



Career Pathways for Researchers



If you can end up doing something you like at a professional level and get paid for it, that's as good as it gets.



Message

from the Pro-Vice-Chancellor

Mhe University of Essex was ranked 9th out of over 150 universities in the United Kingdom for the quality of its research in the last Research Assessment Exercise. We are a very strongly research-led University and, as such, very emphatically recognise the vital role that our research staff and students play in the sustainability of this strength. What has also become increasingly important to us now is the need for the University to support the development of researchers' skills and capacities, both generic and subject-specific. We are very concerned that your career develops well, and we recognise fully the part that we can play in that development.

In this context then, I commend this contribution to your own thinking on the way your career develops. The profiles here provide a really fascinating insight into the sheer diversity of opportunity that a research career gives you, and I hope you will find them both interesting, illuminating and inspiring.

I am delighted to wish you every success in your work and in your development as a researcher.

Professor Rob Massara
Pro-Vice-Chancellor (Research and Enterprise)

**Please respect the privacy of contributors.
Those profiled are not available for careers advice.**



Contents

This publication has been compiled as a source of interest and inspiration to both prospective and current research students and staff. It features profiles of researchers who have either worked or studied at the University of Essex. It illustrates the diversity of career paths possible to those who undertake research and the doors that research can potentially open. Contributors include those who have made careers in academia, the public, private and voluntary sectors. The profiles flag up some of the experience and skills which those researchers developed in their work. They share their perspectives on what they might do if they were at an early stage of a research career.

We thank all of them for the insights they have provided on their career paths and what influenced them in their career decisions.

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Dr Irene Hames

Editor Publisher

Dr Irene Hames is Managing Editor of The Plant Journal, one of the leading journals in the plant sciences, and a member of Wiley-Blackwell. Following her PhD in Cell Biology at Essex, Irene went into publishing, working initially as a freelance proof reader and copy editor, before moving into editing and then becoming a professional editor for a major publisher. Irene is also a member of the Advisory Council of Sense About Science and of the Board of Directors of the International Society of Managing and Technical Editors.

This profile illustrates the value of seeking advice from others which may open new doors.

Irene's career path following her PhD was not exactly a textbook one. "When I left Essex I wasn't quite sure what to do," she recalls. "My husband got a job elsewhere, so after I finished my PhD I helped him set up his new lab. We then started a family. I had kept a small ad from the New Scientist – it was from a publisher looking for proof readers and, although this was about a year or two old, I wrote to that publisher and asked if I could go and see them as I was interested in publishing. That led to me working for them in a freelance capacity, and over the years as my family grew I developed a freelance publishing career, copy editing and proof reading articles for a number of journals. I progressed to rewriting articles for journals and editing books from home, still fitting my work around family commitments." During this period Irene edited a wide range of books. They were not all science-based; Irene recalls working on books on the car and coal industries for example.

Working on a freelance basis gave Irene a great deal of flexibility in her hours of work and the types of work she undertook.

“Although you have to get the work done, it doesn't matter when you do it. You meet your deadlines and you provide a good job because you're only as good as your last job when you're a freelancer.”

"You don't have benefits like sick pay and you have to run your business as a business, so that teaches you very valuable skills."

As well as building up her knowledge of publishing, writing and editing, this brought Irene into contact with a large number of authors, which has proved invaluable as her career has developed. As her skills base developed, she was also asked to provide training for new in-house publishing staff and to manage projects.

Irene's scientific background and her experience of editing and working on journals made her a natural choice for the role of Managing Editor of The Plant Journal when it was established in 1990. "We started with virtually nothing and had to have the journal out in 9 months. The journal has grown rapidly over the past 18 years, which is one of the reasons I haven't gone elsewhere for a job. It has expanded from nothing to a large and high-impact international journal, published every 2 weeks." The managing editor role is wide-ranging and includes overseeing the submissions to the journal, the review process, and all editorial related issues. Irene has also taken on responsibility for dealing with the misconduct cases that arise. She manages a team of four in the Editorial Office in York and coordinates the work of many others. There are 25 international editors and more than 1000 reviewers working on the journal each year, spread around the world. The Editor-in-Chief of her journal is based in the USA, but as submission and review are done via a sophisticated online system, distance is no barrier to effective working.

Irene's profile as managing editor of a prestigious journal has enabled her to become involved in a number of other activities and she is frequently called on to advise and give talks on editorial issues. She has published a well-received book on peer review which has led to a number of other opportunities, notably an invitation to join the Board of the recently - established International Society of Managing and Technical Editors (ISMTE). The ISMTE provides support, training and networking opportunities for people working in editorial roles.

She is also a member of the Advisory Council of the charity, Sense About Science, which provides information and advice about scientific matters that are in the public domain, with the aim of dispelling misconceptions. Through Sense About Science, Irene has provided advice on the peer review process and presented at seminars and workshops. She also does work for the Committee on Publication Ethics (COPE).

“I'm in a position to be able to pick and choose what I take on in addition to my editorial job.”

"I can say yes I will do that because either it's really valuable and I believe in it, or because I will really enjoy it. It adds a different element to what I do." These broader roles, attendance at conferences to represent The Plant Journal, and her contact with authors keep Irene very much in touch with editorial and scientific developments.

Irene feels that the skills she developed during her PhD have proved extremely valuable in developing her career. "When I started in publishing I had already been an author because I had published papers from my research. When you get your first manuscript back marked up with all sorts of comments you tend to think 'oh my goodness it's all rubbish'- but actually that's the norm. I was just glad to have it accepted. It made me realise how significant it is for an individual to get a paper published - something that I still keep in mind when dealing with the 1,200 submissions a year to The Plant Journal. That's why I take so seriously every reject we have to send to an author. I realise the significance because of the impact it can have on that person's career, their funding opportunities and their promotion prospects."

In Irene's view, doing a PhD enabled her to develop good work habits. "You learn to reason and to judge things on the results you get, not what you think should happen. In publishing nowadays we have a lot of problems with fraud and other misconduct.

“I think when you're doing research you should do the experiment properly, get the results and report what you found and interpret from those results - you don't make them up. The recording and writing skills that you develop are very useful in other contexts.”

Asked what advice she would give to someone starting out on their career from a PhD, Irene suggests firstly:

“Never be afraid to contact anybody who you think might be able to help you or give you good advice, even if they seem at a higher level.”

And secondly:

“Identify what it is you like, because if you can end up doing something you like at a professional level and get paid for it, that's as good as it gets.”



Dr William Spindler

Senior Public Information Officer

Dr William Spindler has worked for the United Nations High Commissioner for Refugees (UNHCR) for 12 years. The organisation's mission is to "protect and support refugees and assist in their return or resettlement". His current role is as a Senior Public Information Officer and is based in the headquarters in Geneva.

He studied for his PhD at the University of Essex in the Department of Art History & Theory. Prior to this, he studied for a Masters degree at the University of Southampton, and made the move to Essex to explore the subject of his thesis further with a world expert in indigenous artistic & literary sources, with a focus on Latin America.

In this profile it is interesting to read how someone juggled a series of work roles alongside his PhD research.

William has worked in a small team of 5 people for 3 years as a spokesperson for the UNHCR. This is a job that involves dealing with the media on a global basis. It requires the ability to research and provide information and statistics on specific regions of the world and to communicate the official UN position to journalists. In the absence of the Chief Spokesperson, William has to be prepared to take questions from journalists at the twice weekly press conference on any subject concerning humanitarian emergencies and crises in any part of the world, in addition to his own specialist knowledge of certain regions. He also needs to be in tune with knowing what sort of information journalists want. The role requires not only talking to journalists, but also providing guidance to colleagues in the field. This might require advising on sensitive issues or giving practical information. Although he deals with complex emergencies and situations, he does not get directly involved with relief work. By ensuring that journalists are in a position to tell the refugees's story, he considers there is reward in knowing that you have helped those people in some way.

William's entree into media-related work started in the early days of his PhD. A friend had recently started work for a human rights mission in Haiti. He had already undertaken some freelance journalism with the Latin America section of the BBC World Service and the Financial Times.

Through these media contacts he approached the BBC to see if they might be interested in his reporting for them in Haiti. A combination of factors, including a volatile political situation at the time, led him to be employed as correspondent there for a year.

It enabled him to combine both his research interests and documentary journalism.

In William's view, the skills of the academic researcher are very applicable to the area of radio and documentary journalism.

The skills of a researcher in gathering information, processing it and conveying it in ways that can be understood by an audience are very important for people who deal with communications.

At the time, William sought this opportunity with little intention of pursuing the path of a journalist or within the media; it was more based on pragmatism. It was "simply a way of killing two birds with one stone." William would claim that lots of things in his career have been chance opportunities. However, it would be fair to say that William was proactive in getting known in the field of documentary journalism for his specialist knowledge of Latin America. He developed key contacts which have obviously stood him in good stead. Not long after his stint in Haiti with the BBC, he was approached by the United Nations to cover a temporary post in Mozambique undertaking media-related work. He continued his PhD research alongside this role.

Interestingly, his original career thinking had not been along the lines of the media at all. When William started on his PhD, he had envisaged a career in academia. Even when he completed his PhD, academia was still an option, and to that end he published some academic articles and applied for academic lecturing posts in a number of UK universities.

