perhaps more noticeably, by students, who can be somewhat prejudiced against learning this type of subject from a young female lecturer.

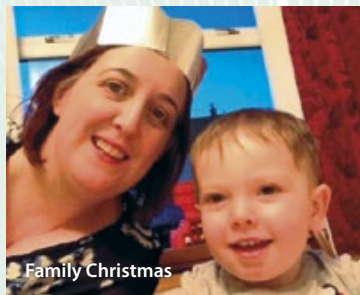


On the beach at Inverkip



Mary Doherty

Health Science,
University of the Highlands and Islands



What is your research about?

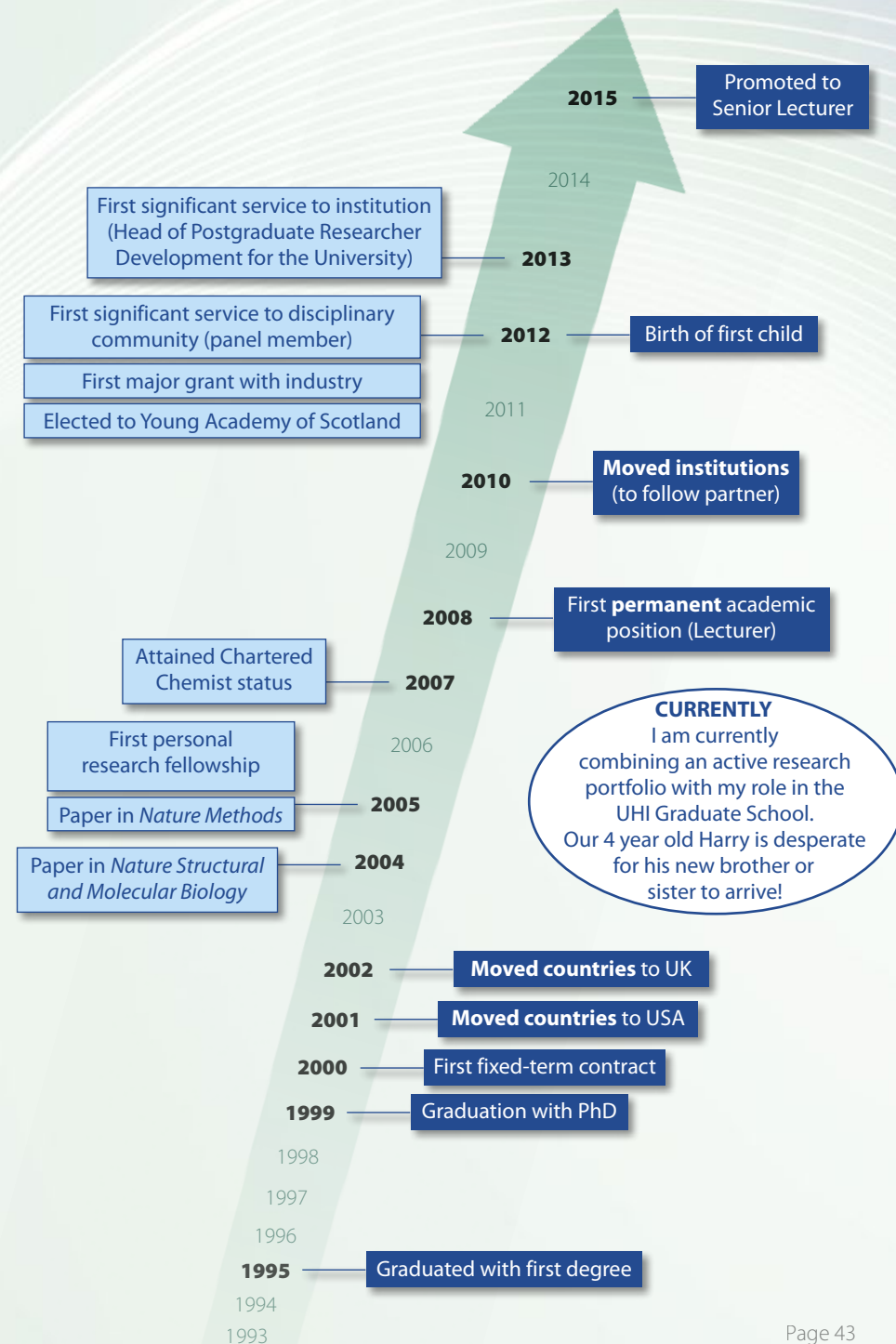
I am an analytical chemist specialising in the detection and characterisation of proteins and lipids (fats). There are many different sorts of these compounds, and they are essential for living plants and animals. I am interested in how quickly proteins and fats are made and broken-down in biological systems, and how this can impact on the well-being of an organism. I use a technique called mass spectrometry (very expensive but accurate scales) to investigate hundreds of these molecules simultaneously.

What do you think was crucial in making your career successful?

Collaboration has always been key. As a trained chemist, I find myself working with biologists, medics, mathematicians and industrial partners on a daily basis. The ability to communicate to a wide audience is crucial. Taking risks and embracing new challenges has also been important. I moved to New York a couple of weeks after 9/11 and now find myself in Inverness. Both challenging, but exhilarating in totally different ways!

What aspects of your career have you found challenging?

Keeping the momentum going can be difficult at times – especially when things in the lab don't work! Having a good team around you is critical. I've always been lucky to have great colleagues. Going back to work after maternity leave was also difficult but I think that's the case whatever career you have. I luckily have very supportive managers.



Mirela Delibegovic

Medical Sciences, University of Aberdeen

What is your research about?

My research investigates the causes and development of type 2 diabetes. I try to understand the very first alterations that occur at the cellular level, to identify a point when we can interfere, either by dietary alterations or drug treatments, in order to prevent or potentially reverse full development of diabetes.



What do you think was crucial in making your career successful?

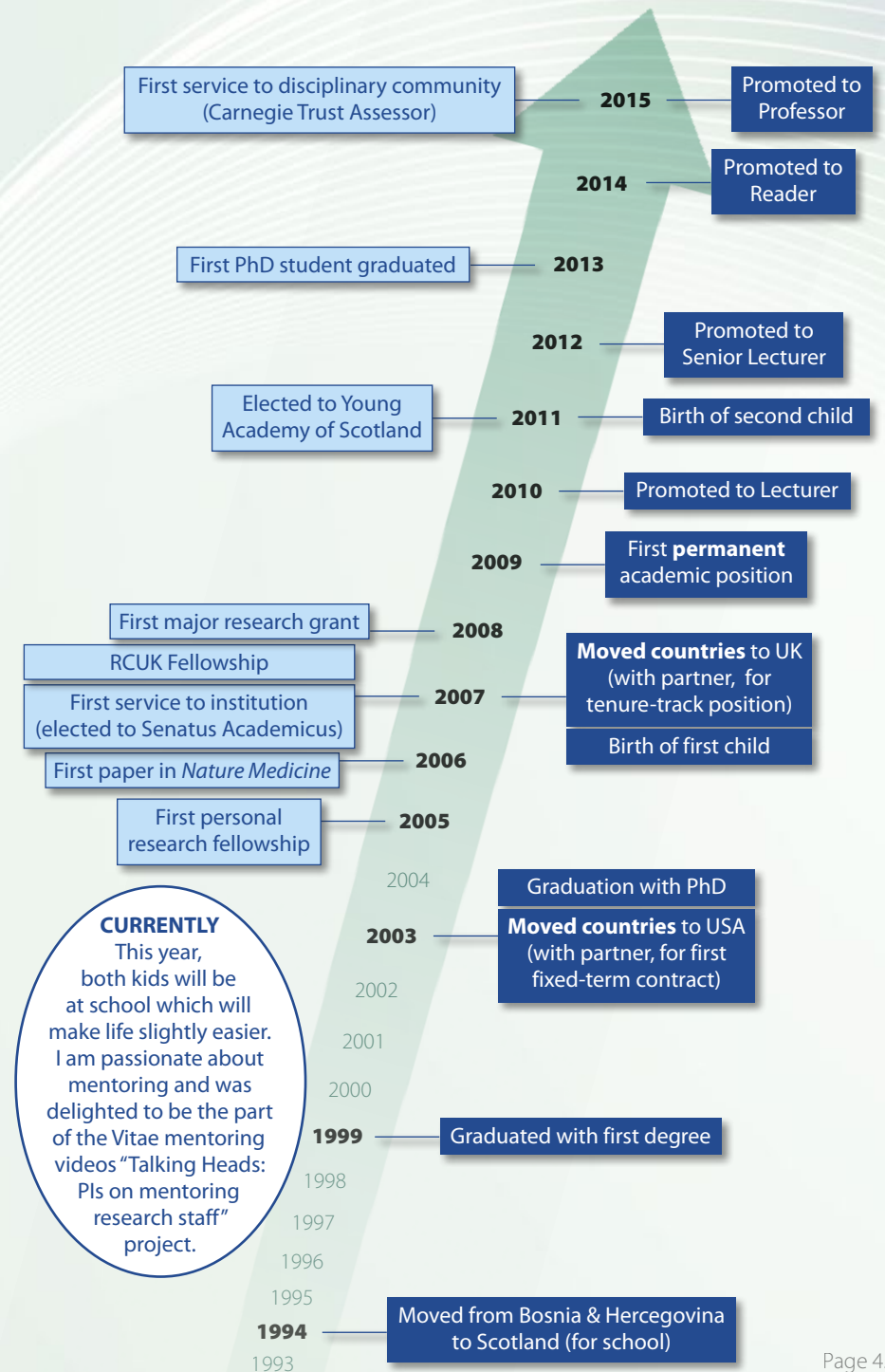
I always knew that I wanted to work on diabetes, which really defined my career. At the undergraduate level, when choosing my final year project, there were only 2 diabetes projects offered and both of them meant relocating to the London area for 10 weeks. I could have chosen other projects offered at Edinburgh, but I knew that I wanted to work on diabetes so I moved in my final year. This opened up so many new opportunities, including the PhD offer that came afterwards, and allowed me to meet people who have influenced my career as a scientist.

