DARWIN COLLEGE
CAMBRIDGE

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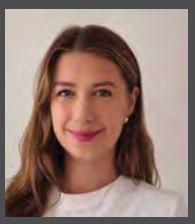
THE Darwinian

Architecture

How three Darwin Fellows have shaped the study of Architecture at Cambridge; and the College's own exciting plans for redevelopment.

Also inside:

Alumnus James Howley on designing Dublin's Millennium Bridge and taking responsibility for the city's St Patrick's Cathedral.



From Polish decarbonisation to Spanish bio-based building – Darwin's architecture students describe their projects and passions.

How you can be part of a campaign building on Darwin's first 60 years.

News for the Darwin College Community

A Message from the Master

Dr Mike Rands

How our 60th anniversary provided the launchpad for a campaign to secure Darwin's future

2024, Darwin's 60th anniversary year, has been momentous. We began with the 39th Darwin College Lecture series on the topic of Revolution, launched with a tour de force from the historian Professor Sir Simon Schama in which he explored whether revolutions advance or stall progress. He attracted an audience of over 700 and inspired us all. The subsequent seven lectures were equally enthralling and you can catch up with them all on our College YouTube channel (@DarwinCollegeLectureSeries) where they have already received over 222,000 views. Do join us in person – or catch up online – for the 40th Lecture Series on Codes which began on 24th January.

Our recently launched Erasmus Seminar series included three diverse and fascinating talks from Darwin Fellows this year. Emeritus Fellow, Professor Simon Schaffer of the History and Philosophy of Science Department at Cambridge explored colonial natures and climate sciences in the early 19th century. Alumna and recently elected Darwin Fellow Professor Flora Samuel (interviewed on page 12) described her research to improve inclusion in spatial planning and the creation of the Cambridge Room, to foster community debate. Our third Erasmus Seminar was delivered by longstanding Darwin Fellow in Genetics Dr Torsten Krude, who enlightened us all on how his research has led to the identification of specific start sites for DNA replication and how they might orchestrate the cloning of the human genome.

Lunchtime research seminars in both the humanities and sciences continued to be well attended with a rich mix of excellent talks by Darwin students and post-doctoral Fellows and Associates as well as some guest speakers. And our new series of 'Chalk Talks' – informal evening gatherings where researchers share a new idea to be explored by the audience – are proving a great success.

Our students continued to excel in many walks of life. 114 graduated with PhDs in the last year, alongside 134 with MPhils, and 75 after completing other one-year courses. Their non-academic achievements were equally impressive. Darwinian Harrison Whitaker (PhD in Film & Screen Studies) led a Cambridge University team to triumph in the British Student Quiz Championships, while also captaining Darwin in the current BBC *University Challenge* series, two rounds of which have so far been broadcast.

Meanwhile PhD English student Liz Stevenson was part of the victorious Cambridge women's clay pigeon shooting team at the British Universities and Colleges Sports competition, where they were crowned National Champions; while our rowers were the only Cambridge team to take on universities from across the globe at the World Class University Rowing Championship in South Korea.

Two of our distinguished Fellows, Professor Carol Brayne, an epidemiologist and public health academic who pioneered the study of dementia in the UK, and Royal Society Research Professor Eric Wolf who studies climate change and Earth-Ocean-Atmosphere Systems, retired this year, but remain active Emeritus Fellows. We are deeply grateful to them both for their many contributions to Darwin.

"Our students continued to excel in many walks of life. 114 graduated with PhDs in the last year, alongside 134 with MPhils, and 75 after completing other one-year courses."

It has been delightful to welcome four new Fellows to Darwin in 2024:

- Professor Jeremy Adelman, the Henry Charles Lea Professor Emeritus of History at Princeton University and the Director of the Global History Lab at the University of Cambridge;
- Professor Serafina Cuomo, the newly appointed A. G. Leventis Professorship of Greek Culture at Cambridge;
- Professor Karishma Jain, Teaching Professor of Sustainability and Innovation at the University's Department of Physics;
- and Dr Diana Arseni, a Group Leader in Neurobiology at the Medical Research Council's Laboratory of Molecular Biology in Cambridge.

In addition we have a elected a talented and enthusiastic cohort of new Post-Doctoral Research Fellows to the College Governing Body.

In September we launched a major College fundraising campaign at a special Formal Hall where we were joined by distinguished speakers representing our Founding Colleges, the Darwin family, the University, our student body and our generous benefactors. The dinner in the Dining Hall gave us an opportunity to outline the ambitions we have for Darwin over the next 10 years.

The campaign aims to raise £60 million to transform and sustain the College to make bigger and better contributions to research, learning and addressing global challenges. As the year closes, we have secured gifts and pledges of just over £10 million towards this ambitious goal thanks to the support of many College alumni, Fellows and friends, but of course we have a long way to go. If you are interested in contributing to the campaign, further information about how you can help us is given on page 18.

This issue of the *Darwinian* has a focus on architecture for a good reason. The College is embarking on its most ambitious estate development project in its history: to both decarbonise our estate – and in so doing contribute to our commitment to be carbon neutral by 2032 – and to transform the Dining Hall and Hermitage building to create new and improved spaces for research collaborations, interdisciplinary study and learning and enhanced social engagement, including a new Garden Room under the Dining Hall (see page 19 for more details).

The Campaign Launch. Photo credit David Johnson

We now have the exciting prospect of delivering this transformation of the College estate over the next few years. Please do join us in any way that you can to contribute to helping Darwin College attract and foster the best and brightest minds and so make the world a better place for all life on Earth.

Darwin College YouTube channel

Alumni News

Using AI to identify cancer biomarkers

Alumnus **Dr Ludmil Alexandrov** has harnessed the power of machine learning to identify biomarkers in breast and ovarian cancer tumours, in a breakthrough which could have a dramatic impact on the length of time patients wait for a definitive diagnosis and treatment.

Ludmil completed an MPhil in Computational Biology at Darwin in 2010, followed by a PhD in Genetics. Now a Professor in Cellular and Molecular Medicine at the University of California San Diego, his use of AI to confirm cancer was highlighted by CNN World.

"You get your test result immediately, and you can start treatment," he told the programme.

In 2024 Ludmil was inducted as a Fellow of the American Institute for Medical and Biological Engineering in recognition of his pioneering contribution to research.

Poetry shortlisted for Polari Prize

Alumnus **Dr Paul Stephenson** (MPhil European Studies and PhD History, 1998-2002), was shortlisted for the Polari Prize for his poetry collection *Hard Drive*, published by Carcanet. The prize celebrates the work of emerging and established LGBTQ+ writers.

Paul has an MA in Creative Writing from the Manchester Writing School, has been published widely in poetry magazines and has taught online courses for the Poetry School. He has published three pamphlets, and for the past six years has helped to programme the festival Poetry in Aldeburgh. *Hard Drive,* his debut collection, was published in June 2023. Written in the aftermath of the unexpected loss of his partner, whom he met at Cambridge, it is both a record of the realities and practicalities of grief, and a testament to love.

"It is such an honour to have my book selected by the Polari judges, and for my poems to have been shortlisted for this prestigious award," says Paul.

Sharing trustworthy research with parents and educators

Dr Mairead Ryan, who graduated from Darwin in 2024 with a PhD in Medical Sciences, is leading a newly launched venture sharing the latest research of child and adolescent health with parents and teachers.

Designed to support all those championing health and well-being in educational settings, School Health Pulse aims to bridge the gap between cutting-edge health research and real-world impact.

They review and distil the latest studies, converting complex academic papers into accessible, easy-to-read articles. This means schools can make evidence-based decisions and implement positive changes.

"We're passionate about sharing research findings in a way that's clear and easy to understand for teachers, parents and others," says Mairead. "When we do this, more children and young people can benefit. We've had really positive feedback so far, and we're just getting started. We're excited to see where we can take this together."

Can you tell when someone is putting on your accent?

Scots, Irish and northerners can spot when you're faking it, says Darwin alumnus **Dr Jonathan R. Goodman**.

A study published in November in *Evolutionary Human Sciences* compares the ability of people from across the UK and Ireland to tell real local accents from mimicry.

