



THE Darwinian



**The completion of John
Bradfield Court and
new studentships:**
with grateful thanks to
Darwinians worldwide



A New Portrait



John Bradfield Court



Nobel Laureate
Eric Maskin is
interviewed by
Andrew Prentice

A Message from Mary Fowler Master



Above:
The College's new portrait of Mary Fowler at its unveiling, with that of her predecessor Willy Brown behind.

Seven wonderful years ago I followed Willy Brown as Master of Darwin. As you may know, he died very unexpectedly in August. Much-loved as Master, Willy was distinguished in labour economics and industrial relations and a founder of the Low Pay Commission. His work, which was characterised by the use of statistics, and careful research, centred around the concept of "fairness". That reflected his own nature, modest, fair, generous, kind, a man of integrity. He was a mediator,

someone who makes the world better. A wonderful man, Willy is deeply missed not just here in Darwin, in Cambridge and in the UK, but around the world. He gave his skills and knowledge freely. Fortunate were those who worked with him, or were taught or tutored by him, who experienced his generosity and friendship. A full tribute to him is on page 10.

Now I'm myself in my last year as Master (but certainly not my last year in Cambridge). September saw a ritual – the unveiling of my portrait. Darwin

members and friends gathered in the Dining Hall where the portrait was waiting, covered. Portraits can be a controversial matter. Martin Jones talked about the many aspects of the planning process: What style? Which painter? What size? What stance? What location? What symbolism? ... With Paul Brason selected as the painter and everything else decided, the sitting (and standing) took place in his studio in Bath. With the portrait completed, framed and delivered to Cambridge, it was time to unveil, to pull off the covering sheet. As you can see from the photograph, I was assisted in this by my grandchildren. Once I saw the finished portrait, all my anxieties were over! My 5-year-old grandson was ridiculously succinct, "It's a masterpiece".

What about the symbolism? I'm a geophysicist. I've worked in remote places, and on small research ships in turbulent seas. But these don't lend themselves to a portrait. When I accepted the invitation to be Master, it was because, when I was myself a student, Darwin had given me so much. I wanted to help continue that generosity of Darwin's spirit. Paul Brason was marvellously sympathetic; he made the whole process relaxed and straightforward. So, the portrait speaks of the College itself. I am standing outside Newnham Grange, by the vine and the fig tree, symbols of peace. The Darwin Bridge is there, and punts are moored along the riverbank.

Darwin College has wonderful buildings, but they get old, like all of us. The bad news is that we cannot now make a video of the Old Granary collapsing spectacularly into the Mill Pond, sending a great wave over the Anchor and Laundry Green. The good news is that the Old Granary is now splendidly restored, with students back in residence, and we can look forward to another century of quirky fun. Next to it, the new Bradfield Room should soon be in use, and the 'John Bradfield Court' will be complete.



"A wonderful man, Willy Brown is deeply missed not just here in Darwin, in Cambridge and in the UK, but around the world."



Left:
Mary unveiling her portrait with her grandchildren

Right:
Mary and Euan with their grandchildren

It is people that make Darwin so special. That's why we fly the Darwin College flag for every degree congregation when Darwinians are graduating. We fly it on other special occasions too and on 26th November it flew to celebrate the 100th birthday of Dr Abe Yoffe, one of our twelve Founding Fellows. I delivered a giant birthday card to him at home in Cambridge. I've been meeting more distant Darwinians too – in Toronto, New York and San Francisco, and in the spring, I hosted a dinner with the Cambridge and Oxford Society in Tokyo, attended by Darwinians, some alumni from other colleges and from Oxford too. Tokyo is lovely during Sakura time, cherry blossom season – Christmas lights in Cambridge cannot compete! Then in Beijing, Shanghai and Hong Kong I met with many other enthusiastic Darwinians.

And yes, with every mile travelled, I'm very concerned about greenhouse gas emissions, both personally and for the College. Sir David McKay is our inspiration (www.withouthotair.com). We're trying to make the College operation as sustainable as possible, as soon as possible, which with our wonderful old, listed, heritage buildings is no easy task. The next decade is going to be very challenging indeed. I earnestly hope Darwin's skills and global reach will help us all to meet those challenges. With that in mind, I send you all my best wishes for a peaceful 2020 and the years to come.

Photo credits:
Sophia Smith

Gorillas found to live in ‘complex societies’, suggesting deep roots of human social evolution



Above:
Three young gorillas take a break from feeding to socialise at the Mbeli Bai forest clearing in the Nouabale-Ndoki National Park, Republic of Congo.

Robin Morrison studied at Darwin for a PhD in Biological Anthropology from 2015 to 2019, and is now working as a Postdoctoral Researcher studying Gorillas in Karisoke, the research site Dian Fossey (PhD Darwin College 1970) established in Rwanda in 1967.

Robin's PhD Research

Gorillas have more complex social structures than previously thought, from lifetime bonds forged between distant relations, to “social tiers” with striking parallels to traditional human societies.

The findings of Robin's research suggest that the origins of our own social systems stretch back to the common ancestor of humans and gorillas, rather than arising from the “social brain” of hominins after diverging from other primates.

Published in the journal *Proceedings of the Royal Society B*, the study used over six years of data from two research sites in the Republic of Congo, where scientists documented the social exchanges of hundreds of western lowland gorillas.

“Studying the social lives of gorillas can be tricky. Gorillas spend most of their time in dense forest, and it can take years for them to habituate to humans. Where forests open up into swampy clearings, gorillas gather to

feed on the aquatic vegetation. Research teams set up monitoring platforms by these clearings and record the lives of gorillas from dawn to dusk over many years.”

Gorillas live in small family units – a dominant male and several females with offspring – or as solitary males. Morrison used statistical algorithms to reveal patterns of interaction between family groups and individuals.

By analysing the frequency and length of “associations”, she found hitherto undetermined social layers. Beyond immediate family, there was a tier of regular interaction – an average of 13 gorillas – that maps closely to “dispersed extended family” in traditional human societies e.g. aunts; grandparents; cousins.

Beyond that, a further tier of association involved an average of 39 gorillas, similar to an “aggregated group” that spends time together without necessarily being closely related. An analogy to early human populations might be a tribe or small settlement, like a village. Where dominant males (“silverbacks”) were half-siblings they were more likely to be in the same “tribe”. But over 80% of the close associations detected were between more distantly related, or even apparently unrelated, silverbacks.

“Females spend time in multiple groups throughout their lives, making it possible for males not closely related to grow up in the same group, similar to step-brothers, the bonds that form may lead to these associations we see as adults. The time spent in each other's company might be analogous to an old friendship in humans,” Robin said.

She and her colleagues argue that sporadic fruiting schedules of the gorillas' preferred foods may be one reason why they, and consequently maybe we, evolved this hierarchical social structure.

“Western gorillas often move many kilometres a day to feed from a diverse range of plants that rarely and unpredictably produce fruit. This food may be easier to find if they collaborate when foraging. They spend a lot of their early life in the family group, helping to train them for foraging. Long-term social bonds could further aid cooperation and collective memory for tracking down food that's hard to find.”

A small number of mammal species have a similar social structure to humans. These species also rely on “idiosyncratic” food sources – whether forest elephants hunting irregular fruitings, or the mercurial fish schools sought by dolphins – and all have spatial memory centres in their brain to rival those of humans.

Before now, the species on this short list were evolutionarily distant from humans. Our closest relatives, chimpanzees, live in small territorial groups with fluctuating alliances that are highly aggressive, often violent, with neighbours. As such, one theory for human society is that it required the evolution of a particularly large and sophisticated “social brain” unique to the hominin lineage.

However, Robin’s research indicates that the addition of gorillas to this list suggests the simplest explanation may be that our social complexity evolved much earlier, and is instead merely absent from the chimpanzee lineage. The scaling ratio between each social tier in gorillas matches those observed not just in early human societies, but also baboons, toothed whales and elephants. “While primate societies vary a lot between species, we can now see an underlying structure in gorillas that was likely present before our species diverged, one that fits surprisingly well as a model for human social evolution.”

“Our findings provide yet more evidence that these endangered animals are deeply intelligent and sophisticated, and that we humans are perhaps not quite as special as we might like to think.”



Above: Three western gorilla groups (Conan, Morpheus and Zulu) mingle peacefully as they feed at the Mbeli Bai forest clearing in the Nouabale-Ndoki National Park, Republic of Congo.

Below: Researcher Robin Morrison monitors gorilla behaviour in Mbeli Bai forest clearing in the Nouabale-Ndoki National Park, Republic of Congo.



About Robin, Gorillas and Darwin College Boat Club

Robin started working with wild gorillas in The Republic of Congo as a research assistant straight after finishing her biology degree. She found it fascinating and has continued ever since. Having recently completed her PhD, Robin is now working in Rwanda’s Virunga Mountains, at the gorilla study site fellow Darwin College alumna Dian Fossey set up in 1967 – one of the longest-running studies of any animal species anywhere in the world.

“Cambridge was the perfect place to base my research. Not only because of the incredible legacy of primatologists like Jane Goodall and Dian Fossey, but also to work with experts in ecological modelling and primate evolution.”

While at Cambridge, Robin investigated the evolutionary origins of cooperation and sociality by looking at which elements of human social behaviour are also observed in gorillas, and how gorilla groups share space and resources.

During her PhD, time was divided between the Congo and Cambridge: “I tracked gorillas through dense forest, recording them with motion activated cameras, and spying on them from treehouse-like platforms. It was a lot of walking, a lot of getting bitten by insects, but also some amazing moments watching gorilla behaviour. Back in Cambridge I was usually found shouting at my computer as I figured out how to code all the statistical analyses. Either that, or out rowing on the river with the wonderful women of Darwin College Boat Club, followed by a big brunch!”

Against the Odds?

More like Swings and Roundabouts

Darwin alumnus Candace Thomas graduated with an MPhil in Sociology in November 2018, here she reflects on her life and how it impacted her approach to being a student at Cambridge.



Above:
Candace Thomas

“I grew up on fairgrounds, travelling throughout Scotland – loved and supported by a community who passed down amazing morals and values.”

As I begin to write this article about my life, I cannot help but feel something akin to imposter syndrome. I accept that going from Showman- Traveller to Cambridge graduate is – *unusual*. As a scholar of Gypsy, Roma and Traveller (GRT) studies I am aware that it defies statistical probability. Statistically, GRT are ten times less likely to attend university; only 3-4% of GRT aged 18-30 progresses to higher education in comparison to 43% of the national population; and only one in ten GRT pupils leave school with GCSEs graded A*-C. I can therefore completely understand why I was asked to write an “against the odds” article, but I have to be honest – being a Traveller doubled my odds for success – attending the University of Cambridge was hedging my bets.

I grew up on fairgrounds, travelling throughout Scotland – loved and supported by a community who passed down amazing morals and values. We “shifted” seasonally from city- to town- to village, often on a weekly basis, owning and operating our fairground equipment as a multi-generational family unit.

At a young age I learned how to construct and maintain our rides; to follow a work schedule and work as part of a team; to both follow the rules and accept responsibility with ease. I was given the opportunity to witness how our family earned our living and was taught to respect not only the value of money but also the local “punters” frequenting the fair.

I was also fortunate to witness how people from all over Scotland lived - the socio-economic differences from place to place – I was a sociologist before I knew what one was! I was able to develop unique in-group skills that have given me an edge in my studies and have allowed me to transition into various career fields. I can with confidence, directly attribute my drive and determination; my first-hand empathy; my compassion for “others” and ability to stand up for justice to being a Traveller.

It would, therefore, be a foolish underestimation for anyone to read the aforementioned statistics and assume GRT lack the intelligence, creativity, work

ethic or ambition to go into higher education. I would suggest that these statistics are instead indicative of the discrimination and prejudice faced by GRT in early education; verbal and physical bullying not to mention institutional discrimination was rife and would often taint any further academic aspirations.

GRT are also incredibly perceptive people and are more than aware of public attitudes towards them; we can sense that, statistically, around 66% of Britons do not consider our ethnic status (and right to protection) legitimate; I attended one classmate's birthday party in seven years of primary school, so it is no surprise to me that one in three adults would disallow their child to play with a GRT child. Given this, it should come as no surprise to anyone that choosing to progress to university can be an incredibly nerve-wracking decision. GRT worry about being refused service in student bars, as one in ten people believe all "Travellers" *should* be denied entry. They have to endure and overcome rumours of "pikey party" themed bops (an actuality in the case of Reading University's Agricultural Society). As a result, GRT are forced to either hide their identity or pursue a career more in keeping with traditional customs. Many Showman-Travellers go on to become successful entrepreneurs using skills they developed in the fairground business. If you are *brave* enough to attend university and identify yourself as a "Traveller" at Cambridge, you are relentlessly reminded of the odds. I experienced some truly well intentioned first reactions from students and staff alike: lots of 'Really? That's...

GREAT?" and "Oh, well, well done!" or my personal favourite the mortified glare followed by an awkward smile and a slow deliberate shuffle to the farthest corner of Darbar.

I pen "*brave*" but I did not have the option of hiding my identity from fellow Darwinians as my Master of Philosophy dissertation in Sociology centred on my positionality. I chose to use an auto-ethnographical approach to explore the fluid myriad of unique, yet comparable GRT identities in the UK, seeking to dispel some of the myths and stereotypes behind prejudicial views about GRT identity.