What aspects of your career have you found challenging?

I have always found it challenging moving cities and countries in order to pursue my chosen career path. It meant leaving all my friends and everything I was so familiar with, and starting over from scratch. However, it was quite exciting as well and I have always appreciated the fact that working in different laboratories and meeting new people have made me the person I am today. There were times when I thought that perhaps choosing the "easier path" would have been less stressful and lonely, but having to make new friends and colleagues has made me overcome my fears of speaking out and become more confident.



Family Christmas



Nicola Stanley-Wall

Life Sciences, University of Dundee

What is your research about?

I study how bacteria come together to form social communities called "biofilms". Common examples of biofilms include dental plaque and the slime that forms in the plug hole! In a biofilm the individual bacteria have increased resistance to various antimicrobial agents and are better adapted to survive environmental stresses. Consequentially, biofilms have a significant impact in clinical settings, where they cause the majority of chronic infections and in industrial settings where they cause significant corrosion and biofouling.

What do you think was crucial in making your career successful?

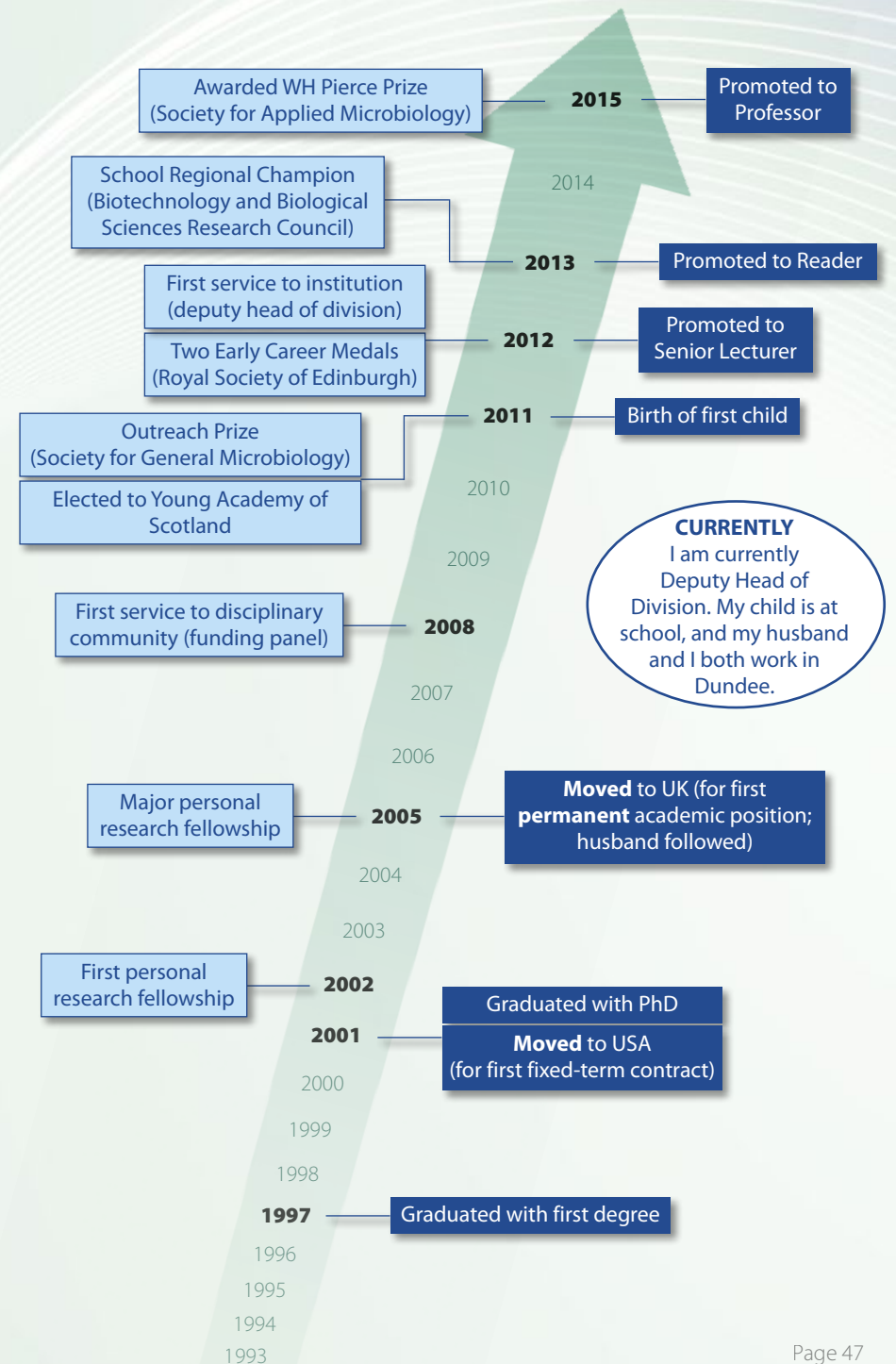
Being with colleagues who believe in me and have supported me along the way has been critical. This has been at the personal level and at a practical level by reading draft grants and papers etc.



Family holiday on Skye (2015)

What aspects of your career have you found challenging?

Maintaining balance between all of the different demands on your time can be difficult. Tasks can include administration, experimental design, teaching, grant writing, and finance management etc. On the positive side there is a lot of autonomy and inherent flexibility; this means that work can fit around a family life given support from both family and work colleagues.



Rachael E. Jack

Psychology, University of Glasgow

What is your research about?

My research focuses on human social communication – that is, how people transmit and decode complex patterns of information (such as dynamic facial expressions) for social interaction. I am particularly interested in why communication breaks down, for example, between different cultures or during human-robot interaction. I use an interdisciplinary approach that combines psychophysics, social psychology, and information theory.



What do you think was crucial in making your career successful?

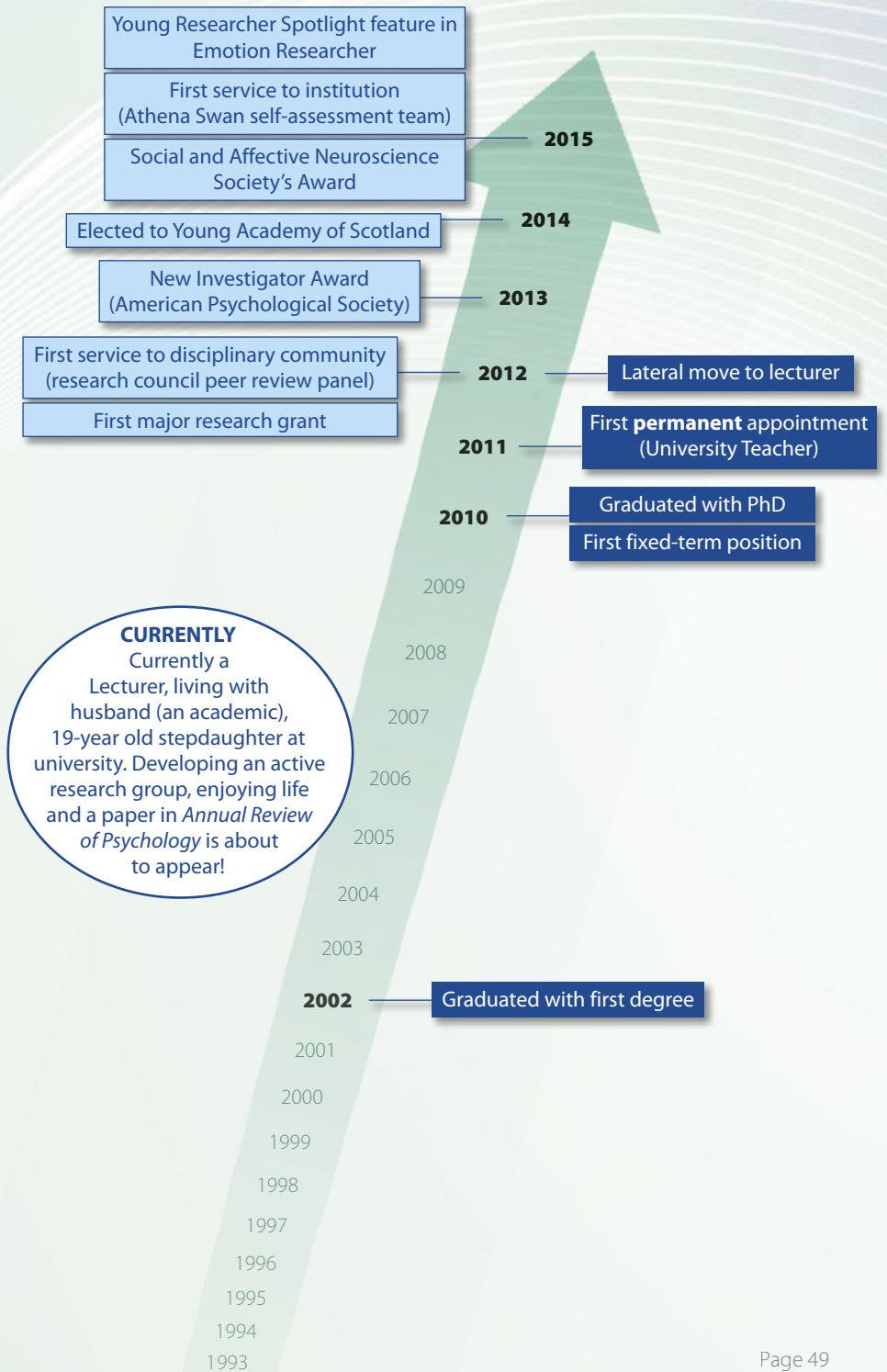
My parents and family gave me a sense of wonder and excitement about the world and learning. Crucially, they presented a “no barriers” view – that all jobs were for all people, that you don’t have to get married, have kids, that you shouldn’t let anyone or anything prevent you from achieving your goals... I also had an excellent mentor who guided my career path, pushed me to improve professionally as well as personally, and taught me what real high standards are, how to achieve and maintain them, and get others there too. Work-life balance is also important – word hard, play hard.

