



## The Climate Emergency and Social Inequality – Responses from Researchers in Wales

Early Career Research Conference • Friday 26 November 2021

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| <b>9.00 – 9.10</b>  | <b>Introductions</b>   |
| <b>Professor Helen Fulton</b><br><b>Dr Ben Raynor</b>   | Vice-President, Humanities, Arts and Social Sciences, Learned Society of Wales<br>Senior Research Manager, HEFCW   |
| <b>9.10 – 9.30</b>  | <b>Keynote</b>   |
| <b>Professor Milja Kurki</b>  | ‘Climate Change: The potential and the challenges for cross-disciplinary responses’  |
| <b>9.30 – 10.30</b>   | <b>Session 1 – Interconnection, Participation and Decision Making: Approaches to Acting Globally</b>   |
| <b>Dr Amaya Querejazu</b>   | ‘Making Kin with Other Worlds: Relationality as a methodology to build pluriversal international relations’  |
| <b>Dr Caer Smyth</b>  | ‘No Room for Wildlife? Making a case for the environment in participatory decision-making processes’   |
| <b>Dr Feng Mao</b>  | ‘Serious Games for Climate Change Adaptation’  |
| <i>Chaired by Professor Ambreena Manji, School of Law and Politics, Cardiff University</i>                    |  |
| <b>There will be a short comfort break at the end of this session</b>   |  |
| <b>10.35 – 11.35</b>  | <b>Session 2 – Learning from Communities’ Experiences: Envisaging Future Possibilities</b>   |
| <b>Dr Hannah Hughes</b>   | ‘Change with and for the Climate’  |
| <b>Dr Nguyen Chien</b>  | ‘Climate Risks’  |
| <b>Dr Luci Attala</b>   | ‘Múnekañ Masha: Revitalizing water in the Sierra Nevada de Santa Marta’  |
| <i>Chaired by Professor Michael Woods, Department of Geography and Earth Sciences, Aberystwyth University</i> |  |
| <b>Coffee break (15 minutes)</b>  |  |
| <b>11.50 – 12.50</b>  | <b>Session 3 – Language and Translation: Issues of Representation and Social Justice</b>   |
| <b>Dr Ben Ó Ceallaigh</b>   | ‘The Green New Deal: A window of opportunity for minoritised languages?’   |
| <b>Dr Rhianedd Jewell</b>   | ‘Cyfieithu ar y pryd yn llysoedd Cymru - Cydraddoldeb Iaith a'r Gyfraith?’<br>‘Simultaneous Interpretation in Welsh Courts - Linguistic and Legal Equality?’ |
| <b>Dr Joanna Chojnicka</b>  | ‘Trans in Translation: Multilingual practices and local/global gender and sexuality discourses in Polish transition narratives’                              |
| <i>Chaired by Professor Mererid Hopwood, Department of Welsh and Celtic Studies, Aberystwyth University</i>   |  |
| Simultaneous translation from Welsh to English will be available during this session.                         |  |



