

# Dr Maibritt Pedersen Zari *PhD, BDes (Int. Arch)*

Senior Lecturer in Sustainable Architecture



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## Citizenship:

New Zealander.

## Languages:

Fluent: English.  
Beginner / intermediate:  
German, Danish, Te Reo  
Māori, Tibetan.

## Pronouns:

She/her.

## Expertise and research interests

My research sits at the interface between ecology and designed human experiences across spatial scales, from interior architecture and architecture, through to urban design. Because I see humans as indivisible parts of living ecologies, my work considers how human wellbeing is interconnected with the health of the ecologies we exist within. To leverage these interconnections for increased wellbeing (of all) is the work of regenerative design. My research explores how understanding ecosystems can be used to define tangible ecology based metrics for sustainability or regenerative performance in the urban built environment, with particular regard to how climate change and continued loss of global biodiversity affects communities and built environments. My expertise include: biomimicry and architecture, biophilic design, urban ecosystem services, ecosystem-based adaptation and nature-based solutions, urban climate change resilience and adaptation particularly in the Pacific, regenerative design, and design for urban biodiversity. Currently I am the Primary Investigator for the Marsden funded project 'Wellbeing through Nature-based Design: Co-designing Climate Change Adaptation in Oceania' and lead a complex and diverse team aiming to develop nature-based urban design solutions, rooted in Indigenous knowledges that support climate change adaptation and individual and community wellbeing in different contexts across Oceania. I am well published and am respected in my field internationally, as exemplified by numerous key note speaking invitations, and invitations to collaborate. My research has been [cited more than 1000 times](#). My h-index is 16 and my i10-index is 29.

## Academic Qualifications

- 2005-2012 PhD. Victoria University of Wellington, School of Architecture.  
<http://researcharchive.vuw.ac.nz/handle/10063/2491>
- 1997-2001 Bachelor of Design (*Interior Architecture*). Victoria University of Wellington.

## Positions held at the School of Architecture, VUW

- 2021-present. Research Cluster Leader Sustainability and Wellbeing
- 2017-2018 and 2019 - present. Deputy Head of School
- 2015-2017. Director of Undergraduate Programmes
- 2016-present. Senior Lecturer (Sustainable Architecture)
- 2008-2016. Lecturer (Sustainable Architecture)
- 2006-2008. Assistant Lecturer
- 2000-2003 and 2005-2006. Contract Course Coordinator, Guest Lecturer, Research Fellow, Tutor.