These applications did not succeed. But by this time, William's curriculum vitae opened up other doors into journalism and media-related work. In spite of having a short spell with the UN in Mozambique, William had not actually considered working for the UN. Therefore, when a UN post in Rwanda came his way, he reacted with some hesitation. However, he did join the UN and has in fact worked there ever since.

Moving from PhD research into non-academic employment is not always a smooth ride. William was at pains to point out that for some employers a PhD might be regarded as a luxury, a self-indulgence in that you take 3 or 4 years of your life which may not have any relevant connection to them.

You have to remind prospective employers that your PhD thesis is not an end in itself. It is the process of research itself that you have to offer.

And you really need to sell your research skills. The rigour in finding information from primary resources such as the library, interviewing people and out in the field, and using the capacity to discriminate over lots of information are key skills in many work contexts. The need to be resourceful and creative in your search for information, pursuing parallel lines of investigation and finding things in different ways are the skills that William uses on a constant basis which he honed as a researcher.

Certainly the skills of writing have been of value to William in his career in producing reports and publications. But he does point out that he has not only relied on his research training. He has still had to develop his skills within his work setting by learning from others. He strongly feels that,

A PhD is just a stepping stone to something else. Your learning does not stop just there.

For example, his PhD did not prepare him for the time pressure of deadlines in his work; research deadlines are on a longer timeline. He came up against this early in his journalistic days. When striving to produce a really effective piece of writing, William took heed of a very useful piece of advice from an experienced BBC journalist on the need to be conscious of deadlines. "It's not the best you can do; it's the best you can do within the time you have. Even if you're a minute late and it's the best report in the world, it won't make it into print."

William has not had a lot of formal training for his work roles, but he has learnt in other respects from journalists in

the field. Life as a journalist can be a very lonely occupation and requires high levels of organisation, professionalism, writing skills and commitment. Observing journalistic colleagues who do this well and reading the work of people you admire has proved a true inspiration and created a desire in William to emulate those qualities.

In terms of William's next career steps, he has not mapped out a route. He has greatly enjoyed working for the UN as an international organisation as it has allowed him to work in parts of the world which he would not have been able to do otherwise.

The UN has a rotation policy whereby staff are expected to move every few years. He could choose to move into a management role or a role heading up an office in the field. He has always been interested in ethnic and cultural relations, so he may be thinking of where that interest takes him in the future.

One message that William considers important for researchers who may be looking at the next step is not to limit themselves to any one area of professional life.

It is possible to recycle yourself into different things. Don't just look at academia, look at other possibilities too where you might find very rewarding areas where you can use your research skills.

Since this interview, William has received a further promotion within the UNCHR.



Sir John Ashworth

Retired Foundation Professor of Biology

This profile traces the career history of someone who has received a knighthood in acknowledgement of his achievements in the public domain. Now in his seventies, Sir John still describes himself first and foremost as an academic. This is interesting in that as his profile will show, a not insignificant part of Sir John's career was spent in settings outside academia. His profile also demonstrates someone who has learnt new skills and embraced change throughout his long career.

Following his first degrees in Chemistry and Biochemistry at Oxford University, he began his PhD under the supervision of Professor Hans Kornberg, an eminent academic in the field of biochemistry. Not long into his PhD his supervisor was appointed Foundation Professor of Biochemistry at the University of Leicester. Sir John took the step of moving to Leicester with him as a PhD student.

Right from the beginning I had a lot more responsibility of an administrative kind than many PhD students have and I actually found that very helpful.

As a very small department in its infancy, he had the responsibility for helping set up the new lab. Much of his learning was accumulated through experience, first as team member and then in time running a research group. He experienced a steep learning curve which was not without its challenges. On one occasion he narrowly avoided disaster when he realized he had submitted an order for 5 miles of rubber tubing as part of equipping the lab. He learnt about cash flow initially through overspending on a budget for radio-chemicals.

As the research group got bigger, he acquired skills of delegation and an understanding of financial as well as personnel and management control. In terms of advice to those undertaking a PhD or postdoctoral role, Sir John thinks

it is important as a developing scholar not to view your research role in narrow terms but to fit into the wider community of other scholars and seek interactions with society.

Sir John was employed in the role of research demonstrator which required him to teach. Although this meant that it took him a year longer to complete his PhD, he valued the experience of teaching.

Seize every opportunity that you get to do some teaching, help with the administration of the lab, take over responsibility for health and safety or engage in committees...in a sense I don't think it matters what.

By the time he had completed his PhD he had published a number of papers from his work with Kornberg and lab colleagues. The research was in the area of applications of molecular and genetic techniques to microbiology.

At a time when the higher education system in the UK was expanding, he was offered a lectureship on the condition that he chose another research area.

This prompted him to apply for a prestigious Harkness Fellowship. His application was successful and this took him to the States where he studied cellular differentiation in cellular slime moulds under an eminent scientist. At this stage there were very few people in the world who were using this organism. During his fellowship he assisted a fellow researcher at the University of California in setting up a lab to continue their research in this field.

With this valuable experience of establishing a lab, he returned to Leicester to repeat the process. He set up the first lab in Europe to undertake research in biochemical approaches to cellular slime moulds. Although initially on his own, he was joined by a technician; the team further grew to approximately 12 people within a few years. He was awarded the Colworth medal in 1972 for his research by the Biochemical Society.

At this point he moved to Essex to take up the new post of Foundation Professor of Biology.

"In some ways the role was not dissimilar to running a small business. The University did not have a department so the role involved setting it up from scratch, involving an extraordinary range of administrative and managerial skills."

What made it particularly challenging, however, was that it was a time of student riots and discord. He had to use considerable persuasive skills to negotiate with demonstrators and suppliers to arrange for the delivery of equipment to the new department, and prepare for the arrival of new students.

After some years at Essex his career took an interesting turn. He was invited to go down to the Cabinet Office to be interviewed for the then new post of Chief Scientist attached to the Central Policy Review Staff on a

secondment basis for which he was successful. The CPRS was a Think Tank set up by Lord Rothschild under Edward Heath, the previous Prime Minister. "I'd never done any policy analysis or had been exposed to politics with a capital P"

However, a major attraction of the job was that it was a new post, where he had scope for creating his own role.

My whole career has been about applying existing, well understood techniques to novel situations.

The role was to provide scientific and technical advice to the Cabinet on a very wide range of topics. It required the capacity to come up to speed rapidly in technical areas, more often than not outside his subject specialism, analyze all the facts and then write a report with an executive summary of half a page. His research and analytical skills provided a good basis for undertaking the role. The pressure was enormous at times when reports had to be completed within very tight timescales for the Prime Minister or Cabinet.

During his 5 years as Chief Scientist, Professor Ashworth presented assessments on science and technical issues which led to a number of high profile cases including the Windscale Enquiry on nuclear power.

He also undertook a not inconsiderable professional risk when he published the first report on climate change. Margaret Thatcher challenged him at one of his first meetings with her, "Are you seriously suggesting my Government should be worrying about the weather?"

At the end of this 5-year stint, Professor Ashworth went back into higher education management in the role of Vice-Chancellor at Salford University.

It was certainly a testing and sometimes uncomfortable role in that HE cuts required him to slim down the University by roughly a third. However, he suspected he had gained a reputation for "managing change" successfully as he was asked to become Director of the London School of Economics and Political Science in 1996.

He immediately signed up for a course in Economics at an LSE Summer School. His purpose was not only to gain a greater understanding about the institution, but also to send colleagues a signal that change was on its way.

A number of major public and private sector roles followed including Chairman of the Board of the British Library, Chairman of Bart's and The London NHS Trust, and non-executive director posts with the North East London Strategic Health Authority, J Sainsbury's plc and Granada plc.

Sir John still sees his skillset as those of an academic in spite of all the varied roles he has undertaken.

"When I'm faced with a problem, I tend to work on it like I would on a research assignment, rather than as a lawyer or as an accountant".

He sees the job of a manager in or outside academia to understand what motivates people, whether it's a PhD student or a Secretary of State...and to understand why people don't (always) agree with you and to work with them.



Dr Obi Aghanya

E-business product manager

Dr Obi Aghanya is an eBusiness Product Manager with Adobe Systems. Obi completed his PhD in Fault Tolerant Computing in the (then) Department of Computer Science at the University of Essex in 1994. Working initially for Frame Technologies, which was subsequently taken over by Adobe Systems, Obi has combined a technical element with an increasing involvement in the commercial aspects of the business over the course of his career.

This profile is an example of someone who acknowledges the importance of developing "soft skills" alongside technical knowledge and expertise in order to thrive in the workplace.

Having completed a Masters at Essex, Obi was strongly motivated to continue researching in the area of Fault Resistant Computing. He found the technical aspect of the research fascinating, but decided that working in a purely technical area was not enough for him. "I decided after completing my PhD that I did not want to carry on in the pure academic sphere. I wanted to relate whatever I did to, for want of a better phrase, the real world."

It all comes down to people for me in the end and that's I guess what interests me; making sure that the technology is not an end in itself but a means to a better end.

Obi's early roles with Frame Technologies and then with Adobe were in technical support. "Initially with Frame I worked in technical support for one of their products called Framemaker. I then moved into a more administrative role on a product called Lotus Notes. There I found myself providing services to the customer care team, so customer care has been a consistent thread in my career from the very beginning. I have always been interested in the business side of things and so I set out to be involved with not just technical matters - because that's where my strengths lie - but also with business decision making and to have more of an influence in that."

