



#discoverydays24

# Discovery Days 2024

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**Wednesday 10 January**

11:30 - 16:30

**Thursday 11 January**

09:00 - 16:30

**Friday 12 January**

09:00 - 16:45

# Welcome

“It is ultimately right that the public that funds this great institute should see University projects that impact the community, the wellbeing, the hopes, the quality of life and the benefit of the whole world.”

**Stephen Fry**

At the inaugural University of Dundee  
Stephen Fry Award for Public Engagement  
January 2012

[uod.ac.uk/discovery-days](https://uod.ac.uk/discovery-days)

## University of Dundee's Discovery Days 2024



In 2022, we launched our new University Strategy 2022-2027, and in doing so gave a clear statement of our commitment to draw on the triple intensity of academic excellence in research, education and engagement and to deliver on our positive social purpose. Our Discovery Days programme celebrates that excellence and its impact.

We've set ourselves some significant challenges for the years ahead which will see us transform lives around the world through our work on Climate Action & Net Zero, Equity & Inclusion, and Population Health & Wealth. We can only tackle these issues through interdisciplinary collaboration, and our Discovery Days are an exciting opportunity to engage with our new professors, award-winning teachers and communicators, to inspire new ideas, projects and conversations that respond to the social challenges we face. This is a great opportunity for us to inform and connect with communities and future generations locally, nationally and globally.

The annual Discovery Days began in 2004, as a celebration of the work of our newly appointed leaders in research. Since then, we have heard and discussed the work of 303 new professors at the University of Dundee, as they showcase their ideas to the public and our University community. This year, Discovery Days 2024, will see us welcome a further twenty three new professors, talking on a rich array

of subjects varying from health and wellbeing and economic sustainability to our ground-breaking scientific research and arts practice. We will also host presentations from our leading learning and teaching practitioners. They will share with us insights into new and innovative teaching methods and how they support student welfare.

The series opens with a public session of the University's Court. This event provides an opportunity for stakeholders to hear from Amanda Millar, the University of Dundee's Chair of Court and myself as Principal and Vice-Chancellor, to ask questions and to engage with the strategic priorities on the Court's agenda.

Discovery Days 2024 promises to be a fascinating tour through the outstanding achievements and future plans of our staff and students, and I hope very much that you will join me on what will be an exciting voyage of discovery for us all.

I look forward to seeing you there.

**Professor Iain Gillespie**  
Principal and Vice-Chancellor

# Session 1

**Wednesday 10 January 2024**

**11:30 – 12.30**

Lunch: 12:30 – 13:30

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**Chair:** Tricia Bey,  
Deputy Chair of Court



## Public Session of Court

Amanda Millar • Chair of Court  
Prof Iain Gillespie • Principal and Vice-Chancellor

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This session will see the University Court hold its sixth annual public stakeholder meeting, with representatives of the governing body.



Amanda Millar, Chair of Court, and the University Principal & Vice-Chancellor, Professor Iain Gillespie, will discuss Court's achievements over the past year and the University's ambitious plans for the future with the Deputy Chair of Court, Tricia Bey. Thereafter, Amanda, Iain and Tricia will take questions from attendees.

# Session 2

Wednesday 10 January 2024

13:30 – 14:45

Coffee break: 14:45 – 15:15

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**Chair:** Prof Iain Gillespie,  
Principal and Vice-Chancellor



## The University as a driver for economic transformation

Dr David McBeth • Vice-Principal (Enterprise and Economic Transformation)

In this talk, Dr David McBeth will outline the University's commitment to improving Dundee's prosperity, as well as its aspiration to impact positively on the social fabric of the city and its citizens. David will touch on major initiatives and projects led by, or involving, the University such as those funded by the Tay Cities growth deal (in Health & Life Sciences and Justice), as well as the opportunities provided by Eden Project Dundee. He will also highlight the impressive success of spin-out and start-up companies that have been supported by the University over the years, and their contributions to economic transformation.



## Policing secretion: How cells ensure accurate delivery of proteins

Prof Liz Miller • Chair of Molecular Membrane Biology

Human cells make roughly 10,000 different types of protein that must be faithfully delivered to the right places within the cell itself, and to the bloodstream and tissues. Each protein is given an 'address label' that ensures accurate delivery of these proteins. We aim to understand this delivery system and how individual cells decode those address labels to efficiently handle such a large volume of protein traffic. In the long term, we want to develop chemical inhibitors that will selectively prevent the release of proteins, that contribute to heart disease and other pathologies.