Participants from Belfast, Dublin, Glasgow and the north-east were better than those from London, Essex and Bristol at recognising when a speaker was putting on their native accent.

"I'm interested in the role played by trust in society and how trust forms," said Jonathan, who graduated with a PhD in Biological Anthropology in 2023, and is now a Research Associate at Cambridge Public Health.

"One of the first judgments a person will make about another person, and when deciding whether to trust them, is how they speak. How humans learn to trust another person who

may be an interloper has been incredibly important over our evolutionary history and it remains critical today."

The study received extensive media coverage. But perhaps the key proof that it has attracted attention beyond academia came when it popped up in an episode of long-running satirical news quiz *Have I Got News For You*.

Alumna awarded Balzan Prize

Darwin alumna **Professor Lorraine Daston** (Diploma in History and Philosophy of Science, 1973) has been awarded the Balzan Prize for History of Modern and Contemporary Science.

Administered by the International Balzan Prize Foundation, the prize's aim is to "foster culture, the sciences and the most meritorious initiatives in the cause of humanity, peace, and fraternity among peoples throughout the world."

Professor Daston is Director Emerita of the Max Planck Institute for the History of Science in Berlin and Visiting Professor in the Committee on Social Thought, University of Chicago.

The prize was awarded "for the extent, originality and variety of her work, which has drawn on a wide range of scientific fields to highlight the mental representations and values underlying research activity; for the number and quality of her articles and books, which have opened up new paths in the history and epistemology of sciences; for her contribution to the training of generations of researchers; and for her support – as head of prestigious institutions – for innovative research projects."

Another alumnus, Professor Piero Boitani (PhD English, 1971) was awarded the Balzan Prize for Comparative Literature in 2016.

College News

Professor Angela Wood appointed as Darwin Vice-Master

We are delighted to announce that **Professor Angela Wood** has taken up the position of Vice-Master of Darwin, alongside **Professor Fiona Karet**. Thank you to **Professor Sara Baker**, who has previously served in the role, for her continuing contribution to life at Darwin.

NIHR Professor of Biostatistics and Health Data Science in the Department of Public Health and Primary Care, Angela was also recently appointed as Co-Lead/Programme Director of the Big Data for Complex Diseases Driver Programme. Her research focuses on the use of population health data for the prevention of numerous chronic diseases.

Throughout her career, Angela has seen building relationships with students and colleagues as something to be balanced alongside the pursuit of science, rather than secondary to it.

"I love being a Tutor at Darwin – I really enjoy the interactions with students," she says. "I'm also a Staff Development Lead, and supervise lots of students in the Department."

While already juggling multiple priorities, Angela is looking forward to further developing this non-academic focus.

"I see it as refreshing! It's nice to do something which is nothing to do with science. I want to learn more about leadership within the University and learn more about what matters to Cambridge, and this role provides an opportunity to do that it in a safe environment. I'm very excited to take it on."

Darwinian wins Cancer Research UK PhD Thesis Prize

Darwin graduate **Dr Isabel Esain Garcia** has been awarded this year's PhD Thesis Prize by Cancer Research UK in recognition of her outstanding research project. Isabel graduated last summer with a PhD in Medical Science.

Over the course of her doctoral research, Isabel discovered a new molecular mechanism in cancer gene regulation. Her research identifies a new method of controlling the expression of cancer genes by manipulating their physical structure, opening up the possibility of a universally applicable cancer treatment.

Her supervisors, **Professor Shankar Balasubramanian** and **Dr David Tannahill**, said:

"Isabel is a capable and committed young scientist. Her experimental design, execution and analysis were superb. In turn, the outcomes of her PhD study provide arguably the most compelling data to date to settle a central question (and controversy) in the field, by supporting a causative role for these DNA secondary structures."

Darwin Catering Team highly commended for Green Gown Awards

Catering Manager **Ivan Higney** and the Darwin Catering team were Highly Commended in the Campus Food and Drink category in the Green Gown Awards.

The Awards were launched in 2004 to recognise sustainability initiatives across the higher education sector. 2024 saw 133 projects from 83 institutions shortlisted, with 22 winners and 23 highly commended awards announced at a ceremony at Dynamic Earth in Edinburgh.

Judges were impressed by Darwin's rigorous and explicit focus on plant-based catering, as well as the boldness and ambition of the 100% plant-based May Ball and Green Week. They also commented on the College's "amazing integration with both student and academic work, with the College open to trialling and being a site for cutting edge research in sustainable diets."

The Master, Dr Mike Rands, said:

"I am thrilled that Darwin's commitment to offering varied and delicious food, while reducing the environmental impact of feeding our community, has been recognised by this award. We are proud of the imagination with which our staff approach the challenge of ensuring Darwin's catering is as sustainable as possible."

Darwin was also a Finalist in two categories – Student Sustainability Champion (**Meg Groom**), and Staff Sustainability Champions (**Ivan Higney** and **Matt Turpie**).

Earthshot Prize "lights the path to a sustainable future"

It was good to see the **Altyn Dala Conservation Initiative** recognised as one of the recipients of the 2024 Earthshot Prize. Based in Kazakhstan, Altyn Dala has already achieved the dramatic recovery of the Saiga Antelope, previously on the brink of extinction. It is now working to restore and preserve the country's Golden Steppe, one of the world's least protected natural ecosystems.

Altyn Dala is led by the Association for the Conservation of Biodiversity of Kazakhstan (ACBK), the Kazakh partner of BirdLife International. Darwin Master Dr Mike Rands was instrumental in the foundation of BirdLife International, which he led as Chief Executive from 1996 to 2009. He retains a role as its Chair, and in October visited Kazakhstan to host the BirdLife International Partnership Meeting for the European and Central Asian Region, bringing together 46 partner organisations working across the region to achieve conservation ambitions.

Since the introduction of the Earthshot Prize in 2020, Darwin has been one of 200 organisations around the world invited to submit nominations. Founded by His Royal Highness the Prince of Wales, and incubated by The Royal Foundation, the prize aims to incentivise changes to repair the planet, to research, develop and scale the most impactful solutions to the world's greatest challenges.

His Royal Highness described the winners and finalists as 'lighting the path for a sustainable future for us all."

"Their groundbreaking work demonstrates that with the right support and collaboration, we can scale solutions that will repair and regenerate our planet," he said. "Let their success inspire us to act with urgency and optimism, ensuring a thriving world for future generations."

In 2021, Darwin nominated Sanergy, which went on to become one of the first 15 Earthshot finalists. Described by the Master as "truly inspirational', Sanergy aims to use a circular economy to solve the sanitation crisis, empowering cities to build systems to ensure the safe containment of human waste, which is then removed and processed to become fertiliser and biofuels.

We are excited by the opportunity we have as an Earthshot Nominator to draw attention to the work of innovative, imaginative and effective agents of environmental change around the world. Members of the Darwin community are warmly invited to share in this role, and to let the College know of any projects you believe should be considered for nomination. To discuss suggested nominations, please contact the Master on master@darwin.cam.ac.uk

A new champion for Darwin sustainability

We were delighted to welcome **Miriam Remshard** to Darwin last term, in the part-time role of Project Manager (Sustainability). A PhD student in Psychology at Peterhouse, Miriam is researching misapprehensions around climate change, and how its threat and solutions can best be communicated. The position at Darwin therefore offers a unique opportunity both to have a practical impact in advocating and implementing sustainable solutions, and to see climate communications in action within a small community.

"It's the perfect complement to my research, working towards the same overarching goal," Miriam explained.

She is walking in the footsteps of Meg Groom, who held the position over the past two years while completing her PhD in Physics at Darwin. Meg's initiatives, from Project Second Life to Green Week, have become part of the fabric of Darwin life, but

Miriam believes that her perspective as a non-Darwin member will benefit both Darwin and Peterhouse.

"It's interesting to see so much going on at Darwin that isn't happening at Peterhouse. I like to think it will be helpful to bring a fresh pair of eyes."

She is used to juggling College affiliations, having sung for the past year with the Pembroke College Chapel Choir, as part of which she travelled to Zambia last summer.

