

Latin America  
Centre of  
Asia-Pacific Excellence



New Zealand

# Early Career Researchers

São Paulo, 14-15 October 2024



# Contents

<b>Introduction</b> .....	<b>3</b>	
<b>Delegation leads</b> .....	<b>4</b>	
<b>Scheduling instructions</b> .....	<b>5</b>	
<b>Early Career Researcher Biographies</b>		
Agricultural, Veterinary and Food Sciences		
1. Dr Natalia Martin .....	6	
2. Dr Emma Sharp .....	7	
Biological Sciences		
3. Dr Emilee Benjamin .....	8	
4. Dr Priscila Madi Salloum .....	9	
5. Benjamín Durán-Vinet .....	10	
Built Environment and Design		
6. Dr Priscila Besen .....	11	
Earth Sciences		
7. Dr Rodrigo Andres Gomez Fell .....	12	
Engineering .....		
8. Dr Jannik Haas .....	13	
9. Dr Febelyn Reguyal .....	14	
10. Dr Jingjing Liu .....	15	
Environmental Sciences		
11. Dr Karla Jesús Araya-Castro .....	16	
Health Sciences		
12. Rochelle Ellison-Lupena .....	17	
13. Dr Angelique Reweti .....	18	
Human Society		
14. Dr Ramzi Michel Tubbeh Sierralta .....	19	
Indigenous Studies		
15. Jacinta Maria Forde .....	20	
Law and Legal Studies		
16. Sophie Elizabeth Coomber .....	21	





Tēna koutou  
Saudações da Nova Zelândia

*In April 2024 the Latin America Centre of Asia-Pacific Excellence (the LatAm CAPE) brought a group of New Zealand research leaders to Brazil. The aim of that visit was to establish research collaborations between Brazilian and New Zealand universities and reignite research relationships that had floundered during the pandemic.*

*Thanks to the generosity of the LatAm CAPE, we are now able to bring 16 early career researchers (ECRs) to São Paulo to build on the conversations we had in April. Our ECRs are from seven of New Zealand's eight universities and come from diverse disciplinary backgrounds. They are united by their research focus on sustainability and their desire to build enduring relationships with researchers in Brazil.*

*In this booklet you will find research profiles of our ECRs and instructions on how to book speed networking meetings with them. We welcome up to three Brazilian colleagues at each meeting with a New Zealand ECR and hope that you might meet with more than one of our ECRs over the course of the two days of speed networking.*

*Accompanying our ECRs are senior leaders from three of our universities. They are also available to meet with research, international and graduate leaders from Brazilian universities and institutions.*

*We look forward to meeting you on 14 and 15 October.*



## Delegation leads



**Professor Frank Bloomfield ONZM** is the Deputy Vice-Chancellor (Research) at the University of Auckland and is responsible for assisting and advising the Vice-Chancellor and University Council on research policy, strategy and research management. He plays a key role in developing relationships with the University's research funders and collaborators, promoting the research profile of the University both locally and internationally, and overseeing the operation of the Research and Innovation Office. Professor Bloomfield also is the Chair of the Board of UniServices, the University of Auckland's innovation and commercialisation company. Prior to becoming the Deputy Vice-Chancellor (Research), Professor Bloomfield was Director of the Liggins Institute, one of the

University's Large Scale Research Institutes. He is a Professor in Neonatology and trained in the United Kingdom, New Zealand and Canada and worked for many years as a Consultant Neonatologist at Auckland City Hospital. Professor Bloomfield has previously been the President of the Perinatal Society of Australia and New Zealand and of the Perinatal Society of New Zealand. He is a Fellow of Te Apārangi the Royal Society of New Zealand and is passionate about evidence-based multidisciplinary neonatal care.



**Neil Dodgson** is Professor of Computer Graphics in the Faculty of Engineering and Dean of the Faculty of Graduate Research. Prior to joining Victoria he was, for twenty years, co-leader of the Graphics & Interaction Research Group at the University of Cambridge.

His research is in 3D television (where he has designed and analysed displays that do not need the special glasses), modelling of three-dimensional shape (where his group reconciled the two different mechanisms used in the CAD and animation industries), and the intersection of art, design, aesthetics, computing, and psycho-physics (where he has developed tools for artists and analysed abstract art). He is a Fellow of Engineering NZ, the Institution of Engineering and Technology, and the Institution for Mathematics and its Applications. He is a

Chartered Engineer in both NZ and the UK, and is a member of ACM SIGGRAPH, Eurographics, AsiaGraphics, and the Visual Effects Society.



**Professor Leonel Alvarado** is the regional Director of the College of Humanities and Social Sciences in Wellington. He has published over 10 books of poetry, fiction and criticism, which explore, among other topics, the relationship between music, nationalism, migration, and identity. He sits on the editorial board of several international journals, such as Revista UNAM Internacional, and has organised international conferences with universities in Aotearoa New Zealand, Mexico, and Central America. He has actively promoted teaching and research agreements between Massey University and several Latin American universities, with a focus on Massey's key areas of teaching and research – indigenous studies, communications and media studies, agriculture, veterinary

science, food technology, development studies, education and training, art and design, and distance education. He has been awarded three Primer Minister's Scholarships for Latin America to take groups of students to universities in Brazil and Colombia –these programmes have focused on indigenous studies, cultural diversity, language upskilling, expressive arts, and climate change.

## Scheduling instructions

The biographies of the researchers have been organised by broad subject area. Each researcher has also provided research classifications to allow you to find all of the New Zealand researchers who match your research interests.

Once you have selected all of the researchers you would like to meet with, please use the online booking form to set up a meeting. Each meeting will last for up to an hour. You may wish to bring up to 2 other colleagues with you to meet with any New Zealand researcher.