What aspects of your career have you found challenging?

Moving almost immediately from PhD to Lecturer was difficult because the job requires a completely new set of skills such as people management. Also, being married to an academic has both pros and cons.



Enjoying dinner at Brasserie Mollard, Paris (for my birthday)



Rosalind Allen

Physics & Astronomy, University of Edinburgh

What is your research about?

I use mathematical equations and experiments to study how bacteria grow. I am especially interested in making models for how antibiotic treatments of infections can be improved. I also study the complex microbial communities that are found in almost every environmental setting, from the human gut to a wastewater treatment plant.



What do you think was crucial in making your career successful?

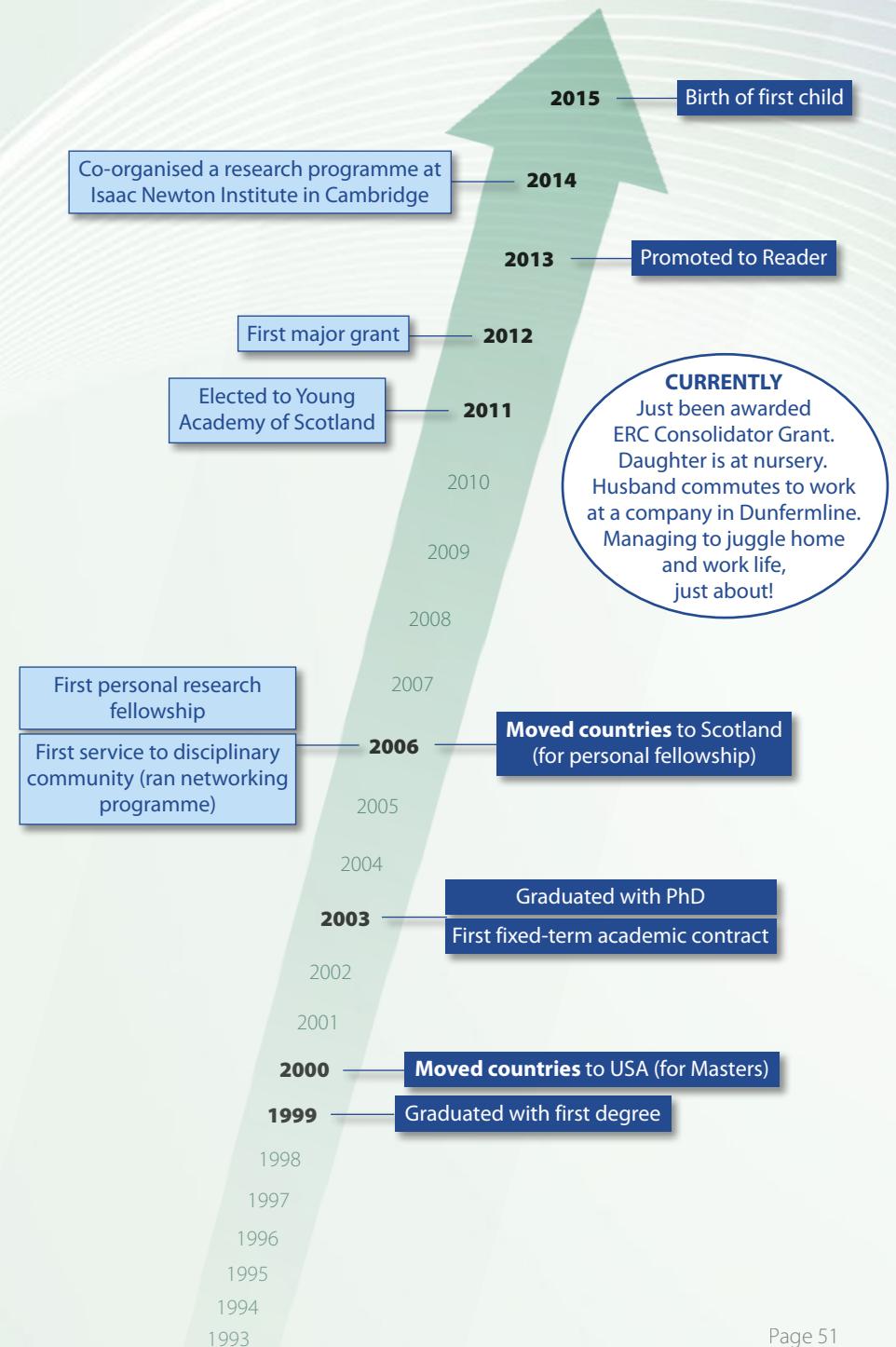
Initially, I had a very supportive PhD supervisor who actively promoted me, made sure I published a lot of papers, and did his best to increase my confidence. I also had a very positive relationship with my postdoc supervisor. More recently, the most important thing has been the award of a Royal Society University Research Fellowship which has made my life much easier in terms of having time for research. This was especially important as I have been embarking on a new area (microbiology) having been trained in physical chemistry.

What aspects of your career have you found challenging?

I have struggled to obtain UK grant funding for my research which is very interdisciplinary (at the border of physics and biology). Luckily I have managed to get some international grants, and my department has been very supportive.



Out for a walk in the beautiful Edinburgh outdoors



Sarah Coulthurst

Life Sciences, University of Dundee

What is your research about?

I am a molecular microbiologist who studies how bacteria work and behave. I am interested in how bacteria try to kill other, rival, bacteria and in how some bacteria successfully attack higher organisms including people and plants. A main focus is the class of bacterial weapons known as 'protein secretion systems' which many bacteria use to deliver toxic protein 'bullets' to target cells and organisms.



What do you think was crucial in making your career successful?

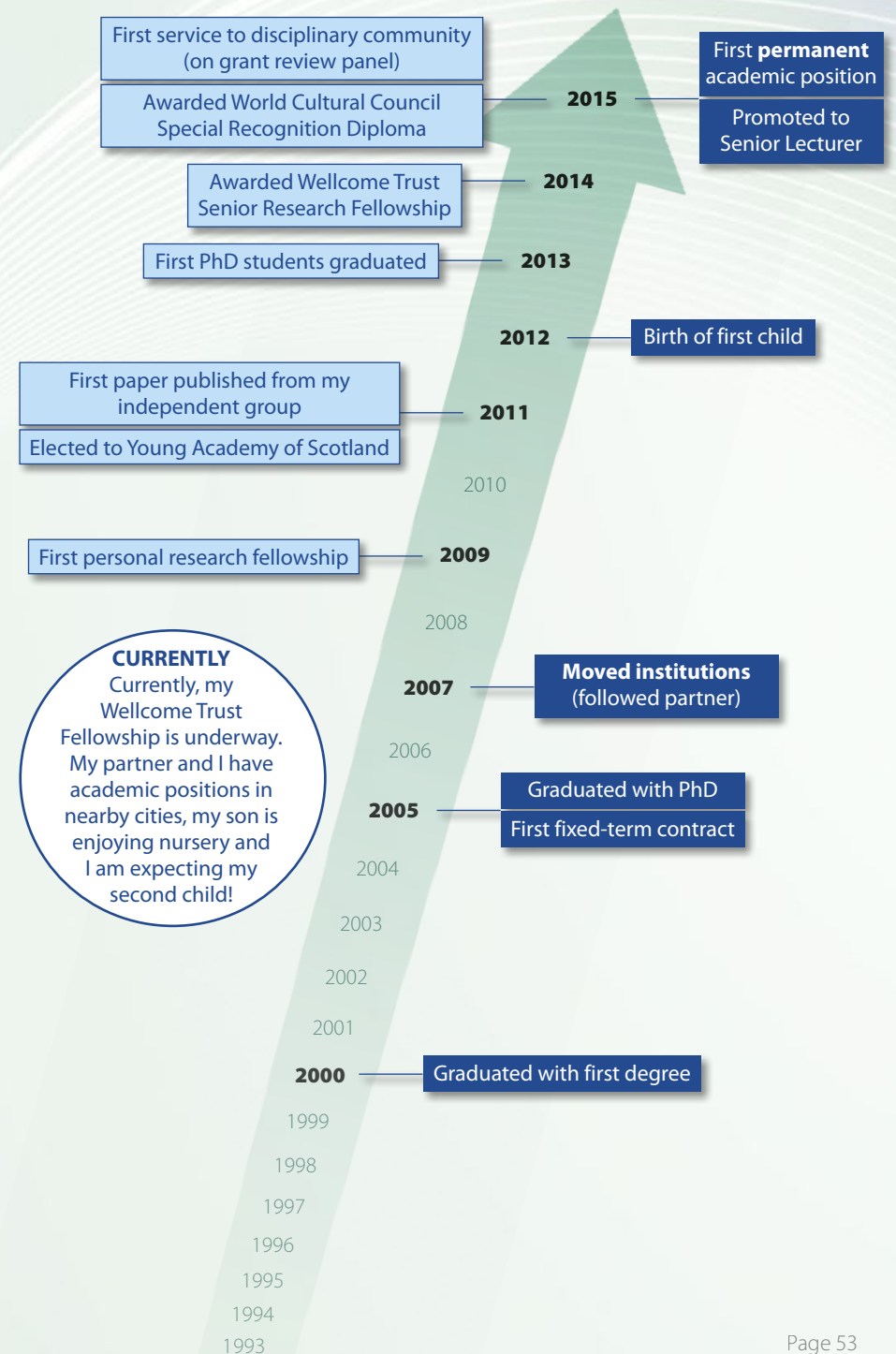
I think that supportive colleagues and mentors have been very important throughout. Recently, having a partner who has shared parenting responsibilities as equally as possible, and colleagues (both senior and peers) who understand the challenges of juggling a baby/small child with work have both been invaluable.