## Peer reviewed journal articles

- ✓2021, Major, D.C., Blaschke, P., Gornitz, V., Hosek, E., Lehman, M., Lewis, J., Loehr, H., Major-Ex, G.A., **Pedersen Zari, M.**, Vargas, M.J.V., Watterson, E., and Wejs, A. 2021. 'Adaptation to climate change in small island settlements.' *Ocean & Coastal Management* Vol. 212 No. 105789. Pg 1-6.
- 2021, Delpy, F., **Pedersen Zari, M.**, Jackson, B., Benavidez, R. and Westend, T. 'Ecosystem Services Assessment Tools for Regenerative Urban Design in Oceania'. *Sustainability*. Vol. 13, No. 5 pg 2825.
- ✓2021, **Pedersen Zari, M.** 'Biomimetic Urban and Architectural Design: Illustrating and Leveraging Relationships between Ecosystem Services'. *Biomimetics*. Vol. 6, No. 1. Pg 1-16.
- 2021, Blanco, E., **Pedersen Zari, M.**, Raskin, K. and Clergeau, P. 'Urban Ecosystem-Level Biomimicry and Regenerative Design: Linking Ecosystem Functioning and Urban Built Environments'. *Sustainability*. Vol. 13, No. 1 pg 404.
- 2020, Marques, B., Freeman, C., Carter, L., and **Pedersen Zari, M.** 'Sense of place and belonging in developing culturally appropriate therapeutic environments: a review'. *Societies*. Vol. 10, No. 83 pg 1-18.
- ✓2020, **Pedersen Zari, M.**, Blaschke, P., Jackson, B., Komugabe-Dixon, A., Livesey, C., Loubser, D., Martinez-Almoyna Gual, C., Maxwell, D., Rastandeh, A., Renwick, J., Weaver, S., Archie, K. 'Devising urban ecosystem-based adaptation (EbA) projects with developing nations: a case study of Port Vila, Vanuatu'. *Ocean & Coastal Management*. Vol. 184 pg 1-14.
- 2020, MacKinnon, R., Oomen, J., and **Pedersen Zari, M.** 'Promises and presuppositions of biomimicry'. *Biomimetics* Vol. 5, No. 3, pg 33.
- ✓2020, **Pedersen Zari, M.** and Hecht, K. 'Biomimicry for regenerative built environments: mapping design strategies for producing ecosystem services'. *Biomimetics* Vol. 5, No. 2, pg 1-18.
- ✓2019, **Pedersen Zari, M.** 'Understanding and designing nature experiences in cities: a framework for biophilic urbanism'. *Cities and Health*. Pg 1-11.
- ✓2019, **Pedersen Zari, M.**, Kiddle, G. L., Blaschke, P. M., Gawler, S. & Loubser, D. 'Utilising nature-based solutions to increase resilience in Pacific Ocean Cities'. *Ecosystem Services*, 38, pg 1-10.
- 2019, **Pedersen Zari, M.**, 'Devising urban biodiversity habitat provision goals: ecosystem services analysis'. *Forests*. Vol. 10, No. 5, pg 39-48.
- 2019, **Pedersen Zari, M.**, 'Ecosystem services impacts as part of building materials selection criteria'. *Materials Today Sustainability*. Vol. 3-4. Published online March 2019.
- ✓2018, **Pedersen Zari, M.** 'The importance of urban biodiversity. An ecosystem services approach'. *Biodiversity International Journal*. Vol. 2, No. 4, pages 357-360.
- 2018, Rastandeh, A., **Pedersen Zari, M.**, Brown, D.K. & Vale, R. 'Analysis of landform and land cover: potentials for urban biodiversity conservation against rising temperatures'. *Urban Policy & Research*. Vol. 37, No. 3, pages 338-349.
- 2018, Rastandeh, A., **Pedersen Zari, M.** & Brown, D.K. 'Components of landscape pattern and urban biodiversity in an era of climate change: a global survey of expert knowledge'. *Urban Ecosystems*. Vol. 21, No. 5, pg. 903-920.
- 2018, Rastandeh, A., **Pedersen Zari, M.**, & Brown, D. K. 'Land cover change and management implications for the conservation of a seabird in an urban coastal zone under climate change'. *Journal of Ecological Management & Restoration*. Vol. 19, No. 2, pages 147-155.
- 2018, Rastandeh, A., **Pedersen Zari, M.**, 'A spatial analysis of land cover patterns and its implications for urban avifauna persistence under climate change'. *Landscape Ecology*. Vol. 33, No. 3, pages 455-474.
- 2018, Rastandeh, A., Brown, D.K. and **Pedersen Zari, M.**, 'Site selection of urban wildlife sanctuaries for safeguarding indigenous biodiversity against increased predator pressures'. *Urban Forestry & Urban Greening*, 32, pages 21-31.
- 2018, Rastandeh, A., **Pedersen Zari, M.**, Brown, D. & Vale, R. 'Utilising exotic flora in support of urban indigenous biodiversity: lessons for landscape architecture'. *Landscape Research*. Vol. 43, No. 5, pg. 708-720.

- ✓2017, **Pedersen Zari, M.** 'Biomimetic urban design: ecosystem service provision of water and energy'. Buildings. Special Issue: Biomimetics in Sustainable Architectural and Urban Design, Vol. 7, No. 1 pages 21.
- ✓2016, **Pedersen Zari, M.** 'Mimicking ecosystems for bio-inspired regenerative built environments'. Journal of Intelligent Buildings International (IBI). Special Issue: Biomimetic Building Design. Vol. 8, No 2, pages 57-77.
- 2015, **Pedersen Zari, M.** 'Ecosystem processes for biomimetic architectural design' Architectural Science Review (ASR). Vol. 58, No. 2, pages 106-119.
- 2015, **Pedersen Zari, M.** 'Ecosystem services analysis: mimicking ecosystem services for regenerative urban design'. International Journal of Sustainable Built Environment (IJSBE). Vol. 4, No. 1, pages 145–157.
- ✓2014, **Pedersen Zari, M.** 'Ecosystem services analysis in response to biodiversity loss caused by the built environment'. S.A.P.I.E.N.S. Vol. 7, No. 1.
- ✓2012, **Pedersen Zari, M.** 'Ecosystem services analysis for the design of regenerative built environments'. *Building Research and Information (BRI)*, Vol. 40, No. 1, pages 54-64. Special Issue: Regenerative Design and Development.
- ✓2010, **Pedersen Zari, M.** 'Biomimetic design for climate change adaptation and mitigation'. *Architectural Science Review (ASR)*, Vol. 53, No. 2, pages 172-183.
- ✓2009, **Pedersen Zari, M.** 'Changes in climate driving changes in architectural education'. ARCC Journal, vol.6, no. 1.