Please note that there is a separate tab on the booking form for each day of meetings and that the form asks you to provide details on everyone who will meet with the New Zealand researchers. If there are no available times on either day for the person you are wanting to meet you can add your name into the 'waitlist' slots to the right of the online booking form and if a space becomes available, we will be in contact.

## Online booking form

If you would like to meet with one of our delegation leads, please email [christine.quinn@auckland.ac.nz](mailto:christine.quinn@auckland.ac.nz) noting which leader you are hoping to meet with and the purpose of the meeting.

### Venue

Amazônia Room, Renaissance Hotel  
Alameda Santos, 2233 - São Paulo

### Refreshments

There will be a lunch break at 12:00 and afternoon break at 15:00 (food provided).

Day 1	Monday 14 Oct	10:00	11:00	13:00	14:00	15:30	16:30	Waitlist space 1
1	<b>Dr Natalia Martin</b>	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s
2	Massey University	Email	Email	Email	Email	Email	Email	Email
3	Agricultural, veterinary and food sciences	University	University	University	University	University	University	University
4		Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area
5	<b>Dr Emma Sharp</b>	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s
6	University of Auckland	Email	Email	Email	Email	Email	Email	Email
7	Agricultural, veterinary and food sciences	University	University	University	University	University	University	University
8		Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area
9	<b>Dr Emilee Benjamin</b>	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s
10	University of Auckland	Email	Email	Email	Email	Email	Email	Email
11	Biological sciences	University	University	University	University	University	University	University
12		Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area
13	<b>Dr Priscilla Madi Salloum</b>	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s
14	University of Otago	Email	Email	Email	Email	Email	Email	Email
15	Biological sciences	University	University	University	University	University	University	University
16		Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area	Academic unit/research area
17	<b>Mr Benjamin Duran Vinet</b>	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s	Name/s

# 1. Dr Natalia Martin

[n.p.martin@massey.ac.nz](mailto:n.p.martin@massey.ac.nz)

**Research area classification:** Agricultural, veterinary and food sciences; Animal production; Animal growth and development; Animal management; Nutrition

**Current employer:** Massey University

**Role:** Lecturer

**Bio:** Dr Natalia Martin is an animal scientist, interested in animal growth, meat quality, husbandry and genetics, with a particular focus on cattle and farmed animals. Originally from Argentina, she completed an Agronomy degree at the University of Buenos Aires (UBA), and also worked for the Sheep Unit of the Faculty of Agronomy of UBA, and the Sheep and Wool Department of the Secretariat of Agriculture, Livestock, Fisheries and Food. She came to New Zealand after completing her degree, to work and gain experience in agriculture. Natalia worked in technical and field research positions at Massey University's sheep, beef and dairy farms for several years. While at Massey, she did a Masters in foetal development in sheep and completed a PhD evaluating the finishing performance of beef sires in a dairy–beef system. She started working as a Lecturer in Animal Science for the School of Agriculture and Environment at Massey University in 2022.

**Collaborative research interests:** Natalia believes that interdisciplinary collaborations are essential for developing profitable and sustainable farming systems. These systems must consider soil, pasture, animals, environment, climate, social perceptions, finances, and more. Her particular interests are focused on animal systems and how we can increase productive efficiency by using local resources and industry by-products. For example, in New Zealand, Natalia has been researching ways to reduce the number of low-value calves from the dairy industry (the “by-product”) by generating animals that, through genetics, husbandry and/or nutrition, will grow better, produce more (milk and/or meat) and therefore will be more sought after and valuable. This approach reduces the overall carbon footprint of dairy and beef farming, if we consider that many of these calves will be grown for beef. It also makes systems more sustainable and resilient to future challenges. For this line of research, she has collaborated with internal (group, school and college) as well as external researchers (AgResearch, Beef+LambNZ). Cattle farming systems in South America operate quite differently from New Zealand, and thus there are learnings to be made and exchanged about feed (resilient grasses, silvo-pastoral systems, industry by-products such as sugar cane), animals (crossbreeding for climate adaptation, different age at slaughter) and sustainable practices that can all contribute to mitigations of climate change. Fostering collaboration with internationally recognised researchers would be of benefit to Massey and New Zealand, as well as to the other counterpart universities and countries.

## 2. Dr Emma Sharp

[el.sharp@auckland.ac.nz](mailto:el.sharp@auckland.ac.nz)

**Research area classification:** Agricultural, veterinary and food sciences; Built environment and design; Economics; Environmental sciences; Human society; Indigenous studies; Agriculture, land and farm management; Other agricultural, veterinary and food sciences; Urban and regional planning; Other economics; Environmental management; Pollution and contamination; Soil sciences; Human geography; Ngā mātauranga taiao o te Māori (Māori environmental knowledges); Ngā mātauranga taiao o te Māori (Māori environmental knowledges); Environmental politics

**Current employer:** University of Auckland

**Role:** Lecturer

**Bio:** Dr Emma Sharp is an environmental geographer, and a Rutherford Discovery Fellow of the Royal Society of New Zealand. After her Masters degree in glacial science she worked in government, consultancy, and the third sector internationally on environmental management, education and humanitarian issues. In 2010 Emma returned to teach at the University of Auckland, and completed a PhD in Environmental Geography on alternative food systems and affective politics. She is a founding member of the NZ Women and Gender Geographies Research Network (2013-) and runs the Kainga Wāhine monthly meetups in the School of Environment. Emma also runs the Critical Food Studies Group (2018-), is a member of the Community Economies Institute, the Politics Economy and Place Research Group, and convenes the Australasian Agrifoods Research Network (AFRN). Emma is a Principal Investigator with Te Pūnaha Matatini - Centre of Research Excellence, and co-leads a research cluster on Aotearoa/New Zealand's Future Foods.