What aspects of your career have you found challenging?

On occasion it can be hard to have confidence in yourself when a life in research has its inevitable ups and downs. Probably the biggest challenge I have faced (and still face) is managing the conflicting demands on my time since I have become a Mum. I wouldn't change it for the world, but I never have enough hours in the day!



Spending time with my son



Sharon Ashbrook

Chemistry, University of St Andrews

What is your research about?

My research involves the study of atomic-scale structure, disorder and dynamics in solids, using a technique called Nuclear Magnetic Resonance (NMR) spectroscopy. We combine experiments with computation to understand inorganic materials, including high-pressure minerals, catalysts and ceramics.



What do you think was crucial in making your career successful?

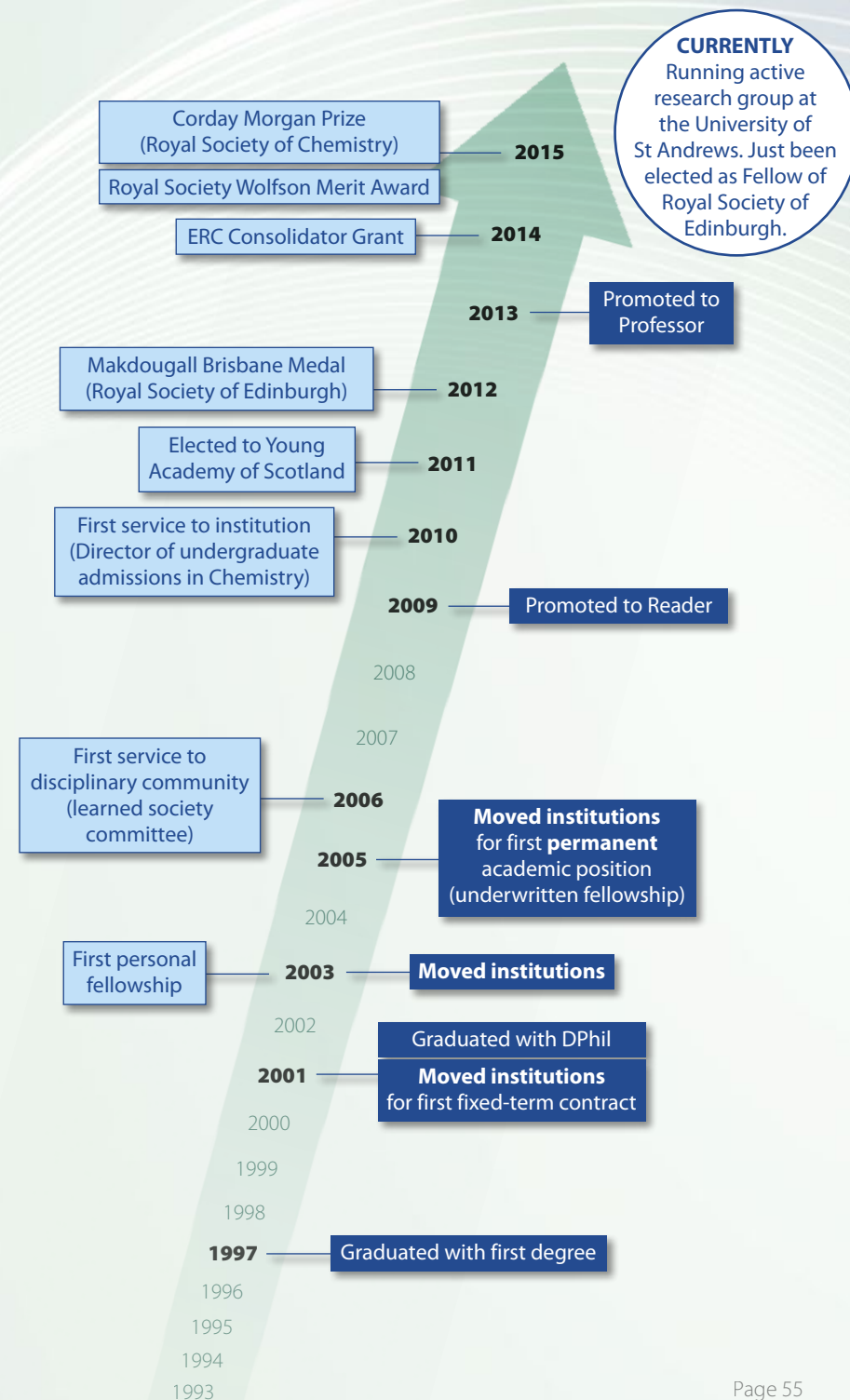
I am fortunate to be part of a relatively small international community where it was possible to build an international reputation at a relatively early stage of my career, and I had a number of excellent mentors. I also believe the fellowships I had (from the Royal Society and RCUK) were vital in enabling me to demonstrate independence. More recently, the support and encouragement I have received from my Head of School (e.g., to go for promotion) have been invaluable.

What aspects of your career have you found challenging?

The transition from PhD/project-funded postdoc was very challenging, as it was unclear how to demonstrate independence, produce a good publication track record, and demonstrate teaching ability while still a funded postdoc, yet these things are expected when applying for lectureships in science. I also found the very competitive process of obtaining funding (and the many rejections you get) very challenging and discouraging, when I first started in academia.



Walking with my research team in Chamonix



Sharon Hutchinson

Health and Life Sciences,
Glasgow Caledonian University



What is your research about?

I lead a public health research programme on the epidemiology of blood-borne viruses (particularly hepatitis C), involving a range of studies (e.g., population-based surveys, surveillance initiatives, novel record linkage designs, systematic reviews, meta-analysis, and statistical/economic models), designed to inform on the most effective ways to prevent, diagnose, and treat infection and disease.

What do you think was crucial in making your career successful?

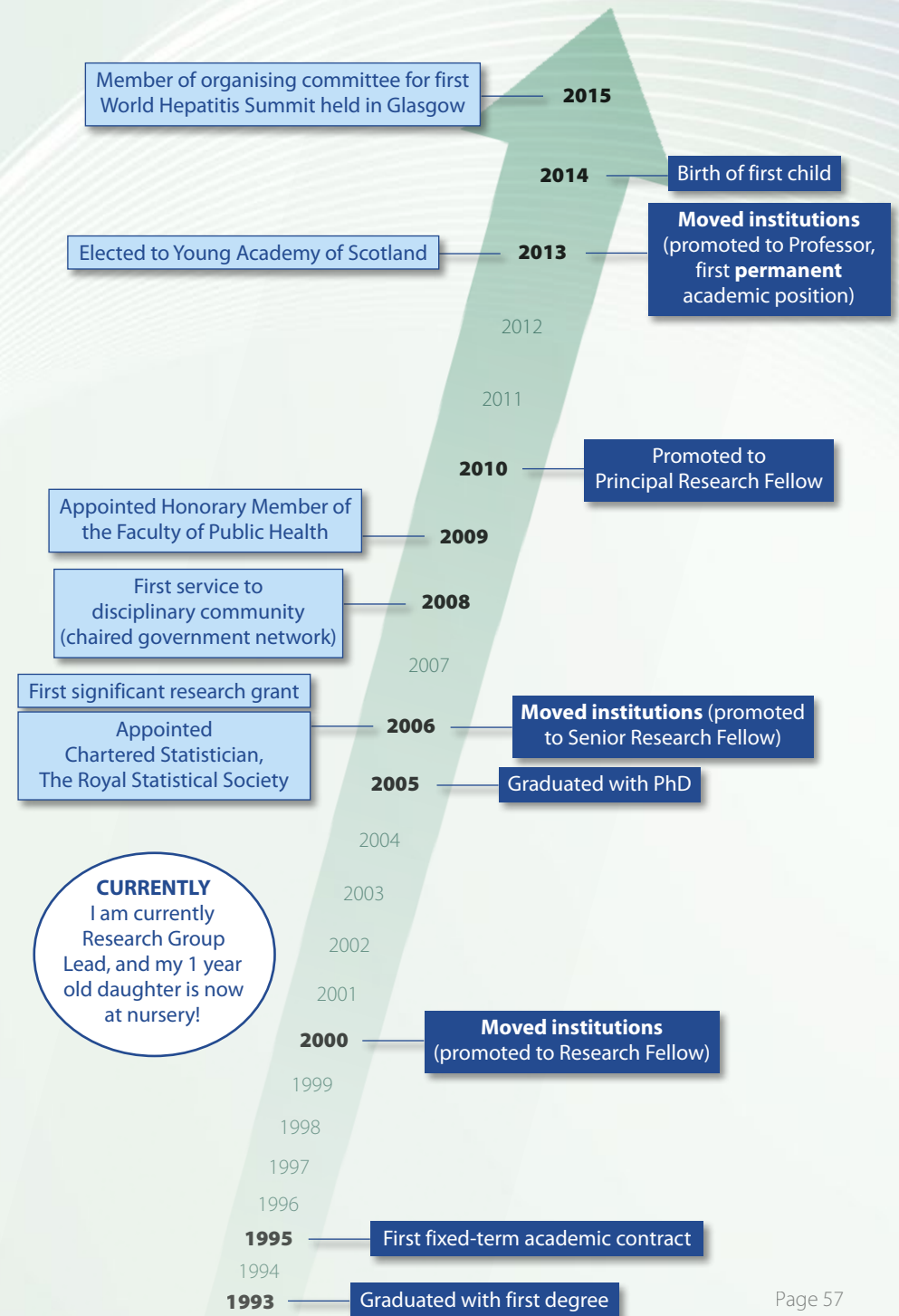
I have been incredibly fortunate to have had the opportunity to work alongside, and collaborate with, eminent experts in the field. Nonetheless, designing and conducting research that has proven to inform and influence national public health policy and practice has been pivotal in defining my career.