Before beginning her studies at Cambridge, Miriam completed a BA in Experimental Psychology at Oxford, and a Master's in Environmental Science and Climate Change Communication at Yale.

Miriam is particularly excited by the longstanding engagement of Darwin's Catering Manager, Ivan Higney, with research. Darwin's catering team has worked with numerous PhD students, taking part in studies and supplying information and statistics, and also responds to new findings by changing its approach.

But Miriam's remit is far wider than food. She'll be working with students and staff across the College to support sustainable activity and ensure that Darwin's impact on the environment continues to be considered in every aspect of College life.

Darwin College Boat Club took to the water in South Korea

Congratulations to the Darwin College Boat Club, who flew to South Korea at the end of the summer to participate in the World Class University Rowing Festival.

From 21st-25th August, rowers competed on the Taehwa river in Ulsan, in the south of the country. Darwin's crew, the only participants from the University of Cambridge, joined students from the University of Oxford, Stanford University, Harvard University, Massachusetts Institute of Technology, Yale University, Peking University, the University of Tokyo, Hamburg

University, UNIST and the University of Ulsan for the Festival, which was broadcast on Korean television and attended by tens of thousands of supporters.

Asking the questions: Harrison Whitaker

Darwin's *University Challenge* team returned to the small screen on Monday 6th January for their second-round match, in which they triumphed over the University of Edinburgh, securing a place in the quarter-finals.

In the meantime, team captain **Harrison Whitaker** (PhD Film Studies 2021–24) finds himself on the other side of the interrogation, having been employed by the programme's makers as a Question Writer and Casting Researcher.

"It's thrilling – and a bit strange – to go from answering questions on one series to writing them for the next!" Harrison says.

"I just hope that I can play some small part in future contestants and teams having as much fun on the show as I did with Darwin."

An architectural triangle

Interview with Professor Dean Hawkes

Emeritus Fellow Professor Dean Hawkes explains how, for 70 years, his three-sided career in practice, teaching and research has driven the discourse on architecture and the environment.

After more than 70 years, Dean Hawkes still recalls the conversation that launched his life in architecture.

"I remember precisely," he says now. "I was 15, and I had a friend at school in Rochdale who one day told me that his elder brother was going to be an architect. And I recall saying to my friend, Peter, 'that's what I'm going to be'. I don't think I'd ever thought of it before." Dean returned home after school and told his mother about this sudden clarification of his future plans. "She said, 'very nice, your tea will be ready soon!' But the next day I came home and she'd been to one of the only two bookshops in my northern industrial town, and bought the only book they had on architecture – *An Introduction to Modern Architecture* by JM Richards."

On the advice of the headmaster at his grammar school, Dean enrolled at Manchester School of Art in 1956. "I thought it was wonderful. I think in some respects, having spent the rest of my life in university schools of architecture, it was a very different experience from university. University schools of architecture tend to be rather hermetic – the conversation's entirely about architecture! But without having to try, I had friends who were painters, I had friends who were sculptors, I had friends who were textile designers."

After his studies, Dean worked in an architect's practice in Manchester, and that might have been the end of the story. Instead, an advert for a research assistant 200 miles away in Cambridge changed the trajectory of his life and career. Professor Sir Leslie Martin, who had been appointed as the University's first Professor of Architecture in 1956, was in the process of making the case for organised research within architecture. As a result, he had obtained funding through the Department for Scientific and Industrial Research to support research into a project to study 'Daylight in Housing'. This used an 'artificial sky', a dome structure that stood in the garden of the Department of Architecture, under which was a representation in artificial light of a sky condition. They needed an architect to undertake studies, putting models of buildings under this device and measuring daylight in different building arrangements. "That's what I came to do."

This project led to research into mathematical modelling of environmental factors in buildings, which eventually became a PhD, as a research student at Clare College, that produced the 'Cambridge Environmental Model', exploring how buildings will respond to different climatic conditions. By 1973, having used his PhD as a springboard to further research into the effect of the environment on hospital buildings, Dean was appointed to a Lectureship at Cambridge. He taught in both the lecture room and the design studio and further developed his environmental research in a series of funded projects and with PhD students. But as his academic career flourished, he never lost sight of the practical dimension of architecture.

"My practice was quite modest, I did extensions to academics' houses. Small jobs, but enjoyable projects, with nice people. So the combination of research, practice and teaching, which I maintained throughout my academic life, began there. Very few people do all three. But it's immensely rewarding, because each activity is informed by the other two."

From the beginning, one word has been central to Dean's approach to all three strands of his multi-faceted career: *environment*. "It's a word which has many possible definitions in terms of architecture, and my approach has a particular definition. It's about the *quantities* and *qualities* of heat, light and sound that constitute the environment in buildings."

At the time of Dean's training, the environment had yet to assume its current significance.

"We were actually taught plumbing," he recalls. "It wasn't taught as environment, it was taught as the fundamentals of building services – heating, ventilation, lighting, and a bit on acoustics. We were sent for building science lectures to the Manchester Institute of Technology, because the art school couldn't teach that. Environment in its present meaning began to be a question in architectural discourse at the end of the 1960s and the beginning of the 1970s, when a war in the Middle East meant that the oil price tripled. Suddenly, people became interested in designing buildings that were more efficient in their use of energy."

In 1983 a desire to practise at a more substantial level led to a partnership with a former Cambridge student, Stephen Greenberg. The environment was central to the work of the practice. Over 11 years Greenberg & Hawkes won four RIBA Architecture Awards, had 11 projects exhibited at the Royal Academy of Arts, featured at the Venice Biennale and were widely published in the architectural journals. Every project they completed was, says Dean, "fundamentally environmental" – including his own house in Cambridge.

"My house was built in that period – designed in 1990, finished in '91. And it is a house out of the thinking of the practice. The house is 'environmental', when we set up the practice one of our objectives was always for elements of the research to inform every building. Which it did, in every instance. And of course, in a way, historically, all buildings are environmental. The reason we build, fundamentally, is to create shelter. So it's at the heart of what buildings are for. I suggest that a building which isn't environmental in its conception isn't fundamentally architectural."

Dean joined Darwin as a Fellow in 1976, when the College itself was only 12 years old. He was the first Fellow to be elected in the mastership of Sir Moses Finley.

Dean Hawkes' house. Photo credit Peter Cook

After 30 years in Cambridge, including a decade as Director of the Martin Centre, the department's research division, an unanticipated opportunity drew him away from his adopted home. An approach from the Welsh School of Architecture at Cardiff University proved hard to dismiss. The Welsh School had a 'professoriat' of three chairs, of Architecture, Architectural Science and Architectural Design and Dean was given the opportunity, as Professor of Architectural Design, to lead the design teaching of the school, with an additional role in developing the teaching of the history and theory of architecture.

During his seven years in Cardiff the Welsh School achieved a five-star rating in the research assessment process. There Dean introduced a Masters and a PhD course in architectural design and was co-founder of a Design Research Unit within the school. He also continued to practice and was a finalist in the international competition for the Welsh Assembly building, the Senedd, in Cardiff. In 2002 Dean retired, to focus on his writing. An Emeritus Research Fellowship from the Leverhulme Trust funded a year of international travel for the research which enabled him to write *The Environmental Imagination (2008 & 2018)*, now in its second edition, which joined *The Environmental Tradition (1996)*, and *The Selective Environment (2002),* and has been followed by *Architecture and Climate: an environmental history of British architecture (2012)*, and *The Architect and the Academy (2022)*. He is currently working on a further book, *A Banquet of the Senses: the environments of houses*. His academic work has been recognised by receiving the international PLEA Award 2000 for his contribution to the teaching, practice and research of environmental architecture and the RIBA Annie Spink Award 2010 for excellence in architectural education. He received an honorary Doctorate of Letters, D.Litt., from the University of Westminster in 2016.

This highly productive non-retirement has taken place against the backdrop of a rekindled relationship with Darwin, which, much to Dean's delight, reinstated his Fellowship on his departure from Cardiff. "That was tremendous," he says. "Such a boon to come back and once again to be a member of this College."