Currently under review:

- Latai-Niusulu, A., Bakineti, T., Missack, W., Kiddle, G.L, **Pedersen Zari, M.**, Blaschke, P., Kiddle, R., Chanse, V. 'Nature-based solutions for climate change adaptation and wellbeing: Evidence and opportunities from Kiribati, Samoa, and Vanuatu'
- Kiddle, G.L, **Pedersen Zari, M.**, Blaschke, P., Chanse, V., Kiddle, R. 'An Oceania urban design agenda linking ecosystem services, nature-based solutions, traditional ecological knowledge and wellbeing'
- Marques, B., Freeman, C., Carter, L., and **Pedersen Zari, M.** 'Conceptualising therapeutic environments through culture, Indigenous knowledge and landscape for health and well-being'
- Milligan, A., **Pedersen Zari, M.**, Rastandeh, A., Cranefield, J., Archie, K., Tallon, R. 'Beyond community gardens: urban agriculture, Geographic Information Systems and transformative citizenship'
- Pedersen Zari, M.** & Petrović, E.K. 'From anthropocene to symbiocene: philosophical considerations of ecosystem biomimicry in built environment design'.

**Books**

- 2020, **Pedersen Zari, M.**, Connolly, P., and Southcombe, M. *Ecologies Design: Transforming Architecture, Landscape and Urbanism*. Routledge Earthscan, Oxon.
- 2018, **Pedersen Zari, M.** *Regenerative Urban Design and Ecosystem Biomimicry*. Routledge, Oxon.
- 2017, Petrović, E.K., Vale, B. and **Pedersen Zari, M.** *Materials for a Healthy, Ecological and Sustainable Built Environment: Principles for Evaluation*. Woodhead Publishing, Duxford.

**Peer reviewed book chapters**

- ✓2021, **Pedersen Zari, M.** 'Biomimicry for Sustainable and Regenerative Architecture'. In Lu, D. (Ed), The Routledge Companion to Contemporary Architectural History. Routledge.
- 2020, **Pedersen Zari, M.** 'Introduction: a shifting paradigm in ecologically focused design'. In M. Pedersen Zari, P. Connolly, M. Southcombe. (Eds), Ecologies Design: Transforming Architecture, Landscape and Urbanism. Oxon: Routledge.
- 2020, Partington, J., **Pedersen Zari, M.** 'Ngāi Tūhoe's Te Kura Whare: our living building'. In M. Pedersen Zari, P. Connolly, M. Southcombe. (Eds), Ecologies Design: Transforming Architecture, Landscape and Urbanism. Oxon: Routledge.