What aspects of your career have you found challenging?

Time management is inevitably a challenge, involving juggling various academic and non-academic commitments and ensuring sufficient time devoted to publishing and disseminating the research.



Out walking with the family near Dumgoyne



Silvia Paracchini

Medicine, University of St Andrews



What is your research about?

I am a human geneticist. I study how variation in our genome may contribute to complex traits such as dyslexia and handedness. My work is aimed at identifying the genes involved in such traits by scanning the genome of many individuals. I use cells growing in a dish and zebrafish to understand the role that these genes might play during brain development.

What do you think was crucial in making your career successful?

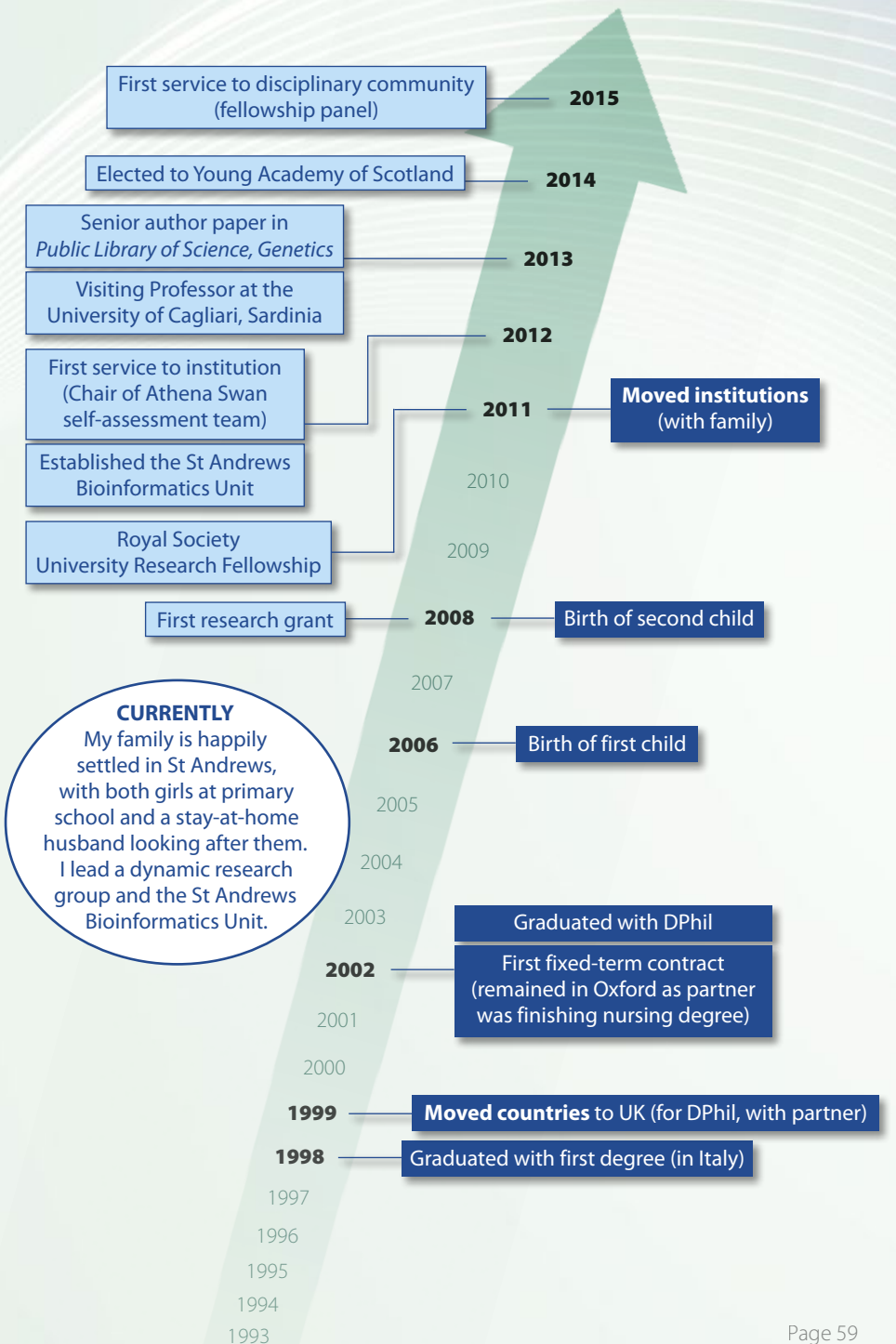
The single most important thing was the decision to leave Italy and move to the UK. The opportunity to work with great mentors, all transmitting enthusiasm for my work, taught me that science is fun. Looking at myself, I think resilience, curiosity, creativity and determination are the key characteristics that helped to go forward. And I would never be here if I did not have a supportive partner.

What aspects of your career have you found challenging?

It was definitely the period of moving from post-doc to independent researcher, which I also had to balance with caring for a toddler and a baby. Now that I have made it, there are other types of challenges, such as being responsible not only for my own career, but for the people in my group.



In Sardinia with family (2013)



Sinead Rhodes

Psychology, University of Strathclyde

What is your research about?

My research focuses on cognitive development in children, especially memory, both for children who are developing typically and those with developmental/psychiatric disorders such as depression and ADHD.



What do you think was crucial in making your career successful?

Supportive mentors and access to opportunities to engage in multi-disciplinary work and knowledge exchange activities have been critical in defining my career. Supportive mentors include my PhD supervisors and a number of senior members of staff at Strathclyde who have acted in a mentoring capacity since I joined. Taking part in Crucible (first cohort in 2009) and YAS (elected into first cohort in 2011) have also broadened my thinking and activities.



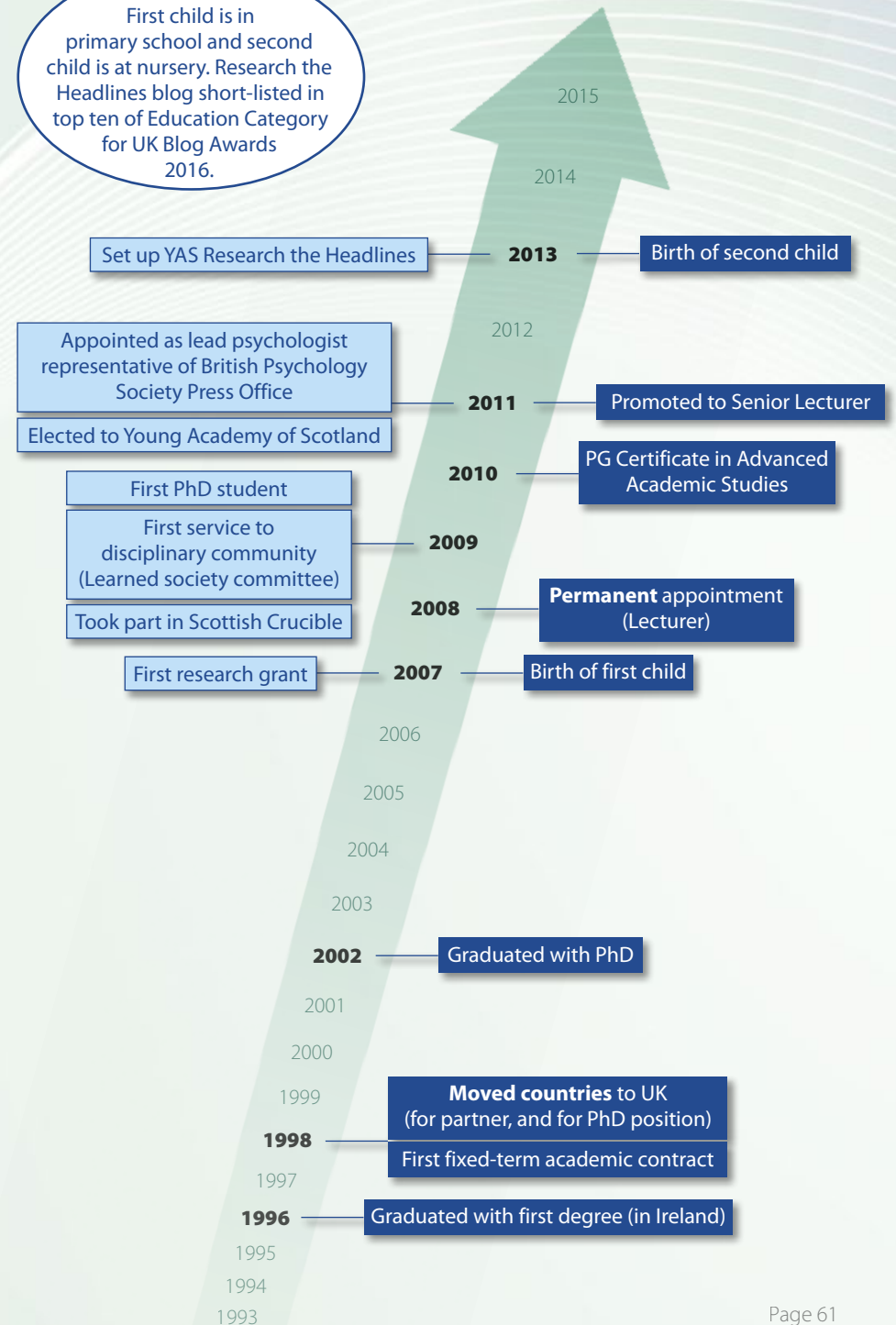
With my husband and children in Venice, 2014

What aspects of your career have you found challenging?