I initially believed I should (or could) reverse the media's characterisation of GRT as deviant, itinerant roustabouts, more likely to study and develop skills out-matching the Artful Dodger, than succeed in a prestigious academic institution. I did not want to be judged as a "Gypsy Bride"; unwilling or disallowed to pursue an education. I felt I had to dress more conservatively; I toned down my hair colour; I would often second-guess my own thoughts or opinions; and strived to follow formal academic principles without critique. However, I thankfully realised that I was concealing aspects of my identity that allowed me to stand out, to go into situations with a unique perspective and achieve original results. I was suppressing the strength and resilience that had been passed down and instilled in me by my ancestors – the tools I needed to fight adversity.



Left:
Candace as a child

Students and Research



Above:
Larissa Hill, Candace Thomas and Kent Dawson at Alloa Fair, 1996.

Since graduating from the University of Cambridge last year I have chosen to combine my Traveller instinct with the knowledge and skillset I acquired in higher education. I have applied this two-pronged approach in my professional projects; seeking to highlight the adversity experienced by a multitude of destitute, displaced groups.

I wanted to go out and spend time with communities to see how they viewed their identity, to discover what their life experiences had taught them and how they would choose to tackle the problems they face. I have been fortunate to do this in a number of ways; I have begun filming a documentary about my journey, inspired by my dissertation, which I would ultimately like to turn into a book featuring images taken by GRT themselves. However, I am equally passionate about highlighting the struggles and strengths of other groups, excluded and undervalued in contemporary

“Going forward, I now fully understand the strength in my position and would encourage anyone who has earned their place at the table to know their worth.”

society. Which has led me to work with two remarkable NGOs the Refugee Survival Trust and Lifting Hands International. I was fortunate to have worked with, and was taught some truly valuable life lessons by, a Yazidi community living in a camp just outside Serres, in Northern Greece. I discovered that just like my community; they possess in-group knowledge and skills that should be harnessed by those seeking to alleviate their plight.

Going forward, I now fully understand the strength in my position and would encourage anyone who has earned their place at the table to know their worth. When you step into your first lecture or sit at your first team meeting do not be afraid to share your opinions and stand by your convictions. You carry a wealth of inherited knowledge that is largely over-looked in mainstream society and have acquired the cultural capital to achieve whatever goals you set. The odds may not be set in your favour, the playing ground is certainly unfair, but you have a double advantage so hedge your bets and play to all your strengths.

Candace Thomas (MPhil Sociology 2017)



Above:
In April the Master and Development Director enjoyed the company of alumni at dinner in Beijing.



Above:
The Master and Development Director pictured with alumni in Hong Kong at a reunion event in April.

Studentships at Darwin

Our fantastic student callers.

From left to right: Alicia Wilcox, Madeleine Emms, Bea Simpson, Ziyue Zeng, Rebwar Salih, Madison Vorva, Felicity Hey, Xingran Gao, Rachel Palkovitz, Fauzi Said. Not pictured: Jordyn Armstrong, Edoardo Chiatelli and Anastasia Iliina. Photo: Eleanor Collingwood



When I joined Darwin as Development Director two and a half years ago, it was clear to me, having been working in fundraising in Cambridge since 2003, that Cambridge as a whole needed to provide more for its postgraduate students. Naturally for Darwin, as a purely postgraduate College this need would be particularly acute.

In October 2018, Cambridge's Vice-Chancellor Professor Stephen Toope announced the Student Support Initiative (SSI), a £500 million fundraising target for the University and the Colleges to raise money for students.

Central to the Student Support Initiative is fundraising for postgraduate studentships, which provide funds to ensure the quality and diversity of postgraduates. Darwin is of course playing its part in fundraising in this area. We cannot allow postgraduate study to become the preserve of the well-off: academia – as well as society at large

– needs the most gifted students, not just those able to fund themselves, to be able to begin and complete PhDs and Master's courses.

At Darwin we are in a fortunate position, in that funding bodies such as the Cambridge Trust are often able to match funds that the College puts forward to create studentships. Consequently, Darwin is often able to create studentships for PhD and Master's courses when we secure donations which cover half the cost, with the balance coming from matched funding through the Cambridge Trust or the research councils.

Much has been achieved already, and Darwin has recently begun studentships such as the David Ellar Studentship, which funds a PhD in biological sciences, or the Michael Blank studentship, which funds a Master's student in economics.

Philanthropy is often thought of as major donations by a few individuals. In reality, a great deal can be achieved when many

individuals give relatively modest amounts. In September 2019, Darwin ran a Telephone Fundraising Campaign, when 14 of our students called some 500 Darwin Alumni, seeking support for our Studentships programme. The results were fantastic, with 200 people donating and £128,000 raised, which will, amongst other things, fund two new PhD Studentships at Darwin. We are hugely grateful to all who have contributed to these initiatives: your support is invaluable and enormously appreciated by the students concerned, as well as by the College at large.

Looking to the future, we need to create more of these studentships to encourage the best students to come and study here, free from worry about finance.

If you have already contributed: thank you. If you think you might be interested in contributing, please do get in touch, we will be delighted to hear from you!

Samuel Venn, Development Director

Professor Willy Brown

1945–2019

Professor William Brown, known to most as Willy, was elected Master of Darwin College in October 2000 until his retirement in 2012. Willy was an egalitarian, leading the College with an easy hand, fairly and with wisdom. He was committed to every member of the College community. Willy's interpersonal skills and his experience as an arbitrator meant that he was widely sought in the College and University beyond to sit on scores of committees. His wise counsel was greatly valued by all who came into contact with him. Willy was generous with his time and would listen attentively, always affording students, Fellows or staff friendship, kindness and sincerity. He was greatly loved and is sorely missed.

The Times' obituary of Willy published on 11th October 2019 is reproduced below (with slight adaptation):

The drive for a national minimum wage in Britain owed much to Willy Brown's childhood ability to talk his way out of trouble. Brown, who according to his brother Henry was "a social chameleon", came from an academic family and in time turned his negotiating skills into an economics professorship that focused on how wages should be set.

The minimum wage first hit the statute book in 1604 when James I passed an Act Fixing a Minimum Wage for textile workers. It was scrapped in the 19th century, but Tony Blair seized on the idea when he became prime minister in 1997. He created the Low Pay Commission (LPC), of which Brown was a founder member.

In the 1960s Brown had worked for the Wilson government's Prices and Incomes Board, an early attempt to regulate the economy. After being appointed to the University of Warwick he put a strong emphasis on case-study research, but found that policymakers were not impressed with case studies because they thought there was only limited scope to generalise from them into political solutions. So he started the Workplace Employment Relations Study, a regular exercise that he eventually persuaded the government to fund and which continued until only a few years ago.

Brown used his survey techniques to research the effects of raising the minimum wage on employment, prices, inflation, exports and imports. "It was Willy who laid down the modus operandi of the LPC," Sir George Bain, its first chairman, said, "treating the national minimum wage as an empirical rather than theoretical question."

The balding and bespectacled Brown rejected theoretical economics in favour of a more practical approach. It may also have better suited his sociable temperament, which inclined him to linger



over a pint or three in the pub after work. New acquaintances were often taken off guard when his soft tone of voice gave way to a sudden, loud laugh that lit up his crinkly eyes.

Yet he did not suffer fools. It was at one of the University's regular management-union seminars in 1984, when Arthur Scargill, the leader of the National Union of Mineworkers, was in the throes of the miners' strike, that Brown bared his intellectual teeth.

Bain, then the chairman of Warwick Business School, said: "I remember Willy cross-examining Scargill in a forensic way, exposing how shallow his tactics were. He thought he was just a fraud and a sham, leading the miners to disaster." Brown, a Labour Party member since the 1950s, would have been naturally



Below:
Willy in his study at Darwin College. Photo Credit: SirCam

sympathetic to a well-argued union case. "He got along well with most people, including union leaders," Bain said. "But he didn't bother to get along with sh*ts."

William Arthur Brown was born in Oxford in 1945 to Joan (née Taylor) and Arthur Brown, an economist and Fellow of All Souls College, Oxford, who soon after his son's birth was appointed pro-vice chancellor at the University of Leeds.

"Willy was the brightest of us boys," Henry said. "He could certainly think on his feet, and he had a real sense of mischief." A scholarship boy, he breezed through Leeds Grammar School on his way to Wadham College, Oxford. There he read PPE and fell under the influence of Hugh Clegg, who taught

Brown about real ale and took him to the National Board for Prices and Incomes. In 1968 Brown moved to the University of Warwick and then, in 1985, to Wolfson College, Cambridge, where he was the Montague Burton professor of industrial relations for 27 years. He was appointed to the Advisory, Conciliation and Arbitration Service (Acas) in 1998.

Yet even the knottiest problems Brown had to disentangle at Acas paled into insignificance compared with the potential pitfalls he faced at home: Brown had two pairs of stepdaughters with the same names.

He first married Kim, who had daughters Rachel and Sarah from her first marriage. After his ten-year marriage to Kim ended in 2003 he partnered with Jackie Scott and they were married in 2017. She was a colleague at Cambridge, where she was head of the Faculty of Social and Political Sciences and is now retired. She had two daughters, also called Rachel and Sarah. "It was a bit tricky, but he always said he wanted four daughters," Jackie said.

From 2000 to 2012 Brown was Master of Darwin College, but he maintained his links with Yorkshire. Henry said: "Willy and I, and many family and friends, shared a strong attachment to a remote family cottage in Middlesmoor on a steep green hillside, anchored by a stocky church, in the Yorkshire Dales." The brothers laboured to renovate the cottage in the 1970s, turning it into a spiritual home and base for energetic moorland walks, in Willy's case punctuated by reciting huge chunks of Wordsworth and Shakespeare from memory, with a varied stock of ribald verses and limericks that often ignited that explosive laugh.

In retirement Brown and Jackie moved to Hinxtton in Cambridgeshire, where he would be entranced by the Red Arrows circling the church spire before flying over the Duxford air show. He entered local politics, using his arbitration skills to take the rough edges off commercial property development plans.

While busy with a large garden, Brown still had time for writing. As well as dozens of academic papers, he wrote several significant books on the modern workplace and the changing face of industrial relations. To those he added, two years ago, *The Emerging Industrial Relations of China*.

"I can see a parallel in the intellectual stance of our father," Henry said. "Sceptical of theories and models, and happy to struggle with awkward data to make sense of the world. They were both determined that policy based on that understanding can make the world a better place."

William Brown, CBE, was born on 22 April 1945. He died on 1 August 2019, aged 74.

New Master

Dr Mike Rands appointed for 2020

Dr Michael Rands has been elected to succeed Professor Mary Fowler as Master from 1 October 2020.



Dr Mike Rands is currently the Director of the Cambridge Conservation Initiative (CCI), a unique collaboration between the University of Cambridge and the internationally focused cluster of biodiversity conservation organisations based around Cambridge. He will take up the office of Master after the retirement of the current Master, Professor Mary Fowler, on 30 September 2020.

After studying Environmental Sciences at the University of East Anglia, Mike took a DPhil in Zoology at Wolfson College, Oxford (coincidentally Darwin's "twin" College). An early career as a research ecologist followed, studying farmland biodiversity in the UK and developing innovative methodologies for increasing wildlife populations in agricultural ecosystems, some of which became enshrined in UK and EU policy.

In 1986 he moved into international conservation, directing a programme of multidisciplinary projects in over 100 countries for the International Council for Bird Preservation, based at its headquarters in Cambridge. In 1996 he was appointed Chief Executive of BirdLife International, a global partnership of national conservation organisations that strives to conserve birds, their habitats, and global biodiversity, working with communities towards sustainability in the use of natural resources.

As the Director of CCI, Mike heads an initiative which seeks to transform the global understanding and conservation of biodiversity through the integration of research, education, policy and practice. He is a Fellow in Management Practice at the Cambridge Judge Business School, and a Fellow Commoner at Magdalene College in Cambridge.

Commenting on his election, Mike said: "I am delighted to have been elected as the next Master. I believe the College's intellectually rich and vibrant international community - combined with its collaborative, informal and non-hierarchical ethos - make Darwin an exceptionally important and attractive part of the Cambridge collegiate community. I very much look forward to playing my part in its growth and development."

Professor Anne Ferguson-Smith, who chaired the search committee, said: "We are delighted that Mike Rands has agreed to be the next Master of Darwin College. These are important times for our Collegiate University as we look to the future. Mike's appointment reflects his commitment to education and research at Cambridge and his dedication to tackling the global challenges that we face more widely. We look forward with enthusiasm to working with Mike as our new Master."

The Copper Beech Tree - Regenerated

Darwin's gardens are stunning - whatever the season there is always a new vista to enjoy. Central to the garden is the Copper Beech tree which always looks glorious, and is uppermost in our thoughts when talking about the gardens.