He and his wife are regulars at the First Wednesday Club, a monthly lunch for retired Fellows and their spouses, and are frequent faces in and around College. This winter marks 60 years since their arrival in Cambridge, a city on which Dean has left his mark in highly tangible form. "Architectural practice is pretty visible," he points out. "Buildings are not things you can hide." In his buildings, his books, and over half a century of teaching and research, Dean Hawkes has shaped the discipline sparked by a throwaway remark in a Rochdale playground in 1953.

Fitting the past to face the future

Interview with James Howley

Alumnus James Howley explains how a postgraduate diploma at Darwin kickstarted a career of architectural conservation which has culminated in the role of Cathedral Architect at St Patrick's Cathedral, Dublin.

James Howley is a big name at Dublin's St Patrick's Cathedral. Arriving early for our appointment at the medieval church in central Dublin, I mention who I'm meeting to the staff at the visitors' desk, who immediately waive the entry fee. They welcome me in to wander among the intricate stained glass windows, the guttering candles and the memorial plaques to successive generations of Guinness family benefactors which jostle for space with composer and former chorister Charles Villiers Stanford, and former Dean and literary titan Jonathan Swift.

When James arrives he introduces me to the Verger, Louis, whose lifelong association with the building began as a choirboy, at the Choir School founded in 1492. As I confirm that his name has worked its magic, Louis raises an eyebrow. "I'll have to have words with them – we usually charge double to guests of James's!"

Since completing a two-year diploma in Architecture at Darwin in the early 1980s, James has built a respected reputation in the conservation of older buildings, preserving them for the future through careful restoration and sensitive intervention. After leaving his home in Belfast to study Architecture in Manchester, he spent two years at the Musée d'Orsay in Paris, before coming to Cambridge.

Although the course was predominantly project-focused, it sparked a lifelong interest in the more theoretical side of the subject.

"The main thing that Cambridge opened up for me was history and theory and research," he says now. "I think I plucked up the courage to go into the University Library in my second year. It seemed very intimidating, but once I'd discovered it I did a dissertation, which became a good dissertation that later became a book! It was the first time I'd have done serious sort of archival research."

The dissertation documented the architectural follies dotting the Irish landscape. By the time the book, *The Follies and Garden Buildings of Ireland*, was published by Yale University Press in 2004, illustrated by James's own drawings, he saw it as an elegy for buildings which were rapidly disappearing.

"They were all falling down and nobody was looking after them. I did the survey drawings because I thought half of them aren't going to be here soon – I thought it was just going to preserve by record. But I think my practice has restored over 60! And there's a charity called the Follies Trust which has restored 30."

His practice, Howley Hayes Cooney, in which his wife, Fionnuala Hayes, is also a partner, was founded after the couple's move to Dublin in the 1990s following 12 years in London. From the beginning the practice combined new design with

"The main thing that Cambridge opened up for me was history and theory and research."

a strong specialism in conservation, an expertise which James had developed through the restoration of historic houses in London and a Masters in Conservation Studies at the University of York, inspired by his work on Scott's Grotto in Hertfordshire.

"It's an 18th century, mostly subterranean sort of chambered grotto and a summerhouse, that were in terrible condition, and English Heritage were giving a grant for the restoration, because it was a Grade 2 listed building. And the job was well received, it won a Civic Trusts Award, and then I decided I should really go and find out a bit more."

The past hasn't dictated every twist and turn of his career, however, with one project in particular staking a striking claim on the contemporary. Shortly after arriving in Dublin, James and his then business partner Seán Harrington put forward a design for the competition for a new pedestrian bridge across the river Liffey, to mark the new Millennium.

"We were working in my sitting room in Sandycove, our second child had just arrived, and we didn't even have a computer – we had to find a student who had a computer to do the drawings and put the sheets together."

Despite its inauspicious gestation, the design was shortlisted, and subsequently won.

"To our absolute delight it was built on time – it opened a week before the Millennium, just before Christmas in 1999."

Having firmly made his mark on his adopted city, James has maintained his practice in Dublin ever since. He was looking at "stepping back slowly" until St Patrick's Cathedral appeared on his horizon.

After working on the Deanery and Marsh's Library on the same site, as well as on a conservation plan for the park the cathedral sits in, he was steeped in the history of the building, and a familiar figure to its clergy and administrators. Taking on the mantle of ensuring the cathedral is fit for future generations allows him to be part of a story deeply intertwined with that of the city.

"I'm really interested in the Guinness family and their legacy. Their philanthropy was unbelievable. They'd always supported hospitals, and Benjamin Lee (Sir Benjamin Lee Guinness, 1798-1868) paid for this big restoration – there's now almost no Medieval fabric on the outside and a good bit of the inside is also 19th century, but it's almost the only Medieval cathedral of European scale in Ireland. All of this area would have been part of the Dean's Liberty, and there would have been houses for the lay vicars and the choral vicars and the prebendaries, but it was a slum by the 18th century. And Benjamin Lee's son, Lord Iveagh, bought it all up, flattened the whole lot and made a park. Which gave a lovely setting to his father's restored cathedral!"

With two sung services daily, and a thriving choir school, the cathedral is a still vital place of worship, as well as the third most popular paid attraction in the capital, with 600,000 visitors a year. James's plans, which include tidying up the current cluttered gift shop and toilet arrangements through the addition of a new external building, and potentially removing the existing railings to merge the park into the cathedral grounds, will fit it for the 21st century, and form an appropriate culmination to his own career.

"I should have had more sense!" he laughs. "My mother, had she still been alive, would be saying 'you must be astray in the head.' But it's great, and they're lovely people – it really is a big community."

An education for uncertainty

Interview with Professor Flora Samuel

Darwin Fellow and Head of the Cambridge University Department of Architecture, Professor Flora Samuel explains why sustainability and social justice go hand in hand with her passion for buildings.

When Professor Flora Samuel was appointed as Cambridge Professor of Architecture and Head of Department, a College affiliation was one of the easier decisions. As a Darwin alumna, she stayed in College for the first few days of the departmental job. As well as finding it "very comfy, very central, great plant-based food – and there are kayaks!" there was a more significant alignment of priorities.

"I very much like the fact that the College is so serious about sustainability," she says. "I'm so passionate about sustainability, it pains me to go to a College where that's not on the top agenda."

This passion has been a longstanding focus, both for Flora personally, and of her approach to architecture.

"I've been sort of obsessed since the word go – I don't really know where it came from. The world is so slow to catch up with the realities of climate change. We have climate change predictors of how the UK is going to heat up, but nobody's really designing for them at the moment. And I'm interested to find out when the first court cases come in to say 'you knew what the heating situation was; why didn't you design for it?'"

Architecture at Cambridge, thanks largely to the work of Darwin Emeritus Fellow Professor Dean Hawkes, has, Flora concedes, confronted the issue more directly than some.

"This department has a great history of designing for climate change, and Dean's work was absolutely pioneering in showing how historical and modernist architecture were designed around environmental concerns. Increasingly students are much more interested in retrofit, and how you might recycle buildings, and those sorts of things. These are new, uncharted waters."

Flora's commitment to sustainability is inextricable from the other driving concern of her life and work – her concern for social justice.

"People can't really respond to climate change if they're disempowered and have no opportunities to do anything, and also if they're too stressed by other aspects of their lives. So I think climate change is a social justice issue, primarily, and that's how it tends to come through in my work."

These priorities have resulted in the two projects consuming most of Flora's time and energies beyond the department. Having been instrumental in setting up an Urban Room in Sheffield, while Head of Department at Sheffield University (still going after 10 years), she is now replicating the concept in Cambridge.

"Urban Rooms are places where communities, local authorities, industry, practice and universities come together to talk about the future of their places and cities," she explains. "It is very apparent, because Cambridge is the most unequal city in Britain that we need something like that here."

The need for communities to have the opportunity to respond to increasing planning and development in and around the city is another motivating factor. The newly formed Cambridge Room (www.cambridgeroom.org) is preparing to open a pop-up space in the Grafton Centre, before hopefully moving to permanent premises on Mill Lane, and has just achieved charitable status.