Being employed on temporary contracts (up to 2008), making it difficult to plan work, was challenging. Working with people in the past who have not had my best interests at heart was also difficult. Managing my workload, including travelling with 2 small children, is currently a challenge.

CURRENTLY

First child is in primary school and second child is at nursery. Research the Headlines blog short-listed in top ten of Education Category for UK Blog Awards 2016.



Stella Chan

Clinical Psychology, University of Edinburgh

What is your research about?

The World Health Organisation has declared depression to be the 'No. 1 cause of illness and disability' in young people, yet youth mental health is seriously under-researched. My research focuses on adolescent depression, with the ultimate goal of informing better preventative strategies and early intervention. I look at neural-biological and psychosocial mechanisms underlying vulnerability and resilience to adolescent depression, as well as the role of self-compassion.



What do you think was crucial in making your career successful?

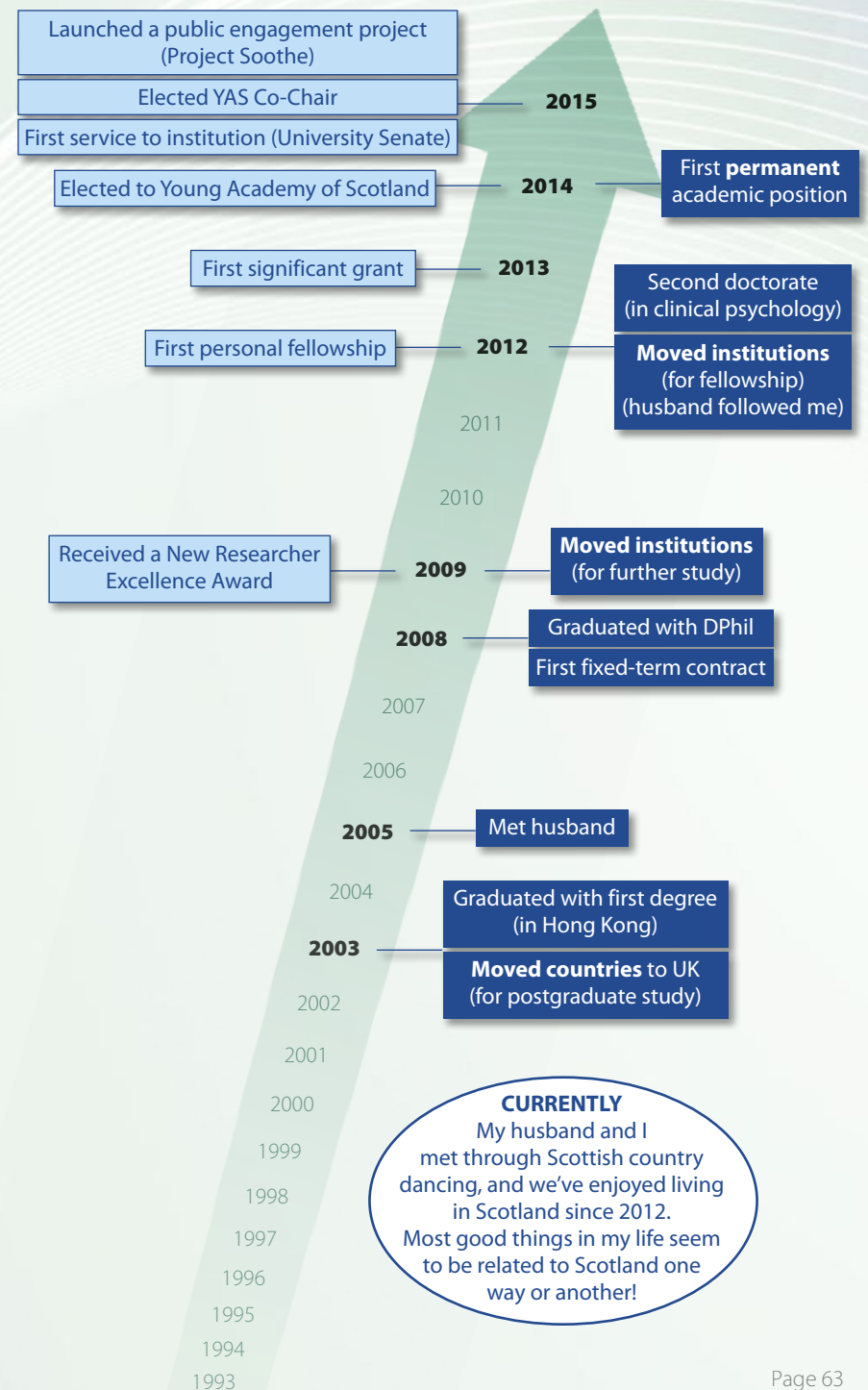
My career has only just begun and I hope one day I can call it a success! What I have found helpful is to let myself be guided by genuine curiosity and open-mindedness when deciding what research to pursue and who to work with, rather than merely thinking about what may look good on CV. I think my training and experience both in research and clinical practice has been a true asset. I also think it is really important to be myself rather than putting on a so-called professional façade.

What aspects of your career have you found challenging?

I was brought up by parents who believe that if people think you are good, they will give you the recognition you deserve, so you must not demand things from people. It gave me a real shock when I realised many academic appointments, e.g. promotion, are by application!



A happy day cycling through vineyards in the Mosel Valley 2015

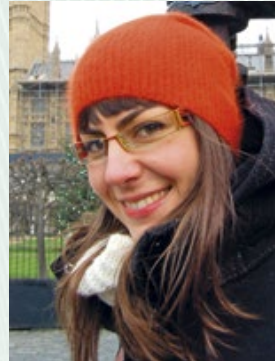


Valeria Skafida

Social Policy, University of Edinburgh

What is your research about?

My research focuses on social and health inequalities, and more specifically on the changes and developments of children's eating habits, within the context of family life and public health policy.



What do you think was crucial in making your career successful?

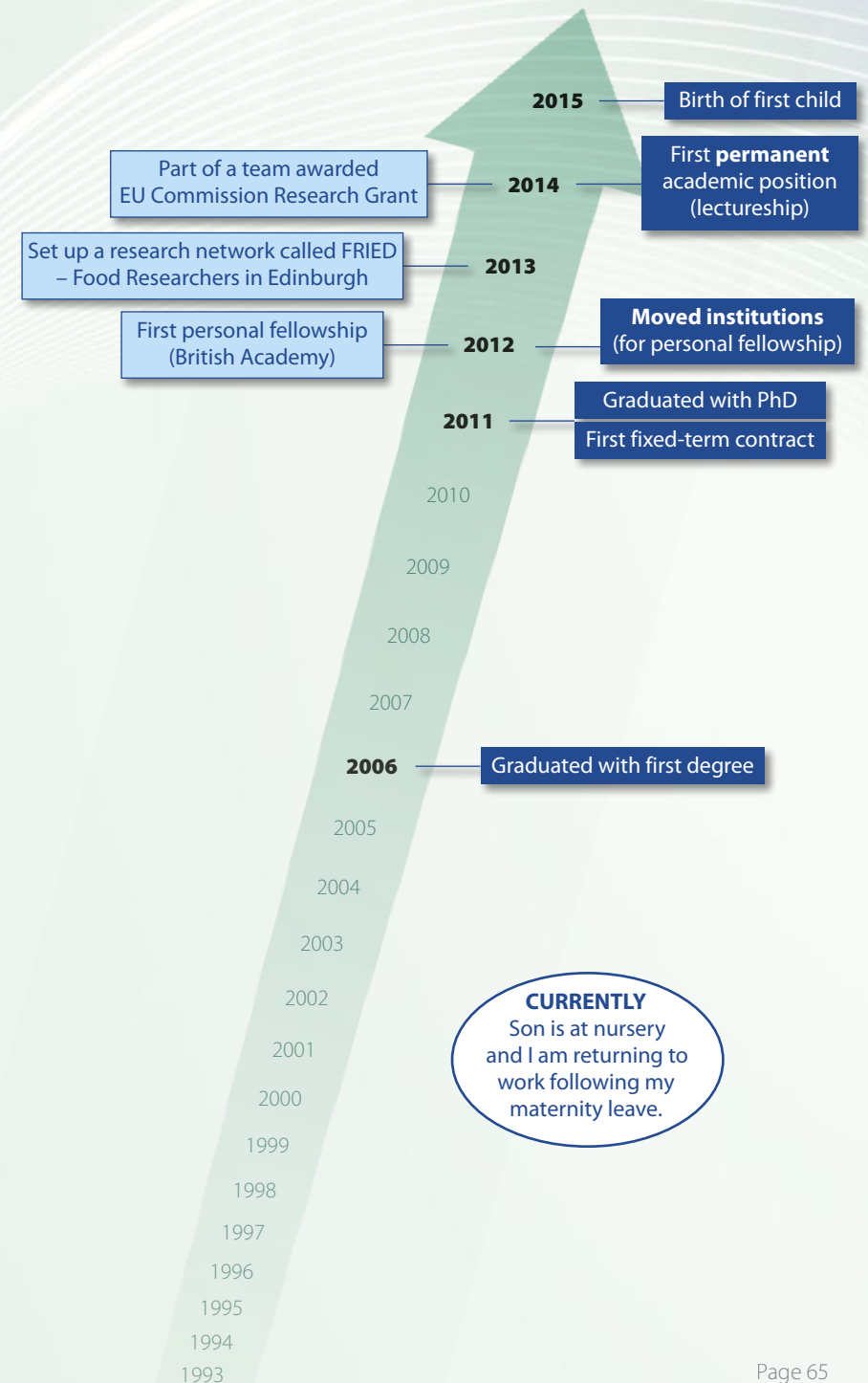
Starting with my own parents, and subsequently with my friends and partner Stelios, I was surrounded by inspiring role models working within academia who gave me a taste for what it is like to think like a researcher. I also had a number of significant mentors during my undergraduate studies who encouraged me to pursue postgraduate studies, which subsequently opened the door to my current career. Being awarded a British Academy Postgraduate Fellowship was a fantastic opportunity to develop further my research interests and portfolio, and was an important factor in eventually obtaining a lectureship at the University of Edinburgh's Social Policy department.