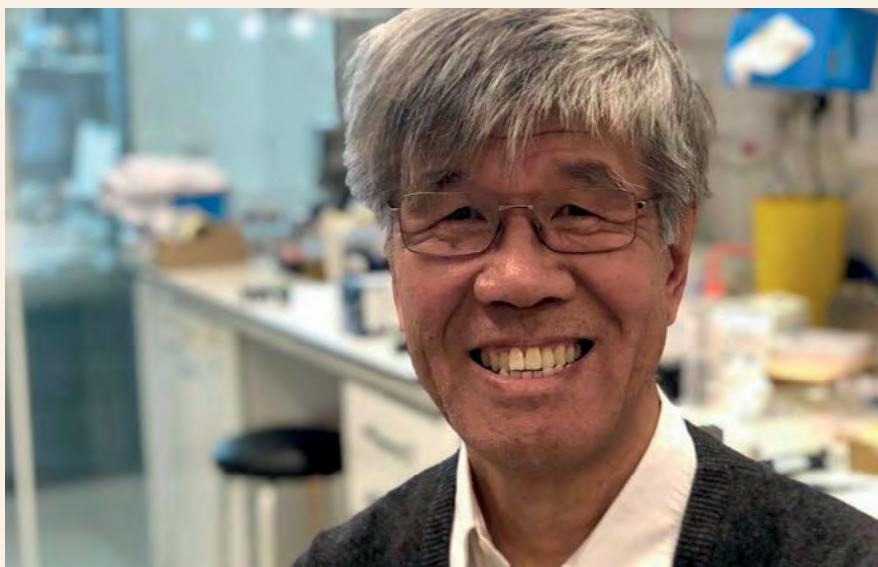
Alumni, students, Fellows and staff alike enjoy the beauty of the Copper Beech. However, we are very aware that the tree won't carry on forever. The centre of the trunk is suffering from rot; to alleviate the danger of the tree collapsing it undergoes frequent surgery to keep it at a safe size. However, we are cognisant that the tree will eventually have to be removed for the safety of people using the river and grounds.

With this in mind in 2011 grafts of the tree were taken and nurtured with a hope to re-plant them at a later date. Eight years later the saplings are healthy and now large enough to plant on. The first of which was ceremonially planted at the MRC Laboratory of Molecular Biology in Cambridge. Darwin Emeritus Fellow Richard Henderson and Torsten Krude, Fellow and enthusiastic Gardens Officer, took great pleasure in digging it in. The tree marks the many good links Darwin has with the LMB. Long may the tree and our relationship with the LMB continue.

Below:

Richard Henderson and Torsten Krude with the newly planted Copper Beech sapling





Kiyoshi Nagai pictured at the LMB

Dr Kiyoshi Nagai Darwin College Fellow from 1993–2019

The College is deeply saddened to announce the death of Emeritus Fellow **Dr Kiyoshi Nagai**, who died on 27 September 2019 after a short illness.

Dr Nagai was a structural biologist at the MRC Laboratory of Molecular Biology in Cambridge, who was known for his work on the mechanism of RNA splicing and structures of the spliceosome.

After studying at Osaka University, Dr Nagai moved in 1981 to the Laboratory of Molecular Biology in Cambridge, where he worked as a post-doc with Max Perutz (coincidentally, Max Perutz became an Honorary Fellow of Darwin in 1984) on overproduction of eukaryotic proteins in *E. coli*.

Kiyoshi later became a group leader at the LMB and was joint head of the Division of Structural Studies from 2000 to 2010. He was elected as a Fellow of Darwin College in 1993, and became a Fellow of the Royal Society in 2000.

Kiyoshi was known as a thoughtful, compassionate and cultured colleague, who through his concern and regard for his students, post-docs, colleagues and friends, engendered their affection and respect.

Richard Henderson, a colleague at the MRC LMB and Emeritus Fellow of Darwin, said: "Kiyoshi was bold, ambitious and totally fearless scientifically, as well as immensely skilled experimentally. With his warm, supportive and perceptive personality, he and his research group formed a highly successful team."

The Master said: "We are enormously saddened by Kiyoshi's untimely death. He was a great scientist and scholar, and one of the many distinguished researchers at the Laboratory of Molecular Biology in Cambridge who have been, and are, associated with Darwin College. He will be greatly missed and our thoughts are with his family."

Honorary Fellow, Dr Christopher Johnson

After completing his PhD, the talented physicist became a Fellow of Selwyn and went on to be a Bursar at Selwyn and Senior Bursar at St John's from 1970-1991. He also served on the Council of the Senate in the 1970s and was a University member of Cambridge City Council.

During his time as Senior Bursar, he first proposed the idea for the St John's Innovation Centre following a visit he made to the USA in 1984 when he visited universities and science parks, which included an innovation centre in Salt Lake City, Utah. Upon his returning to Cambridge, he convened a small group to plan the St John's Innovation Centre. It was the first innovation centre in Europe to focus on supporting knowledge-based businesses and it is the oldest such business incubator in the UK.

He was awarded an Honorary Fellowship of Darwin College in 1978. Dr Johnson died on 5th January 2019.

Honorary Fellow, Sir Michael Atiyah

Sir Michael Atiyah was Master of Trinity College from 1990-1997 and was President of the Royal Society from 1990-1995. He was knighted in 1983 and appointed to the Order of Merit in 1992. Sir Michael became an Honorary Fellow of Darwin College in 1992. Sir Michael died on 11th January 2019.

Honorary Fellow, Professor Sir Christopher Dobson

Professor Sir Christopher Dobson was Master of St John's College from 2007 until his death on 8th September 2019. He was knighted in 2018 in recognition of his contributions to Science and Higher Education. He was the John Humphrey Plummer Professor of Chemical and Structural Biology and was awarded an Honorary Fellowship at Darwin College in 2014.

John Bradfield Court and refurbished Old Granary



Above, clockwise from top left:

Plaque unveiling by Bob Bradfield and Greg Winter;
The John Bradfield Building viewed from the Gallery; Afternoon Tea in the Study Centre; Reception in The Old Library.
Photos: Phil Waterson.

On a beautiful day in October donors, alumni and Fellows attended the naming day of the Bradfield Court and refurbished Old Granary.

Following speeches in the Old Library guests were free to look around the new John Bradfield Building and the Painted Room. We are grateful to the three students who kindly opened their rooms in the Old Granary for people to view. Alumni who had lived there as students in years gone by expressed their joy at seeing how beautifully updated the rooms were, barely recognisable to some! - now all en-suite and with the best views in Cambridge!

It was a pleasure that so many donors to the project travelled from all over the globe especially for the day. Our thanks also go to John's son Bob Bradfield, and to Greg Winter, the outgoing Master of Trinity College, who jointly opened the Bradfield Court.

The building project itself has been a complicated mix of conserving the old and embracing the new as outlined by John Dix, Darwin College Bursar.

He said "From the start it was clear that John Bradfield Court would be a challenging hybrid. On the one side we had the restoration of the Old Granary – George Darwin's conversion of a former warehouse, home to his daughter Gwen Raverat then to generations of Darwin students, a listed historic and quixotic building. On the other side we have the Bradfield Room, reflecting the College's need to add further flexible common space and the desire to do so in our tradition of modern architecture which will endure. In the middle we had the need for College life to go on with the minimum of disruption, particularly maintaining access to the Study Centre throughout."

The Bradfield Court was created in memory of John Bradfield who first mooted the idea of founding a graduate only college in Cambridge. Former Master and Honorary Fellow of Darwin, Professor Sir Geoffrey Lloyd gave a fascinating talk about Sir John which is both informative and entertaining, this is reproduced overleaf.

Sir John Bradfield as remembered by Professor Sir Geoffrey Lloyd

How to describe John Bradfield's connection with Darwin? Utterly, utterly simple. Without him we would simply not exist. HE had the idea, HE got together support from other bursars, HE got it through the University, HE secured the outside funding to make sure the College, once founded, would be able to continue: and as we know, grow and grow, so that it is now one of the biggest collegiate communities in Cambridge.

Think about that. He was not only doing us a favour - a favour! bringing us into existence. This foundation was to the enormous benefit of the University. In the early 60s the graduate population in Cambridge, which had been tiny up until then, really began to take off. Leaving the University with quite a problem. The existing Colleges were simply not up to taking up the shortfall, for their eyes were firmly fixed on the needs of their undergraduate population.

So we come to the famous episode of the London train and Rattee and Kett Builders Merchants. The story has been told many times, but is worth retelling on this auspicious day. A train carrying John and a number of Bursar colleagues halted just outside Cambridge station where the builders merchant R and K used to be - trains still often get stalled there, don't they? - and waited, and waited, and waited. And the conversation turned to what could or should be done for all those new graduates who were itching to come to Cambridge. Surely, John urged, what we need is a purpose-built NEW graduate College.

But it is all very well to have a good idea. Putting it into practice requires altogether different skills. John got St Johns and Caius to join Trinity to get behind the proposal and wrote round to other Colleges to see who was prepared to join. He certainly tried Kings, because I happened to be on the College Council (I was a Junior Research Fellow) when the proposal came to us. But Provost Annan would have none of it. We can do something far cleverer, he thought, namely set up a new Research Centre in Kings particularly for subjects like sociology that at that stage were not represented in the University. Not a bad idea, for sure. But whereas the Kings Research Centre is now ... defunct, Darwin goes from strength to strength. Not that it got unanimous support from other Colleges in those early days.

I did not know John in those days. But got to know him and admire him greatly when I was asked to become Master in 1989. It is not that he and I always agreed, on politics for instance. But then he had already created a decent Modus Vivendi with a far more political animal than myself, namely Moses Finley. I knew, as did Moses for sure, that when it came to wise judgement concerning how to secure the financial well-being of the College, John was in an altogether different

league. Actually John was in a league all of his own. Chairing our Finance Committee, I was often bowled over by how our other external financial gurus were positively in awe of John, who nevertheless never overplayed his hand, never drowned out other voices.

I could go on, but I shall just mention one other aspect of John that impressed me hugely. He was not just financial adviser and sponsor, but an intellectual supporter. Time and again I spotted him in the audience at our Darwin College Lent Term Lecture Series. Often enough actually taking notes. Often enough following up the lecture with some pretty pertinent observations afterwards. He was a true polymath. I count myself incredibly fortunate to have been able to work with him so closely.

Athena was reputed to have sprung fully armed from the brow of Zeus. Darwin College did so, one may say, from the brow of John Bradfield, after whom this wonderful new courtyard is to be named, in gratitude and in his honour.

Notes on possible establishment and finance of a very modest Graduate College.

12th October 1962, Author John Bradfield

BUDGET

a) Setting up expenses - furniture and equipment	£
Furniture for Principal's flat	2,000
10 bed-sitting rooms at £200	2,000
Hall (80 chairs at £5 average and £400 for tables)	800
Kitchens (including cutlery and china for meals)	2,000
Two Combination Rooms	3,000
Library (including books)	2,000
Office equipment	1,000
Public places and corridors	1,000
Miscellaneous (cleaning equipment, gardens, etc.)	1,000
	£14,800
b) Annual Expenditure	
Rates	750
College Servants:	
Clerk	1,000
Resident caretaker and maintenance man (free living Accommodation)	500
Part-time caretaker	250
Gardeners	300
Cleaners - 2 full-time (excluding cleaners for the 10 Bed-keeping rooms who would be balanced by service charges)	900
Maintenance of establishment (mainly electricity, gas, water, cleaning materials)	2,000
Repairs (including decoration and furniture renewal in public rooms)	3,000
Library (new books)	200
Dinners (10s.each) - 40 Fellows - 4 free dinners a Week for 40 weeks (assumes each would miss average of 10 weeks' dinners a year)	3,200
Senior Combination Room papers, etc.	100
Principal's stipend	500
Principal's entertainment allowance	250
Subsidy to kitchens	1,000
	£13,200
c) Annual Income	
40 Establishment Charges at £10 a quarter	1,600
10 (unfurnished) room rents at £10 a quarter	400
40 Tuition Fees at £5 a quarter	800
d) Hence net annual deficit, b) minus c), would be about	£10,400

From Visiting Darwin student to Honorary Darwin Fellow, Eric Maskin

Nobel Laureate in Economics

An Interview by Darwin alumnus and former Fellow Andrew Prentice

Eric Maskin carried research out in Cambridge while a visiting student from Harvard in 1975–6. He received his Nobel Prize in Economics in 2007, together with Leonid Hurwicz and Roger B Myerson for having laid the foundations of mechanism design theory.



Welcome back to Darwin Eric. Thank you.

It seems impossible to believe that we studied here together over 44 years ago.

Isn't that extraordinary; you haven't changed a bit.

Now I know you enjoyed your time in Darwin and then as a Research Fellow in Jesus and you've been back to Cambridge several times since then. I'm sure readers would be interested in some reminiscences and maybe the role that Cambridge played in your development.

I was doing a PhD at Harvard, and my PhD Supervisor was great friends with Frank Hahn, one of the economists here in Cambridge, and he thought that I could use a bit of intellectual firming up. The original plan was for me to just come for a year as a visiting student, and that's when I was here in Darwin, but I had such a good time, met so many people who turned out later to be collaborators and friends, that I managed to stay on. I got a Research Fellowship at Jesus and spent another year there, and have since visited St John's and Churchill. Over the years Cambridge has become almost a second home. I know so many people and I've had many fruitful and enjoyable collaborations with people here.

It's great that you have such a close relationship with Cambridge but this is the Darwinian, so tell us a bit more about your memories here; has Darwin changed much since those days?

Darwin, at least where we are today, has changed surprisingly little. You know I opened the front door on Silver Street and I went back 40 years, it didn't look much different at all. The coffee room is the same, the lunch line is different, I don't recall that bit, but the dining hall itself is pretty much unchanged. Just to let readers know, you and I were flatmates at number 5 Castle Street, a place which I believe was condemned after we'd left, unfit for human habitation.