"We'll be popping up all across the region," says Flora. "Its charitable objects are around helping people who don't normally get consulted with to get involved, and to make places more inclusive."

Simultaneously, Flora is principal investigator for the Public Map Platform for Future Generations, charting the green transition on the Isle of Anglesey in north Wales. Funded by the Arts and Humanities Research Council and a collaboration with Anglesey Council, the project brings together layers of data to indicate how resources can be used most effectively, in a region which is chronically short of funding.

"We're also developing a method to chunk these layers together, so that the Welsh government can see how Anglesey is progressing towards the Wellbeing of Future Generations Act. And climate change is absolutely central to that. We're starting to develop some data that shows that when people operate in Welsh they're likely to behave more environmentally, because the language is so connected to place. Once you get into Welsh you start realising as you travel around that everywhere you see is called Boggy Fen or Windy Hill or something like that, so you're straight away thinking about the climate conditions as you go round."

In terms of the day job, Flora is determined to expand architectural education, both opening up access to under-represented students, and broadening what they learn to equip them for an unpredictable future.

"It's moving in the right direction," she believes. "It's becoming more inclusive, it's becoming shorter, moving from five years down to four, and it's enabling people from other fields to come and join in along the journey. But we really have to work to make architects express their value better and be perceived to be more useful. I don't think that architectural education is providing students with the skills that they need in these highly changing times. So my interest is in what we call an education for uncertainty."

Having begun her own career at a time when very few women studied architecture, Flora is proud of the fact that the department's current intake is over 50% female. Less encouraging is the fact that, in practice, it remains a heavily male-dominated field, with women making up around 20-30% of practitioners, with few in leadership roles.

"Women tend to drop out with time. Lawyers and doctors very quickly became 50/50, but architecture's stayed stolidly in around 20 per cent. And equally with other kinds of diversity it's performed very badly."

Somewhat ironically Flora ascribes her academic career, in which she has held the roles of Lecturer at the Welsh School of Architecture at Cardiff; Professor of Architecture in the Built Environment at the University of Reading; Head of the School of Architecture at Sheffield University; and Vice-President for Research at the Royal Institute of British Architects (RIBA), to her own experience of practice's difficulties for women.

"I think the thing that got me into academia was having babies," she reflects. "Because it's very very hard to be an architect and have children, for a woman. It's very long hours, a lot of overtime unpaid, and it can be quite brutal."

Her belief in the importance of research, the driving force behind her role at RIBA, extends both to the growing academic discipline of architecture and to those in practice.

"I spent a great deal of time trying to encourage architects to see themselves as researchers. The ones who do, they start attracting new funding streams, it's good for their brand and they have distinct offers that people will pay them for, so it really pays off. A professional is somebody who's supposed to work with the best possible knowledge. You wouldn't want a surgeon operating on you with a slightly mediocre knowledge base, would you? So I don't think people should be allowed to be called an architect unless they actually are working at the cutting edge of their knowledge and their research."

The flip-side of this is that, increasingly, the study of architecture is recognised as having value for its own sake, rather than as an automatic pathway to a career in practice.

"Typically I think about 50% of the students here will go into other fields," Flora estimates. "We very much encourage people to not have a sort of lemming-like idea that they're on a conveyor belt towards being a practitioner, because there are so many other things that you can sidestep into. We also have a lot of PhDs. PhDs in architecture were not much of a thing a few years ago, but now a lot of people are doing them, and quite a lot of practitioners are coming back to do PhDs, because they find that practice doesn't have this intellectual dimension that they want."

Returning to Cambridge, where her own academic journey within architecture began (initially at Murray Edwards and latterly at Darwin), after a career spent absorbing and shaping the priorities of architecture departments across the country, means she is clear-sighted about her ambitions while in the post, which she took up just over a year ago.

"The department has grown – it's doubled in number of students," she says. 'We've started the new Design Tripos, which is architecture training but much more digital, much more engineering, data science and materials science skills. It's very exciting, very interdisciplinary. I'm also interested in supporting the department and the University to be much more linked to the city and its communities, and get local young people and students having work experience in the city and in the Urban Room and so on. So really embedding us in the local scene. Cambridge is such a fascinating place; it's under such pressure. You do not need to go somewhere exotic to find thorny architectural issues to explore."

"One comes to Cambridge to visit the world"

Interview with Professor François Penz

Emeritus Fellow Professor François Penz describes how a fascination with architecture's interconnection with cinema has taken him further than he ever imagined.

It's unusual, at the culmination of a long and distinguished career at one of the world's great universities, to admit that you were determined at its outset to run away from it. But according to Professor François Penz, had communication technology progressed a few decades faster, Cambridge might have lost him long ago.

"For quite some time after my PhD I was trying to go back to France, but there was no email, and no one ever responded to my letters," says the Emeritus Fellow in Architecture.

"And then Dean Hawkes very kindly always said 'come on, I have another post-doc, I have another post-doc', so it snowballed. And then I climbed the ladder, I became a Fellow in Darwin, and then I became the Head of Department, and I've been the director of the Martin Centre, so all of those things happened and none of them were planned really!"

Having grown up in France, François studied Architecture at the École Polytechnique Fédérale de Lausanne (EPFL), Switzerland, in the early 1970s. He worked in practice briefly in Provence, before coming to Cambridge on a one-year British Council scholarship in 1978. Far from the fulfilment of a lifelong dream, he confesses that the only thing he knew about the University was its Boat Race rivalry with Oxford. But, invited to stay on and complete a PhD, supervised by Professor Dean Hawkes, he became central to the Department's evolution over the next 45 years.

Hired by the Department to implement computer-aided design (CAD) in Architecture, François became increasingly fascinated by the idea of digital creativity. He ran a life drawing class using early computers, while working with undergraduates to make short films. But the focus which was to direct much of his career really emerged when he was introduced to Maureen Thomas, then Head of Screen Studies at the National Film and Television School.

"At the time she was trying to tell her colleagues in film studies that really the world was changing, and that digitality would soon be all the rage," he remembers.

"And her colleagues said no, no, celluloid will be there forever, we'll never go digital. She was very interested in what I was doing with the digital world

"Thanks to my students, I've been invited to so many different continents and places that I would not have had the opportunity to visit if I'd stayed in France, I think."

in architecture, and so we started to collaborate – she was teaching me about screen language, and I was teaching her about architecture, and how we represent space."

As a result, in 1995 the pair devised the first conference in Cambridge on film and architecture, which led to the creation of the Cambridge University Moving Image Studio (CUMIS) in 1998 and the MPhil in Architecture and the Moving Image. Following the restructuring of the department in 2005, François taught on the interdisciplinary Screen Media and Cultures MPhil (now the MPhil in Film and Screen Studies based in MML), as well as directing the research group DIGIS (Digital Studio for Research in Design, Visualisation and Communication), investigating the intersection of Architecture, Cinema, and Digitality.

Since his retirement in 2020 he continues to supervise four PhD students, as well as third-year dissertations. Lasting connections with students across the decades continue to broaden his horizons.

"Thanks to my wonderful PhD students I've had a lot of collaboration with China. I've been many times to the University of Nanjing, and I'm going back in the spring to carry on a research project with one of my former PhD students who is now the Dean of the Faculty there. So I think one of the extraordinary things about Cambridge is that it's a little place, but one comes to Cambridge to visit the world. Thanks to my students, I've been invited to so many different continents and places that I would not have had the opportunity to visit if I'd stayed in France, I think."

François's connection with Darwin began as a student in 1978, and he became a Fellow in 1994. Over that time he has witnessed what he describes as the "extraordinary transformation" of the College.

"In 1978 there might have been 70 students, and now there are more than 700. Reg Goodwin, who was Dean at the time, would take all the new PhD students – I wouldn't say we would all fit in his car, but we would fit in a minibus, and we would be taken to his house for dinner once or twice a term. It was very much a family atmosphere."

However, from an architectural perspective, what strikes François is the capacity of the existing Darwin buildings to accommodate a vastly expanded community.