Obi feels that in addition to the research skills and experience he gained by doing a PhD, a number of the transferable skills that he developed have been extremely useful- particularly the ability to explain technical matters to non-specialists. "Often you're working with people for whom there is just no interest in technology - people are different.

What you need to appreciate is that while for someone like me the minutiae of how a particular module functions and all the clever bits of coding or design that are involved in it are all very well and interesting, the vast bulk of people around you couldn't care less!"

"I recall that when people were asking about some work I did for my thesis, what the project was, if I started going on about module of redundancy and this, that and the other they would quickly glaze over. But if I said that many aeroplanes are run by computers these days and that if a system were to fail and you have a blue screen, then everyone onboard is going to die..."

Explaining a concept so that a non-specialist can understand was something that I was aware of even then.

Obi draws on that same skill 15 years later. Along the way, he has added to it an understanding of business matters which enables him to fulfil a key role in the organisation.

"The people that I work with right now are the decision makers and they often look to me to provide a technical assessment of options they are considering. They will only take what I say seriously if they see that I understand the business implications of those options. So you need people to say, this is a big problem that could stop this project, or this is a problem but shouldn't stop the project.

It's a matter of trying to step away continually from the pure technical aspects of how this tool works or that piece of equipment performs.

You need to ask the vital questions, how do we improve customer satisfaction, reduce business costs and make sure that we can serve more people more quickly."

If someone is coming up to the end of their PhD and has decided that they do not want to stay in academia, that is sometimes seen as a failure; anything other than becoming an academic can be seen as second best. Obi takes a different view; he sees it as a matter of individual choice. "Much of the specific technical work that I did during my PhD has not really been used in my day-to-day work since. You might argue that if you knew you were going to not carry on in academia, then why go through that 3-4 years?"

I think the techniques I developed during my PhD, the way of thinking and approaching issues, learning to be dispassionate and so on has been very useful.

"People might argue that you could get that in other ways, but it worked for me. I don't think there's a right answer to that; I think it's a question of what you think and what you feel and what opportunities are presented to you." Asked how he thought his career might develop, Obi said: "I think the main thing is that I don't want to go away from technology, that's just the way I am I guess. I am interested in technology and I'll carry on being so. I'm fortunate enough to work in the same building as some extremely clever people and by talking to them I can stay in touch with technical developments. I don't have any specific career goal. I think that the most I can say is that I'll probably continue to move towards the business side, whilst retaining some technical aspect"

As a final thought for anyone currently doing a PhD, based on his experience, Obi suggests,

You do need more than just the letters after your name. The PhD doesn't get you very far if you don't have the sort of soft skills we've talked about.

"I definitely applaud that fact that that kind of training is now available in universities for people to get involved in alongside their research. It will certainly make them more attractive in the job market."



Dr Colin Osbourne

Senior Research Fellow

Dr Colin Osbourne is a Senior Research Fellow in the Department of Animal and Plant Sciences at the University of Sheffield.

His research aims to better understand how plants interact with the atmosphere, and how this relationship has evolved over geological time. His 5-year Royal Society University Research Fellowship has allowed him to concentrate on establishing his own research group examining the evolution of C4 photosynthesis and its ecological significance in the grasses. One aspect of this research is also shedding light on modern plant-climate relationships. Currently on a 3-year extension of his fellowship, he now manages a team of researchers including five PhD students, one postdoctoral member of staff and a technician.

This profile looks at how Colin arrived at this point and to what degree luck, patience and good planning played a part in his career development.

Biology had been a passion for Colin from a relatively early age, and therefore, it was a natural step to embark on a degree in Life Sciences, which he undertook at the University of Manchester. He was inspired by lecturers on his course to switch to Plant Biology in his second year. "I'd never really appreciated how exciting and interesting plants could be – but once my eyes were opened, there was no turning back!" His interest grew through summers spent working as a summer field assistant in Arctic Sweden during his undergraduate holidays. His enthusiasm was such that he decided to study the effects of climate change on plants.

He sought advice from the same plant biology lecturers on where he might study after his first degree. It was the influence of an eminent research leader in this field (Steve Long, in what was the Department of Biology) that brought him to the University of Essex.

Within this research group he studied the effect of increased CO₂ levels on wheat and natural vegetation in large-scale field trials. The research took him to Arizona and Maryland in the US for several months at a time, and Switzerland for shorter visits.

As well as gathering the data required for his research, he developed both expertise in repairing equipment in the field and confidence in his ability to solve problems in a hands-on and practical way.

Working on large collaborative projects within the research group of a world leader in his field provided many opportunities for interacting with, and learning from, leading international scientists. Studying overseas was also hugely beneficial, offering the chance to experience the US research environment and culture.

There was little doubt in his mind that he would continue after his PhD as postdoctoral researcher. Through a contact made earlier in his career, an opportunity arose at the University of Sheffield as a post-doc to apply mathematical modelling to understand long-term impacts of climate change on landscape processes and vegetation. Funded by the EU, this required him to work closely with colleagues in the UK and the Mediterranean.

He learnt computer programming from scratch which he has applied ever since in a variety of projects.

Colin gained his second and third post-doc posts within the same department, this time looking at the effects of high CO₂ levels in the ancient past using experiments, computer models and the plant fossil record. "The geological past is a very exciting place for a scientist interested in climate change – it's got it all – greenhouse climates, CO₂-rich atmospheres and, above all, evidence via the fossil record of how plants responded to these conditions." This was a productive time that he enjoyed greatly, and it led to two papers in the high impact journal Nature. However, it was a period of great uncertainty in his career knowing that, if he wasn't successful in securing a research fellowship or lecturing position, eventually there would be no more post-docs.

With hindsight, he realizes that a greater output of publications would have been helpful. Persistence and patience were vital during this time.

The common view is that you improve your likelihood of success as a researcher by focusing on a particular research area. Colin recognized that he ran a risk in projects which were quite diverse.

You need to be known and recognized for your niche area.

Colin may argue it was not intentional, but in undertaking a range of different research projects, he has been able to develop skills which have been very portable and valuable to his subsequent research.

Looking back from the comfort of job security, I have no regrets about my meandering research path - it has given me a very broad perspective on plant biology. And feeling relatively comfortable within a diverse range of disciplines has proved tremendously useful for developing new ideas for research.

Colin feels that this perspective influenced his success in applying for the Royal Society Fellowship.

The last six years have been an important period in Colin's research career. "Holding a research fellowship has offered a fantastic opportunity to learn about how to devise, fund and manage research effectively. I've been immensely privileged to have been able to explore and develop ideas in an environment free from the pressures of teaching and administration."

He has recently been granted a 3-year extension to his fellowship and will be extending his research further in the area of tropical grasses. During this extension, he has worked on developing outreach work by communicating science and expertise to a wider general audience. This work has proved an unexpected pleasure in that it takes him out of his laboratory into local museums and schools where his role is to make science exciting and accessible. Quite apart from the inevitable delight that children derive from examining the DNA of sputum, one of the experiments that Colin has found engaging for school children, Colin has felt the experience to be of mutual benefit. By explaining his research to children, it has given him a great opportunity to view his research with fresh eyes.

Explaining your science to 11-year-olds really forces you to think clearly about what is important and why you're doing it – the experience has helped immensely in both writing and talking to more expert audiences.

In the foreseeable future, Colin is continuing to progress the same research agenda. He is called upon to teach on an occasional basis, and in respect of the longer term he is fortunate in having the guarantee of a senior lectureship at the University of Sheffield.



Professor Gill Green

Professor of Medical Sociology

Professor Gill Green is Professor of Medical Sociology at the University of Essex and Director of the National Institute for Health Research (NIHR) Research Design Service for the East of England.

Gill has a first degree in History & Literature and a Masters and PhD in Latin American Studies. Gill's PhD research focused initially on low-income housing in Latin America. During her studies she became interested in health issues as so many of the people she interviewed were living in unhealthy environments.

This profile flags up the value of keeping your eye on opportunities for collaborative research. It also illustrates the possible challenges faced by early career researchers – male and female - who are trying to establish an academic career at the same time as juggling family commitments.

Having completed the PhD, Gill's career plans were strongly influenced by practical considerations. "By that stage I had a child and it was also a time when Latin American Studies was still developing as a discipline - there was less interest in it and there weren't very many jobs in it. One was advertised roughly every 6 months and there was quite a lot of competition for posts. Also, having a child, I thought that spending a lot of time in Latin America (which was the thing I wanted to do being a Latin Americanist) would be not impossible, but rather difficult. I needed a job."

Looking at her skills more broadly proved to be the way forward for Gill. "Because I liked doing research I applied for a range of research-type jobs, and the one I got was in the Medical Sociology Unit (MSU) of the Medical Research Council. That's where my interest in health really took off and I stayed there for over 7 years. I started off doing work on a longitudinal study about the social correlates of health. In that job, I was working closely with the Director of the MSU. It was more of a research assistant post"

Practical matters were once again influential in Gill's next career move. "Actually when I came to Essex I came as a job share with my partner, in the Sociology department. One of the reasons that we job shared was that it was a very good way of relocating two people to the same place. Subsequently a more senior full time post came up, which I applied for and got, in a new centre at the university which later became the Department of Health & Human Sciences."