What aspects of your career have you found challenging?

In addition to general time-management and work-life balance issues, I found two aspects particularly challenging: learning complex statistical analysis techniques for my postgraduate studies with no prior experience from my undergraduate degree, and learning to deal with the press for media coverage of my research.



Enjoying the great British weather!



Verena Rieser

Computer Science, Heriot Watt University



What is your research about?

I am interested in enabling computer systems, such as robots, to understand and produce human language. I am particularly interested in spoken language, which is "messier" than written language. For example, we often repeat ourselves, hesitate, or speak ungrammatically. Holding a conversation with a computer system also means that this system needs to decide and reason about *what to say next* and *how to say it*. These two issues are at the heart of my research programme.

What do you think was crucial in making your career successful?

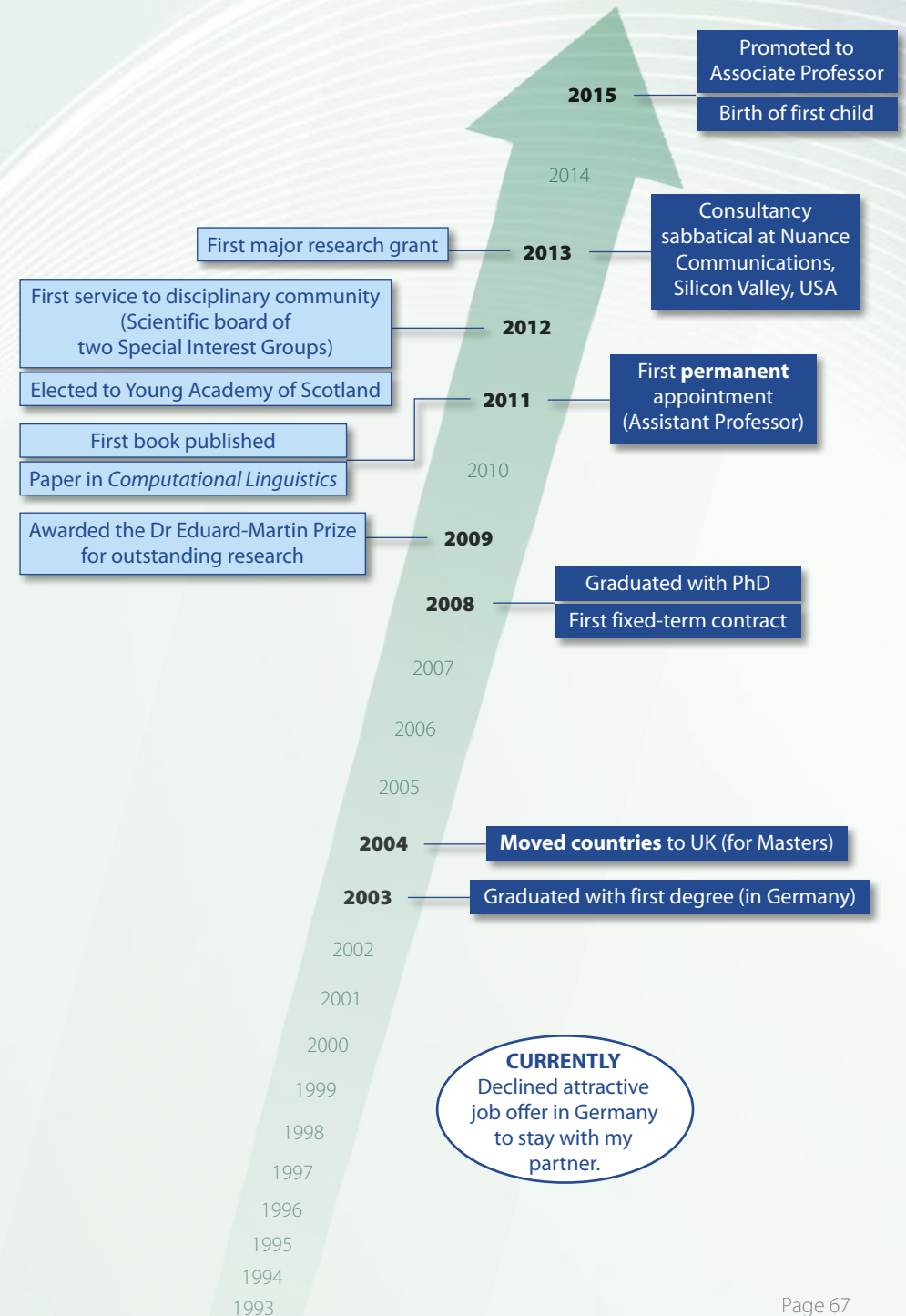
I have worked in many different environments: I have worked and lived in three different countries (Germany, UK, USA); I have worked in academia and industry; I have a undergraduate degree in literature and a MSc in Computer Science; and I have even spent 1.5 years working in a completely different field (from Computer Sciences to GeoSciences). For me, that is what defines my career: I enjoy learning about new things and exploring possible options.

What aspects of your career have you found challenging?

There seems to be a big transition from a postdoctoral career to becoming a lecturer. Getting a permanent position is, for many early career academics, the ultimate goal. However, very little prepares you for what comes next. PhDs and postdocs are trained in doing research. As a faculty member, you suddenly get to spend less time on your research, but you have to teach, supervise students, manage people, write research proposals, attend meetings, do admin, etc.



Enjoying my maternity leave with my daughter Katarina



Vicky Long

Health History, Glasgow Caledonian University

What is your research about?

I examine how social and political factors have shaped the development of healthcare services in nineteenth and twentieth-century Britain with a focus on occupational health and mental health. I am interested in the role played by workers and healthcare professionals, and the historical origins of contemporary health inequalities.



What do you think was crucial in making your career successful?

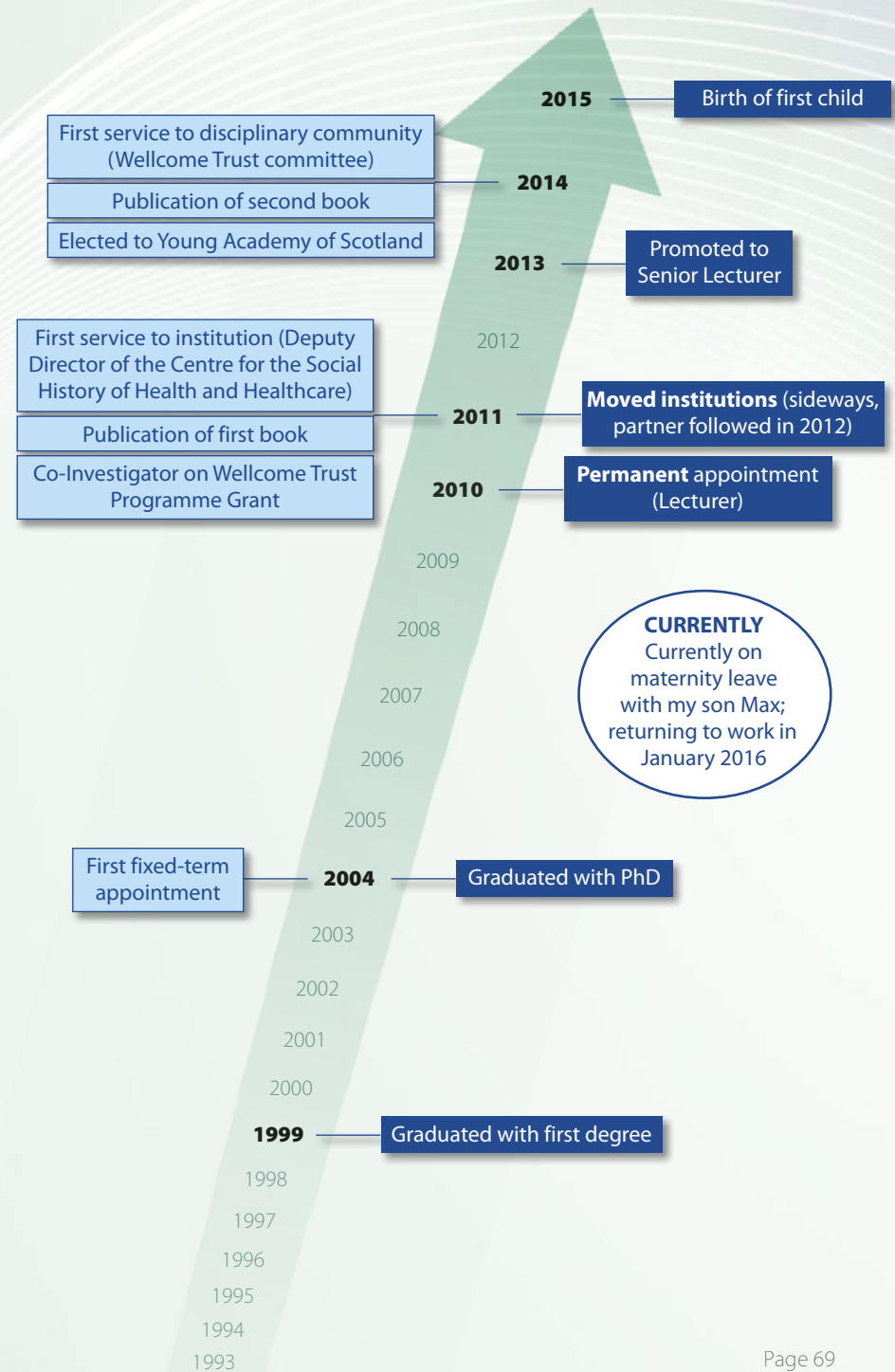
Between the ages of 18 and 30 I was first a student and then a postdoctoral researcher at the University of Warwick. Moving to Manchester in 2009 to take up a new role in public engagement gave me fresh challenges. There, I found myself working in a large, supportive community of postdoctoral researchers: it helped me focus on what I needed to do to secure a permanent job.