**Collaborative research interests:** Emma has research interests in soil contamination; food and soil sovereignty, security and citizenship + future food technology (especially in relation to meat and dairy production); environmental justice; environmental economies; citizen/community science; Indigenous environmental governance.

Emma's five-year Rutherford Discovery Fellowship investigates the governance and social, scientific, economic and cultural politics of soil. This includes a plethora of different values of soil including its potential for carbon storage in relation to climate change, Indigenous soil politics, contamination, industrial chemical regulation, artistic uses and ways that soil might be taught as an interdisciplinary and holistic 'system' of the environment, in schools.

She co-lead the citizen/community science programme Soilsafe Aotearoa, [www.soilsafe.auckland.ac.nz](http://www.soilsafe.auckland.ac.nz) and its spinoff projects, Soilsafe Kids and Dustsafe Aotearoa. These different projects collect public data on environmental contaminants in household and community spaces, and communicate them back to participants as well as educating communities about the risks of heavy metal exposure, in particular.

### 3. Dr Emilee Benjamin

[emilee.benjamin@auckland.ac.nz](mailto:emilee.benjamin@auckland.ac.nz)

**Research area classification:** Biological sciences; Marine and estuarine ecology

**Current employer:** University of Auckland

**Role:** Research Fellow until 19.11.2025

**Bio:** Dr Emilee Benjamin is a marine ecologist researching seabed restoration. She is currently working on a community-led shellfish and seabed restoration project in the Top of the South Island involving marine farmers, a variety of government agencies, community groups, NGOs, Māori tribes, and academics. Emilee's research fellowship is aligned with some of her PhD research, which explored the potential to restore mussels despite the many ecological changes and degradation from overharvesting. She graduated in 2023, was nominated for the Dean's Best Thesis Award, and published nine research papers arising from her research. As an ECR Emilee is striving to bridge the gap between industry, communities, and academic science in developing novel approaches to restoring the ecological functioning of degraded coasts.

**Collaborative research interests:** Filter-feeding bivalves, such as mussels, oysters, and clams are known as ecosystem engineers because they provide many ecosystem services including the creation of habitat for other organisms. However, these valuable bivalves have declined throughout the world, largely due to overharvesting, but there is growing international interest in restoring populations of these important organisms in coastal ecosystems. In her mussel restoration project for the last 5 years, she has successfully developed the methods for re-establishing adult mussel beds in areas of seafloor where they were historically present, but were removed by overharvesting, and have not recovered naturally due to habitat and climate changes. Emilee is currently researching innovative methods to facilitate juvenile mussel recruitment for restoring mussel reefs into degraded coastal habitats. This involves experimental research manipulating the availability of settlement substrates that can be used by recruiting larval and juvenile shellfish. This research is of interest to many scientists and coastal managers globally who are seeking more effective means for restoring biodiversity and the wide array of ecosystem services generated by the existence of substantial filter-feeding bivalve populations in coastal waters. This research is important for climate change mitigation, as biodiverse ecosystems are more resilient to climate change, and the shell material generated by bivalves is a well-recognised source for carbon burial and sequestration, as well as sediment stabilization, nitrogen remediation, and water filtration.

Both Chile and Brazil have temperate coastal environments that are experiencing similar issues with degradation as New Zealand, many of which are the result of the impacts of climate change, such as smothering of seafloor habitats with sediment as a result of land erosion caused by extreme weather events. These strong parallels between our temperate regions of the world provides excellent opportunities to advance new international collaborations in coastal restoration research.



## 4. Dr Priscila Madi Salloum

[priscila.madisalloum@otago.ac.nz](mailto:priscila.madisalloum@otago.ac.nz)

**Research area classification:** Biological sciences; Genomics and transcriptomics; Evolutionary biology not elsewhere classified; Genomics; Microbiology not elsewhere classified

**Current employer:** University of Otago

**Role:** Postdoctoral fellow until 31.7.2025

**Bio:** Dr Priscila Madi Salloum completed her undergraduate degree in Biological Sciences, majoring in Molecular Biology, at the State University of Campinas. She did her Masters degree in the same university, focusing on Genetics and Evolution. After working for 1.5 years as a high school teacher in São Paulo, she moved to New Zealand to undertake her PhD at the University of Auckland. The PhD research taught her bioinformatics, genomics, transcriptomics, field and lab work. Priscila followed her PhD research with a six-month postdoc in the same area. She then accepted a position as a postdoc at the University of Otago for 3.5 years (ongoing), under Prof. Robert Poulin. She is fascinated about applying genomic methods to understand the evolution of organisms and how they cope with environmental stress. A new avenue in her research portfolio includes investigating how host-associated microbes can impact the traits of their hosts.

**Collaborative research interests:** Priscila believes that, for sustainability and climate change, it is important to involve not only scientists, but also the broader community, mainly those who live and work on land and sea. She is currently applying for research grants in New Zealand, and part of her proposed projects involve engaging with schools, Māori communities, and the broader public in environmental monitoring of shellfish populations. Priscila is interested in collaborating with other researchers who have experience in engaging with the broader community. In addition, her main expertise is in genomic tools, and she currently applies genomics to characterise the microbes associating with animal hosts. Microbiomes can modulate traits of their hosts, from immune responses to behaviour, from growth rates to stress resistance. She is interested in better understanding how the characteristics of diverse animals are modulated by their microbiomes, and how the interactions among these animals and their associated microorganisms evolved. Therefore, she would like to collaborate with researchers looking into how microbiomes can be purposefully modified to help towards climate change adaptation and sustainable development. For example, how can we harness the potential of micro-organisms to modulate traits of interest/relevance in their hosts to help us achieve better outcomes in conservation and food production, such as temperature tolerance in climate-vulnerable species, captivity survival in conservation programs, ocean acidification resistance in corals, resistance to disease in inbred populations, growth rate of aquaculture species, and so on? Her work is currently mostly at the basic research level, generating scientific knowledge by characterising microbiomes in diverse animals and correlating it with variation in some of these animals' traits. Priscila has worked with various invertebrates (molluscs, helminth parasites, small crustaceans, insects) because of their huge diversity and countless habitats, but her questions and expertise are applicable to any animal or plant system.