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| <b>Lunch break (45 minutes)</b>   |  |
| <b>13.35 – 13.55</b>  | <b>Introduction to afternoon session</b>   |
| <b>Dr Aaron Thierry</b>   | 'From Publications to Public Actions: The Role of Universities in Facilitating Academic Advocacy and Activism in the Climate and Ecological Emergency' |
| <b>13.55 – 14.55</b>  | <b>Session 4 – Positive Approaches to Waste</b>  |
| <b>Katherine Stewart</b>  | 'Making Rag Rugs from Waste T-shirts: A community response to climate change and resource waste in Wales'  |
| <b>Dr Alvin Orbaek White</b>  | 'Clawing Our Way Back from Plastic Fantastic: A new opportunity for the valorization of waste materials'   |
| <b>Dr Mehroosh Tak</b>  | 'A tool in the toolkit: Can True Cost Accounting remove siloed thinking about food loss and waste?'  |
| <i>Chaired by Professor Andrew Henley, Cardiff Business School, Cardiff University</i>  |  |
| <b>There will be a short comfort break at the end of this session</b>   |  |
| <b>15.05 – 16.00</b>  | <b>Session 5 – The Economics of Change: New Approaches to the Climate Crisis</b>   |
| <b>Dr Siobhan Maderson</b>  | 'Addressing the Climate Change and Biodiversity Crises: Beekeepers and power in the Capitalocene'  |
| <b>Jamila La Malfa-Donaldson</b>  | 'Performance of Industrial Hemp in West Wales'   |
| <b>Dr Elaine Forde</b>  | 'Offsetting and Footprints: A comparison of two environmental accounting regimes'  |
| <i>Chaired by Dr Cara Reed, Cardiff Business School, Cardiff University</i>   |  |
| <b>Coffee break (15 minutes)</b>  |  |
| <b>16.15 – 17.10</b>  | <b>Session 6 – Energy Systems: New Technologies and Approaches</b>   |
| <b>Dr Simon Middleburgh</b>   | 'How Bangor University is developing nuclear systems to combat climate change and explore the universe'  |
| <b>Marina Kovaleva</b>  | 'Development of Ammonia-Based Combustion Systems'  |
| <b>Dr Rhiannon Chalmers-Brown</b>   | 'Carbon Capture and Utilisation: The VFA Factory'  |
| <i>Chaired by Professor Karen Henwood, School of Social Sciences, Cardiff University</i>  |  |
| <b>Conclusion of lightning talks; break</b>   |  |
| <b>17.30 – 18.30</b>  | <b>Roundtable discussion – Will technologies designed to decarbonise homes exacerbate or reduce social inequalities?</b>                               |
| Drs Kate O'Sullivan and Rachel Hale<br>Drs Elli Nikolaidou and Deborah Morgan<br><i>Chaired by Jonathan Adams, Jonathan Adams + Ptns Architects</i> |  |
| <b>Close of conference</b>  |  |



## Speakers

### Keynote speaker

#### Professor Milja Kurki

*EH Carr Chair, Department of International Politics, Aberystwyth University*

I am EH Carr Chair in International Politics at Aberystwyth University. I specialise in philosophy of science and conceptual/theoretical study of international politics. My most recent work traverses natural and social sciences and humanities as I have tried to think through the implications of relational cosmology for how existing political imaginations and worldviews are structured.

### Session 1

#### Dr Amaya Querejazu

*Newton International Fellow, Department of International Politics, Aberystwyth University*

My research is about exploring the ways and methods through which we make sense of the worlds we inhabit and our idea of belonging. I draw from relational cosmologies to offer alternatives and insights into the ways global issues like climate change and conflict are addressed today.

I am a British Academy Newton International Fellow at Aberystwyth University and an Associate Lecturer at the University of Antioquia (Colombia). I have a PhD in Political Science. My research interests are Relationality, International Relations Theory, Postcolonialism and cosmology.

#### Dr Caer Smyth

*Lecturer in Law, School of Law and Politics, Cardiff University*

I am an interdisciplinary legal researcher who employs socio-legal research methodologies to explore problems of environmental law and procedural environmental justice.

My doctoral research project examined the role of rationalist assumptions in participatory decision-making processes and their impact on the treatment of the environment. My current work builds on my thesis findings and investigates obstacles facing effective public participation in environmental decision-making, e.g. the treatment of expertise and the adversarial nature of public local inquiries.

#### Dr Feng Mao

*Lecturer in Environmental and Physical Geography, School of Earth and Environmental Sciences, Cardiff University*

Serious games are games created for purposes beyond pure entertainment, which are a promising approach for understanding the best ways to cope with and adapt to the uncertain future caused by climate change. Our recently launched impact project, GamEngage, will build an international network of serious game researchers, practitioners, users, and beneficiaries to co-explore new opportunities in serious games for climate change adaptation.

I am a Lecturer in Environmental and Physical Geography at Cardiff University. My research interests lie in the intersection of water, ecosystems, society, and technologies, focusing on three main themes: (i) aquatic ecosystems under change, (ii) resilience and environmental risk, and (iii) innovative data technologies for the environment and development, including low-cost sensor networks and visualisation applications.