## What blows with the wind?

Prof Xiaoyi (Shawn) Mu • Chair of Energy Economics

Renewable energy such as wind and solar will play a crucial role in the 'net zero' strategy by 2050. Thanks to an array of government supporting policies, renewable energy in the UK has experienced a phenomenal growth over the past decade or so. In 2022, wind power contributed a quarter of the UK's total electricity generation. This talk will look at how the growth of wind energy has impacted the wholesale electricity prices, CO2 emissions and the electricity system costs in the UK, and why the electricity prices did not fall despite a significant drop in the total demand.

# Session 3

Wednesday 10 January 2024

15:15 – 16:30

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**Chair:** Prof Wendy Alexander,  
Vice-Principal (International)



## Unethical working practices in the global supply chain

Prof Shamina Haque • Chair of Accounting

Irresponsibility and unethical working conditions have always been an issue of concern in the global supply chain. Workers in the global south are often subject to exploitation by retailers in the global north, all in the pursuit of maximizing their profits. The COVID-19 crisis has exacerbated the suffering of these workers in the supply chain and amplified broader stakeholder concerns over the issue. Drawing on a recent research project, this talk will shed light on the impact of COVID-19 on garment workers in Bangladesh during the pandemic. The research delves into how the lack of accountability within the garment supply chain by big brands and retailers contributed to the economic and social vulnerabilities experienced by these workers, particularly women, during this challenging period. We have gathered evidence regarding the impact of COVID-19 on these workers and made specific recommendations aimed at effective positive change to prevent and remediate unfair practices within the garment industry.



## Imagining justice: Stories from the inside

Prof Trish McCulloch • Chair of Social Work

Ideas of justice, fairness, and equality matter to most of us. Yet, achieving justice, in contexts of inequality and harm, continues to be 'hellish complicated'. In this talk, Prof Trish McCulloch will share findings from her work on what justice means for people with convictions and how we can advance justice for all. Advancing justice with people with convictions is not easy. There is a strong relationship between poverty, social exclusion and offending but rather than solving these social harms our justice responses often amplify and entrench them. Drawing on theories of justice, participation, and real utopias, as well as the lived experiences of people with convictions researched over several years, Trish invites us to imagine what justice looks like in modern societies and the parts we play in securing that.



## The Great Resignation: Causes and consequences

Prof Sanjay Singh • Chair of Human Resource Management

A phenomenon known as 'The Great Resignation' has affected every business in the world. Globally, millions of workers quit their jobs, and this trend is expected to continue. The scientific world is paying close attention to this novel phenomenon, and practitioners and researchers are working hard to identify the causes, consequences, and preventative strategies of this wave of people leaving the workforce. We don't yet know much about stopping the great resignation phenomena, but it must be handled carefully.

# Session 4

Thursday 11 January 2024

09:30 – 10:45

Coffee break: 09:00 – 09:30

Coffee break: 10:45 – 11:15

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**Chair:** Prof Shane O'Neill,  
Deputy Vice-Chancellor and Provost



## There and back again (A Journey from FE to HE)

Prof Nick Brewer • Chair of Biochemistry Education

The power of education to truly change lives can never be underestimated. In this talk, Prof Nick Brewer will talk about his 20-year journey navigating through the education sector from his first teaching role at a Further Education College (where he had a true epiphany) to Higher Education that has allowed him the opportunity to open doors for students that perhaps, would not have come to university. Working in partnership with colleges, in particular local partners like Dundee and Angus College has been incredibly rewarding. There have been other initiatives that have spun out of the FE College work that have also opened doors for students that perhaps would never have come to university. Making 'the Dundee Difference' to our local community matters and the challenge is to do more in active collaboration with FE partners to continue the strong tradition Dundee has to truly make a difference to people's lives.



## Enlighten me: Recapturing liberal values for higher education

Prof Jane Fenton • Chair of Social Work Education

Something worrying is happening in higher education – censorship, no-platforming, and a stifling orthodoxy of critical social justice activism/scholarship. In this talk, Prof Jane Fenton will provide research evidence of these trends and will offer some analysis of their ideological underpinnings and implications. Jane will then suggest an antidote – the promotion of traditional, liberal, Enlightenment values, including free expression, tolerance, resilience and rationality.