"What always surprises me is that a lot of the common areas have not changed that much. For some extraordinary reason the Dining Hall is still the same size. I mean obviously they've added a new row of tables for formal dinners. But it was very nicely conceived. You have to give it to Bill Howell, the Head of Department in 1973, who built it – it has stood the test of time in an amazing way."

The opening up of opportunities offered by the Bradfield Room, however, he sees as a "fantastic addition – I think Darwin really needed that."

Darwin's fostering of interdisciplinary connections has been a consistent complement to François's own delight in working across a range of fields, bringing an architect's eye to bear on a diversity of interests.

"I've branched into cinema, and my work has been very interdisciplinary, working with anthropologists, psychologists, musicians. For people who do research, it's the most exciting aspect – to work with and discuss other disciplines has been a wonderful thing. But I always do it from the point of view of architecture. And I always retreat to the relative safety of my profession, really. Because at the end, this is what I know best."

Solving problems in beautiful ways

Michael Salka

For most people, a PhD is enough of an undertaking by itself. But for Gates Cambridge Scholar Michael Salka, it's just one strand of an international tapestry of commitments, which include directing the Master's programme he recently graduated from at the Institute for Advanced Architecture in Catalonia (IAAC) based in Barcelona, working as the Technical Director in charge of running grant projects for the lab which hosts the programme, and maintaining his connection to his hometown in Colorado.

"Luckily the different hats feed each other!" he says.

Michael's role in Barcelona was the inspiration behind his studies in Cambridge.

"I was trying to diversify a bit and scale up my research. At my lab at IAAC we're very focused on timber, as it's kind of the leading material transition for the built environment, especially with regards to carbon. But when you think about the global scale, there are different solutions in different places. So as a way to take more of that international perspective, I wanted to create a PhD where I could study different natural material value chains, and start to understand how they could learn from each other."

In Barcelona, Michael has overseen a portfolio of projects which rapidly transform urban spaces, working with schoolchildren to create temporary pedestrian environments using bio-based materials.

"It's a nice match, because our lab is really focused on bio-based materials for their sustainability potential, and that sort of timeframe is ideal – we need quickly deployable things that can be durable enough in an urban space, but can also be removed and reused because they won't stay in those places forever."

Michael has always been interested in the theory of architecture, and its interconnections with other disciplines, particularly through its environmental impact.

"Even when I was an undergraduate I saw it as a sphere that was largely research-based but could be applied to the built environment. But it was really when I went to Spain and started to understand how the climate funding is working in the European Union, that I realised that architects have this incredible role to be designers of ecosystems, in a way. It's not a direct connection, but when we design and specify buildings that use natural materials, we have a significant impact on the ecosystems that provide those materials."

Darwin felt like a natural fit, both because Michael was returning to education having already established his career, and because of the casual interaction between students and academic staff.

"In Spain we were able to do really incredible things by having direct access to tools and almost no boundaries between students and staff – a hugely collaborative environment. That kind of openness was essential to the success of these projects, because they do touch on so many different disciplines. So I didn't want to enter anything more siloed than necessary."

With the PhD now drawing to a close, for the first time in a while there isn't an obvious next step. Michael is eager to continue working with IAAC on the European Bauhaus Academy Alliance, encouraging greater use of bio-based materials across the European construction sector through the values of sustainability, inclusion and beauty, while also making training more accessible to professionals who can't commit to re-entering further education.

At the same time, however, he's keen to apply the fruits of his research back home.

"I would really love to take some of this experience I've gained between Europe with its progressive funding and the UK with its incredible research atmosphere and take some of that back to my little hometown in the woods in Colorado," he says.

"I think we have an incredibly pressing need – a lot of the mountain towns in the west have a huge housing shortage, housing is incredibly expensive where it is available, and there are great resources. There's a tradition of building with wood, but not in the current technologies. And we also have great materials like clay-rich earth and a climate that works well with natural materials for passive conditioning. So I would love to go and try and show that we can solve problems in beautiful ways."

When one industry builds a town

Julia Wlodarczyk

For Julia Wlodarczyk, the fact that the Master's in Architecture is a two-year course is a large part of its appeal.

"It means you actually get to enjoy it," she says. "You get the chance to experience it again in the second year, or do the things you didn't do last year, so I'm really fortunate."

The course is predominantly self-led, with students pursuing their own research interests and limited structured teaching time. But the expectations of the programme result in a hugely multi-faceted exploration of an initial idea.

"You apply with a research proposal, and then you develop it as you go along in the first year, with the intention of doing field work in the summer. And then you come back and you write it all up in the first term of second year. You create a project which has some writing, some theory, some research and then you design to that, so the last two terms you're designing and drawing and creating a portfolio."

Inspiration for Julia's project came from close to home. Brought up in England from the age of three, she comes originally from Poland, where her hometown is at the centre of the debate about decarbonisation.

"I come from a very small town in Poland, which happens to be the biggest polluter in Europe," she explains. "It's got a really big coal power station, and as we're entering an energy transition period, this power station's one of the first to be proposed to be decommissioned, in the next 10-15 years. So my project started off questioning what happens to this town to prepare them for this really crazy transition, because the whole town was built on this industry."

Considering the impact of the shutdown on the local economy and employment levels, as well as how the 20% of Polish energy the power station currently produces is to be replaced, was beyond the remit of an architectural focus. Instead, Julia gradually narrowed her perspective to examine the connections between the industry and the built environment.

"I went on this journey of looking at all the elements of the built environment, and I've found a type of building which is a community-run fire station. This model of firefighters in the rural countryside dates back to the 1800s, when the state delegated the responsibility of fire management to the people. Over the years it expanded into a community centre. They organise the firefighters and organise lots of festivals and activities, and provide the space for people to gather. It's a group of predominantly women, who do dinners and have different initiatives for the community, and take part in lobbying for change for the village. So they take a lot of agency."

While considering the impact decarbonisation will have on the community, Julia simultaneously became engaged by how this concept of community agency can be replicated elsewhere, and the role that architecture could play in it.

"I've been looking at that type of building, as it's a kind of historic and traditional form that's not really been explored much in architecture. So I've been looking at how that model could be viewed in the future as something where you balance utility and culture and self-organisation in a way to exchange knowledge and foster self-organisation, self-maintenance, for the transition."

Julia's research has already led to an invitation to contribute a chapter to a forthcoming book, *Urban Resilience*, an experience which confirmed that the end of her time at Darwin will not see the end of her interest in academia. However, the ideal trade-off between research and practice remains to be seen.

"I see myself very much in the balance, because whilst I like writing I also like the actual materialisation of a project. I definitely want to keep one foot in, but also get to work."

Thank you for your support

Fiona Duffy, Director of Development

Thank you to everyone who helped to make 2024 a special year for Darwin. As the College site fluttered with anniversary bunting, we marked our first 60 years in July with a weekend of celebration attended by alumni from around the world and across the decades. Many alumni also made special birthday gifts to the College this year, collectively raising £800,000 between January and November. A special report will be sent to all donors in the spring, to share how your gifts have had an impact on our students and life in College.

In September we gathered again to launch a major fundraising campaign for our future plans. Friends and supporters of Darwin including the Vice-Chancellor Professor Debbie Prentice, Honorary Fellow and Astronomer Royal Lord Rees, and Honorary Fellow and Darwin family representative Angela Darwin, shared their perspectives on why supporting Darwin to build on the achievements of its first 60 years is so important.

"Darwin has established itself as a hub for intellectual curiosity and boundary-pushing," said the Vice-Chancellor.

"The College recognises that postgraduate research students are the "engine room" of academic endeavour. It is committed to creating an environment in which our leading academic talent can support, nurture and mentor our up-and-coming talent. Today, Darwin is home to the largest number of PhD students at the University – making it the deepest pool of postgraduate potential. The University's future success depends on being able to continue attracting the best and brightest minds. And when we do, we must ensure that we can offer them the best possible experience."