## Session 2

### Dr Hannah Hughes

*Lecturer in International Relations, School of Law and Politics, Cardiff University*

Creating less harmful environmental and human relations in response to global environmental degradation requires change and transformation at all scales of political life: from the daily practices of individuals to the conduct of global political institutions. In this talk I will explore whether the newly formed Local Community and Indigenous Knowledge Platform (LCIPP) within the United Nations Framework Convention on Climate Change (UNFCCC) offers a site for learning about cultural change.

I am a lecturer in International Relations at Cardiff University interested in the relationship between knowledge and power in global environmental politics. I am currently developing a new research project to explore change and transformation in political, economic and environmental relations.

### Dr Nguyen Chien

*Research Assistant, Department of Physics, Aberystwyth University*

Climate risk is about how much damage caused by the climate is likely to happen to our society during a given time looking into the future. Many uncertain factors emerge when we estimate this risk – to what extent can we be sure about this risk estimation, and can computing and big data be of great help?

I am a research assistant in the Department of Physics, Aberystwyth University. With a background in environmental and water resources engineering, I research the coastal hazards related to climate change, which is pertinent in the UK context.

### Dr Luci Attala

*Senior Lecturer in Social Anthropology, University of Wales Trinity Saint David*

My talk will provide details of a UNESCO-BRIDGES supported project called Múnekañ Masha that draws indigenous Kogi (Colombia) knowledge of environmental management together with the knowledge systems of conservation and ecological science. The project uses intercultural dialogue to produce transferable, transdisciplinary collaborative models of ecological regeneration, with a focus on water and its changing behaviours in the time of climate change.

As an anthropologist, my research has focused on the cultural meanings of water in different locations. My book, *How Water Makes Us Human*, demonstrates the ways that water shapes lives.

## Session 3

### Dr Ben Ó Ceallaigh

*Lecturer in Celtic Studies, Department of Welsh and Celtic Studies, Aberystwyth University*

In recent years there has been much talk of the need for a “Green New Deal”. While the form this should take is the subject of much debate, some see it as a stepping stone on the path to ending neoliberalism. This, in turn, could potentially see the development of an economic hegemony which would, coincidentally, be more conducive to the maintenance of minoritised languages. My lightning talk will discuss that possibility.

I am from the west of Ireland and work on language loss and revitalisation, particularly in Gaelic contexts. I am interested in the ways in which macro-level economic, political and environmental change can affect the fate of endangered languages. I currently teach in the Department of Welsh and Celtic Studies in Aberystwyth.

### Dr Rhianedd Jewell

*Lecturer in Professional Welsh, Department of Welsh and Celtic Studies, Aberystwyth University*

The role of an interpreter is to transmit information faithfully and correctly from one language to another, but can this be done completely neutrally, and what are the implications of this in a legal context? My lightning talk will consider to what



extent simultaneous interpretation ensures linguistic and legal equality in Welsh courts, and what changes can be introduced to improve it.

I work as Senior Lecturer in Professional Welsh at Aberystwyth University. With an academic background in Modern Languages (French and Italian), I specialise in translation studies, and I won the Dillwyn Medal in the Creative Arts and Humanities from the Learned Society of Wales in 2018 for my work in the field.

**Dr Joanna Chojnicka**

*Marie Curie Postdoctoral Fellow, School of Modern Languages, Cardiff University*

In my talk, I will present my current postdoctoral project, which I have just started working on at the School of Modern Languages, Cardiff University. The project is concerned with Polish narratives of gender transition on social media (blogs and YouTube) and their authors' use of multilingual and translation practices (for example, identity labels or medical terms), which are often adapted from English in innovative and creative ways.

I am a Marie Skłodowska-Curie Fellow at the School of Modern Languages, Cardiff University. Having received my PhD in linguistics in 2012, I have worked as a postdoctoral researcher and lecturer at universities in Germany, Poland and now Wales, focusing on issues in language, gender and sexuality studies, critical discourse analysis, minority language studies and ecolinguistics.