Asked how consciously she had planned her career, Gill commented: "I've sort of fallen into things and done things that I think sounded interesting at the time. I've rather followed my instincts and I think I've been quite lucky. It was just like the HIV research, I got into HIV at the time when there was huge interest in it. Similarly with social aspects of medicine and health - that has been a real growth area ever since I've been working in it. I had no idea about that at the time actually; that was just luck.

“I’ve definitely tried to keep my eye open, not only for things that interest me, but also for things that I think look like they will go somewhere.”

Turning to the question of being on short-term contracts, Gill suggests:

“I think that it’s important not to get into the position when you’re coming to the end of your contract and you’ve got nothing lined up. You have to be proactive about it.”

Gill identified a number of skills that she had gained through doing research that have proved useful in other contexts.

“My first taste of management was definitely with research projects: pulling in research funding, managing, meeting timescales and deadlines and communication skills. That was really useful; I learnt such a lot from that.”

These management skills were to prove most valuable in the next stage of Gill's career, when she became Director of Research for the Department of Health and Human Sciences. The department was still relatively new and its initial focus had been very much on teaching- often on collaborative provision with the NHS. The Director of Research role was essentially concerned with supporting colleagues in the department to increase their research activities. "The role was particularly interesting and challenging as my colleagues were drawn from such a wide range of backgrounds, often clinical rather than traditional research backgrounds."

After a year or so in that role, Gill became Head of the Department of Health and Human Sciences. Although

working as Director of Research had given Gill a broader understanding of the Department, she faced what she describes as a steep learning curve as a new Head of Department. "I had to understand not only how my own department worked, but also how other departments and the university as a whole worked. Having said that, it proved to be an extremely rewarding role and put me on the map in the university." As she gained more experience, Gill was asked to take on a number of cross-university projects. "Looking back, it was an interesting, if somewhat stressful, job."

As Head of Department, Gill had to scale down her teaching and research commitments, although the latter in particular remained a strong interest. "As I approached the end of my 3-year term, I was keen to move into a more research-related role and was happy to take the lead on a bid involving five Universities and four NHS trusts to run the NIHR Research Design Service for the East of England.

Gill now spends 2 days per week working as Director of the Research Design Service for the East of England.

The role involves co-ordinating the service which aims to work with clinicians in the NHS, providing encouragement and support to them in applying for funding for applied health research. The role also involves fostering networks to enable potential researchers to find collaborative partners in the NHS or in universities in the region. This role draws on many aspects of Gill's experience.

“I have always enjoyed working across sectors and developing collaborative research which has the potential to have an impact on people’s lives.”



Dr Pauline Lane

International Project Manager

Pauline Lane is a Project Manager for Plan International, an international children's charity.

This profile is an interesting example of someone who has reappraised her career at several points and made major changes as a consequence. It also flags up how crucial networking skills can be to developing a career.

Returning to study as a mature student and as a qualified nurse, Pauline did an undergraduate degree in the Department of Sociology at Essex.

She was inspired by a number of academics in the department, who she describes as "extraordinary," and who encouraged her to go on to a PhD.

After completing her undergraduate degree, Pauline worked for a year as a research assistant in the department on an ESRC-funded project, and then began her PhD.

Following her PhD in Sociology at Essex, Pauline worked as a teaching fellow, as lecturer, senior lecturer and then as a freelance researcher before taking up her current post.

Pauline did part time lecturing while completing her PhD and on completion worked as a Teaching Fellow in the Department of Sociology at Essex. She did this for 2 years, but then began to feel that her career prospects in the department were limited.

As Pauline saw it, in order to be a strong candidate for a lectureship, it was regarded as important to have experience of working at another university.

As she wanted to continue working in academia, Pauline began to look for vacancies elsewhere and was attracted to a vacancy at the University of East London (UEL) for a lecturer in Health Science. "I had originally trained as a nurse, and I'd been lecturing in health at Essex, so it was a good combination."

She was appointed as a lecturer and was offered a senior lectureship after 4 months. Her experience at Essex had given her confidence as a lecturer and researcher.

The highlight of Pauline's 5 years at UEL was her research, working with indigenous communities around the world. The research focused on issues concerning genetic

research and ethnic and indigenous rights. However, the research environment at UEL did not entirely suit her. "At the time UEL didn't have a very strong research base, unlike Essex.

As a researcher, if you are not supported by a research community, then it can be quite difficult as you feel isolated and do not have peer support.

When I went to UEL, I considered myself to be probably a lecturer first and a researcher second. I came to realise that for me the excitement was in research; the lecturing involved a lot of repetition and sometimes the marking was tedious."

A further disadvantage of the work at UEL was what Pauline describes as "an enormous amount of administration." A change of job beckoned. "I just felt that what I had come to do, which was to be intellectually creative and engaged, wasn't actually possible." Pauline's job search identified a 1-year post with Norfolk Primary Care Trust doing research on health issues of asylum seekers and refugees. Although that wasn't Pauline's field at the time, she thought that her health background might be regarded positively. "UEL agreed to release me for a year, although in the event I never went back."

The research work drew heavily on Pauline's skills in qualitative research. It also led to her making what proved to be very valuable contacts in the Department of Health which was funding the research. "I started to build expertise in asylum seeker and refugee health, so the Department of Health used me and I built a team conducting research for them. Slowly, because of the nature of the work, the Home Office also asked me to do work for them. Altogether I spent nearly 8 years working for the two departments on issues surrounding asylum seekers and refugee health issues." As Pauline says, "I developed extensive expertise in that field and I have written a lot. However, I started to become quite disillusioned with policy work at governmental level. For 8 years work I couldn't actually see much change for asylum seekers, even though a lot of health professionals use the resources and over 300,000 people a year use the website I created."

Her concerns about the impact of the work, together with the uncertainties resulting from having to tender for funding year after year, led Pauline to reappraise her career once again. "I could have continued - I had a good enough reputation - but I decided at that point I had had enough".

She applied for and secured her current post with Plan International. The post involves the management of a study of a cohort of girls, across nine countries, which is taking place over the period 2006 -2015 as part of the UN Millennium Development Goals. "Essentially I have been asked to professionalise the process and to lead on research in the policy division from the London office."

Pauline identifies a number of positives in this post. "Firstly, it is a permanent post. It also feels more practical from the policy perspective. Working as I was, at such a high level with government departments, change tends to happen extremely slowly. The kind of work that I am doing now can actually inform practice. That is satisfying for me - I'm not just looking for monetary rewards, I like to feel that I am doing some good, that the job has some meaning." Pauline's job involves a significant amount of travel. Although based in London, in the first few months she visited New York, Paris, Cambodia and Uganda.

Looking back over her career, Pauline is quick to recognise the value of her PhD.

I don't think that I would have got the work with the Department of Health and the Home Office if I hadn't had a PhD. I think that having the title Dr means that you are taken more seriously - though that doesn't mean you have to take yourself seriously! I think that I had exemplary training in qualitative research methods at Essex from internationally renowned, academics - passionate, with a great deal of vision and enthusiasm.

Whilst these research skills have proved eminently transferable to a number of settings, Pauline's track record of securing funding has also proven to be a valuable asset. "I used to bring in between £150,000 and £250,000 a year in tendering and bidding. That was something else that I could bring to the charity and we're just at the moment putting in a bid for £1 million. Pauline also regards networking as a vital skill. "When I was last looking for a job, the Department of Health contacted me to ask if I could do some work for them and in fact someone else has just asked me again."

If you set up networks, often things come to you that you don't expect. Often you'll hear about things that other people don't, because you have already worked for that organisation.

As far as career planning is concerned, Pauline advises: "By all means you could make a career plan, but my experience is that life isn't like that, and perhaps, a better career plan may be to have a vision that you would like to move towards. Life is complex and if you have family and children, there are so many other variables to take into account.

I think identifying what it is that motivates you is really important - what are the core values that you want to fulfil? Then look at areas of the working world where you might be able to fulfil those.



Dr James Andrew

Director of Solutions Management

James is the Director of Solutions Management for NaviMedix, a company in the United States that specializes in software technology for the healthcare sector.

James studied for an Applied Biology degree at the University of Bath and then after experience in a range of industrial research settings, took his PhD in Plant Photosynthesis in the Department of Biological Sciences at the University of Essex.

This profile illustrates a career path that has taken a number of interesting turns and has involved taking risks. It flags up the real importance of being aware of your personal attributes and the skills that you develop as a researcher.

At an early stage, the application of research in a commercial environment was the driving force in James' career planning.

"I figured out early on as a teenager that I was interested in the application of skills to solve problems, rather than being interested in biology for the sake of being interested in biology."

After completing his first degree, he sought opportunities to apply his scientific knowledge and, to that end, spent a summer working at Long Asset Research Station as a part-time researcher. He then undertook a period of 6 months doing industrial research for Monsanto in Belgium. This was subsequently followed by 6 months in Iowa in the United States with a gulf seed company, developing particles to be used in plant breeding research. The research in this company brought him into contact with a visiting scientist from the University of Essex. Based on this contact James made the decision that he would like to apply for a PhD at Essex under the supervision of this same scientist.

"I was interested in learning the skills and techniques from this research group with a view to going back and applying them in the plant breeding industry."

James' supervisor played an influential role in his academic development and the direction of his studies. In a discussion with his supervisor at the beginning of his PhD, they agreed that his skill set was such that he would thrive on the challenges of problem-solving.