Yes - that was a most appalling way for the College to treat a future Nobel Laureate. Now I have a very distinct recollection of you giving a recital in Jesus, if I'm not mistaken, you played among other things, Rhapsody in Blue and I was blown away because as a non-player I was so envious of your abilities. So tell me do you still play music?

I do still play. I play the clarinet and when I was at Jesus I played in the College orchestra. Jesus has a lovely chapel and the reverberations made us all sound wonderful. Actually I did some playing when I was at Darwin. And I still play chamber music, I have a trio, clarinet, cello and piano and you know it's very difficult to have the self-discipline to practice every day unless you have a commitment. So I schedule myself for concerts, we play maybe six concerts a year, and that forces me to practice, and I do practice every day or at least almost every day, and I bring my clarinet with me when I travel.

It's terrific that you have such commitment.

Well it's wonderful therapy. We academics work hard thinking and writing most of the day and it's terrific to have a complete change of pace. And music is a

complete change of pace, you're not really thinking, it's more a matter of emotion and expression and, if you're playing chamber music, which is what I love the most, you're also communicating with the other musicians in a non-verbal way and that's very satisfying too, so I love it.

So let's get onto your academic work. Many PhD students, especially early post-docs, struggle to find their research niche and this can be a difficult journey for many. But I've heard that you had a special moment where it suddenly clicked for you. Can you tell the readers about that?

Yes, well I was lucky with my timing. I chose to get into the field of economics at just the right time for me because this was when the field of mechanism design was just getting off the ground. For non-economists, mechanism design is the part of economics where you do reverse engineering. You look at the goals that you would like to achieve and you work backwards to figure out what mechanism, or what institutions, might get you to those outcomes. I had taken a lecture course given by my PhD advisor, which included a lot of mechanism design at a time when it wasn't a very well-developed field, and in the course he gave many examples of mechanisms which would accomplish particular goals.

But the question that occurred to me was whether there is some general principle we can find - given any goals you might have - that would reveal a mechanism that will achieve those goals. Not all goals are achievable so first we want to figure out which are and which are not and, if the goals are achievable, is there a recipe we can follow, is there an algorithm for creating a mechanism which will achieve those goals? So that's what I took away from this course that the field was just a set of examples and I thought it would be interesting to try to

generalise and answer these two big questions.

And you had a vision I think that this could knit together your pure mathematics with something that would at least have the option of being functional.

Exactly. So I started as a pure mathematician but when I found out about mechanism design I said 'boy this is a terrific combination because it is mathematical, but it's potentially of great social value because the goals could be fulfilling big social needs'; so this was an irresistible combination.

But answering these two questions - which goals are achievable and how you find a mechanism for achieving them - turned out to be really hard. And that's where Cambridge first came to the fore because, when I was here, I didn't have any formal obligations. I was supposed to be writing my thesis but I didn't even have a clear idea yet what I wanted that thesis to consist of. And so over the course of really two years I just thought and thought and thought about these questions and had many, many false starts and many, many dead ends. But eventually, and it was very much an 'aha' moment, there was a flash when I was lying in bed one night, where I saw a way forward - and what an exciting moment that was! And so I very quickly wrote that up and that became the core of my work in mechanism design and almost everything that I did subsequently sprang from that first paper.

And I think you are among many academicians who have had false starts, discouraging starts.

Yes.

I hope readers who are in that phase of their life will be encouraged that it is absolutely possible to get through those and out the other side.

It is, in fact I think you have to expect

that, at least that's always been my experience. Whenever I think about a research question, the number of unfruitful stabs I take at that compared to the fruitful ones, the ratio is very high - most of the time I fail. But I've been lucky enough to have sufficient successes that the many more numerous failures don't matter.

And they've obviously been intensely rewarding to you as an individual and I guess it would often be the case that if they're rewarding to you, they'll be rewarding to everybody.

Well that's right, so one thing that students sometimes worry about needlessly I think, is 'will anyone be interested or is it important?' And I think they shouldn't worry about that so much. What they should ask themselves is 'is this interesting to me, do I really want to know the answer?' If they're interested in it, and they end up having something to say about it, other people will be interested too.

Now mechanism design was a case in point; when I started it was very much a fringe area of economics and even after I had my 'aha' moment and had my first paper on the subject, it's fair to say that most of the profession ignored it for many years. But little-by-little people took a look and said 'you know this is pretty interesting stuff' and also, with time, a number of applications were found, sometimes quite important applications such as to the spectrum auctions, which were used in the US and in the UK for allocating radio spectrum to telecom companies; mechanism design was used a lot for those. So those applications helped attract attention to the field and now it's recognised as one of the important areas of economics and everyone is interested in it.

A thought comes to mind that it might actually be somewhat useful if people ignore you to begin with

because it gives you space to really construct and think without too much pressure from competitors. And as long as you're exerting your own intellectual pressures then it may actually be helpful if you're working in somewhat isolation.

I think that's right. I've always resisted working in areas that were too fashionable because there's too much pressure, there's almost too much curiosity on the part of others about what you're up to, you feel the need to move maybe faster than you would like because maybe someone else will be getting there first unless you move very quickly. So yes, I don't want to be completely isolated because then there's no one to talk to and talking to other people is valuable, but I don't want to be in the thick of things either.

Now Eric, you were awarded the Nobel Prize for having laid the foundations of mechanism design theory, a branch of game theory. Is it possible to explain it to our non-specialist readers?

I think it is and there is a particular example I like to use, which is how to divide a cake. So, you have two children, Bob and Alice, and you want to divide the cake so that each kid is happy with the piece that he or she has got. So that means that Bob should think that he's got at least half the cake and Alice should think that she's got at least half the cake. Now the problem that you have is you don't know how Bob and Alice view the cake. If you did know, if they for example saw the cake the same way that you did you could just try to cut the cake exactly in half and give them each one of the pieces and that would be the end of the story. But is there a way of proceeding which will result in them each being happy with the piece they got despite your lack of knowledge?

And it turns out that this is actually a very old problem, it goes back literally thousands of years, its mentioned in the Old Testament,

Lot and Abraham are discussing, not how to divide a cake, but how to divide some grazing land in a way that they're each happy with. And there's a very, very clever but remarkably simple solution, which probably some of the readers of the magazine will already know because it's widely in use. The way it works is that one of the kids, Bob, should cut the cake and the other kid, Alice, should choose which piece she takes for herself. And the reason this works is that when Bob is cutting the cake he has a strong incentive to cut it so that, from his point of view, the two pieces are exactly equal, because if one of them is bigger he knows Alice is going to take that one. So, Bob will cut the cake so that, no matter which piece Alice takes, he will be happy with the other one. He'll be happy and Alice will be happy because she gets to choose her favourite piece and voila, we've solved the problem.

So that's just one example and maybe not the most important example in the world, but it gives you a flavour for what mechanism design is all about. But the big problem is that the mechanism designer in this case, the parent who was trying to divide the cake between the kids, is missing some crucial information, he doesn't know how the kids see the cake and the big mechanism design question is despite the lack of information can you achieve your goal by coming up with a suitable mechanism. In this case the mechanism is the divide and choose method. And that's what we in mechanism design try to do, to find the analogue for the divide and choose method in whatever application.

You've given a lovely example and I'm sure it's infinitely more complicated than that. Now, I for one would be very happy if this were just a theoretical problem, but I know that you, as well as being deeply invested in the theory of it,

are also interested in applications and I think you've been involved in some applications.

I have.

Can you tell us a little bit about one or two of those?

So, the US was the first to do this and the UK followed suit pretty soon afterwards and many other countries. The idea was that in most countries the government controlled the radio spectrum. And that was seen as inefficient because in the mid-1990s there began to be a plethora of telecom companies who wanted to use the spectrum for mobile phones and for satellite TV and for all of the other modern telecom devices. The US Government wanted to find a way of transferring the right to use different bands of radio frequencies from the public sector to the private sector.

Let's imagine one such case, you are the government and there is a particular band of frequencies that you want to privatise, there are a number of telecom companies who are interested, how do you make sure that you allocate that band to the company that values it the most. That's your goal, you want to make sure that the company who values it the most, who is going to get the most use out of it, actually gets it. That's a problem I was interested in.

And one way of doing that would be to ask companies 'how much do you value it?', but that's not going to work because if a company understands that its chance of getting the band is higher if it quotes a higher number, well then it's going to exaggerate its value. But then all of the companies will be exaggerating and you won't know which one really does value it the most. So you have to try something more sophisticated.

You could have each company make a bid for the band. A bid is a statement of how much you're willing to pay, and then you could



allocate the band to the company that makes the highest bid and then award the band to the company that makes the highest bid and have it pay that bid.

Now that's going to be better than the first method because now companies won't exaggerate anymore. If the band is worth £10 million to me I'm not going to bid £12 million because if I win I'll have to pay £12 million and that's too much. But now companies are going to under-bid, if it's worth £10 million to me I'm not going to bid £10 million because if I won I'd have to pay £10 million, its only worth £10 million, my net profit would be zero so I'm going to bid less than £10 million. But if all of the companies

are bidding less than their true value, then once again, you don't know which company values it the most.

So again, there's an ingenious solution to this, which is companies should each make a bid and you should award it to the highest bidder, but instead of having the winner pay its own bid, it pays the second highest bid. And that will induce each company to bid exactly what the band is worth to it because it doesn't want to under-bid, it doesn't want to bid less because it doesn't pay its bid anyway, so there's no benefit from under-bidding and if it does under-bid it runs the risk of losing the band altogether. It's not going to under-bid and its not going to over-bid, because if it over-

bid, then there would be a risk that another company would come in just below, it would win the band by bidding more but it would have to pay more than it's worth. If it's worth £10 million to me and I bid £12 million and you bid £11 million, I'm going to have to pay £11 million, that's too much. Using this system companies will neither over-bid nor under-bid, they'll bid exactly what its worth and that means that the company that values the band the most will end up winning.

It takes some thinking through, but I can see that it works.

It works and once again it is amazingly simple. The actual spectrum auctions were more complicated than this, but this was the basic principle behind them and it's since been used now successfully in many dozens of countries.

Now I understand that you've also been working or at least thinking about the possibilities of reforming voter systems.

Oh yes.

I'm going to ask you a difficult question about that in a while, a specific question, but tell us about voter systems.

Okay, so imagine you want to have a system for electing MPs or in the US, electing Presidents. The current systems in effect are very badly flawed. They work okay if there are only two candidates, but they work very badly if there are three or more. Let me explain what's wrong with the system in Britain. It's called first past the post or plurality rule. The idea is each voter votes for a single candidate and the candidate with the most votes wins, even if that's short of a majority and it very often is short of a majority.

If there are three candidates A, B and C and 40% vote for A and 35% vote for B and 25% vote for C, A wins because 40% is the most. But the problem is that it might actually

be the case that B and C are more popular than A in the sense that if B were going up against A in a head-to-head contest, B would beat A and perhaps even if C were going up against A, C would beat A because perhaps B and C are similar enough so that they split the vote between them. This has actually happened many times in Britain but a famous time was in the General Election of I guess it was 1983. Mrs Thatcher was the Tory Prime Minister at the time, there was the Labour Party and there was this new Party, the SDP. Now Labour and the SDP split the vote between them. Close to 60% of the population were voting either Labour or SDP but they ended up with 40% of the seats because the Tories got the rest. And so the Tories won a big majority whilst actually most people voted against them.

Is there a solution to this problem within mechanism theory that is different from proportional representation?

There is and it's actually an old idea, it was proposed in the 18th century by the French mathematician and political thinker, Marquis de Condorcet, and what Condorcet proposed, and what I've been advocating - and my work gives theoretical underpinnings for this - is that rather than voters just voting for single candidates as they do now, let voters rank candidates. Thus, if there are three, A, B and C, a voter might say well I like A best, but if A doesn't win then I want B and if B doesn't win then I want C.

Voters can express themselves more fully than just picking a single candidate and the idea is that once they've submitted their rankings, you look for a candidate who according to the rankings would beat each other candidate in a head-to-head contest. In other words A wins if, when you look at the rankings, more people prefer A to B than prefer B to A, so A beats B by a majority, and also A beats C by a majority, more people

prefer A to C than C to A. And so the winner will be the true majority winner.

Is that implemented anywhere?

Not exactly. This is called true majority rule, but there are systems which are very close to true majority rule which are beginning to gather steam. Interestingly, many years ago, the City of London used a ranking system to elect the Mayor. The Republic of Ireland uses a ranking system to elect their MPs, the lower House of Parliament in Australia uses a ranking system for their MPs and in the United States, for the first time last year, 2018, the State of Maine used ranking and I've been involved in the effort to get more States to go over to ranking.

Wonderful. So let's move on from voting to other forms of negotiation and here comes my difficult question. We're doing this interview at the end of January 2019 and I guess there are two aspects to this question, one is a theoretical one in relation to your work, but another is as a keen observer of Britain and the US. This is a time when our respective countries are in political crisis, the longest ever government shutdown in the US, a major trade war with China and in the UK our government seems lost in labyrinthine Brexit negotiations. Can you connect any of these to your discipline of game theory, can you help us?

Yes, well actually I think voting theory applied to both countries would help a lot. In the US I think one of the fixes that we're in is that we have an extremist President, Donald Trump. Donald Trump would never have been elected under the sort of majority system that I'm advocating, he got elected because all of the mainstream candidates cancelled each other out, they split the anti-Trump vote and that allowed Trump to win with very much less than a majority. So, I think reforming the

voting system would go a long way towards getting more mainstream and more centrist candidates elected and centrist candidates are less likely to take these very combative positions, such as shutting the government down and fighting China in a trade war.