## Opening speaker – afternoon sessions

**Dr Aaron Thierry**

*Postgraduate Researcher at Cardiff School of Social Sciences; WISERD*

## Session 4

**Katherine Stewart**

*PhD student post viva, Department of Geography and Earth Sciences, Aberystwyth University*

My talk will focus on just one aspect of my research – a series of community upcycling workshops, turning waste T-shirts into rag rugs, which were run by a research participant and myself. I found this activity to have been of little economic value, but huge cultural value, as I will discuss.

My background is in environmental management, landscape archaeology, conservation and, more recently, human geography at PhD level. My work steered me to become involved with community sustainability projects, which led to my curiosity about why and how people come together to live more sustainably.

**Dr Alvin Orbaek White**

*Senior Lecturer, Energy Safety Research Institute, Swansea University*

For every three people on the planet there are two tonnes of plastic; plastic is a hydrocarbon material that we have used as feedstock to make high asset-value carbon nanomaterials.

I am a Senior Lecturer and former Sêr Cymru II Fellow at Swansea University. My vision is to advance global energy sustainability by developing efficient energy materials while using non-conventional sources. I like to do interesting chemistry with boring materials and turn them into solutions through innovation and entrepreneurship.

**Dr Mehroosh Tak**

*Lecturer in Agribusiness, Pathobiology and Population Sciences, Royal Veterinary College*

The talk will discuss how True Cost Accounting (TCA) – a method for measuring and quantifying the true social, economic and environmental impacts of different food production systems – can be used to help to overcome siloed thinking and support collaborative efforts to reduce food loss and waste (FLW) throughout the whole food system. The talk will present recommendations from our upcoming policy recommendation report on FLW in the UK.



I am a food systems economist and Lecturer in Agribusiness at the Royal Veterinary College. I am currently researching ways to reduce global hunger by linking sustainable agricultural production policies to equitable food consumption practices and centring traditional and indigenous knowledge. As part of the UKRI Global Food Security Project, I collaborate with colleagues at WISERD and Aberystwyth University.

## Session 5

### Dr Siobhan Maderson

*ESRC Post-Doctoral Research Fellow, Department of Geography and Earth Sciences, Aberystwyth University*

Pollinator decline is one of many manifestations of the interlinked biodiversity and climate crises. While beekeepers have been called upon to act as monitors and guardians of pollinator wellbeing, my research finds that many see current efforts at significant environmental improvement for pollinators as curtailed by wider power inequities, and the dominant food system.

I am an ESRC Post-Doctoral Fellow in the Department of Geography and Earth Sciences at Aberystwyth University. My PhD was on the Traditional Environmental Knowledge of long-term beekeepers. My current research interests address food systems, multiple evidence bases, Local Environmental Knowledge, science and policy, citizen science, and the Anthropocene.

### Jamila La Malfa-Donaldson

*Final year PhD student, Institute of Biological, Environmental and Rural Sciences, Aberystwyth University*

Industrial hemp offers several impressive environmental and socio-economic benefits for Wales. The results presented from a preliminary growth trial show industrial hemp grows well and produces good yields, demonstrating its potential to create a local bio-economy whilst helping to meet net carbon targets.

I am a final-year PhD researcher at Aberystwyth University. My work involves developing testing, cultivation, and processing methods of industrial hemp for therapeutic compounds, including cannabinoids.

### Dr Elaine Forde

*Lecturer, Morgan Academy, Swansea University*

In recent years, a number of differing socio-economic models have emerged to help publics and policymakers to quantify, and control, anthropogenic environmental impacts, or "footprints". My talk contrasts two such environmental accounting regimes found in planning and development frameworks – offsetting and environmental footprinting – and asks if, and how, footprinting might usefully be extended to other aspects of civil society.

I am an anthropologist and Lecturer in Swansea University. My research interests are in living off grid and equitable energy transitions in Wales and beyond.