“There is definitely the discipline around doing a PhD that equips you with a set of skills and expertise which you can apply to solve problems. I think that's what I was interested in and that's now half of what I do today. **”**

Problem-solving and creative thinking have been a recurrent theme in the jobs he has done since and, in particular in his current job with Navimedix. He leads a team of people who work to identify the administrative problems of clients in the health care sector which leads to developing web-enabled software solutions to meet their business needs.

His PhD supervisor also influenced him, he believes, in his drive to achieve. "He was very good at raising the bar and stretching people."

The feedback James received from his supervisor about the quality of his work was always direct, to the point, and fair. James views this in retrospect as good training for the business world, in that you have to be prepared to both deal with criticism and be prepared on occasions to defend your corner by engaging in a 2-way dialogue.

“If you can't deal with criticism in your research work, then you're going to have some interesting challenges when you play hard ball in the commercial world. **”**

He was also influenced by a week's course he attended during his PhD, which was sponsored by a research council. Its purpose was to provide insights into industry and to stress the importance of developing relevant professional skills for use in academic and non-academic settings. Despite the pressures of finishing lab work and writing up, he felt it was a very good investment of time, whether you chose to carve a path in academia or not.

“I don't care what anyone says, as an academic you're going to have to sell your ideas. You're going to have to get money, whether it's from the government or from private sources. You're going to have to do all the things that I end up doing every day in my current job. I have to justify the funding of my team and justify the ideas that go to solve people's business problems. **”**

Towards the end of his PhD, James was fairly sure he did not want to pursue a career in academia. However, he continued his research as a postdoctoral researcher at Essex for a year to give himself more time to consider his next step. During this time he received some illuminating feedback from a series of psychometric tests that he undertook as part of a selection process for jobs in manufacturing. He identified with the comments which suggested that he would be best suited to a fast-paced creative environment with minimum structure.

This partly prompted him to choose to work for a small, unstructured family run plant breeding business in East Anglia. He worked there for a year or so developing a range of scientific instrumentation, but then made the move to the States when he got married. He worked for a similar type of company before taking a pause to reassess his career direction.

James describes himself as a risk-taker and does not consider his career path to be a conventional one. Certainly his next career move might not be seen as necessarily an obvious one for a scientist. He joined a small company of 28 people involved in software in the late 90s. "They were a smart group of people, who were ready to take anything on and try and change the world. That's the type of environment I like working in."

“This role allowed him to exercise not only his creative abilities, but also his logical critical thinking skills which he attributes to the discipline of academic research. **”**

The company experienced rapid growth in the space of 3-4 years. Unfortunately, at this point, the company ran into difficulties, coinciding with the dot.com collapse. James suddenly found himself unemployed, having to start from scratch again.

Faced with the task of putting his resume together, James found it relatively straightforward in lifting out the achievements and contributions he had previously made in niche companies. This secured him his current job with Navimedix in software development technology.

In terms of his professional development, he recognises he has not stood still. In recent years he has developed people management skills which he had not acquired in his early career. "If I go back 5 years, I was more of an individual contributor, rather than a manager or a leader in an organisation."

As far as the future is concerned, he sees himself looking for the next set of problems within a business environment that interests him.

As a risk-taker by nature, his advice to researchers thinking about their career paths is:

“Don't be afraid of failure because you're going to fail sometime. Far better to experiment and take risks early on in your career, than when you're 50. **”**



Dr Dylan Griffiths

Local Government Policy Manager

Dylan Griffiths works for Leeds City Council as Policy Manager.

Dylan studied for a PhD in the Department of Government at the University of Essex between 1990 and 1996. His research culminated in a thesis on Politics and Policy Making in Wales, and focused on the Conservative governments of 1979 onwards, particularly in the areas of regeneration and housing. The themes of devolved, regional, and local government became central to Dylan's subsequent career.

In this profile he leads us through some of the turning points in his career and what he learnt through the process. It highlights the value of taking a step back at times to consider what really motivates you.

Dylan was absolutely clear about his career goal at the beginning of his doctorate; he wanted to be an academic and, specifically, a lecturer in public policy. Indeed, he managed to secure a full-time lecturing post in British Politics at the University of Newcastle part way through his PhD and completed his PhD on a part-time basis while working. The work had some immediate satisfactions, including the teaching element.

Studying politics gets you to think in the longer perspective, to think beyond the conventional wisdom of a particular time; this was a useful skill which I tried to teach to students. It also helps you to consider that there is more than one side to every story.

He felt considerable satisfaction in seeing some of his students take this on board and witnessing a number go on to highly successful careers in politics and elsewhere.

After seven years as an academic, Dylan took stock of his career. His thesis had been published as a book and he had succeeded in having a number of articles published. Dylan was involved with other academics across Europe in research in sub-national government and he found teaching quite interesting. On balance, however, he felt that his career had not really taken off.

For him at least, the role of an academic did not seem as interesting and intellectually engaging as he had imagined or expected. In particular, he felt dissatisfied with what he saw as the relatively abstract nature of the research on which he had been working.

"I began to wonder if there was some great truth that I was discovering or even if there was any great truth to be discovered. Maybe it's something about my chosen field. Someone said that talking about politics is like commentating on a cricket match; you may understand the game very well, but you don't add a new insight to that which good players, that is, politicians, already have. Maybe I lacked confidence that I had something genuinely interesting to say. Or maybe I wasn't as good at research as I had thought."

Dylan began to think about a career change. He was keen to continue to use his skills as a researcher, but ideally in an environment that would provide more practical applications and a more tangible end product. He applied for and secured a job with a 'think tank,' seeing it as "a sort of world between academic research and practical research."

At the think tank, Dylan worked on a project on devolution in the UK which obviously had a strong link with his PhD and research interests. The work was intended to inform civil servants and a wide range of others who had to work with devolved administrations. "The job looked as if it was going to be quite an influential one."

As it transpired, the move was not an entirely satisfying one. A major factor in moving out of academia, was that he wanted his work to make a difference in the real world. He had also hoped that his work would retain a high degree of autonomy and creativity. In both respects, he was somewhat disappointed. The work he was required to produce was largely a matter of reporting what was going on. "It was almost like rewriting what was in the Times newspaper. There wasn't much space for being creative.

In fact one thing I wrote, the boss said had too much of myself in it. As an academic, if you have a novel thing to say, you go ahead and say it.

I had a novel thing to say, but that wasn't what they wanted."

After 9 months working for the think tank, Dylan began to look, once again, at the job market.

As a result of these experiences, he was developing a clearer set of search criteria. He wanted a job in which he could use his interest in public affairs and where his strengths in the study of policy would be valuable. Still firmly in his mind was the desire to do something where there was a practical end product. Added to these factors was Dylan's awareness of his need for autonomy and the opportunity to be creative. Dylan secured a job in the

Policy department of the City of York Council and quickly found that the pieces of the career jigsaw were falling into place. Promotions followed, taking Dylan to three other local authorities in the North of England. Each of those moves involved a greater level of responsibility, culminating in Dylan's current appointment as Policy Manager with Leeds City Council in July 2006. He feels he has found his niche. "I find this job interesting: investigating policy options for the council, writing policies for the council and answering questions for members. A lot of thought goes into those things. I find that this kind of job gives me more opportunities to think creatively within the context of the political environment and although there are constraints, within those constraints there is room to think and to suggest and to propose solutions. If the suggestions are useful and constructive, I get to develop them into policy and to help shape what the organisation actually does. For example how a public body spends million of pounds, in the public gaze, affecting people's lives. That can be a very satisfying process. I think that local government is where I have been happiest in my working career and probably where I would now want to stay."

Looking back to his PhD, Dylan recognises that he developed a number of skills that have been of great value in his subsequent careers.

"Although the arguments I now put forward, for example, the rights and wrongs of changing the wage level at Leeds City Council, may be less large scale, they are nevertheless important questions and draw on the skills I gained.

My PhD gave me the useful skills of taking on board a great deal of information quickly, or slowly - too slowly from my supervisor's point of view perhaps! I can see different arguments and the evidence for them. I can weigh evidence and I can come to my own conclusions and defend those conclusions, even on quite grand topics such as the nature of the British state.

I am grateful to the University of Essex: it gave me the opportunity to become an academic for seven years and I wouldn't have got the academic job if it hadn't been for the PhD. It was a very interesting experience and provided a foundation for what I have gone on to do since. What I've ended up doing is also very interesting, but different."



Dr Darin Dobler

Global Clinical and Medical Affairs Manager

Dr Darin Dobler works as a manager in Global Clinical & Medical Affairs for Baxter, a healthcare/pharmaceutical company in the United States.

This profile is interesting in that it presents a career story of a trained scientist who has found that communication has been the key to his career so far.

Darin studied for a PhD at Essex between 2003 and 2006 in the area of Molecular Medicine in the Department of Biological Sciences. He had undertaken his undergraduate degree in Chemistry with a minor in Psychology in his native country of the United States. Following his degree, he was employed by the University of California and then worked as a research scientist in industry.

His decision to enrol for an Essex PhD was influenced by research papers he had read in an area of cardiovascular studies within molecular medicine. He identified the author as an academic at Essex, and successfully applied to work with him. Therefore, the next step was to research the University as a place to study and live. The international mix of student and staff at Essex was a definite draw and confirmed his resolve to commit to the PhD.

"The combination of the supervisor and the international atmosphere at Essex made the decision a very easy one."