As we turn 60, we have set ourselves an ambitious target – to raise £60 million to:

- Ensure that the brightest researchers, especially those who are underrepresented in higher education, are given the financial and practical support they need to flourish.
- Provide more spaces for innovation, collaboration and study through the creation of a multipurpose Garden Room under the Dining Hall.
- Reduce our environmental footprint to become a carbon neutral College, firstly by reducing our energy use through extensive insulation, and secondly by installing an innovative water-source heat pump taking heat from the river to provide heating and hot water – the Pump House Project.
- Make a significant impact on the global challenges facing society by launching a new Global Challenges Innovation Fund – to support groups of students, Fellows and alumni to work collaboratively on new solutions.

From its inception, Darwin has had a clear sense of purpose and been unafraid to do things differently. By contributing to this campaign you can help to ensure that this purpose continues to propel the College forward, fostering research and innovation whose impact will be felt far beyond Cambridge.

To make a gift or discuss the campaign further, please contact Fiona on
development.director@darwin.cam.ac.uk
All gifts matter, whether large or small

Designing the future of Darwin

The Garden Room, as seen from the College gardens

In Darwin's 60th year, we are delighted to be pursuing an ambitious programme of building, to equip the College for its future, and to fulfil our aim of achieving a carbon zero site by 2032.

The Silver Street campus is a beguiling blend of architectural styles and periods. The 19th century family homes at the heart of the College are connected by the 1960s addition of the Rayne Building and Dining Hall, now listed buildings in their own right. Later developments, including the Study Centre (1994) and Bradfield Court (2019) have won architectural awards in recognition of their sympathy with the existing context, forming a cohesive whole around the gardens and the River Cam.

However, with nearly 800 students in a College which originally housed a scant 12, the need for more communal spaces is growing. As François Penz points out on page 15, the site has adapted remarkably well to a dramatically increased population. But whereas their 1960s counterparts may have worked in the library or lab, and relaxed in the Bar and Parlour, for students today the boundaries between the two are more porous. We need to offer spaces which reflect that – where students can sit with a laptop and a coffee, or unwind with friends – and which provide the opportunities for interdisciplinary interaction which have been key to the Darwin experience from the beginning.

The Garden Room interior

In tandem with this, we are determined to honour the ambitions laid out in our Strategic Plan, to reduce the College's carbon impact to zero.

A new fundraising campaign, outlined by the Development Director on page 18, will provide the opportunity for alumni and friends of Darwin to be part of this pivotal moment in the College's evolution.

"Building on our 60-year legacy we are, for the first time, launching a major fundraising campaign to improve the College site, reduce our environmental impact, make a greater contribution to the research and education this University provides, and to focus our efforts on the greatest challenges facing the world today," says the Master, Dr Mike Rands.

Working with two firms of architects, we have applied for planning permission to realise a multifaceted proposal to decarbonise the existing site, harness the river's energy through a river-source heat pump, and create a new social space under the Dining Hall.

A switch to sustainable energy sources is only feasible if the existing building fabric is first improved to limit heat loss as much as possible. 5th Studio will therefore oversee fabric improvements to Newnham Grange and Newnham Terrace, while Caruso St John will undertake similar measures in the Hermitage, Rayne Building and Dining Hall. These measures principally comprise improved glazing and insulation, sensitively incorporated into the historic fabric, as well as the first comprehensive refurbishment of the central buildings in over 50 years.

Turning to the river to meet the heating needs of the site, we plan to build a Pump House, designed by 5th Studio, which will house the technology required to provide a low-carbon source heating and hot water for the majority of the Silver Street estate. A network of pipes will distribute heat to individual buildings, while the Pump House itself will make the technology visible, celebrating its innovation and raising the profile of a truly sustainable solution.

"It's really exciting," says Nicola Blake, architect at 5th Studio, who also teaches an undergraduate design course at the Department of Architecture.

"We quickly realised that we couldn't hide the building away because there's a lot of equipment that goes into it. So we chose to design a small landmark that celebrates decarbonisation, a fitting bookend to the College site."

The building is designed to invite inquiry into its purpose and impact, both from College members and casual observers.

"We've made the ground floor open, raising up the structure so that you get a clear view to the filtering screen and to some of the key equipment that engages with the river. You can punt past there, which should be a really good way for members of the public to get a glimpse of it."

The need to house the technical workings of the heat pump, without dominating an already physically small site, created a very specific set of demands on the architects' creative powers.

"I think as architects we thrive on constraints – they give us something to respond to and allow us to form a clear narrative," says Nicola. "But the building is not only driven by constraints, it's also driven by a desire to have a strong presence on the water, to relate to the millpond with its cluster of historic industrial buildings including water mills that used this section of the river as a source of energy. We see the Pump House as an addition to this family of idiosyncratic structures, shaped by the river and the space it needs to draw energy from it."

Simultaneously, the College has commissioned Caruso St John to design a new multi-purpose space beneath the existing Dining Hall. Lightly enclosed, to take full advantage of its views of the College grounds, the Garden Room will

naturally extend the ground floor of the College, creating a seamless relationship between Newnham Grange, the Rayne Building and the Hermitage, as reflected one floor up.

The room will enable College members to meet and engage with one another in a casual, light-filled setting which enjoys the surrounding aspect of the gardens, improving the quality of social spaces in the College for events, informal study, and collaboration.

"The projects were conceived as different aspects of the same plan from the beginning," says the College Bursar, John Dix.

"The need for an additional 'third space', which can be used for both work and recreation, while fostering connections across the College community, is part of the same vision as the updating of our approach to energy use to fit the College for a sustainable future."

Designing the Garden Room to sit in sympathy with the Dining Hall and the surrounding buildings was not a straightforward brief, admits James Hand of Caruso St John.

"But that's the exciting part about it," he explains. "These interesting 19th and 20th century architectures which aren't obviously inherently compatible. It's a really challenging thing to work with that and to find something which complements it and works with it but doesn't detract from it, so that you make this greater whole somehow."

The Dining Hall's elevated position provides striking views over the gardens, but was also designed to create a car park underneath the building at the entrance to the College. In 2024, this feels increasingly less essential in central Cambridge, particularly in a College striving for environmental sustainability. But filling in a space designed to be there puts the architects in a complex imagined dialogue with their 1960s predecessors.

"The idea of it as a building which you drove off the street and came under doesn't feel so important in cultural terms any more – there's not the same expectation of immediate transition from car to interior," says James.

"But what could be there instead? We thought that was going to be a really difficult thing to unpick, but the archive at Darwin is fantastic, and we went up and looked through old correspondence and actually they were already discussing when they built it in the 60s that something could come underneath it. But how you deal with it is the question – the Dining Hall is a difficult shape to do something with. We played around with the geometry of it to make it this kind of second order, so it's twice as geometric as the original, which kind of breaks it down and makes it feel lighter in some way. The materials reflect that – it's trying to be a bit curtain-like, and doesn't remove the idea of the hall being raised up, so that it has this vista over the gardens."

Creating spaces to be used and remembered by generations of Darwinians, and which will become part of the defining template of the College for its members, is an exciting prospect for any architect.

"It's amazing to work with Darwin because it's an opportunity to do something really important and lasting," says James. "I think we're all looking forward to seeing it at some point in the future being built and getting to stand in those spaces and see how it changes the character of the College."

The Pump House, as seen from the gardens

Obituaries

Alumnus **Dr Victor Paz** (PhD Archaeology 1996)

Thank you to Darwin Fellow Professor Martin Jones for this tribute.

Renowned Filipino archaeologist and Darwin alumnus, Victor Joaquin Paz, has sadly died at the age of 57. On arrival in Cambridge from the University of the Philippines Diliman in the mid 1990s to embark on graduate study, Victor immediately made his presence felt in his College and Department as a vivacious and generous younger researcher with a strong sense of community. While working on his doctoral thesis, a pioneering study of Indonesian archaeobotany, he succeeded in combining innovative research with contributing to his academic community, be it seminar groups, mentoring, or having fun, an approach to life and to those around him that he maintained even in final years of severe illness.

After graduating, Victor returned to the Philippines to build up an archaeological training programme to secure for the first time a structure and continuity for the Philippine archaeological profession. He pressed that forward on many fronts, including his directorship of that programme, his creation of publication opportunities, including his role as founding editor of the journal *Hukay*. He was also ahead of the curve in using social media for the communication and advancement of his field.