Would it be true to say maybe that because we already have a very polarising system of voting, that none of those parties that are in power are likely to agree to the majority voting method.
Indeed.

Hence, presumably you're approaching this by stealth as it were, by trying to reform state-by-state, is that right?

That is right. The US is a decentralised country in the sense that each state can decide for itself how it's going to vote. There are no national voting laws. And yes, my view is that if we get a few states to move over to a better system, Maine was the first, I think Massachusetts will be next, and there are several others who are interested, we will start the ball rolling and ultimately most states will be doing this. And that will result in very different sorts of candidates getting elected, more majority-oriented candidates and that would be very good for the country.

So that's intensely interesting, but now we're in the position we are, I'm thinking about the possibility of applying your theories to negotiations because the government shutdown is a deadlock of negotiations, the Brexit votes in Parliament are a deadlock in negotiations, can your theory can help us out there.

Yes, well to keep harping on voting theory, one of the problems with Brexit is that there are many different options or at least three options, what we might call soft Brexit, hard Brexit and remain. And at the moment the three positions are more or less stalemated. What I

would propose is to use a majority vote, not first past the post, to let MPs, or if there were a second referendum, to let the British public rank the options, we might want to have more than just the three to make sure that the options were well defined, to let the voters rank the options and then to look for an option which commanded a majority against each of the others. That's something which the country should be willing to live by; majority rule is a principle of democratic society.

So that seems a really elegant solution, which resonates with me immediately. Have you written your letter to the Times or...?

Well funny you should say that because one of my oldest friends in economics, Partha Dasgupta and I just today said we should write an essay, I think for the Guardian, maybe not the Times, on this very subject. And I think we're going to do that.

I think I need to release you immediately to go off and do that. It seems to me Eric that your proposal could be immensely useful; we need something to break this retched deadlock.
Indeed.

This has all been so informative for me. You describe everything with such clarity. Perhaps we can end with a bit of a discussion about climate change as I believe you have an interest in allocation of carbon emissions.

Indeed, one project I got involved in about ten years ago was a carbon auction here in the UK. This was at a time when the European Carbon Trading Scheme was about to be launched and Britain wanted to be a part of that, but in order to be a part of the scheme you had to make pledges that you were going to reduce carbon emissions by such and such an amount - you had something to trade. And so the question was how the British

Government was going to get carbon emitters, which were mostly electricity generating companies, to make pledges to reduce their emissions.

And they knew that I was interested in auction theory, so they came to me and said, if we put up a sum of money, something like £1 billion and this money was to be awarded to firms that were willing to make carbon emission reductions, how could we allocate the money in a way where we would get the most reduction for that sum of money. And that struck me as an intellectually interesting question. I don't do a huge amount of government consulting but occasionally I do and when I do it's nice to have a nice meaty intellectual problem, which maybe I can then write a paper about. I took on that challenge and the British Government indeed did run an auction more or less along the lines that we laid out.

That's a very satisfying experimentation as it were, albeit without a control but...
That's right.

Who contacted you from the British Government? Was there a Darwinian link? It wasn't David MacKay was it? Because David was, as you know, a mathematician who was then seconded to the Department of the Environment and Energy.

It's not impossible that he was involved!

Eric this has been tremendous and on behalf of all Darwinians I want to congratulate you on your tremendous achievements, and thank you for staying so connected with Cambridge.

Well thank you.

Photo Credits: *SirCam*

Darwin College Boat Club 50th Anniversary

A Day to Remember

By Alicia Wilcox, DCBC Captain 2020

Darwin College Boat Club (DCBC) was founded in 1969 by its current President, Dr Chester White. Since then, it has become one of the most successful graduate boat clubs in Cambridge and has grown into a very social and vibrant community of rowers, coxes and coaches.



Above:
Waiting to row

HISTORY

What a year for Darwin College Boat Club! We made it to the ripe old age of 50 and boy did we kick our heels up and celebrate this milestone.

We owe huge thanks to our President Chester White who established the club. It was through his connections across the colleges that any interested Darwin rower had a seat in a boat (albeit at another college). As Darwin's rowing membership grew Ian McConnell formed both a women's and men's crew to compete in the 1970 May Bumps races. The 70s saw Darwin winning oars (five times!), establishing Darwin sports colours and infamously coining "the Darwin Start" taking the first few strokes of Bumps on dry land (1972). We even produced some star Olympians, Helen McFie Simone and Nonie Ferrand.

Chester and his wife Liz designed and made the first club flag, which was flown at all triumphant events.

The 80s and 90s were characterized by updating oars and boats. In 1980 there was a brief mutation with Pembroke for the Town Bumps in which we entered either as Darbroke or Pembwin! In 1997 Captain Torsten Krude revolutionized the DCBC training, paving a new path to Bumps and Head Racing success. Still an important member today he pushes crews off with a steady hand; his knowledge of every angle and twist of the River Cam is unrivalled.

The new millennium saw fines for excessive bank parties, overseas events with alumni in New York and training camps in Seville. The men even entered the Head of the River in London, only to be bailing water from their boat (another boat sank completely, and the race was called off altogether).

So, from humble beginnings DCBC entered 2019 stronger than ever and club captain Magda Gerigk took the reins to ring in the 50th year of our existence.

THE 50TH ANNIVERSARY CELEBRATION

Magda assembled an enthusiastic organising committee who, together with the Development Office, could not wait to bring back as many alumni as possible to Darwin and the River Cam. The club was going to be in for a treat. The BBQ was fired up early on Saturday 6th July 2019. At noon, old faces appeared, some donning the club blazer. Alumni had flown in from across the globe, as far as Australia and the United States. Alumni took time to find their name on a winning oar or browse the exhibition by the College Archivist Elisabeth Leedham-Green and Dr Carol Williams.

Major draws were the unveiling of a new member of our fleet followed by DCBC's 50th Anniversary Bumps Race, crewed by people who last rowed 5-40 years ago, together with some of our current members. For many, returning to the boat bay was humbling and emotional; Graham Ashley was ecstatic at his father's hand crafted rolling trestles that were still supporting Pembroke's tub.

"HANDS ON!" ordered W1 cox Dean Kos. The 2019 committee, showcasing the 50th anniversary edition kit, took to their positions and for the first time placed their hands on the new member of our fleet. They lifted the boat off the racks and slowly walked out with all eyes on the (original) club flag that concealed the name.

This exciting new addition was only made possible by the generous donation of Darwin alumnus, Chris Todd. Mr Todd, seeing the boat for the first time, popped the champagne to christen it. He had named it after a place close to his heart, the oldest Scottish football club in Glasgow where his grandfather captained and played football in 1914: The *Queens Park* Football Club. *Queens Park* set off on its inaugural lap, chauffeuring Mr Todd and his guest as the stern pair. As the boat returned and we banked Mr Todd and his guest safely on dry land, crews



began to boat. Game faces on. Old kit had eagerly been unveiled and had survived the years well. Each crew numbered off from bow when ready, and pushed off to the start line at the top of the Reach, where Umpire Sam Venn was briefing the marshals. Crews in position, one and a half boat lengths from each other. "DRAW 1! DRAW 2! DRAW 3!" and we were off! Coxes and rowers winding it up to race pace like they had been training all season. A BUMP by cox Oli Fleck to cox Jules Erdelmann's crew. *Bella's* crew thumping out that deep synced finish but *Queens Park* kept them at bay, maintaining Headship (thank goodness, an insurance claim was not needed on its first row).

THE EVENING

After all that hard work we were now ready to celebrate at the Boat Club Dinner: the only way that Bumps can be wrapped up. Everyone changed into black tie and, boat club blazers. Darwin's Dining Hall was transformed with boat club colours of red, blue and yellow; Head Porter, Derek Scott, had assembled our balloons in the hall while we were out rowing. Blades were put out as table centrepieces and a slide show projected onto one wall reeled through many memories. We herded together for possibly the largest team photo taken in the Dining Hall, one that will no doubt be framed in many homes (perhaps even DarBar). Master Mary Fowler delivered the opening speech, the pride in her voice was tangible. DING! DING! DING! the first fine was announced with many following for all those who had caught a crab, been bumped, or cycled in to the river while coaching. A touching speech was given by Erik Lithander to acknowledge and wish well our absent club President, Chester White and his wife Liz. The memories and wine flowed. Current members and alumni relishing in a common love for rowing, the boat club and our

College. An emotional Magda gave the closing speech that marked her final words as Overall Captain. What a journey for her as she now joins the incredible alumni community. The party did not stop (it never does with DCBC) as we filed down stairs to taste Alice Walsh's delicious cake and head to DarBar to let our hair down.

In the bar, Tatjana Kovacevic's voice rang out, her band played our favourites (most appropriately, Summer of '69) and we all sang to our hearts content arm-in-arm. In that day of celebration, we had squeezed in what we do during our entire time rowing for Darwin: sweat together, laugh together, crew together, and come away with memories, new friendships, and an even closer bond to these folk and this College.

I for one am filled with immense pride and absolute gratitude to have experienced the 50th celebration and now to fulfill Overall Captaincy for the upcoming season. I hope to maintain contact with alumni; to continue to update our equipment, lobby for funds to push our club forward in the Bumps ladders. Most of all I hope to continue harboring this energetic, welcoming group and keep DCBC simply *sensational*.

Left:
Chris Todd launching 'Queens Park'
Below:
The DCBC 50th Anniversary Organising Committee
Bottom:
Alumni and students before the DCBC 50th Anniversary Dinner



Happy 100th Birthday Abe Yoffe

Founding Fellow of Darwin College



Above:

Fellows in 1968: Standing (left to right): Bruce Newton, Phillip McNair, Abe Yoffe, Gordon Robin, Harold Whitehouse, Ernest Childs, Reg Goodwin, Robert (Bob) Borland, Pieter Seuren. Seated: Alun Moelwyn-Hughes, Graham Hough, Frank Heyhoe, Judy Bailey, Frank Young (Master), Sylvia Fitton Jackson, David Wheeler, A. C. (Bill) Stuart-Clark, Donald West.

Abraham David Yoffe, or 'Abe' as he has always been known, is the last remaining Fellow of the twelve Founding Fellows of Darwin College appointed by the Nominative Trustees in 1964. During his 55 years on the Fellowship he has contributed enormously to the welfare of the College, and to the enhancement of its research standing, by attracting to the College many talented post-graduates, research fellows and scientists of international reputation.

Abe was born on 26 November 1919 in Jerusalem, at the start of the British Mandate in Palestine, which followed the collapse of the Ottoman Empire at the end of the First World War. Abe's parents were orthodox Jews: his Father was a Rabbi, and the family lived in the Mea She'arim district of Jerusalem, a mainly Jewish neighbourhood outside the walls of the city.

When Abe was five, his Father moved to Australia to establish a synagogue in Shepparton, in Victoria State. This is where Abe lived as a child. He went to Melbourne High School, and then to the University of Melbourne where he graduated with a Master's Degree in Chemistry in 1941.

In 1942, Abe joined the newly-founded Lubricants and Bearings Section of the Australian Council of Scientific and Industrial Research, housed in the University of Melbourne and led by Dr Frank Philip Bowden a

Gonville & Caius alumnus who had returned to Australia at the start of the Second World War. Abe's job was to investigate the initiation and growth of explosions in nitroglycerine, and especially to understand the causes of the occasional unpredicted explosion which could completely destroy an explosives factory. Within a remarkably short period, Abe and his colleagues showed experimentally that, if bubbles as small as 0.1 mm in diameter were present in liquid nitroglycerine, its sensitivity to mechanical impact increased by about 1000 times: ignition was caused by the rapid compression and heating of the gas/vapour inside the bubble. Since then, the role of bubbles and gaseous spaces in liquid and solid explosives has been the subject of intense investigation, with bubbles sometimes being added deliberately to industrial explosives in order to sensitize them.

In December 1944, Bowden returned to Cambridge and founded the Physics and Chemistry of Rubbing Solids (PCRS) section in the Department of Physical Chemistry. Abe joined this new section a few months later as Bowden's first research student in this group. He became a member of Trinity College and was awarded his Ph.D. in 1948.

After his Ph.D. Abe continued to work with Bowden. Then following three years working as a Senior Scientist at the Weizmann Institute in Israel, Abe returned to Cambridge, and in 1958 was appointed Assistant

Director of Research in the newly-formed Physics and Chemistry of Solids (PCS) group within the Cavendish laboratory. Here, Bowden and Yoffe published two classic books based on their research into explosives - *Initiation and Growth of Explosion in Liquids and Solids* (CUP 1952, reissued in 1985) and *Fast Reactions in Solids* (Butterworths, 1958). Abe was awarded the Sc.D. Degree in 1961; and in 1968 he was appointed to a Readership in Physics, a significant distinction as so few Readerships were awarded at that time.

Working with explosives was not without risk and in the late 1950s Abe had a serious accident when he was examining with unprotected eyes the growth of crystals of lead azide (a sensitive primary explosive) in a glass test tube. An explosion took place with fragments of glass spreading everywhere including into his eyes. Luckily, the doctors saved his sight, but a fragment is still embedded in one of his eyes.