His career objective was always to re-enter industry. "It was a huge help in my PhD knowing roughly the career direction I had in mind. I didn't know exactly which field of research, or which country, but I knew it would be something connected with scientific research."

"I also knew I wanted to work in international teams where there would be a lot of scientific communication involved."

His PhD prepared him well for this because he found himself working alongside student and staff colleagues from China, Pakistan, Iran, Nigeria and the UK. He also made friends with people in other disciplines, including those in the world-renowned Human Rights Centre. Discussing each other's goals and objectives contributed to his world view. This teamwork and connection with international colleagues was something he was able to market well when he was job-hunting after the PhD.

His first post-PhD job as a research scientist in a laboratory involved managing a team of international personnel from different cultural backgrounds. Interestingly, Darin stayed in this job for 2 years, but realized that he wanted a role that was more people, and scientific communication-oriented. He changed, therefore,

to his current job in Global Clinical & Medical Affairs. His role involves engaging in dialogue with physicians, patients, researchers, sales and marketing personnel across the pharmaceutical industry.

Communication and relationship-building are central to his job at Baxter. When the company is setting up clinical trials for a new drug, Darin acts in a consultative role, seeking input from a range of stakeholders and experts on the development of that product.

"It is my job is to develop relationships with physicians and patient organisations."

As part of that role, Darin identifies and contacts the key stakeholders, including the world experts in a specific clinical field. He invites them to advisory boards to seek their input on the forthcoming clinical trials. He spends a lot of time talking to physicians and asking them questions on complex issues including diagnosis and treatment in multiple disease states. Darin organizes and communicates this expert guidance back to the clinical team who are conducting the clinical trials.

Darin is involved in the recruitment of new employees to his organisation. The two major competencies that are sought by his employer for medical affairs are firstly, a candidate's knowledge of science including their capacity to assimilate new scientific information accurately and quickly, and secondly, their ability to communicate their science well and appropriately.

"We all know some people who are very intelligent, but not everyone has the ability to communicate well."

In his current job he researches and writes abstracts and manuscripts for publication. He looks back to his PhD as a time when he built up his writing experience. Darin gives credit to his PhD supervisor for helping him to develop some aspects of his communication skills including his writing expertise. Darin recognises it would have been easy for his supervisor to have written most of the research, but instead took time to train him in the mechanics of writing well.

Something my supervisor helped me with, was to work together on how to communicate something well in writing... the writing experience was invaluable. I work with people who haven't done that. I think I have a huge advantage in having that training and experience at Essex.

The other skill which he draws upon a regular basis in his job and developed with the aid of his supervisor, is the ability to present. When a new drug or article comes out, it is his job to update the rest of his organisation by means of a presentation or training course.

The department at Essex required all second year PhD students to present their research in front of academic staff. He received recognition of his good performance by receiving the annual prize for his presentation.

"It was regarded as very important by our group to do the presentation well. So I spent quite a lot of time with my supervisor, practising the significant parts, anticipating the type of questions that might come up."

When it comes to advice to those embarking on a PhD, Darin has two thoughts.

Firstly, he suggests seeking opportunities to both communicate your research and to ask for feedback.

Talk about research, make presentations, go to other universities and see what other people are doing in your field. ...Receiving good criticism, only sharpens us, makes us stronger. It's difficult to do, but incredibly helpful.

His second message applies to scientists, but has wider relevance about taking control and aiming towards independence in the course of your PhD.

Do your science well. Most of the science you do pre-PhD, you're taught it, you read about it and you do some practicals. But when you're on a PhD, you get to do the real stuff. You get your hands on the research. No one else can do it for you. Keep in mind you need to be an independent researcher by the end – it's a tough process.

When it comes to deciding on a career, Darin considers it important for PhD students to gather insights and information from a variety of people in order to help people match what they are good at and what those jobs might involve.

It's getting out there. Don't be afraid to talk to people in other departments as well as your own. Talk to research and academic staff at Essex and maybe at other universities. Then talk to someone in industry and ask them what that's like.

In his career, Darin hopes to remain within medical affairs for the foreseeable future. He particularly enjoys the international travel element of his current job and is attracted by the thought of working internationally. Therefore, when he has consolidated his experience he is keen to seek opportunities in Europe, the Middle East and Asia.



Dr Florencia Franceschina

Senior Lecturer and International Route Tutor

Dr Florencia Franceschina is presently employed by the Manchester Metropolitan University (MMU), where she has two roles: the first as a Senior Lecturer in the Department of Combined Honours and Foundation Studies; and the second as an International Route Tutor, with a roughly 40/60 split of these two roles in the past academic year.

This profile illustrates the need to be prepared to adapt your expectations in relation to your own career goals.

Florencia came to the University of Essex after studying in France. She came here to study for an MA in the Department of Language and Linguistics, and, with the same supervision, continued her studies to complete her PhD in 2002. Exactly how she arrived to Essex was something of a coincidence: she applied to Essex and one other UK university, and as Essex responded first, this is where she came!

"How people choose where they go and study is a bit of a mystery. Looking back now, I realise how lucky I was – studying at Essex, but I didn't know that at the time!"

Florencia is very appreciative of the time she spent studying at Essex. She cites not only the excellent supervision she received, but also the general academic environment of the Department of Language and Linguistics. Academics are easily accessible, and there is constant encouragement and support for budding academics to develop additional skills, by organising conferences and editing departmental journals. Teaching as a Graduate Teaching Assistant is also encouraged for the experience it can provide. Looking back, as an established academic, Florencia can now see the value of all of these activities, some of which, at the time, seemed to have little relevance to her future academic life.

A future in academia was exactly what Florencia planned to have. Such was her enthusiasm that she applied for her first position as a lecturer at Lancaster University even before she had submitted her thesis. The application was successful and she began working there immediately after submission of her thesis.

"Becoming an academic was like a dream for me, and getting a job as an academic was, well, I couldn't believe my luck!"

Although Florencia spent almost six years at Lancaster, forming friendships with many colleagues and broadening her academic horizons, she found the reality of academic life to be somewhat different to the vision she had held as a student.

What I have learned in the past few years has to be to adjust my expectations to what academic work is like. I've learned to value other things that I didn't realise were important when I first finished my PhD.

It was through working at Lancaster that Florencia came to be involved in a short research project in Finland. She found the work so enjoyable that she resigned from Lancaster and moved there for a one-year posting. Upon returning to the UK, Florencia took a post working for a private study group which provides study skills training and is very closely linked to Lancaster University. This was the position she held until September 2009, when she joined the MMU.

Florencia feels that it is the combination of experience gained in her previous roles which makes her so successful in her current roles as Senior Lecturer and International Route Tutor.

"When I went to Lancaster, I was in charge of the pre-session programmes in the summer, which involved quite a lot of work. Now when I look back I realise that this experience gave me lots of useful skills and knowledge about management and running things."

As a lecturer, Florencia still enjoys the thrill and excitement of research; however she also finds considerable pleasure in teaching.

"I realise that I get a lot of satisfaction when I see students do well, so when you see someone develop, you see them get better. It's not just one type of thing that gives satisfaction in academia. It's a more varied type of job than I thought when I first started. And it's better to enjoy everything than just say the research, or just the teaching."

Her role as International Route Tutor means that Florencia is involved in marketing her university to potential future students abroad. As a result of this she has travelled to the United Arab Emirates (specifically to Abu Dhabi and

Dubai), in order to support the International Office in this aspect. A further responsibility which Florencia finds particularly enjoyable is that she has to deal with many different departments throughout the university, in order to set up the structures needed to support international students and also with respect to the re-designing of modules that are better tailored towards international students.

Florencia is very much aware of the changes to the role of an academic over the past few years; much of which is due to general issues in higher education and is often linked to government policies.

Continued professional development is key to keeping abreast of these changes, and in the next academic year, encouraged by her current employer, Florencia will begin work on a post-graduate certificate in higher education practice (PG-CHEP), something which is also available at Essex University.

"As a student, I didn't realise those things were going to be important for me, as an employee now I can see their importance. Experience teaches you these things."

In Florencia's view the most important piece of advice she can give a PhD student is that during the course of a PhD, it is best not to concentrate **solely** on academic achievements, but instead to attempt to gain a **range** of skills and experiences that will be useful later on throughout the career development.

"For me, at least, the fact that I had to adjust my expectations early on in my career will hopefully help me to be flexible in the future as well. You need to appreciate things for what they are and not what you want them to be."



Dr Leonardo Bichara Rocha

Senior Economist

Dr Leonardo Bichara Rocha works as a senior economist for the largest international commodity body, the International Sugar Organisation. The ISO is based in London and consists of 85 member states that produce, consume and trade sugar across the world. It provides a forum for intergovernmental consultations on sugar and "aims to facilitate trade by collecting and providing information on the world sugar market, ethanol from sugar crops and other sweeteners".

This profile demonstrates the importance of identifying your strengths and areas of experience, developed in your doctoral research and elsewhere, which you might use as a foundation on which to build.

Leonardo studied for his first degree in International Relations and Economics in his native country of Brazil.

His interest in international organisations grew when he went to work for the Brazilian Federal Court of Accounts after his undergraduate studies, which brought him into contact with the activities of bodies such as the OECD, the World Bank and the Federal Bank. The experience also provided him with insights into the economic aspects of government procurement and the feasibility of economic proposals and projects. These two things prompted him to apply for a Masters in International Economics at Essex.