## 5. Benjamín Durán-Vinet

[benjamin.duran-vinet@postgrad.otago.ac.nz](mailto:benjamin.duran-vinet@postgrad.otago.ac.nz)

**Research area classification:** Biological sciences; Environmental sciences; Bioinformatics and computational biology; Genetics; Bioinformatic methods development; Climate change impacts and adaptation; Environmental biotechnology; Environmental biotechnology diagnostics

**Current employer:** University of Otago

**Role:** PhD candidate until 25.11.25

**Bio:** Benjamín Durán-Vinet is from Temuco, Chile and has a Bachelor in Biotech and Bachelor (Honors) in Biotech from the University of La Frontera. His long-term focus has been on applied research. Benjamín has worked on several projects as a research assistant, obtaining knowledge of molecular biology, genetic engineering, and molecular diagnostics for marine biosecurity.

Benjamín is a member of the Neil Gemmell Lab at the University of Otago (Department of Anatomy) where he is further developing CRISPR-Dx toolbox for marine biomonitoring with a blend of machine learning. His work will be within the framework of the project “CAWX1904 – A Toolbox to Underpin and Enable Tomorrow’s Marine Biosecurity System”. The aim is to develop several new molecular tools for marine biosecurity. He will be focusing on using CRISPR endonucleases to detect specific traces of eDNA/eRNA that may help to elucidate the presence and abundance of non-indigenous species and/or harmful algal bloom species.

**Collaborative research interests:** Benjamín’s research area aligns closely with the broader focus on sustainability and climate change, emphasizing environmental biosecurity, which could be particularly beneficial for Chilean and Brazilian aquaculture leaders in Salmon and Tilapia production, respectively. Using CRISPR-Cas-based diagnostics and environmental DNA, rapid, sensitive, and specific detection of land and aquatic pests in various ecosystems is possible. Early detection is crucial for managing and mitigating the spread of pests, which often disrupt local biodiversity and economy, alter habitats and impact ecosystem services essential for climate resilience.

Pre-trained artificial intelligence models that design highly specific and sensitive assays is also part of Benjamín’s research. This capability significantly improves comprehensive environmental monitoring, aiding in preserving natural habitats and ensuring ecosystem health, which ultimately supports broader sustainability goals for both ecosystems and related industries (e.g. dairy, aquaculture, agriculture).

Benjamín’s work on CRISPR-Cas-based diagnostics contributes to sustainable environmental management practices, bolstering efforts to combat climate change by protecting biodiversity and maintaining ecosystem integrity.

He is currently involved in projects related to biosecurity and diagnostics applying cutting-edge technology in partnership with the Cawthron Institute; invasive mammal species, in partnership with the US Department of Agriculture and US Air Force; detection of avian influenza in collaboration with Otago microbiology department and University of Regina in Canada

## 6. Dr Priscila Besen

[priscila.besen@aut.ac.nz](mailto:priscila.besen@aut.ac.nz)

**Research area classification:** Built environment and design; Architecture; Urban and regional planning; Building

**Current employer:** Auckland University of Technology

**Role:** Lecturer

**Bio:** Priscila Besen is a Lecturer in Sustainable and Regenerative Architecture at AUT's Huri Te Ao School of Future Environments. With a PhD and a Master of Architecture in Sustainable Design from the University of Auckland, her work focuses on creating healthy, resilient and liveable built environments for a post-carbon future. Priscila began her career with a Bachelor of Architecture and Urbanism from UFSC, Brazil. Her research bridges technical and cultural aspects in built environment design, including life-cycle thinking in architecture, sustainable urban design, co-design, building energy performance, adaptive reuse and retrofit. Current projects include collaborative research with PUCV in Chile on collective housing co-designed with Indigenous communities in Aotearoa NZ and Chile, as well as research on mapping sustainable solutions and resourcefulness in the Tropic of Capricorn region. Priscila co-leads the Future Neighbourhoods Lab, where Master students explore new technologies and design strategies to adapt existing urban and suburban environments towards a liveable and regenerative future.

**Collaborative research interests:** Priscila has developed research in environmental and social sustainability in the built environment, addressing climate change mitigation and adaptation within urban settings. Her interests for future projects span several key areas:

- Urban systems and climate change adaptation: investigating the interconnected energy-water-food-waste systems within cities, and exploring how innovative technologies can enhance urban resilience. This includes the implementation of decentralised solar energy systems to reduce dependency on centralised power grids and increase energy security; the use of decentralised water collection and treatment to enhance community resilience. She aims to investigate how various emerging technologies can decentralise these resources, enhancing sustainability and resilience in the built environment in various settings, from formal to informal settlements, from the Global North to the Global South.
- Sustainable urban design and mobility: design strategies for walkable and cyclable neighbourhoods in the transition to a post-carbon future. This includes investigating how neighbourhood design encourages walking and cycling, as well as integrating potential micromobility solutions and disruptive mobility technologies to facilitate the transition to car-free cities.
- Adaptable and sustainable architecture: applying life-cycle thinking in architecture; transforming existing buildings for new purposes through retrofit and adaptive reuse. Creating adaptable and reversible architectures by applying design for disassembly (DfD) principles, which allow buildings to be easily modified or deconstructed, minimising waste and resource use.
- Indigenising the built environment: learning from Indigenous holistic ways of thinking, resourcefulness, and collective ways of living to re-indigenise our buildings and cities towards a sustainable future. Her research aims to integrate these principles through appropriate co-design practices to create regenerative collective housing, promoting sustainability and community resilience. She has ongoing research on this topic comparing experiences in Chile and Aotearoa New Zealand, and aims to expand it to other areas and countries.