What aspects of your career have you found challenging?

Securing my first book contract was difficult, and without it I struggled to get interviews for permanent posts. I enjoyed many of my postdoc positions, but found the lack of job security stressful, and ended up moving hundreds of miles apart from my partner for work for several years. Maintaining a work/life balance remains an ongoing challenge!



Public engagement at Woodhorn Museum 2014



Victoria Martin

Physics & Astronomy,
University of Edinburgh

What is your research about?

I lead the Higgs boson research team at the University of Edinburgh. My team and I work as part of the ATLAS experiment collaboration at the Large Hadron Collider at CERN, the European laboratory for particle physics, in Geneva, Switzerland, where the Higgs particle was discovered in 2012. The current focus of my research is to better understand how the Higgs boson particle behaves.



What do you think was crucial in making your career successful?

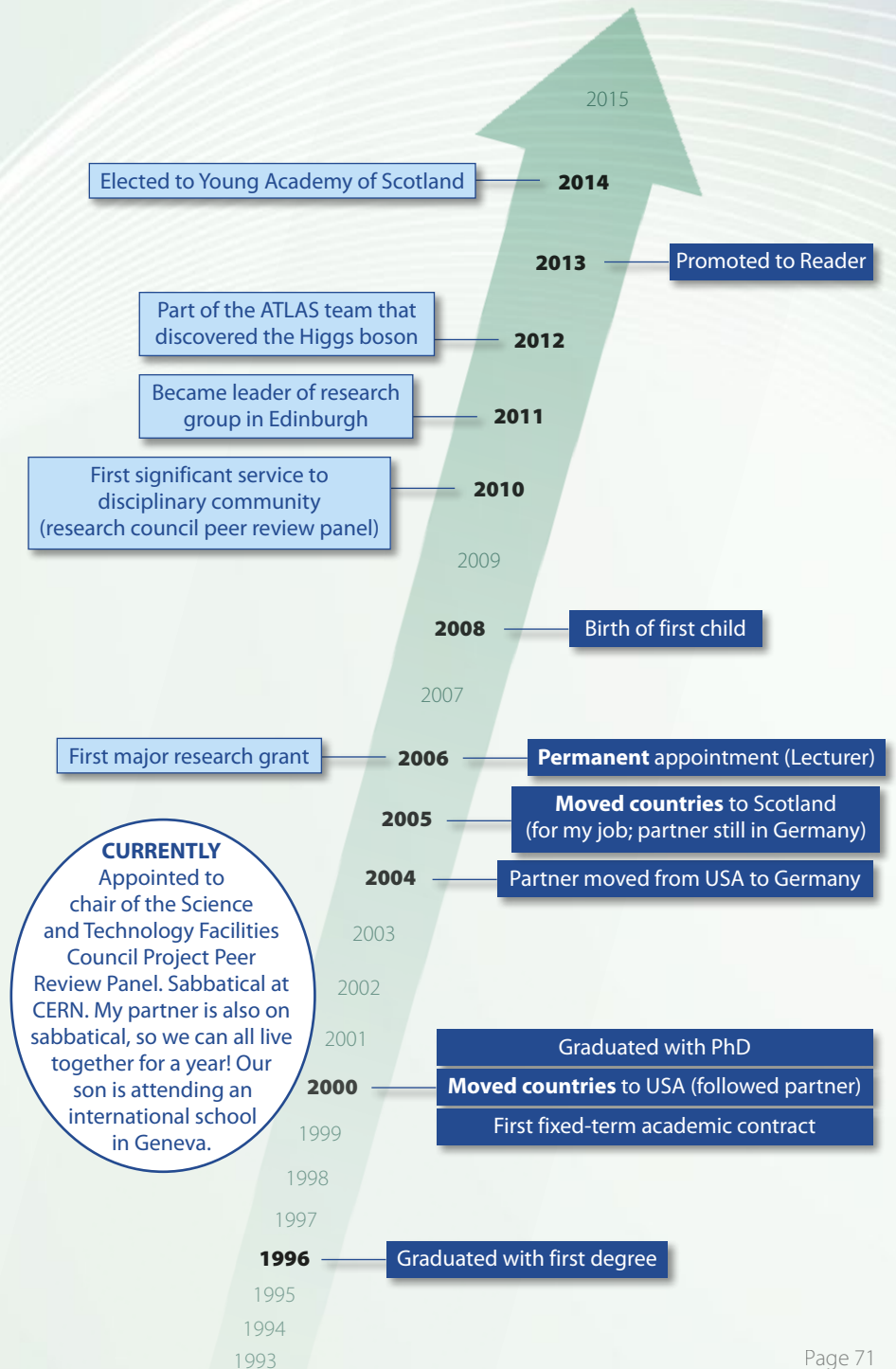
During my research career I have always worked in large experimental collaborations. This means I get to work with excellent scientific colleagues, at all stages of their careers, and from all over the world. I've used many of them as role models: trying to emulate their good practices, to avoid the bad practices, and at the same time find my own path and my own specialism.

What aspects of your career have you found challenging?

Going back to work full time after maternity leave was challenging. My partner is also an academic in Physics, but he works in a different city. During my maternity leave, we lived together with our son in my partner's city. When I went back to work-full time after my maternity leave, I moved back to Edinburgh with our son. At the University 8 hours a day, starting a new research project, then looking after a toddler 8 hours a day is challenging. And no, I didn't spend the other 8 hours asleep! That was for cooking, laundry, grocery shopping, the occasional glass of wine, email... as well as sleep.



With my son at the Science Museum in London



Afterword

If you have read this far you do not need me to say 'Wow – LOOK AT THIS!' as I have been saying to colleagues recently when the pages of this brochure arrived in my Inbox! I was one of the small group of senior women scientists who created the Athena-SWAN awards, and the numbers and progress of women in academia (especially the scientific and engineering areas of academia) is a topic that has long been of concern to me. So I am delighted to see this brochure and to see the successes of the mid-career women (from all areas of academia) whose trajectories are described in it.



The themes in these women's stories that keep recurring (as I see them) are above all – supportive supervisors and mentors. This theme is so common that there is a risk that it is taken for granted – it should not! Couples who are prepared to live apart for a bit, and partners or spouses who are prepared to be the 'trailing spouse', so they move for her job not the partner's, are also an important ingredient in the success of this cohort of women. International experience also seems a significant component in many of the careers described here. The final theme that I noted was the value of major Fellowships, especially those of five or more years' duration; as one contributor says, this allows you to have a child and catch up again academically!

This brochure deserves very wide circulation. It should be put in the hands of career advisers in schools, colleges and universities. It should be given to every academically able school girl, before she makes her final choice of school subjects, and to every wavering female undergraduate or graduate student. It inspires, it informs!

So a huge thank-you to the three members of the Young Academy of Scotland who conceived, initiated, designed and produced this compilation. It is an attractive and fascinating read. I am grateful too to all the contributors who have been willing to share the significant events in their career path and home life; this shows all that come behind you that it can be done and that it does not necessarily mean the renunciation of a normal life! Thank you all!

Jocelyn Bell Burnell
President, Royal Society of Edinburgh

The RSE Young Academy of Scotland is an unusual body in British academia: it covers all academic disciplines, and its membership is gender-balanced. The members of the Young Academy may only be in mid-career, but all of them, male and female alike, have achieved career success. This project showcases the career paths of some of the female, academic members of the Young Academy, from a wide range of disciplines (including the natural sciences, social sciences and humanities). By demonstrating the many and varied routes they have taken to success – varying by discipline, by personal circumstances, by opportunities – it is intended as an inspiration for early career researchers, many of whom still harbour doubts about whether academia is a good career for women.

Our members think it is, and we want to tell the world!

Acknowledgements

We would like to thank Fiona MacFarlane, Jim Naismith and Marie Montondo for their assistance.

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welcometrust



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