Following his work on explosives, Abe's research moved into the area of solid state physics, working on the optical, electrical, and luminescence properties of single crystals, amorphous solids and layered compounds. He carried out pioneering experiments on the transition metal di-chalcogenides and other low-dimensional



materials. He was Head of the PCS group from 1981 until his retirement in 1987 after which he conducted research on the physical properties of quantum dots and other low-dimensional systems and published several important review articles in *Advances in Physics*. He also chaired the Faculty Board of Physics and Chemistry for a period after his retirement.

Many of Abe's students went on to have illustrious careers, including several who became Fellows of the Royal Society. In later years numerous research students and indeed older scientists in the Optoelectronics Group (which developed out of PCS), benefited from his scientific wisdom, empathy and optimistic nature.

Under the provisions of the 1964 Trust Deed founding Darwin College, the Nominative Trustees were charged with the appointment of the first Master and the first twelve Fellows of the College. In April 1964 Professor Frank Young, who had been chosen as the first Master, approached Abe with the proposal that he become one of these first Fellows. This greatly appealed to Abe, and he was appointed in September 1964. Since then, Abe has contributed enormously to the welfare of the College, indeed, up until the last few years he regularly came into College for lunch where he was always interested to hear about research that students and Fellows alike were undertaking.

In 1949 Abe married Elizabeth Mann, a brilliant applied mathematician and daughter of Sir Frederick Wollaston Mann, Chief Justice and Lieutenant-Governor of Victoria. She died in 2014 at the age of 91. They had two sons - Gideon, and Jay who sadly died at a young age, and two daughters - Deborah and Susan. At the latest count, Abe has 13 grandchildren and 6 great-grandchildren.

Abe has always had a great love of ski-ing, particularly cross-country, a passion he shares with his family.

Abe lives quietly at home in Cambridge, with the help of a live-in carer. He always welcomes visits from friends and colleagues, and continues to take a keen interest in the affairs of Darwin College.

By Emeritus Fellows:

Nicholas Branson
Munawar Chaudhri
John Cooper

Darwin College Register 2019

VISITOR

The Right Honourable Lord BURNETT of MALDON (Ian Duncan), Lord Chief Justice of England and Wales

MASTER

Christine Mary Rutherford FOWLER MA, PhD, FRAS FGS FRCSG; (2012)

VICE MASTERS

Jonathan Luke HEENEY ScD; (2012); Professor of Comparative Pathology, Department of Veterinary Medicine

Fiona Eve KARET PhD FMedSci; (2014); Professor of Nephrology, Cambridge Institute for Medical Research

DEAN

Duncan James NEEDHAM PhD; (2013); Associate Lecturer, Faculty of History

DEPUTY DEANS

Matthew Russell JONES PhD; (1992); Reader in Information Systems, Judge Business School

Sara BAKER PhD; (2012); University Senior Lecturer in Psychology and Education, Faculty of Education

Jennifer SCHOOLING PhD FICE OBE; (2018); Director of the Centre for Smart Infrastructure, Department of Engineering

BURSAR

John Tannatt DIX LLB MA; (2014)

COLLEGE SECRETARY

Julian Graham EVANS MA; (2014); Secretary, School of the Humanities and Social Sciences

COLLEGE PRAELECTOR

Christine VAN RUYMBEKE PhD; (2015); Ali Reza and Mohamed Soudavar Reader in Persian Literature and Culture

DEVELOPMENT DIRECTOR

Samuel Oliver VENN BA; (2017)

OFFICIAL FELLOWS

Simon John SCHAFFER MA PhD; (1984); Professor of History of Science, Department of History and Philosophy of Science

Sir Harshad Kumar Dharamshi Hansraj BHADESHIA PhD FREng FRS; (1985); Tata Steel Professor of Metallurgy, Department of Materials Science and Metallurgy

Andrew Mawdesley PITTS PhD; (1990); Professor of Theoretical Computer Science, Computer Laboratory

Carol Elspeth Goodeve BRAYNE MSc MD FRCP FFPH; (1995); Professor of Public Health Medicine, Cambridge Institute of Public Health

François-André PENZ PhD; (1995); Professor of Architecture and the Moving Image, Faculty of Architecture

Anne Carla FERGUSON-SMITH PhD FRS FMedSci; (1997); Arthur Balfour Professor of Genetics, Department of Genetics

Christopher Michael BISHOP PhD FRS FRSE; (1998); Director, Microsoft Research Cambridge

Torsten KRUDE PhD; (2000); University Senior Lecturer, Department of Zoology

Alan Frank BLACKWELL PhD; (2001); Professor of Interdisciplinary Design, Computer Laboratory
John Harold NILSSON-WRIGHT PhD; (2001); University Senior Lecturer, Faculty of Asian and Middle Eastern Studies

Emily Fleur SHUCKBURGH PhD OBE; (2001); Director, Cambridge Zero

Mark Edmondus Jan DE ROND DPhil; (2006); Professor of Organisational Ethnography, Judge Business School

Dénes SZÜCS MA PhD; (2007); University Senior Lecturer, Department of Psychology

Carl Edward RASMUSSEN PhD; (2008); Professor of Machine Learning, Department of Engineering

Russell COWBURN PhD FRS ScD; (2011); Director of Research, Cavendish Laboratory

Jeffrey MILEY PhD; (2011); Lecturer in Political Sociology, Department of Sociology

Christopher SANDBROOK PhD; (2011); Senior Lecturer in Conservation Leadership, Department of Geography

Jan Dietrich Karsen LÖWE PhD FRS; (2012); Director, MRC Laboratory of Molecular Biology

Paul Stuart ANDERSON PhD; (2013); University Senior Lecturer in Middle Eastern Studies, Faculty of Asian and Middle Eastern Studies

Dame Jane Elisabeth FRANCIS PhD; (2013); Director, British Antarctic Survey

Paul Joseph LEHNER PhD FRCP FMedSci; (2013); Professor of Immunology and Medicine, Cambridge Institute for Medical Research

Eric WOLFF PhD FRS; (2013); Royal Society Research Professor, Department of Earth Sciences

Ines BARROSO PhD; (2015); Director of Research, Mechanisms of Metabolic Disease, MRC Epidemiology Unit

Simone Nicole WEYAND PhD; (2016); Group Leader, Department of Biochemistry

Timothy Nicholas MILNER MA; (2016); Pro Proctor, Ceremonial Officer, University of Cambridge

Aylwyn Olav SCALLY PhD; (2016); Group Leader, Department of Genetics

Angela WOOD MA, PhD; (2016); University Lecturer in Biostatistics, Department of Public Health and Primary Care

Julia DAVIES MA PhD; (2016); Head of Transport Group, Department of Plant Sciences

Daniel Haskell WEISS PhD; (2017); Polonsky-Coexist Lecturer in Jewish Studies, Faculty of Divinity

Alexandra BRINTRUP PhD; (2017); University Lecturer in Digital Manufacturing, Institute of Manufacturing

Paolo CAMPANA PhD; (2017); University Lecturer in Criminology and Complex Networks, Institute of Criminology

James Benedict ROWE PhD; (2018); Patrick Sissons Fellow, Director of Cambridge Centre for Frontotemporal Dementia and Related Disorders, Department of Clinical Neurosciences

Alberto Jesus COCA PhD; (2019); Lecturer in Statistics, DPMMS (Statistical Laboratory) & CCIMI

Frédéric-Guillaume SCHNEIDER PhD; (2019); Senior Research Associate (Economics & Policy), Judge Business School

Thorsten BOROVIK PhD; (2019); Principal Investigator, Laboratory for Primate

Embryogenesis, Centre for Trophoblast Research

Ann Sofie CLOOTS LLM PhD; (2019); Slaughter & May Lecturer in Corporate Law

VISITING FELLOW

Andrew DUNNING PhD; (2016); Munby Visiting Fellow in Bibliography, SSHRC Postdoctoral Fellow, Faculty of History

RESEARCH FELLOWS

Daniel Matthew STORISTEANU PhD; (2016);

Postdoctoral Researcher, Department of Medicine
Jenny ZHAO PhD; (2016); Lloyd Dan-David Research Fellow, Needham Research Institute

Adrian Vivian WELLER PhD; (2017); David MacKay Newton Research Fellow, Principal Research Associate in Machine Learning, Programme Director for AI, Alan Turing Institute

Emily Joan WARD PhD; (2017); Moses and Mary Finley Research Fellow

David Alan FRIEDMAN PhD; (2017); Junior Research Fellow, Faculty of Classics

Charu SINGH PhD; (2017); Adrian Research Fellow
Robin REUVERS PhD; (2017); Mathematical physics

Simone Francesco RUGGERI PhD; (2017); Postdoctoral Research, Department of Chemistry

Samuel George OTTEWILL-SOULSBY PhD; (2017); Research Associate, Faculty of Classics

Jenna Mae Irene Russum DITTMAR PhD; (2017); Research Associate, McDonald Institute for

Archaeological Research
Iosifina Petrina FOSKOLOU PhD; (2018); Patrick Sissons

Evelyn Trust Research Fellow
Leah ASTBURY PhD; (2018); Wellcome Trust

Postdoctoral Fellow at the Department of History and Philosophy of Science

Miguel ANAYA PhD; (2018); Research Fellow, Cavendish Laboratory

Hong GE PhD; (2018); Research Fellow, Machine Learning Group

Alexandra Kerstin SCHNELL PhD; (2018); Newton International Fellow, Department of Psychology

Thomas GRUNER PhD; (2019); Research Fellow, Cavendish Laboratory

Gediminas LESUTIS PhD; (2019); Research Associate, Department of Geography

Mojtaba ABDI-JALEBI PhD; (2019); Postdoc Member, Cavendish Laboratory

Anna BELCHER PhD; (2019); Postdoctoral Researcher, British Antarctic Survey

Katharine Elizabeth CRISWELL PhD; (2019); Research Associate, Department of Zoology

Denise WILKINS PhD; (2019); Microsoft Research Fellow
Raphael Bezerra da Silva UCHÔA PhD; (2019); Adrian

Research Fellow, Department of History and Philosophy of Science

HONORARY FELLOWS

Sir Arnold Stanley Vincent BURGESS MA MD FRCP FRS; (1982)

Sir Geoffrey Ernest Richard LLOYD PhD FBA; (1985)
Jeffrey William EDINGTON BSc PhD DSc; (1998)

Amartya Kumar SEN MA PhD FBA CH LITD FBA FRSE; (1998)

Michael Charles SHEPPARD MA DPhil; (2000)

Sir Charles Antony Richard HOARE DSc FRS; (2001)
Ekhard Karl Hermann SALJE PhD FRS; (2002)

Rt Hon Robert RAYNE; (2004)

Lord (Martin John) REES PhD ScD OM FRS; (2004)

Bernard Michael De Lérison CAZENOVE; (2005)

Dame Jean Olwen THOMAS MA ScD DBE FRS FMedSci; (2007)

Robert Hughes JONES PhD; (2008)
Simon Hastings BITTLESTON PhD; (2013)
Sir Christopher Martin DOBSON DPhil ScD FRS
FMedSci; (Deceased, 8th September 2019) (2014)
Sir Alan Roy FERSHT PhD FRS FMedSci; (2014)
Sir Gregory Paul WINTER PhD CBE FRS FMedSci; (2014)
Nicola Margaret PADFIELD MA DIPCRIM DES; (2014)
Robin Wayne CARRELL PhD FRS FMedSci; (2015)
Lady Olga KENNARD ScD OBE FRS; (2016)
Janet ROSSANT PhD ScD FRS FRSC; (2017)
Elizabeth BLACKBURN AC FRS FAA FRSN ScD; (2018)
Eric MASKIN PhD ScD; (2018)
Simon KEYNES PhD FBA; (2019)
Dame Jane GOODALL PhD DBE (Hon) ScD; (2019)

EMERITUS FELLOWS

Abraham David YOFFE ScD; (1964)
Reginald Frederick William GOODWIN MA PhD
MRCVS; (1966)
Donald James WEST MD LITD; (1967)
Bruce Anthony NEWTON ScD FRCPATH; (1968)
Chester WHITE MA PhD BM TD MBE; (1969)
George Thomas GÖMÖRI MA BLITT; (1969)
Paul RIES MA PhD; (1973)
Roger George WHITEHEAD MA PhD CBE FIBIOL; (1973)
Elisabeth Somerville LEEDHAM-GREEN MA PhD; (1973)
Peter Furneaux FRIEND MA PhD; (1974)
Nicholas JARDINE MA PhD; (1975)
Dean Ullathorne HAWKES MA PhD RIBA; (1976)
Richard HENERSON PhD FRS CH; (1981)
Ronald Alfred LASKEY PhD CBE FRS; (1982)
Nicholas James Bertram Alwyn BRANSON MA PhD;
(1983)
Janine Delysia BOURRIAU MA FSA; (1983)
Andrew Christopher FABIAN MA PhD OBE FRS; (1983)
Richard Ashton KING MA CBE FBIM; (1986)
Leopold Eftimios Anagnostis HOWE MA PhD; (1986)
Adrian Thomas GROUNDNS DM FRCPsych; (1987)
Mohammad Munawar CHAUDHRI PhD; (1990)
Kathleen Michelle WHEELER PhD; (1990)
Karalyn Eve PATTERSON FRS FMedSci FBA; (1991)
Margaret CONE PhD; (1992)
John Robert COOPER PhD; (1993)
Jennifer Alice CLACK MA ScD FRS; (1997)
Richard Anthony COX ScD; (1999)
Peta Margaret STEVENS MA; (2001)
Peter John BRINDLE MA MPhil FCMi FINSTD; (2001)
Martin Kenneth JONES PhD; (2001)
Felicia Adina HUPPERT PhD; (2002)
Ian MCCONNELL MA PhD MRCVS FRCPATH FRSE;
(2003)
Christopher CULLEN MA PhD; (2005)
Michael Edwin AKAM DPhil FRS; (2006)
Philip DAWID MA ScD FRS; (2007)
Lawrence SHERMAN PhD; (2008)