## 7. Dr Rodrigo Andres Gomez Fell

[rodrigo.gomezfell@canterbury.ac.nz](mailto:rodrigo.gomezfell@canterbury.ac.nz)

**Research area classification:** Earth sciences; Physical geography and environmental geoscience; Geomorphology and earth surface processes; Glaciology

**Current employer:** University of Canterbury

**Role:** Research Scientist

**Bio:** Dr Rodrigo Gomez Fell is an Earth Scientist specialising in remote sensing, applying spectral satellite, Synthetic Aperture Radar (SAR) and lidar data to understand surface processes and their connections to environmental change in the Southern Hemisphere. With a PhD in Antarctic Science, his research focuses on ice-ocean interactions in Antarctica, the dynamics of mountain glaciers and catchment processes. Rodrigo has researched systems in Antarctica, Patagonia, and New Zealand using SAR imagery, SAR interferometry, satellite altimetry, satellite imagery and airborne lidar. Rodrigo is Chilean and has strong ties to Brazil, having completed an MSc in Oceanography in Rio Grande Do Sul. During his doctorate, he was part of the leadership of the Association of Polar Early Career Scientists and the Awards Committee of the International Glaciological Society. He is currently on a Technical Committee related to the Geoscience Remote Sensing Society (technical society of the IEEE).

**Collaborative research interests:** Rodrigo's collaborative research interests are rooted in addressing the critical challenges posed by climate change and promoting sustainability through interdisciplinary and international efforts, particularly in the Southern Hemisphere. His work is focused on the complex interactions between ice, ocean, and atmosphere, especially in vulnerable regions such as Antarctica, Patagonia, and New Zealand, where the impacts of climate change are profound and multifaceted. He is especially interested in exploring how satellite remote sensing and geospatial technologies can be leveraged to monitor and model these processes, providing actionable insights for policymakers and communities.

A significant aspect of his research involves the use of Synthetic Aperture Radar (SAR) and lidar to investigate surface processes and their contributions to environmental change. Rodrigo has employed SAR interferometry and satellite altimetry to study the dynamics of Antarctic ice tongues, assessing how climate-driven changes in ocean and atmospheric conditions influence ice stability. In New Zealand, he is currently utilising airborne lidar and satellite remote sensing to identify and analyse surface processes across different environments, with a particular focus on the behaviour of braided rivers and the velocity of mountain glaciers. These research efforts are crucial for understanding how climate change is reshaping these landscapes and for developing strategies to mitigate its impacts.

Collaboration is at the core of his research approach. Rodrigo believes tackling climate change requires the integration of diverse perspectives, expertise, and methodologies. His academic background in Brazil and professional experience in Chile and New Zealand has given him unique insights into the environmental challenges faced in the Southern Hemisphere. He is particularly interested in fostering collaborative research that bridges these places, focusing on shared climate change challenges and sustainable solutions. This includes working together with South American institutions to develop integrated monitoring systems and data-sharing platforms that can inform climate resilience efforts across the region.

## 8. Dr Jannik Haas

[jannik.haas@canterbury.ac.nz](mailto:jannik.haas@canterbury.ac.nz)

**Research area classification:** Engineering; Complex civil systems; Electrical energy transmission, networks and systems

**Current employer:** University of Canterbury

**Role:** Senior Lecturer

**Bio:** Dr Jannik Haas is a Senior Lecturer in Sustainable Energy Systems at the University of Canterbury. He directs the postgraduate programmes in Renewable Energy Engineering and co-leads the Sustainable Energy Research Group SERG, which unites over 10 postgraduate researchers. He specialises in energy systems modelling and is driven by understanding the pathways towards carbon negativity.

Jannik co-ordinates the courses "Energy Systems Modelling", "Renewable Energy Technologies", "Energy Projects", and "Energy, Policy, and Society".

He holds a PhD in Engineering from the University of Stuttgart and a Master in Engineering from the University of Chile. He worked for the Energy Center, Universidad de Chile (2013-2015); the Cluster of Excellence SimTech (2015-2022), University of Stuttgart; and the Department of Energy Systems Analysis (2019-2020), German Aerospace Center.

**Collaborative research interests:** Jannik co-leads the Sustainable Energy Research Group (SERG) where researchers work on:

- Renewable energy integration
- Solar engineering
- Power-to-X systems (including multi-energy and green hydrogen)
- Energy storage
- Energy transitions modelling
- Carbon-negative systems

<https://www.canterbury.ac.nz/research/about-uc-research/research-groups-and-centres/sustainable-energy-research-group>

## 9. Dr Febelyn Reguyal

[f.reguyal@auckland.ac.nz](mailto:f.reguyal@auckland.ac.nz)

**Research area classification:** Engineering; Life cycle assessment and industrial ecology; Waste management, reduction, reuse and recycling

**Current employer:** University of Auckland

**Role:** Senior Lecturer

**Bio:** Dr Febelyn Reguyal specialises in life cycle assessment (LCA) and is committed to advancing sustainability. She contributes to the development of sustainable materials, working to create innovative solutions that reduce environmental impact and support a more sustainable future. Febelyn also collaborates with researchers who are working on the development of sustainable batteries, hemp-derived materials and green hydrogen. With extensive experience in both the academic and practical realms, Febelyn actively engages in teaching sustainability, helping to shape the next generation of environmentally conscious leaders. She is one of the three key members of the University of Auckland (UoA) Sustainability Teaching Network and has also been proactive in Teaching and Learning for a Sustainable World (TLSW) under the Ngā Ara Whetū Research Centre, where distinguished people around the world working on sustainability teaching and practices, and share their experiences with TLSW academics and stakeholders such as Greenpeace and Auckland Council.