"It was the multi cultural element of the University that particularly appealed to me. And of course, Essex remains one of the most international universities in the UK."

Having completed his Masters, Leonardo was offered a scholarship by the University's Institute of Social and Economic Research to pursue a PhD. This was subject to his gaining a distinction in his MSc dissertation. He had worked well with his supervisor and felt motivated to undertake further research.

"I don't think I realized how lucky I was to get a scholarship. We've recently had an intern working at the ISO from Essex, a brilliant student, but she is finding it very difficult to get a scholarship."

Leonardo's PhD topic was labour economics. Although he was registered with the Department of Economics, he was jointly supervised by this department and by the Institute of Social and Economic Research at Essex.

In his current job role, he is responsible for analysing and forecasting markets. It involves monitoring some of the emerging issues which includes investment funds and how they are influencing the world commodity markets. He

makes direct use of applied econometrics, which are the same tools and techniques he used during his postgraduate studies, albeit in a different context.

"I now look at commodity markets, rather than wages. The methods are the same. When I'm forecasting sugar consumption, I have to calculate price elasticities, which are the same techniques I used during my PhD, and incidentally, used by the Organisation for Economic Cooperation and Development, the Food and Agriculture Organization (FAO) of the United Nations and similar organisations."

His job involves researching and writing economic reports, all of which are published and translated in the 4 official languages of the ISO, that is, English, French, Spanish and Russian. The publications and findings are disseminated in a number of ways. Leonardo regularly presents and chairs at commodity events worldwide. He is also involved in the twice yearly meetings which involve the membership of all 85 countries. The November meeting takes place in London, whilst the May event can take place in any of the member countries.

During his PhD he already appreciated the importance of being an effective presenter. He was given some particularly useful presentation tips from a senior academic at Essex after presenting his research at an internal seminar.

You can make the most amazing findings but if you present in a way that doesn't strike the audience as appealing, then your results will go unnoticed. Visually, communication skills are just as important as the research work that you do.

Leonardo also recognized the value of learning from others.

"Attend all the lectures you can and get involved in any external seminars, especially where there are guest speakers. Talk to them over a drink if you can."

His advice is not to be afraid to seek out experts in your field. He even emailed a Nobel Prize winner on an economic topic and received a positive response.

Leonardo believes that his PhD training provided the opportunity to develop a number of skills to a high level which are crucial to his current work.

When you're developing an argument, you draw on those critical skills of impartial analysis, thoroughness and meticulousness gained from a research degree. In my current job, I will revise something many times. In the end, it has to be not only good, but also original and thorough.

These are obviously regarded as the key attributes of a successful academic. However, academia was not the route Leonardo wanted to pursue; he felt that academic life would restrict him to a narrow specialization and not allow him the opportunity to engage in a wider range of activities.

In the last year of his PhD, Leonardo took up a part-time job with a small British company in Felixstowe for a few months.

"I remember I found the job by chance really. Having finished my third and last year of teaching undergrads at Essex, I did not have plans to stay at the university for another full year to continue teaching so I started looking for new opportunities."

He saw the job ad on the company's website and thought his skills matched the job description. The company was looking to expand their activities abroad. The role required someone to analyse new markets, the price of commodities and their impact on trade, specifically in South America. Leonardo was able to use his econometric skills to good effect and further develop his interest in commodities.

With this positive experience under his belt, he applied successfully for the job of Junior Economist with his current employer. In fact, Leonardo started work with the ISO before his PhD viva in 2003.

He had consciously made contacts whilst in Brazil and at Essex to develop his knowledge of international organisations prior to applying to the ISO.

Leonardo spends roughly 30% of his time on missions outside the UK. This includes not only representing, and speaking on behalf of the organisation, but also collecting research data from industry in the sugar-producing countries.

In terms of advice to researchers who are considering how to further their career plans, he has two comments. The first concerns the importance of giving focused attention to the issue of your career development well before the end of your doctoral studies.

In some ways you have a lot of time in the PhD to consider things, particularly when you've submitted your first draft. Avoid rushing the PhD, but still make the most of your time on your PhD to consider your options thoroughly.

The second piece of advice is, to examine what natural advantages you might bring from earlier experiences, and make use of them where you can. In Leonardo's case he'd realized some years ago that Brazil was becoming a large exporter of many commodities through its expanding agricultural sector. Using his high level of economic training, he has been able to draw on these skills alongside his knowledge of South American and world commodity markets,

Think of how you can build on what you've done before. Consider how you might be able to apply your experience and take it to a different level. It might just give you job opportunities that are not necessarily connected with academia.

Leonardo has now been with the ISO for 8 years. In the immediate future he envisages continuing in his role, raising the profile of the organisation and monitoring the emerging issues in the area of sugar. He recently organised a workshop in Brazil for 20 developing nations to focus on the technological possibilities of making ethanol and eco generation from sugar. He derived a lot of satisfaction from this and would like to continue with similar activities as part of his wider role for the foreseeable future. He can see that he might be in a good position to transfer his skills to another international agency at a later date, should he wish to.



Dr Mahdi Ghandi

Design Engineer

This profile provides an insight into working in industry after completing a PhD and postdoctoral research and what can make working in industry a satisfying career choice.

Mahdi Ghandi completed his PhD in Electronic Engineering in late 2005. He then joined a company called 4i2i Communications, which specialises in the supply of video codecs to the video broadcast industry. Initially appointed as a design engineer, Mahdi was promoted after two years to his current role of project leader.

Mahdi undertook his PhD as a part-time student in what was then known as the Department of Electronic Systems Engineering. He joined the department following his Masters degree, as a Senior Research Officer (SRO), and undertook a PhD whilst working in that role. When his PhD and SRO were coming to an end, Mahdi decided to be as flexible as possible in his job search and applied for a variety of jobs, both in academia and in industry. Web sites and specialist employment agencies proved to be the best method of finding vacancies. He was prepared to be geographically mobile and the job he accepted with 4i2i involved moving to Scotland.

In his role as a design engineer, Mahdi was involved in both hardware and software design for video codecs. His research had been in a related area and as a result of his knowledge of the relevant technology, Mahdi was able to make an early impact at 4i2i; within two weeks of joining the company he was producing work for customers. He feels that the relevance of his research, and of the papers that he had published during his time at Essex, were very important factors in him getting the job.

After two years as a design engineer, Mahdi was promoted to the role of project leader. Whilst he retains hands-on design responsibilities, as a project leader he also manages a number of the company's projects. This involves being responsible for all stages of a project: planning and developing a solution according to the needs of the customer, delivery and commissioning, on-going maintenance, support and improvement.

The project leader role includes a greater amount of communication: with customers, with the company's manufacturing plant and with other managers. Mahdi has management responsibilities for the other engineers working on his projects. As those engineers work concurrently on other projects for other managers, negotiation with those managers for the time of engineers

is also a feature of his work. Similarly, Mahdi has to negotiate to secure the other resources and equipment required for the projects he leads.

The value that a doctoral graduate or postdoctoral researcher can bring to a commercial organisation is illustrated by Mahdi's move back to England with 4i2i. Following his promotion, Mahdi indicated his desire to move back. The company established an office in the south of England, largely because of his desire to relocate. A small number of other engineers were also then recruited to work there.

Much of his current work Mahdi describes as practical, hands-on design. He finds it particularly satisfying that his work produces very tangible results: he sees products that he has designed being marketed successfully and making money. Mahdi enjoys the interaction with customers, potential and actual, that is involved in his job. As well as visiting customers at their premises, he attends a number of trade shows each year. The job involves travelling both nationally and internationally.

Looking back, Mahdi feels pleased with the way in which his career has developed to date. He feels that he has been able to progress more quickly in a relatively small company such as 4i2i. A further satisfaction is that the pay package is better in industry than in academia.

The way in which Mahdi's professional development has been supported has also been different in industry. He felt that the emphasis whilst working as an SRO was on completing the project and publishing papers in journals. Whilst those publications served him well, Mahdi feels that he lost out to some extent on other aspects of professional development. In particular, as an SRO, there was limited scope to attend conferences and to patent work. His experience in industry has been that his employer is able to support and fund such activities to a greater extent and also to fund the purchase of books and equipment more readily.

Mahdi took a number of professional development courses whilst at Essex which he felt were useful both at the time and in his subsequent jobs. He recalls in particular a course on project management for example. His experience as PhD student and SRO was also valuable in helping him to develop effective oral and written communication skills, learnt in, and suited to, a professional environment. These skills have proved extremely valuable in his work.

During his time at Essex, Mahdi was able to establish a network of contacts. When his company was recruiting engineers, his network enabled him to recommend two people that he knew. One was a former SRO at Essex and the other a former PhD student at Loughborough, whom Mahdi had first met at a graduate student conference. Both were subsequently hired by the company. If he had a second chance to be a PhD student, Mahdi says,

I would work harder on developing a network of contacts as they can be an extremely valuable asset. I think I focused a little too narrowly on the research project and missed opportunities to develop my network further.

Thinking about the next step in his career, Mahdi has the possibility to move to his present employer's head office in Canada. That would probably still be in an engineering role but, as the head office is much larger, he would have much more interaction with colleagues. That in turn would help further his personal and professional development.

Asked what career tips he would like to pass on to current PhD students and research staff, Mahdi's recommendation is,

Attend the courses on CV writing and interview technique which are offered by the University. They really work!