BYE-FELLOWS

Catherine Morag Elisabeth HOWIE; (2018)
Arokia NATHAN PhD; (2019)
Azman MOKHTAR; (2019)
Maude PHIPPS PhD; (2019)

DISTINGUISHED ASSOCIATES

Dame Diana BRITTAN, DBE
Mr Edward CHAPLIN, CMG OBE
Dr Hermann HAUSER, KBE FRS FRENG FINSTP CPhys
Prof Sheila LEATHERMAN, CBE

Dr Bill JANEWAY, PhD CBE
Dr Weslie JANEWAY, PhD
The Right Honourable Lord JUDGE (Igor), Commissary
Of The University

SENIOR MEMBERS

Ms Saumya BALSARI; Author
Dr Davide CHIARUGI; Wellcome-Mrc Institute Of
Metabolic Science
Dr Giorgio DIVITINI; Electron Microscopy Group
Prof John GABBAY; Cambridge Institute Of Public
Health
Prof David GANZ; Darwin College
Dr David GERSHLICK; Cambridge Institute For Medical
Research
Dr Angela GONCALVES; Wellcome Trust Sanger
Institute
Dr Stefan GRÄF; Department Of Medicine
Dr Guillaume GUILBAUD; MRC Laboratory Of
Molecular Biology
Dr Inanna HAMATI-ATAYA; Centre For Research In The
Arts, Social Sciences And Humanities
Dr Anthony HOTSON; Centre For Financial History
Prof Nick HUMPHREY; Darwin College
Dr Harriet HUNT; Department Of Archaeology
Dr Daniel JONES; British Antarctic Survey
Prof Adrian KENT; Department Of Applied
Mathematics And Theoretical Physics; Director of
Studies in Mathematics
Prof Andreas KONTOLEON; Department Of Land
Economy
Prof Ioannis KONTOYIANNIS; Department Of
Engineering
Dr Richard LANGFORD; Cavendish Laboratory
Dr Noelle L'HOMMEDIEU; Darwin College
Dr Ruodan LU; Loughborough University
Dr Derek MATRAVERS; Open University
Dr Eyal MAORI; Cambridge Infectious Diseases
Dr Sean O'H'EIGEARTAIGH; Centre For Research In The
Arts, Social Sciences And Humanities
Dr David PEARSON; Darwin College
Dr Anna PETRUNKINA; Department Of Medicine
Dr Gloria PUNGETTI; Chair Darwin College Alumni
Society
Dr Nebojša RADIĆ; University Of Cambridge Language
Centre
Dr Daniel WUNDERLICH; School Of Arts, Humanities
And Social Sciences

POSTDOCTORAL RESEARCH AFFILIATES

Dr Aya BEN-YAKOV; Cambridge Neuroscience
Dr Lorena ESCUDERO; Cavendish Laboratory
Dr Jessie HITCHCOCK; CRUK Cambridge Centre
Dr Anna PROTASIO; Wellcome Trust Sanger Institute

RESEARCH ASSOCIATES

Dr Domagoj BARETIĆ; MRC Laboratory Of Molecular
Biology
Dr Heye FREYMUTH; Department Of Earth Sciences
Dr George LANSBURY; Institute Of Astronomy
Dr Gediminas LESUTIS; Department Of Geography
Dr Dmitry MAZUNIN; MRC Laboratory Of Molecular
Biology
Dr Christoph NEHRBASS-AHLES; Department Of Earth
Sciences
Dr Nozomi TAKAHASHI; Department Of Genetics

POSTDOCTORAL ASSOCIATES

Dr Pablo ALCON; MRC Laboratory Of Molecular
Biology
Dr Adam ATTAHERI; Cambridge Neuroscience
Dr Joshua BATTS; Faculty Of Asian And Middle Eastern
Studies
Dr Elise BIERMAS; British Antarctic Survey
Dr Jotis BORONAS; Department Of Earth Sciences
Dr Eleanor CAMPBELL; Department Of Biochemistry
Dr Dora Cano RAMIREZ; Department Of Plant Sciences
Dr Jude CASTELINO; British Antarctic Survey
Dr Chrispin CHAGUZA; Wellcome Sanger Institute
Dr Hao-Chung CHENG; Department Of Applied
Mathematics And Theoretical Physics
Dr Stephanie DIEPEVEEN; Department Of Politics And
International Studies
Dr Jochen DREYER; Department Of Chemical And
Biotechnology
Dr Shovan DUTTA; Cavendish Laboratory
Dr Michael EDWARDS; Centre Of South Asian Studies
Dr Avishai GILKIS; Institute Of Astronomy
Dr Natalia Gómez NAVARRO; MRC Laboratory Of
Molecular Biology
Dr Nancy HIGHCOCK; Department Of Archaeology
Dr Nanna KAALUND; Department Of Geography
Dr Leon KAPETAS; Department Of Engineering
Dr Tim KIETZMANN; MRC Cognition And Brain Science
Unit
Dr Emma LAWLOR; MRC Epidemiology Unit
Dr Xuan LIANG; Department Of Physiology,
Development And Neuroscience
Dr Lucy MACGREGOR; MRC Cognition And Brain
Sciences Unit
Dr Charles MORGAN; MRC Laboratory Of Molecular
Biology
Dr Sonia PASCOAL; Department Of Zoology
Dr Laura PELLEGRINI; MRC Laboratory Of Molecular
Biology
Dr Ioannis POLITIS; Department Of Engineering
Dr Monica RAMSEY; Department Of Archaeology
Dr Anna Maria RANZONI; Wellcome Sanger Institute
Dr Souvik ROY; Department Of Chemistry
Dr Eric STERN-TAULATS; Department Of Materials
Science And Metallurgy
Dr Stefanie ULLMANN; Centre For Research In Arts,
Social Sciences And Humanities
Dr Kaveesha WIJESINGHE; Department Of Pathology
Dr Tun Jan YOUNG; Scott Polar Research Institute
Dr Joseph ZHANG; Department Of Chemistry

Darwin College Register 2019

NEW MEMBERS OF THE FELLOWSHIP 2019 ACADEMIC YEAR

This year we are pleased to have inducted the following people to the Fellowship. Welcome to them all, their input into the College is very much appreciated.

FELLOWS

Thorsten BOROVIK

Department: Principal Investigator, Laboratory for Primate Embryogenesis, Centre for Trophoblast Research, Department of Physiology, Development and Neuroscience

Research Interests: how embryonic cells organise themselves to form the most complex lifeforms, such as human and non-human primates. We follow primate embryonic cells through parts of their journey to provide insights into human development.

Ann Sofie CLOOTS

Department: Slaughter & May Lecturer in Corporate Law, Faculty of Law

Research Interests: Corporate finance law, company law and legal theory of the company, law and economics, game theory, behavioural studies, legal risk management. Legal aspects of digital assets, distributed ledger technology, smart contracts and post-quantum cryptography.

Alberto COCA

Department: Lecturer in Statistics at the Statistical Laboratory, Department of Pure Mathematics and Mathematical Statistics

Research Interests: Nonparametric inference including Bayesian nonparametrics, statistical inverse problems (especially discretely observed stochastic processes) and ∞ -MCMC method.

Frédéric-Guillaume SCHNEIDER

Department: Senior Research Associate, Judge Business School

Research Interests: The foundations of human cooperation, trust, and reputation in organisations and economic interactions; the role and extent of signalling and discrimination in the labour market; the importance of mental capabilities for economic success; the determinants of collusion in markets.

RESEARCH FELLOWS

Mojtaba ABDI-JALEBI

Research Interests: Emerging semiconductors for electronics applications including solar-photovoltaics and lighting.

Anna BELCHER

Department: British Antarctic Survey

Research Interests: Marine ecosystems and biogeochemistry with a particular interest in oceanography of Polar Regions and the vital role they play in the changing global climate.

Katharine CRISWELL

(Charles & Katharine Darwin Research Fellow)

Department: Department of Zoology

Research Interests: The evolution and development of the axial skeleton in jawed vertebrates. In particular, the development of vertebral column in cartilaginous fishes (sharks, skates, rays, and chimaeras) to understand how this segmented structure evolved across jawed vertebrates, and how different groups have invented their own unique vertebral morphologies.

Thomas GRUNER

(Research Fellow)

Department: Cavendish Laboratory

Research Interests: Investigating the novel materials that can be used either for solid state refrigeration or to explore emergent correlated electronic states at low temperatures.

Gediminas LESUTIS

Department: Department of Geography

Research Interests: Critical Theory, Global Politics and Africa, Critical Development Studies, Global Political Economy, Ethnography, the Politics of Knowledge.

Alexandra SCHNELL

Department: Department of Psychology

Research Interests: Quantifying intelligence in cephalopods – large-brained marine molluscs. The goal of this research is to determine whether cephalopods possess comparable cognitive abilities to cognitively advanced vertebrates such as corvids.

Raphael UCHÔA

(Adrian Research Fellow)

Research Interests: The long nineteenth-century relationship between natural history, anthropology, and ethnosciences which engages broadly with the interface between the notions of 'nature' and 'culture'.

Denise WILKINS

(Microsoft Research Fellow)

Research Interests: The intersection of technology and collaboration. Examining how machine learning can support enterprise knowledge.

HONORARY FELLOWS

Dame Jane GOODALL, PhD DBE (Hon) ScD

Biography: Jane Goodall is a primatologist and anthropologist. A world expert on chimpanzees she is known for her study of social and family interactions of chimps in Tanzania. She is founder of the Jane Goodall Institute and Roots and Shoots programme.

GRADUANDS PRESENTED OCTOBER 2018 – JULY 2019

PHD:

Applied Mathematics:

Hayley ALLISON

Understanding how low energy electrons control the variability of the Earth's electron radiation belts

Asian and Middle Eastern Studies:

Mohyi MAZIAD

The language of collapsing power: a cognitive-linguistic critical discourse analysis of the presidential speeches of the Arab Spring speeches of Mubarak

Astronomy:

Clare WETHERS

The host galaxies of luminous reddened quasars at $z \approx 2$

Biochemistry:

Helen FOX

Toca-1 driven actin polymerisation at membranes

Christian SCHWALL

Investigation of Bacillus subtilis sigma factor dynamics using improved single cell tools

Rohan SIVAPALAN

Investigating the regulation of DNA non-homologous end-joining through Ku70/80 interacting factors

Biological Anthropology:

Sarah-Louise DECRAUSAZ

Bringing to bear: A biocultural examination of the developmental origins of the obstetric dilemma

Biological Science:

Joana GUEDES

Host-pathogen interactions at the intestinal epithelial barrier

Benjamin JENKINS

The role of alpha oxidation in lipid metabolism Anna KIELOWSKA

The role of PTEN as a PI[3,4]P2 lipid phosphatase in Class I phosphoinositide 3-kinase signalling

Rachel MOORE

Exploring multivariate gene-environment interactions: models and applications

David SCHOEPFER

Investigating temperature signalling pathways in Arabidopsis thaliana using small molecules

Andreas SESSLER

Characterisation of male and female Schistosoma mansoni

Marisa STEBEGG

Environmental stimuli shape adaptive immunity by enhancing T helper cell differentiation and the germinal centre response

James STOWELL

Targeting poly(A) tail removal with an MMI1 bound CCR4-not complex.

Tally WRIGHT

Capturing photosynthetic traits from the progenitors of wheat

Maciej SZUKSZTO

Regulation of Mammalian mitochondrial gene expression: new factors and approaches.