## Session 6

### Dr Simon Middleburgh

*Reader, Nuclear Futures Institute, Bangor University*

We are carrying out internationally leading research at Bangor University by combining experimental and theoretical techniques to design and understand the behaviour of the next generation of nuclear fuels and materials to operate in some of the universe's most extreme conditions. Work is being sponsored by leading industry partners and UKRI, supporting new-build in the region including advanced nuclear applications such as fusion and medical isotope generating reactors.

I have previously worked in industry with Westinghouse Electric, a leading nuclear fuel and reactor supplier, and for government: the Australian Nuclear Science and Technology Organisation (ANSTO), working on fusion and next-generation nuclear systems. I use my varied and international background to grow an internationally relevant research team here at Bangor University to support my work on developing and understanding nuclear materials mechanistically, putting science into engineering.



**Marina Kovaleva**

*Final year PhD student, College of Physical Science and Engineering, Cardiff University*

Recent development on ammonia as a green hydrogen energy carrier has established its suitability for a variety of combustion technologies, including gas turbines. The present research aims to aid the development of ammonia/hydrogen blend gas turbine combustors, through detailed emissions studies, numerical modelling, combustor design and materials testing.

I am a PhD student at Cardiff University, studying with the ammonia combustion research group. I am specialising in ammonia combustion chemistry, numerical modelling of ammonia-blends and combustion-based metal corrosion over the course of my PhD.

**Dr Rhiannon Chalmers-Brown**

*C1 Biochemist, Sustainable Environment Research Centre, University of South Wales*

The VFA Factory is a group of projects that aim to convert industrial greenhouse gas emissions to volatile fatty acids for use as bioplastics, polymers, foods and fuels. This talk focuses on pilot scale bioreactors for the fermentation of industrial off-gases from steel manufacturing to produce acetic acid.

I am a postdoctoral researcher interested in sustainable technologies that can help us achieve net zero and create a secure, environmentally friendly world for our future generations. I am particularly interested in the efficient separation and extraction of products from bioreactors using membrane technologies.

**Roundtable**

This roundtable will draw on research being undertaken at the Active Building Centre Research Programme. The participants will explore – from the perspective of older people living in retrofitted homes, residents of new build homes and architects who design low carbon, sustainable homes – whether technologies designed to decarbonise homes will exacerbate or reduce social inequalities.

**Dr Rachel Hale**

*Research Associate, School of Psychology, Cardiff University*

I am a researcher based in the Understanding Risk Group, Cardiff University, working on 'Living Well in Low Carbon Homes' (LWLCH), which is one of the social science work packages of the Active Building Centre (ABC) Project. My background is in sociology, and my work focuses on the health and well-being of residents in the new Active Homes being studied across five case sites in south Wales.

**Dr Deborah Morgan**

*Senior Research Officer, Centre for Innovative Ageing, Swansea University*

I am a senior researcher based at the Centre for Innovative Ageing at Swansea University. I am currently researching health, social and financial well-being outcomes for older adults living in retrofitted or new-build low carbon homes. My background is in health and social care research, and I specialise in loneliness and social isolation in later life.

**Dr Elli Nikolaidou**

*Research Associate, Department of Architecture & Civil Engineering, University of Bath*

I am a Postdoctoral Research Associate in the Department of Architecture and Civil Engineering at the University of Bath. Also, I am a Registered Architect specialising in sustainable building design (Passivhaus and net zero energy/carbon buildings).



**THE LEARNED SOCIETY OF WALES**  
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**Dr Kate O'Sullivan**

*Research Associate, FLEXIS, Cardiff University*

I am a researcher based in the Understanding Risk Group, Cardiff University. I am currently using a qualitative, longitudinal methodology to explore how the assumptions underpinning the development of low- and zero-carbon homes are realised in their design and, subsequently, how this influences both the daily lives of their occupants and the homes' performance overall. Understanding the interplay between homes, energy and people, as the pathways towards net zero are navigated, is essential for low-carbon homes to successfully contribute to net zero goals and become places where people can live well.