**Collaborative research interests:** Febelyn's research is centred on the development of sustainable materials, with a strong emphasis on integrating LCA methodologies to ensure that these innovations are both environmentally and economically sustainable. By applying LCA, she aims to quantitatively estimate and minimise the environmental impacts associated with the production, use, and disposal of materials, contributing to the advancement of more sustainable industrial practices. One of her primary research focuses is the development of hard carbon materials for sodium-ion batteries, an emerging technology in the energy storage sector. By utilising wood waste as a raw material, Febelyn is working to create high-performance carbon anodes that provide a sustainable alternative to traditional lithium-ion batteries. This research addresses the growing need for effective energy storage solutions while promoting a circular economy through the repurposing of biomass waste. In addition to energy storage, she is involved in advancing waste management practices, particularly in the innovative conversion of various waste streams into valuable, sustainable materials. A significant part of her work involves exploring the use of hemp, a highly versatile and fast-growing plant, as a key resource for creating bio-based materials. Moreover, she collaborates with green hydrogen researchers on assessing their environmental hotspots of green hydrogen to improve its environmental performance.

## 10. Dr Jingjing Liu

[jingjing.liu@auckland.ac.nz](mailto:jingjing.liu@auckland.ac.nz)

**Research area classification:** Engineering; Chemical engineering; Electrochemical energy storage and conversion

**Current employer:** University of Auckland

**Role:** Research Fellow until 1.12.2028

**Bio:** Dr Jingjing Liu is a Research Fellow and lecturer at the University of Auckland. Her research focuses on electrochemical and electrolysis engineering, heat transfer and energy efficiency, sustainable energy storage (e.g. H<sub>2</sub> production), metallurgical processing engineering (e.g. metal extraction), materials characterisation and performance. Jingjing is a Project Lead at the NZ Product Accelerator (funded by the NZ Ministry of Business, Innovation and Employment (MBIE)), where she is developing industrial energy-related technologies for NZ businesses. Within these fields, she has developed her independent research in the green H<sub>2</sub> field supported by the major government (Marsden FS fund and Catalyst Seeding Fund) and faculty research grants (661,000 NZD) and industry funding (70,000 NZD).

**Collaborative research interests:** Jingjing is currently working on the projects shown below. The relevant research outputs (projects and publications) can be found on her University profile:

<https://profiles.auckland.ac.nz/jingjing-liu/publications>

Project 1: Improving energy efficiency for green H<sub>2</sub> production. This research will crucially inform strategies for eliminating the thermal strain of water electrolyser, substantially extending the lifespan of electrolyser components and their capability for continuous operation. This will improve the efficiency and cost-effectiveness of electrolytic hydrogen production. Collaboration across University of Auckland (UoA), University of Canterbury, and GNS Science.

Project 2: A validated digital tool for novel green H<sub>2</sub> production technology (current supported by Catalyst Seed Fund, Principal Investigator, NZD 80,000 (2023-2025)) Team includes UoA, Lawrence Livermore National Laboratory (US) and GNS Science (NZ).

Project 3: Waste heat recovery of H<sub>2</sub> Fuel Cell. This research project will focus on the thermal and waste heat recovery of hydrogen devices in a period of 2 years, in cross departmental collaboration between Chemical and Materials Engineering and Mechanical Engineering.

Project 4: Under development – Jingjing is interested in sustainable critical material extraction for energy transition.

## 11. Dr Karla Jesús Araya-Castro

[karla.arayacastro@otago.ac.nz](mailto:karla.arayacastro@otago.ac.nz)

**Research area classification:** Environmental sciences; Environmental biotechnology; Environmental nanotechnology

**Current employer:** University of Otago

**Role:** Postdoctoral fellow until April 2025

**Bio:** Karla Araya Castro is a Biotechnologist with a Master's and PhD in Natural Resources Science. She is currently completing her postdoctoral research at the University of Otago's Department of Biochemistry. Her research focuses on using lipid-based nanoparticles for plant miRNA delivery. Alongside her scientific career, Karla has significant experience in social entrepreneurship and product development.

In Chile, she led projects during her studies at Universidad de La Frontera, earning recognition for her academic and personal qualities. Through the Melton Foundation, she has worked on climate change and innovative technologies in Germany, China, South Africa, and Zambia. In 2018, she led the "PicaPellet" initiative for sustainable solid biofuel and founded "InclusivApp" to enhance urban accessibility. Recognized as one of La Araucanía's 100 Women Leaders, Karla is a resilient woman, a mother of two, a life partner to Benjamin, a wheelchair user, and a wine enthusiast.

**Collaborative research interests:** From the very start of her research at the Department of Biochemistry in the School of Biomedical Sciences at the University of Otago, Karla has aspired to build connections between researchers in Chile and New Zealand. Given the shared challenges and biodiversity between the regions, there is substantial potential for fruitful collaboration. Latin America, including countries like Chile and Brazil, has a strong tradition in agricultural and environmental research. Leveraging this expertise through collaboration can enhance areas such as crop biofortification and sustainable agriculture. Her work with lipid nanoparticles (LNPs) and their potential to improve nitrogen fixation through enhanced symbiotic relationships aligns well with ongoing research in these regions.