Biotechnology:

Santiago LAGO

A novel pipeline for drug discovery in neuropsychiatric disorders using high-content single-cell screening of signalling network responses ex vivo

Eva LAIN

Novel high-power acid biophotovoltaic cells for the generation of green electricity

Chemical Engineering:

Qian SUN

Aqueous core colloidosomes with a metal shell

Chemistry:

Stephanie ASHENDEN

On the dissemination of novel chemistry and the process of optimising compounds in drug discovery projects

Thea PRECHT

Preparing main group metal clusters from organoaluminium reagents; new possibilities in alkali activated polymer-crosslinking

Marion KEIFFER

Biofunctionalised coordination cages and quantified speciation in supramolecular mixtures

Clinical Neurosciences:

Astrid WENDLER

The evolution of glioblastoma: a single case study

Computer Science:

Hui XIAO

Network-based approaches for multi-omic data integration

Criminology:

Cristobal WEINBORN

From hotspots to hotspots, an empirical exploration of crime concentrations and crime harm in the United Kingdom

Development Studies:

Christopher HOPE

Developmentalism, dependency, and the state: industrial policy and structural transformation in Namibia since 1900

Earth Sciences:

Sylvain MICHEL

From fault dynamics to seismic hazard assessment

Joy MURASZKO

Environmental magnetic applications of first-order reversal curve diagram analysis

Economics:

Roberto GUADARRAMA BAENA

Essays on the political economy of fiscal policy and trade

Education:

Isang AWAH

Reading for pleasure in Nigeria: an in-depth case study of the reading habits of a small group of 9-12 year olds in Nigeria

Elaine GRAY

The role of executive function, metacognition, and support type in children's ability to solve physics tasks

Yishu QIN

Developing an implicit association test to explore implicit and explicit stereotypes of empathy in scientists among university students in England

Lysandra SINCLAIR-HARDING

Profiling emotion regulation: exploring patterns of regulation in classroom behaviour

Engineering:

Nabil ABDERRAHAMAN ELENA

Near-wall turbulence in the transitionally rough regime

Lu BAI

Multiservice ethernet digital distributed antenna systems

Andrea COSCHIGNANO

Normal shock wave-boundary layer interactions in transonic intakes at incidence

Nguyen DOAN

Physical insights of non-premixed MILD combustion using DNS

Mustafa Adnan HAIDER

Optimisation methods for training deep neural networks in speech recognition

Sanggil HAN

Cu₂O thin films for p-type metal oxide thin film transistors

Brynmor PICKERING

Practical optimisation of district energy systems: representation of technology characteristics, demand uncertainty, and system robustness

Judith SHAWCROSS

Manufacturing excellent engineers

English:

Simon TILBURY

The dancer walking the ruins: Laura Riding and dialectical thought

Genetics:

Anastasiya KAZACHENKA

Identification and characterisation of murine metastable epialleles conferred by endogenous retroviruses

Geography:

Josephine CHAMBERS

The discourse and reality of "win-win" interventions for forests and people in the Peruvian Amazon

Haematology:

Rebecca CAESER

Elucidating oncogenic mechanisms in human B cell malignancies

Cavan BENNETT

Cytokine receptor-like factor 3 (CRLF3): a novel regulator of platelet biogenesis and potential drug target for thrombocythaemia

Caroline OEDEKOVEN

Extrinsic regulation of fate choice in mouse haematopoietic stem cells

Eugene PARK

Chemosenitisation of B-cell malignancies through inhibition of microenvironmental protein kinase C- β (PCK β)

Law:

Ann Sofie CLOOTS

In pursuit of a better legal theory of the company: a data-driven, co-evolutionary and multiple equilibria model

Lan NGUYEN

The contribution of UNCLOS dispute settlement bodies to the development of the law of the sea

Management Studies

Richard STUDWELL

From learning to earning: the transition from manufacturing catch-up to competitiveness at the global business frontier, as pursued in China's energy equipment sector

Medical Science:

Ana CRESPILO CASADO

The eIF2 phosphatase: characterization and modulation

Christina ERNST

Transcriptional and developmental consequences of aneuploidy during male meiosis

Jennifer HARRIS

The role of lymph node-derived lymphatic endothelial cells in immune modulation in the tumour microenvironment

Elizabeth MOORE

Improving earlier non-invasive diagnosis of high-grade serous ovarian cancer

Alisa ZYRYANOVA

A molecule-inhibitor of the integrated stress response regulates activity of mammalian eukaryotic translation initiation factor 2B

Medicine:

Madeline MCNAMARA

Development of novel therapies for Marfan Syndrome using a human iPSC-derived disease model

Music:

Tal-Chen RABINOWITCH

Musical group interaction: Mechanisms and effects

Paediatrics

Sara ZAHER

The relationship between enteral nutrition, energy metabolism and gut homeostasis during the course of critical illness

Pathology:

Ala ALENAZI

The role of Roma in Mouse Mammary Epithelial Cells

Lei CHEN

Understanding chicken BG genes at the RNA and protein levels

Angela IBLER

Investigating the DNA damage response induced by typhoid toxin

Valeria RADJABOVA

Characterisation of a novel leukocyte receptor complex-encoded receptor TARM1

Daniel WISE

Understanding antigen processing in chickens using genome editing technology

Darwin College Register 2019

Pharmacology:

Owen BURBIDGE

Developing nanobodies to stabilise the tumour suppressor protein p16INK4a

Physics:

Georgios PILIKOS

Machine learning and Bayesian statistics for seismic compressive sensing

Plant Sciences:

Divyashree NAGESWARAN

A forward genetic screen to identify factors that control meiotic recombination in Arabidopsis thaliana

Psychology:

Omar PEREZ

A cooperative dual-system model of instrumental conditioning

Public Health and Primary Care:

James JAMISON

Identifying strategies to inform interventions for the secondary prevention of stroke in UK primary care

Pure Mathematics and Mathematical Statistics:

Benjamin WELLS-DAY

Structure of singular sets local to cylindrical singularities for stationary harmonic maps and mean curvature flows

Sociology:

Magdalena SOFFIA

Tackling the truly 'bad jobs': scope and limitations of a capability-based measure of job quality in Central America

Merve SANCAK

Finding skills in middle-income countries: the case of auto parts suppliers in Mexico and Turkey

Surgery:

Jawaher ALSUGHAYYIR

Humoral alloimmunity in cardiac allograft rejection

Zoology:

Victoria FRANKS

Effects of early-life social experiences on learning and conservation in a threatened songbird

EMBA:

Anna PETRUNKINA HARRISON

LLM:

Natascha KERSTING

Zachary LENNOX

Christina MALLONEY

Petra MOLNAR

Andrew MOLVER

Christopher NG

Chisom OZOEMENA

Laurent ROBERT

Mrinal SHARMA

Juan Felipe TORRES LUENGAS

MAST:

Applied Mathematics:

Alexander DAVEY

Yujie LIU

Sirui NING

Pure Mathematics:

Arni GUNNARSSON

Wendelin LUTZ

MCL:

Kirthana Singh KHURANA

Christina KOLOTOUROU

MBA BUSINESS AND MANAGEMENT:

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Xiaomin CHEW

Tadashi KUBO

Chiara KUNNIE

Masonori NAKAGAWA

Enrique NAVARRO HIGUERA

Oledele OLAFUYI

Sam RADCLYFFE

Elizabeth SCHWEIZER

Yuji SENDA

Anthony STEL

Yuchen WANG

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MED EDUCATION:

Laszlo AVRAMOV

Rachel CHONG

Sam HOGGARD

Scott SWAIN

MFIN FINANCE:

Rikmer LADEHOFF

Leyi LU

Adam PASIERBEK

Jonathan SHARON

Natasha NDEKWERE

Xiaoyi ZHU

MPHIL:

Advanced Computer Science:

Callum BODELS

Alexander GUBBAY

Applied Biological Anthropology:

Delaney KNORR

Archaeology:

Madison STINGRAY

Jeremy REEVES

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Stefanos ROIMPAS

Architecture and Urban Design:

Edward PONTI

Rebecca WOODWARD

Architecture and Urban Studies:

Ibrahim ABDOU

Asian and Middle Eastern Studies:

Jason GOLFINOS

Jennifer ROSE-MILLER

Xiaodong WU

Kam Tin YAP

Assyriology:

Alex BARKER

Basic and Translational Neuroscience:

Deborah OAKLEY

Biological Science:

Oliver FLECK

Jack FLEET

James LINYARD

Kasey MARKEL

Kiran Kumar THURIMELLA

Bioscience Enterprise:

Louise Mari BAUTISTA

Ilaria COPPOLA

Gaja GASIOREK

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Yuchen HU

Eric ZHAO

Classics:

Ayesa AHMED

Clinical Science:

Demetris ASPRIS

Lucinda KENNARD

Computational Biology:

Mahiar MAHJOUB

Yusef RABIAH

Zhi Ming ZU

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Pei Rong CHEO

Isabella GAMBILL

Berry MULLIGAN

Criminological Research:

Greg LOS

Yuki TAIRA

Cristobel WEINBORN

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Simon THOMPSON

Tosca TIZZANO

Carly WHELAN

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Amba TADAA

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Eduardo TERRA ROMERO

Economic Research:

Xiaoyi ZHANG

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Amal ASIM
Josh COWLEY
Luigi CRUCIL
Sophia SCHNEIDEWIND
Yihan XUE

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Barbora ZAVADILOVA
Siyang ZHOU
Anne ZONNEVELD

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Alaa ALDUBUSH

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Maria GKOVEDAROU

Engineering for Sustainable Development:

Daniel CONSTABLE
Joao COSTA

Environmental Policy:

Simon KIESER
Anna WAINER

Epidemiology:

Hope WATSON

European, Latin American and Comparative Literatures and Cultures:

Thomas MUXWORTHY

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Luka STOJANOVIC

Finance:

Katarina LISKOVA
Linfeng SHEN

Finance and Economics:

Alessandro GIARRE
Lufei ZHOU

Genomic Medicine:

Young-Chan PARK

History and Philosophy of Science and Medicine:

Juliana BROAD
Andrea CECCON
Justin GRENET
Oscar KENT-EGAN
Timothe LANGLOIS-THERIEN
Tyler RHINESMITH

Human Evolutionary Studies:

Imogen BLACK

Industrial Systems, Manufacturing and Management:

Sophie BECART
Adarsh CHUTTOOAR
Niheer SHAH
Sophie WRIXON

International Relations and Politics:

Vincent WALSH
Ian WICKS

Machine Learning, Speech and Language Technology:

Julius SCHWARTZ
Areeb Ur Rehman SIDDIQUE
Minglong SUN
Yuanzhao ZHANG
Osman ZUBAIR

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Alice BLANCHARD
Ditimar NIKOLOV
Abhishek PATEL

Medical Science:

Alex FRANKELL
Thomas VARLEY

Medicine:

Linda SKINGLE

Medieval and Renaissance Literature:

Kristina FOSTER
Lucy SMITH

Micro and Nanotechnology Enterprise:

Inese SILKINA

Modern British History:

Alice GAUVIN
Caitlin WALSH

Modern South Asian Studies:

Jonathan DAS

Multi-Disciplinary Gender Studies:

Anna FORINGER-BEAL
Namrata NARULA

Nuclear Energy:

Tim GELLER
Jordan WAIN
Rachel WIBLE

Planning, Growth and Regeneration:

Christopher DAY
Lidija HONEGGER
Jiyoun JO
Elizabeth SARGEANT
Anthony WONG

Political Thought and Intellectual History:

Harry WHITE

Public Health:

Megan GINGELL

Real Estate Finance:

Eleanor BUTLER
Yuen Tung CHAN
Darin MELLOTT
Gouliang WENG

Sociology:

Joschua HELMER
Rachel Jing Ying KUO
Harry LI
Elisabeth SANDLER
Candace THOMAS

World History:

Theodore DIXON

Zoology:

Jenaid REES

MRES AND PHD:**Medical Science:**

Gordon FRAZER

MRES:**Chemical Engineering (Graphene Technology):**

Kaiwen ZHANG

Chemistry (Nanoscience and Nanotechnology):

Gregory CHANT

Engineering (Gas Turbine Aerodynamics):

Joshua MAYNARD

Gas Turbine Aerodynamics:

Sunwoo HWANG
David SALVADOR JASIN
Alessandro SOLI
Jack WETHERELL

Medical Science:

Eliska ZLAMALOVA

Veterinary Medicine:

Ruby COATES



Events in 2020

Darwin College Lecture Series 2020: ENIGMAS The Lady Mitchell Hall, Sidgwick Avenue

17th January

Dr Adam Rutherford
Author and Broadcaster
Human Origins

24th January

Professor Sean Carroll
Caltech
Mysteries of Modern Physics

31st January

Dr Jo Marchant
Journalist and Author
Decoding the Heavens: The
Antikythera Mechanism

7th February

Dr James Grime
Mathematician and Lecturer
Alan Turing and the Enigma
Machine

14th February

Dr Tiffany Watt Smith
Queen Mary,
University of London
The Enigma of Emotion

21st February

Professor Erik Kwakkel
University of British Columbia
The Enigmatic Pre-modern
Book

28th February

Professor Tamsin Mather
University of Oxford
Eruptions, emissions and
enigmas: from fuming volcanic
vents to mass extinction events

6th March

Dr Albert Yu-Min Lin
Explorer
Archaeological Mysteries

Alumni Events:

Thursday 16th January

DarBar Alumni Drinks
Venue: DarBar

Friday 13th March

Darwin College Society and
Fellows Reunion Dinner during
Formal Hall and drinks afterwards
Venue: Dining Hall and Richard
King Room

March (to be confirmed)

Alumni event in Athens, Greece

Friday 24th April

Alumni Reunion Dinner for years
1976–86 and 1997–2007
Venue: Dining Hall and Richard
King Room

Friday 15th May

Darwin College Society and
Fellows Reunion Dinner during
Formal Hall and drinks afterwards
Venue: Dining Hall and Richard
King Room

Saturday 30th May

Darwin College Society Henry
Moore Foundation Event
Venue: Henry Moore
Foundation, Perry Green,
Hertfordshire

Friday 12th June

Darwin College Society and
Fellows Reunion Dinner during
Formal Hall and drinks afterwards
Venue: Dining Hall and Richard
King Room

Sunday 5th July

Alumni Garden Party
Venue: College Gardens

September

Alumni events in Singapore,
Malaysia, and Hong Kong (to be
confirmed)

Above:

Darwin College Study Centre

Editors:

Sophia Smith, John Dix, Eleanor Collingwood

The editors especially welcome short articles, pictures and news from all our alumni but particularly those overseas.

Correspondence to: darwinian@darwin.cam.ac.uk

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