## Leptin: A novel drug to treat Alzheimer's disease?

Prof Jenni Harvey • Chair of Cellular Neuroscience

How our brain cells communicate with each other determines how we think and behave. In Alzheimer's disease, build-up of unwanted protein causes impairments in communication between brain cells, which results in memory loss. Professor Harvey's research focusses on the cellular events involved in brain cell communication, and how these processes are altered in brain disease. In this talk, Jenni will describe how this brain communication system is controlled by the hormone, leptin. This work has led to the discovery that treatment with leptin prevents the breakdown in communication that occurs in Alzheimer's disease. Importantly, leptin-based molecules replicate the protective actions of leptin, providing a potential novel drug approach for treating Alzheimer's.

# Session 5

Thursday 11 January 2024

11:15 – 12:30

Lunch: 12.30 – 13.30

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**Chair:** Dr David McBeth,  
Vice-Principal (Enterprise and Economic Transformation)



## Early detection of mouth cancer

Prof Michaelina Macluskey • Chair of Oral Surgery

The role of a dentist is not only to check for the more common diseases of the mouth, but also to screen patients for mouth cancer. Often these cancers are preceded by lesions that cause no symptoms but can be identified in the mouth. These can be picked up at an early stage and treated. Patients are then followed up for five years as they are at risk of recurrent disease or developing a cancer. Vigilance relies on regular visual inspection by a dental professional. Professor Michaelina Macluskey has a dedicated clinic each week for such patients. By identifying those lesions that are at greater risk of malignant transformation or recurrent disease we may be able to develop biomarkers or treatments. The development of new diagnostic tools may also help identify high risk patients. In this talk, Michaelina will provide a brief outline of her research in this area.



## It ain't over 'til it's over: Second acts for ancient medicines

Prof Graham Rena • Chair of Cardiovascular and Metabolic Medicine

Most modern medicines are designed against a specific target and that means we know pretty well how they work. In contrast, it is far less clear how some older medicines, which are still in extensive use today, exert their therapeutic effects. Examples include metformin (Glucophage), colchicine and salicylate, all of which have been studied in Prof Graham Rena's laboratory. Research in this area will maximise opportunities to identify new medicines based on these properties and promote cost-effective 'repurposing' of the existing medicines. In this talk Graham will present an overview of research carried out by the postdoctoral fellows and graduate students in his research team.



## Cutting back malaria: Genome editing for new antimalarial discovery

Prof Marcus Lee • Chair of Parasite Molecular Genetics

The repeated emergence of drug resistance to malaria treatments underscores the importance of identifying new drug targets. We use genetic approaches to understand how quickly the malaria parasite can develop resistance to new drugs, how developing resistance might harm the parasite in other ways, and whether the genetics of the parasite influences resistance outcomes. We also are developing genomics-based assays to rapidly identify the targets of new antimalarial compounds and explore their impact on parasite biology.

# Session 6

Thursday 11 January 2024

13:30 – 14:45

Coffee break: 14.45 – 15.15

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**Chair:** Prof Lisanne Gibson,  
Vice-Principal (Research)



## Pictures of sculptures, sculptures of pictures

Prof Michael Peter • Chair of Fine Art & Illustration

What are the rules of engagement for looking at art? Peter's playful work incorporates imagery influenced by illustration and commercial art. His sculptures are often enlarged drawings, used to animate the narrative of his exhibitions which satirise the symbols of power and authority. They interrogate visual representation, questioning what it means to know something or at an assumption of knowledge. In this talk he'll use the mechanisms of illustration to present layered meanings and ideas, presenting images that get us thinking about art and the act of making.



## Accountants of the future

Dr Gizella Marton • Representing the Course of the Year Award  
– 2023 Student-Led Teaching awards

The University of Dundee's Masters in Professional Accountancy programme combines master's level study with accountancy professional body accreditation. Our students graduate as part qualified accountants and are ready to join the workforce. In this talk, Dr Gizella Marton, programme leader, will share how she and colleagues enhance our students' employability skills and prospects across the course.



## Net zero accounting for a net zero world

Prof Ian Thomson • Chair of Accounting and Sustainability

Climate change is the biggest threat to our way of life today. We urgently need to change what we do, how we do it and where we do it to avoid a climate catastrophe. Done properly these changes will transform the world in a positive way, turning risk into opportunity and threats to net positive outcomes, but only if we use the latest science to produce the right evidence to inform decision makers. This talk will explore the right and wrong ways to measure and value the climate consequences of all decisions.