Additionally, Latin America presents unique agricultural challenges and opportunities that could greatly benefit from Karla's research on LNPs and miRNA delivery systems. Collaborative efforts can offer access to diverse plant species and environmental conditions, enriching the research process and expanding the applicability of her findings.

Addressing regional challenges is also a key motivator. Latin America faces significant issues related to climate change, agricultural productivity, and sustainability. By working together, Karla hopes to develop innovative solutions to these pressing problems. Her research aims to contribute to sustainable agricultural practices and climate resilience, aligning with the region's needs and priorities.



## 12. Rochelle Ellison-Lupena

[rochelle.ellison-lupena@vuw.ac.nz](mailto:rochelle.ellison-lupena@vuw.ac.nz)

**Research area classification:** Health sciences; Public health

**Current employer:** Victoria University of Wellington

**Role:** Lecturer and Senior Research Fellow

**Bio:** Rochelle (Kai Tahu|Ngāti Mutunga| Ngāti Porou| Ngāti Whakaeue|Te Ati Awa |Rarotonga|Mangaia) is an emerging researcher with a focus on indigenous health equity from a health promotion perspective. Her passion is for socially and culturally sustainable health intervention at the intersection of people and their social environments. She also has a commitment to indigenous health workforce development that she facilitates through teaching and learning practice that supports Māori and Pacific student success. She has recently been appointed the academic programme director for the Bachelor of Health at Victoria University of Wellington and is beginning work to indigenise the curriculum.

**Collaborative research interests:** Rochelle's perspective on sustainability is focused on locally driven capacity building to ensure that climate interventions are able to be maintained long term. As part of this she did a training needs analysis for the Cook Islands Ministry of Education to map sector needs to identify gaps or opportunities that support the ongoing delivery of climate change responses, such as workforce capacity to building watertanks and electrical training to install and maintain solar panels. Most recently Rochelle collaborated on a project with colleagues at the University of Auckland to understand climate mobility in the Pacific <https://www.pacific-climate-research.auckland.ac.nz/>. She is also the co-supervisor for an indigenous PhD student at VUW whose project is looking at therapeutic practice in response to the climate crisis.

## 13. Dr Angelique Reweti

[a.reweti@massey.ac.nz](mailto:a.reweti@massey.ac.nz)

**Research area classification:** Health sciences; Indigenous studies; Health services and systems; Health and community services; Public health; Health equity; Health promotion; Preventative health care; Social determinants of health; Te hauora me te oranga o te Māori (Māori health and wellbeing); Ngā tokoingoaahurea o te hauora o te Māori (Māori cultural determinants of health); Te whakatairanga hauora o te Māori (Māori health promotion); Tehauora me te oranga tūmatanui o te Māori (Māori public health and wellbeing); Te oranga ā-pāpori, ā-hinengaro, ā-ahurea, ā-wairua o te Māori (Māori social, cultural, emotional and spiritual wellbeing); Ngā tokoingoa pāpori o te hauora o te Māori (Māori social determinants of health); Ngā tāngata, te porihanga me ngā hapori o te Māori (Māori peoples, society and community); Te whanaketanga ā-hapori, ā-rohe o te Māori (Māori community and regional development); Te rangahau kei rō hapori o te Māori (Māori community-based research); Ngā tirohanga Māori (Māori perspectives); Ngā pūtaiao Māori (Māori sciences); Te mana motuhake o ngā raraunga Māori (Māori data sovereignty)

**Current employer:** Massey University

**Role:** Senior Lecturer

**Bio:** Dr Angelique Reweti (Ngāpuhi) has a PhD in Health Sciences from Massey University, specializing in Indigenous health promotion and public health. Her work intersects Indigenous health, sustainability and climate change, focusing on advancing the health and wellbeing of Māori communities through innovative research and active community engagement. Angelique's research explores how the health of the environment is mirrored in the health of people, addressing the impact of colonialism on health policy and developing culturally-relevant health communication strategies. Her leadership in community-based initiatives, such as food sovereignty and well-being, demonstrates her commitment to challenging deficit narratives surrounding Māori health by emphasizing empowerment, resilience and cultural identity.

Kia tau tonu rā te manaakitanga ki a koutou

**Collaborative research interests:** Angelique's research, grounded in mātauranga Māori, examines the deep connections between cultural identity, environmental care and community well-being. For example, her project Waiora: Connecting People, Well-Being, and Environment Through Waka Ama in Aotearoa New Zealand illustrates how waka ama (outrigger canoe paddling) is a culturally significant practice that strengthens the bonds between whānau, the environment, and cultural identity.

Collaborating with Latin American researchers would allow for a valuable exchange of Indigenous knowledge, enhancing our global understanding of sustainability and climate resilience and informing innovative, culturally relevant health promotion strategies.

## 14. Dr Ramzi Michel Tubbeh Sierralta

[ramzi.tubbeh@lincoln.ac.nz](mailto:ramzi.tubbeh@lincoln.ac.nz)

**Research area classification:** Human society; Environmental geography

**Current employer:** Lincoln University

**Role:** Lecturer

**Bio:** Dr Ramzi Tubbeh is a Peruvian geographer with expertise in environmental governance, community-based resource management, and climate change. Ramzi studies how rural livelihoods and environmental governance practices transform with shifting development policies and environmental changes. His focus is primarily on water governance and smallholding farmers' livelihoods in water-stressed Andean regions. Other research includes analysis of livelihood transformation and community-based conservation in indigenous communities of the Peruvian Amazon affected by alluvial gold mining and illegal logging. Ramzi has worked as a sustainability consultant in Peru, where he led vulnerability assessments, designed and assessed the impacts of a climate change adaptation project, advised the implementation of an ecosystem-based climate change adaptation project, and co-ordinated the preparation of Peru's second communication on climate change for the UNFCCC, among other works. Currently he is interested in researching the relationship between large irrigation projects, dairy farming, and degradation of waterways in the Canterbury plains.