Victor led two of the Philippines' longest continuous archaeological research projects: the Palawan Island Palaeohistoric Research Project and the Catanauan Archaeological and Heritage Project. He continued to work with colleagues he first met in Cambridge, including Helen Lewis on the Palawan project, and Graeme Barker at Niah Cave in Sarawak, Borneo. In a recent interview he reflected on approaches he learned at Cambridge: approaches to students, to institutional culture, teamwork and cross-disciplinary international collaborations. His life's work provides a model of how to put those approaches into effective action. His legacy is one of the strongest national archaeological research and teaching cultures in Southeast Asia. His 57 years leave an indelible mark on the archaeology of Southeast Asia and beyond.

Alumna and Emeritus Fellow **Professor Felicia Huppert** (PhD Psychology 1968)

Felicia completed her PhD in Experimental Psychology at Darwin in the 1970s, and became a Fellow of the College in 2002. She was a psychologist with a longstanding research interest in the science of well-being and the promotion of human flourishing, and the Founding Director of the University's cross-disciplinary Well-Being Institute, a role which she combined with numerous research and advisory positions in Australia.

Her roles included Honorary Professor at The University of Sydney's Body, Heart and Mind in Business Research Group, and Visiting Professorial Fellow, Department of Psychology, University of New South Wales, Sydney. Felicia was a member of the Australian Expert Group of the Global Mindfulness Initiative and Director of the Australian Compassion Council Scholars Program.

She was a Fellow of the British Psychological Society, past Chair of the European Network for Positive Psychology (ENPP), and a past Member of the Board of Directors of the International Positive Psychology Association (IPPA).

In a series of tributes collated by the International Journal of Wellbeing, Dr Kai Ruggeri of the Department of Health Policy & Management at Columbia University said:

"Felicia changed the world at a time the world needed to change. People who interacted with Felicia – personally or even just through her work – changed how we viewed the world. Without Felicia, researchers, governments, employers, and, most importantly, individuals, would still be decades behind where we are in our understanding of mental health, why we should care so much about it, and what truly improves wellbeing. She fought for people to care about wellbeing when no one did, fought with people who tried to stop her from making an impact, and then when mental health became popular to discuss, fought for the field to have higher standards. Though she was the consummate academic, her impact went far beyond; by teaching us that health and wellbeing are more than the absence of illness, she made life better for us. The presence of Felicia made that possible."

Alumnus **Dr David Ish-Horowicz** (PhD Chemistry 1969)

David was one of the pioneers in the application of molecular biology to developmental genetics. After a PhD at the MRC Laboratory of Molecular Biology, and a postdoc in Basel, David was recruited by the Imperial Cancer Research Fund. He remained there until his retirement in 2013, first at the ICRF Mill Hill Laboratories, then its Developmental Biology Unit in Oxford, and latterly at the ICRF/CRUK-LRI labs at Lincoln's Inn Fields.

He received the 1997 Gulbenkian science prize and the 2007 Waddington medal of the British Society of Developmental Biology, and was made a fellow of the Royal Society in 2002.

After leading on the molecular cloning of the *Drosophila* heat-shock genes, David set out to apply molecular methods to Drosophila developmental genetics. This led to the successful isolation of *hairy*, a "pair-rule" gene critical for development of the segmentation pattern of Drosophila embryos. David's interest in how *hairy* controls transcription led him to identify *groucho*, the first metazoan co-repressor protein, and to uncover the role of *hairy* in Notch signalling and neurogenesis.

When his lab closed in 2013, he was adopted by collaborators and institutions, dividing his time between Oxford's department of biochemistry, and UCL's laboratory of molecular cell biology, where he held honorary professorships, with Fridays spent in the Francis Crick Institute.

In a tribute in the *Guardian*, David's nephew, Jonathan Ish-Horowicz wrote:

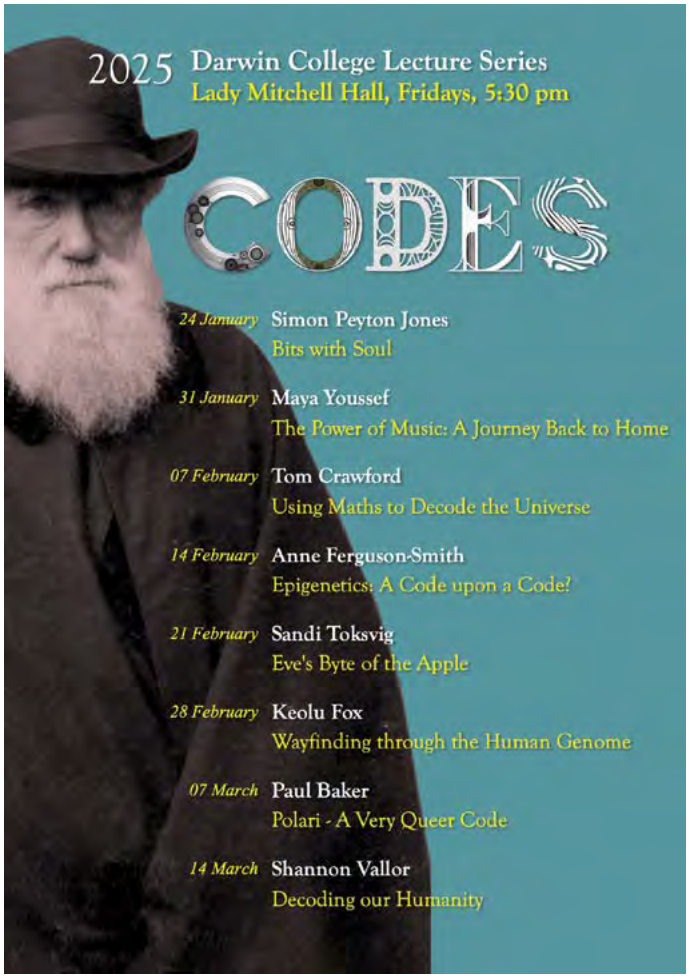
"David was passionate about science and the sharing of knowledge and ideas, which he did with generosity and enthusiasm. He was widely read, a skill valued by colleagues and friends with whom he would share the latest developments, revelling in the explanation of new discoveries. He never really retired.

He continued to nurture young scientists, putting them at their ease in order to encourage them. His legacy is not only one of scientific advancement, but also his collaborative approach and his mentoring of younger generations."

Alumnus **Dr Vickramabahu Karunarathne** (PhD Applied Mathematics and Theoretical Physics, 1967)

Vickramabahu had a prominent career in his native Sri Lanka as a scientist and politician. The leader of the New Sama Samaja Party, he ran for President in 2010 and was a lifelong advocate of leftwing politics. He will be remembered for his contributions to both science and politics, and a life devoted to public service.

Join us for the Darwin College Lecture Series 2025



Alumni Events 2025

Tuesday 4 March	**Alumni Gathering in Shanghai**
Friday 7 March	**Alumni Gathering in Beijing**
Monday 10 March	**Alumni Gathering in Hong Kong**
Saturday 15 March	**DCBC Dinner**
Thursday 20 March	**Online Career Network Event**
Friday 21 March	**In-Person Career Network Event**
Friday 21 March	**Alumni & Fellows' Formal Hall**
Saturday 21 June	**DCBC Dinner**
TBC July	**Family Formal Hall**

We look forward to welcoming you back to Darwin.
For full details of events and reunions, please see
darwin.cam.ac.uk/alumni-and-supporters/alumni-events

We want to hear from you!

Complete the Darwin College 2025 Alumni Survey to share your thoughts with us.

Use your mobile phone to scan the QR code below or visit **https://my.darwin.cam.ac.uk/darwinsurvey25** to submit your survey response.

Darwin College Alumni and Development Office use the highest standards to maintain your personal details. Please read our full data protection statement on our website at **www.darwin.cam.ac.uk/dataprotection**

Editor: Laura Kenworthy.
We welcome short articles, pictures and news from all alumni.
Correspondence to: **communications@darwin.cam.ac.uk**

Front cover image: Andrzej Bugajski
Back cover image: Professor Alan Blackwell