# Session 7

Thursday 11 January 2024  
15:15 – 16:30

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**Chair:** Prof Lisanne Gibson,  
Vice-Principal (Research)



## Good data governance: Data for the people and planet

Prof Angela Daly • Chair of Law and Technology

Our world is increasingly digitalised, with vast amounts of data created by and about us by the government, private companies and other people like our friends and family. Much of this data is controlled by governments and companies, with limited input and direction from the public. This data does not exist in a vacuum. Large amounts of energy and equipment are needed to support our digital products and services. Can we the public get back control over our data? Do we even want to be in control of our data? And how can we face the challenges of climate change in our digital world? In this talk, Prof Angela Daly will draw on her engaged research on data governance to offer some answers to these questions.



## Activism and... accounting?

Prof Colin Dey • Chair of Sustainability Accounting

Accounting is usually seen as a technical practice that measures an organisation's financial performance. Many organisations also now use accounting to measure their wider social and environmental performance. But this is still only part of the story of who uses accounting, and for what purpose. In this talk, Prof Colin Dey will explore how campaigning activists and social movements have used accounting to challenge and to reimagine organisational conduct.



## Water law - what's that?

Prof Sarah Hendry • Chair of Law

'Water law' covers many areas, including water resource management; water quality and water pollution; water rights and allocation; and water services (drinking water and wastewater). Water is essential to all forms of life on our planet. It is cross-cutting across global problems including climate change and biodiversity loss; it is critical to public and individual health but is also a factor of production and vital to all forms of development. In this talk, Prof Sarah Hendry will look at some aspects of water law in the context of the Sustainable Development Goals, and consider how the law can provide a mechanism for addressing complex 'wicked' problems in an interdisciplinary world.

# Session 8

**Friday 12 January 2024**

**09:30 – 10:45**

Coffee break: 09.00 – 09.30

Coffee break: 10.45 – 11.15

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**Chair:** Dr Jim McGeorge,  
University Secretary and Chief Operating Officer



## “It’s all about you!”: Individual focussed social work, student experience and international recruitment

Prof Richard Ingram • Chair of Social Work

The motivation to become a social worker is often rooted in personal experience and a desire to make a difference in the lives of individuals and to society. Students arrive at university with a range of skills, knowledge and values which form the basis of their professional development and education. Once at University, students require support with transitions and experiences which impact on their learning and professional development. Furthermore, in terms of programme development and student recruitment the need for understanding and encouraging and awareness of individual perspectives is crucial and starts a process of engagement and shared understanding. In this talk, Prof Richard Ingram will share lessons for social work education and internationalisation in the higher education sector, in terms of the need to recognise, facilitate and develop reflexivity, empathy, cultural awareness and emotional intelligence within our academic community.



## Nurturing accessible learning communities

Lorraine Syme-Smith • Winner of the Accessible Education Award – 2023 Student-Led Teaching awards

Universities strive to create a learning environment where all students feel valued and develop a sense of belonging. Designing courses that are accessible to all learners is a cornerstone of our scholarship. Together these efforts help to encourage and support people from diverse backgrounds to study in higher education, many for the first time. In this talk Lorraine Syme-Smith will draw on her 30 years of experience of making education accessible. Lorraine will share examples from her practice including some on how learning technologies can support inclusive learning communities.



## Campaigning for change: Banning disposable vapes

Laura Young • Award-winning climate activist

Laura Young is an award-winning environmental scientist, campaigner, and ethical influencer. Laura is also a joint postgraduate researcher between the University of Abertay and the University of Dundee, as part of the Hydro Nations Programme. Over the past year she has been leading the campaign to see disposable vapes banned on environmental and public health grounds, leading to a UK-wide consultation launch and several other political outcomes. As this campaign continues, Laura will share about her work and how to build a campaign.

# Session 9

Friday 12 January 2024

11:15 – 12:30

Lunch: 12.30 – 13.30

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**Chair:** Dr Jim McGeorge,  
University Secretary and Chief Operating Officer



## Choose your words wisely: Investigating language production

Prof Alissa Melinger • Chair of Psycholinguistics

The process of speaking is complex and involves the retrieval and coordination of words, syllables and sounds. Prof Alissa Melinger's research has focussed on the processes involved in producing single words. To produce a single word like 'cat', the language centre of the brain considers a set of potential words. Some will be appropriate for the intended meaning, such as 'cat', 'feline', 'kitty', 'moggy', while some will be inappropriate but related, such as 'dog', 'whiskers', 'purrs'. Alissa will share her work on the impact that these alternative candidates have on our ability to produce words quickly and accurately.