**Collaborative research interests:** Ramzi is interested in conducting research on climate change adaptation in the Brazilian Amazon and in high-altitude Andean peatlands (bofedales) in Chile and Peru.

1. Chile-Peru project: Andean *Distichia muscoides* peatlands (bofedales) are formed through the slow flow of glacial meltwater over gentle peri-glacial slopes. Smallholding farmers and alpaca herders in the Andes have co-managed bofedales over many generations to enhance fodder production and water availability for livestock and irrigation. The resilience of this social-ecological system relies on continuous co-management and reliable glacial water flows. Unfortunately, accelerated glacial retreat is modifying bofedal hydrology and in some areas, farmers and herders are migrating to cities, leading to a loss of local co-management knowledge. These coupled trends raise water security questions. My research aims to support bofedal conservation and rural livelihoods by advancing knowledge about climate stressors, local management practices, and adaptive strategies in Peruvian and Chilean bofedal landscapes.

2. Brazil research: Climate change adaptation projects can significantly support vulnerable communities in a context of climate crisis. However, if poorly designed, projects may exclude or even harm the most vulnerable. Such "maladaptive" projects may create lock-in effects, whereby an undesirable development pathway becomes difficult to steer away from. I have been invited to collaborate with researchers at University of Canterbury and Lincoln University in research to develop methods for reliably identifying climate maladaptation. A climate maladaptation assessment tool has already been developed through research in New Zealand. The next stage involves testing the tool through in-depth research in New Zealand, the Himalayas, and the Brazilian Amazon. We may add Chile and other Latin American countries to the project.

See: <https://theconversation.com/climate-adaptation-projects-sometimes-exacerbate-the-problems-they-try-to-solve-a-new-tool-hopes-to-correct-that-213969>.

## 15. Jacinta Maria Forde

[jacs.forde@vuw.ac.nz](mailto:jacs.forde@vuw.ac.nz)

**Research area classification:** Indigenous studies; Pacific peoples environmental knowledges; Pacific peoples marine environment science

**Current employer:** Victoria University of Wellington

**Role:** Lecturer

**Bio:** Jacinta has a passion for Indigenous and environmental anthropology with a focus on Māori and Pacific interests and epistemologies.

Jacinta's PhD research relates to a larger environmental-based research project on the influence of auhumoana tawhito (ancient aquaculture) on toheroa, an endemic shellfish of Aotearoa. She seeks to ethnographically describe the cultural significance of toheroa for Māori, particularly in Te Tai Tokerau (Northland), and to investigate the traditional and contemporary resource management practices associated with kaimoana.

**Collaborative research interests:** Throughout Jacinta's PhD research, the impact of climate change was always present and evident when discussing the decline of toheroa and the ways in which coastal Māori have utilised mātauranga Māori to establish and implement projects to try and help mitigate these impact. The sustainability of this cultural keystone species has been a concern for coastal Māori since it was first decided to open canneries and turn it into a commercial export. Given the geographical location of Aotearoa in the Pacific, these issues are constantly being discussed and if not explicitly, are always present like an undercurrent. Jacinta's future research is to build on her experience of working with Māori and privilege Pacific epistemologies and methodologies to examine the migration of tofua'a (humpback whales) and their significance, particularly in Tonga, and how climate change and the problematic increased privatisation of the ocean and desire for deep sea mining and other capitalist endeavours has had an impact on these culturally significant mammals. She thinks that it would be great to build relationships with ECRs in Chile particularly on this topic given the tofua'a migration takes them past the coast of Chile.

## 16. Sophie Elizabeth Coomber

[sophie.coomber@aut.ac.nz](mailto:sophie.coomber@aut.ac.nz)

**Research area classification:** Law and legal studies; Climate change law; International humanitarian and human rights law; Ocean law and governance; Public international law; Law and society and socio-legal research; Legal theory, jurisprudence and legal interpretation; Migration, asylum and refugee law

**Current employer:** Auckland University of Technology

**Role:** Lecturer

**Bio:** Sophie Coomber is a Māori/Pākehā (New Zealand European) law researcher and lecturer currently working at Auckland University of Technology. She just completed a Masters researching climate change displacement from the Pacific to New Zealand from a tikanga Māori perspective, applying principles and systems from tikanga Māori to contextualise both displacement and the impacts of climate change within an Indigenous, decolonial viewpoint. Her work focuses on the nexus between human rights, Indigenous sovereignty, pluralist law, and climate change. She is currently working on the incorporation of tikanga Māori into the law degree offered at Auckland University of Technology, in line with new curriculum requirements.

**Collaborative research interests:** Sophie is interested both in projects that look at the law applying to the impacts of climate change and projects that argue for new law. The preservation of human rights and state sovereignty as the climate changes are key research areas for her, alongside climate change displacement, forced relocation, and the specificities of the impact of climate change on Indigenous peoples and their sovereignty. She is also interested in projects that seek to provide new understandings of climate change from different cultural perspectives and translate those understandings into law on the international or domestic level, or that seek to rebalance the relationship between people and the environment through law. She has previously worked on the understanding of legal personhood for environmental features in New Zealand as a way of granting rights to the environment in a way that is consistent with a Māori understanding of the natural world.