Having attended them himself, he feels that the courses alerted him to the need to target his CVs and job applications, and the importance of thorough preparation for interviews, both of which he went on to do in his own job search.

The sort of design work that Mahdi does is very much about applying technology. As such, it does not lend itself to writing up in the form of journal articles or conference papers. As we have seen, the satisfactions of this work come in different forms. Mahdi's view is that someone who is interested in carrying out pure research is likely to find working in academia, or perhaps the research centre of a company, a better career option.



Dr Maxwell Stevenson

Learning and Teaching Officer

Dr Maxwell Stevenson is a Learning and Teaching Officer in Learning and Development at the University of Essex. His job role involves him in all areas of pedagogy and academic development.

This profile highlights the importance of nurturing contacts throughout your PhD. It also illustrates the transferability of academic skills to work beyond your discipline.

Maxwell arrived at Essex as an international student, having undertaken his BA in his native country of Canada. His background in History in Art determined his choice to study for an MA in Architectural History at Essex. At that stage, his general career plan was to progress in the direction of academia. This plan became more fixed with his intention to progress onto a PhD at Essex.

I'm a firm believer in the importance of having a plan to work to. You can always change the plan, but if you don't have one to begin with, it's very difficult to maintain focus.

There are two things that are impressive about Maxwell's approach to his PhD studies. First, knowing the importance of a publishing record to an aspiring academic, he began submitting work for publication as soon as he began his PhD by re-working his MA. When to publish varies between individuals, their discipline, supervisor and circumstances. Some people start earlier than he did; others choose to wait, maybe in order to publish a whole book. "Conference papers might also lend themselves to being turned into articles, or someone might hear them, like what you're doing and want to include it in a book." His advice, regardless of discipline is,

Get publishing as early as you can, and certainly before the end of your PhD. It's good to have something at least submitted to put on your CV 'under review'.

Second, he completed his PhD in exactly 3 years or, more precisely, 9 terms to the day. In addition to the 3 years of the PhD, he also taught, travelled for research, and spent half of his first year as a researcher on a project funded by the Arts and Humanities Research Council.

"I tried to focus both on getting everything finished on time, but also preparing for what might come after."

To this end, Maxwell adopted a strategy from the beginning of his studies: he made a conscious effort to get involved in as much as possible during his PhD, and to say 'yes' to everything.

I think it is to everybody's benefit if you can make yourself available to contribute to things going on in the University beyond your research. Sometimes seemingly trivial contributions can lead to fantastic opportunities, and even if they don't, they can be very good experiences, both in themselves, and for your CV. Make yourself available.

On completion of his PhD, this availability and saying "yes to everything" led to Maxwell taking on four different jobs at one time in the University. This included working in the Art History and Theory Slide Library, the Arts Office, teaching and doing research work.

For many people who study for a PhD, an academic career is the ultimate goal. This was the case for Maxwell. Unfortunately, the completion of his PhD coincided with global financial downturn, which had a significant impact on university recruitment, especially in the Humanities. However, as he points out, even at the best of times:

You have to bear in mind that there are far more people with PhDs than there are academic posts.

For this reason, Maxwell had always tried to keep more than one option open. By getting involved in activities outside his discipline, he had developed a wide portfolio of skills and experience. So, for example, he had helped administer a large conference, he had worked on research projects beyond his immediate discipline of Architectural History, and he had also contributed to the University's research student training programme. This University programme aims to enhance both the study experience of PhD students and equip them with a broad range of transferable skills. Maxwell believes that his involvement as a tutor in the latter helped him get an interview for a maternity cover post as a Learning and Teaching Officer.

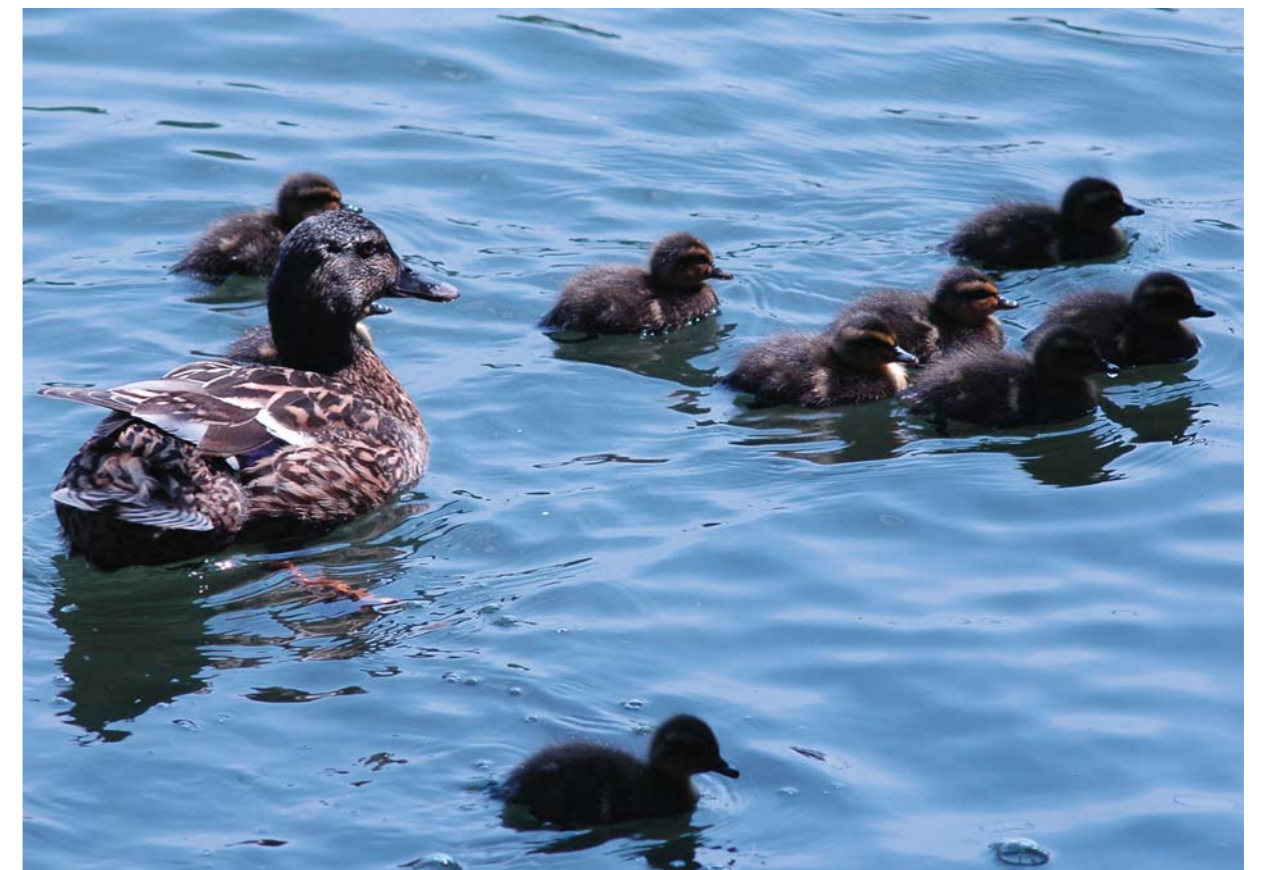
At interview, coupled with his academic experience, he was able to demonstrate that he had all the essentials for the job. "I had to explain my skills in a different context, but not in radically different way." As his role is largely project based, he could argue that his project management skills were finely honed through his PhD. Similarly, critical thinking is something he had exercised throughout his studies; getting to grips with a problem, questioning assumptions and approaching new things in different ways were fundamental. And, of course, Maxwell could demonstrate he had the ability to prioritize his time and work with competing deadlines.

"When I took the maternity job, it wasn't with a desire to leave academic life, but found I enjoyed the job and it spoke well to what I needed in my working life." As a result of this positive experience, he applied and was successful in gaining permanency in the same job when maternity cover came to an end.

He realizes that whilst he enjoys the academic life, it is the academic community and lifestyle itself in which he particularly thrives. This job offers him the opportunity to remain within that environment, develop new skills, expand areas of interest, and still pursue his academic interests on a recreational basis. And would he take an academic job, if it came up tomorrow...?

"I would have to think very carefully about it", says Maxwell. "It had always been my goal, but I do enjoy the job I am in, and nobody is stopping me from keeping up with my research."

In terms of his next career step, he has not made any firm decisions. For now, he intends to build on his experience in this job and undertake more training, including the Certificate in Higher Education Practice, a qualification for staff involved in teaching.



Key Messages

from the Profiles

- Balance the need to be recognised for your niche area whilst keeping your eye on the wider research agenda
- Seek the advice of others in relation to your work and career decisions
- Recognise your personal attributes and skills and their potential transferability
- Decide what really motivates you
- Be prepared to move and take risks at times
- Emulate and learn from others in your field or one you might enter
- Without good quality research and publications you won't make it in academia
- No one else is going to look after your career as well as you will!

The national Concordat to Support the Career Development of Researchers emphasizes the importance of researchers taking control of their careers at an early stage and seeking opportunities for furthering themselves professionally. This document can be viewed at www.researchconcordat.ac.uk/

The University, principally through Learning and Development, aims to provide career and professional development support to research staff and students throughout their time at Essex. This provision is designed to both enhance your effectiveness as a researcher and to aid you in your search for employment in and outside academia.

These profiles have been written and researched by staff in Learning and Development and in the Research and Enterprise Office.