## All roads lead to Times New Roman: Typography and the common law

Prof Thomas Giddens • Chair of Jurisprudence

There is a hidden message encoded in the typography of the official report of the legal case *Baigent v Random House* (2006). The case is a copyright claim against *The Da Vinci Code*, and the trial judge was inspired to transmit a secret code of his own. He did this by formatting individual letters in bold and italic throughout his written decision. The Court of Appeal was not amused by these typographic shenanigans: on appeal, the Court mentions the code just long enough to say that it has no relevance or legal meaning. But, if this were the case, why would the appellate justices need to mention the code at all? This talk will argue that the typographic differences between the two judgments, far from being irrelevant decoration, actually reveal the foundations of Western legal power as an institution infused with colonialist and capitalist interests.



## 'We are One People': Place branding and settler narrative in international communications

Prof Susan Kinnear • Chair of International Communication

Reeling in the aftermath of the 2019 Mosque shootings, Prime Minister Jacinda Ardern responded to the shock of New Zealanders everywhere with the unifying mantra 'We Are One People.' New Zealand prides itself on its inclusivity, and yet the process of nation-building, sponsored by the state, has privileged the white male over every other narrative of New Zealand identity. This presentation will explore the internal forces that shaped settler identity in New Zealand. It will examine how state sponsored ideographs, played out in nation and place branding, contributed to the rise of racism and hostility towards non-white self-imagining, and continues to leave some New Zealanders marginalised in their own home.

# Session 10

Friday 12 January 2024

13:30 – 14:45

Coffee break: 14.45 – 15.15

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**Chair:** Dr Jim McGeorge,  
University Secretary and Chief Operating Officer



## You think forensic science is sexy?

Prof Anne Coxon • Chair of Practice in Forensic Science

For many years, popular TV shows and films have given the public an idealistic picture of forensic science. This has created unrealistic expectations of both the role and of the science in the Courts, particularly from members of the jury. Drawing on 28 years' experience in operational forensic science (20 years as a clandestine drug laboratory chemist working from crime scene to court in New Zealand and eight years as a manager and executive responsible for delivering forensic science and pathology services to the State of South Australia), Anne will compare and contrast the media portrayal of forensic science with reality. Anne will share some of her more challenging, rewarding and entertaining experiences of working in forensic science.



## “Unknown Unknowns”: Navigating the challenges in training students in statistics

Dr David Booth • Winner of the Most Inspirational Teaching award – 2023 Student-Led Teaching awards

How do we train our students to navigate the landscape of misleading interpretations, and develop a keen awareness of the deceptive power of statistical results? Dr David Booth will share his experiences navigating the uncharted territories of statistical education and empowering the next generation of life scientists to face the unknown with confidence and competence. In this presentation, David will cover the intricacies of statistical training, addressing the challenges often overlooked in conventional approaches. Using real-life examples and hands-on analytical exercises, he will share how he bridges the gap between theory and practice, preparing students for their capstone project and beyond.



## How do we ensure energy security and meet net zero targets?

Prof Sudharshan Reddy Paramati •  
Chair of Financial Economics and Climate Change

With increasing tension around the world, energy security has become recent focus of discussion. The International Energy Agency estimates that more than 770 million people in the world have no access to electricity. While in Sub-Saharan African nations only 50% of people have access to electricity. So, on one-hand we are tasked with reducing global emissions by ensuring sustainable economic development with increasing investments into renewable energy projects and improving renewables in total energy-mix. And on the other hand, there is a serious issue of energy security. This talk focuses on the policies that need to be implemented to ensure energy security and meet the agreed targets of emission reduction by countries.

# Session 11

**Friday 12 January 2024**

15:15 – 16:45

Drinks reception: 16.45 onwards

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**Chair:** Prof Iain Gillespie,  
Principal and Vice-Chancellor

## **Presentation of The Stephen Fry Public Engagement Awards**

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- Early Career Researcher of the Year
- Engaged Researcher of the Year
- Public Engagement Project of the Year





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**EVERYONE WELCOME**

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