- 2020, Baumeister, D., **Pedersen Zari, M.**, Hays, S. 'Biomimicry: an opportunity for buildings to relate to place'. In M. Pedersen Zari, P. Connolly, M. Southcombe. (Eds), Ecologies Design: Transforming Architecture, Landscape and Urbanism. Oxon: Routledge.
- 2020, Connolly, P., **Pedersen Zari, M.**, Southcombe, M. 'Introduction: towards and ecologies design practice'. In M. Pedersen Zari, P. Connolly, M. Southcombe. (Eds), Ecologies Design: Transforming Architecture, Landscape and Urbanism. Oxon: Routledge.
- 2020, Connolly, P., **Pedersen Zari, M.**, Southcombe, M. 'A call to ecologies design action'. In M. Pedersen Zari, P. Connolly, M. Southcombe. (Eds), Ecologies Design: Transforming Architecture, Landscape and Urbanism. Oxon: Routledge.
- ✓2019, **Pedersen Zari, M.** 'Preface'. In Naboni, E. and Havinga, L. (Ed), Regenerative Design in Digital Practice: A Handbook for the Built Environment. Bolzano, IT: Eurac.
- ✓2018, **Pedersen Zari, M.** 'Biomimetic materials for addressing climate change'. In L. Martínez, O. Kharissova & B. Kharisov (Eds), Handbook of Ecomaterials. Springer, Cham. Pages 1-23.
- 2017, **Pedersen Zari, M.** 'Utilizing relationships between ecosystem services, built environments, and building materials', in E.K. Petrović, B. Vale, and M. Pedersen Zari, (Eds). Materials for a Healthy, Ecological and Sustainable Built Environment: Principles for Evaluation. Woodhead, Duxford. Pages 1-28.
- 2017, **Pedersen Zari, M.** 'Ecosystem services analysis: incorporating an understanding of ecosystem services into built environment design and materials selection', in E.K. Petrović, B. Vale, and M. Pedersen Zari, (Eds). Materials for a Healthy, Ecological and Sustainable Built Environment: Principles for Evaluation. Woodhead, Duxford. Pages 29-64.
- ✓2015, **Pedersen Zari, M.** 'Can Biomimicry be a Useful Tool in Design for Climate Change Adaptation and Mitigation?' In Pacheco-Torgal, F., Labrincha, J. A., Diamanti, M. V., Chang Ping Yu, and Lee, H. K. (Eds), Biotechnologies and Biomimetics for Civil Engineering. Springer International Publishing, Cham. Pages 81-113.
- ✓2014, **Pedersen Zari, M.** 'Biomimetic Energy Generation Systems for Buildings'. In Anwar, S. (Ed), Encyclopaedia of Energy Engineering and Technology. 2nd Revised Hardcover edition. Taylor and Francis.
- 2014, Storey, J and Pedersen Zari, M. 'Overcoming the Barriers to Deconstruction and Materials Reuse in New Zealand', In Nakajima, S. and Russell, M. (Eds), Barriers for Deconstruction and Reuse/Recycling of Construction Materials. CIB Publications, CIB General Secretariat Publisher, Rotterdam. Pages 130-145.
- 2009, **Pedersen Zari, M.** 'An Architectural Love of the Living: Bio-inspired Design in the Pursuit of Ecological Regeneration and Psychological Wellbeing'. In Brebbia, C. (Ed), Sustainable Development IV, Volume 1. WIT Press, Southampton. Pages 293-302
- ✓2008, **Pedersen Zari, M.** 'Inspiration from the Living World'. In Bernhardt, J. (Ed), A Deeper Shade of Green. Balasoglou Books, Auckland. Pages 165-166.

Currently in peer review:

- ✓2020, **Pedersen Zari, M.** 'Accounting for nature: a critique of ecological footprinting'. In B. Vale, & R. Vale (Eds), Handbook of Ecological Footprinting. Springer.

Currently in progress (invited contributions):

'Coalescing of an Indigenous and nature-based approach to climate change adaptation' with R. Kiddle. For Architectural Thinking in a Time of Climate Emergency edited by S. Pelsmakers and J. Brown.

'Nature-based Urban Design for Oceania' with A. Latai-Niusulu and L. Kiddle. For Creating Resilient Landscapes for an Uncertain Future: A Framework for Change edited by A. Rastandeh and M. Jarchow.

**PhD Dissertation**

2012, **Pedersen Zari, M.** 'Ecosystem Services Analysis for the Design of Regenerative Urban Built Environments'. Doctor of Philosophy (PhD) thesis, Victoria University of Wellington, Wellington.

**Peer reviewed, published conference proceedings** (*underlined author presented at conference*)

- 2020, Varshney, K., **Pedersen Zari, M.**, Bakshi, N. The intersection of carbon sequestration and habitat provision in built environments: building rating tools comparison. 54<sup>th</sup> International Conference of the Architectural Science Association, 26<sup>th</sup> to 27<sup>th</sup> November 2020, Auckland, New Zealand (online).
- 2020, Delpy, F. & **Pedersen Zari, M.** Ecosystem services assessment tools for regenerative urban design in Oceania. 54<sup>th</sup> International Conference of the Architectural Science Association, 26<sup>th</sup> to 27<sup>th</sup> November 2020, Auckland, New Zealand (online).
- 2019, Koat, J. & **Pedersen Zari, M.** Biodiver-Cities: an architectural exploration of how architecture and urban design can regenerate ecosystem services & biodiversity. 53<sup>rd</sup> International Conference of the Architectural Science Association, 28<sup>th</sup> to 30<sup>th</sup> November 2019, Roorkee, India.
- 2019, **Pedersen Zari, M.** & Hecht, K. Biomimicry for regenerative built environments: mapping design strategies for producing ecosystem services (Keynote). In: Zanelli, A., Monticelli, C., Mollaert, M. & Stimpfle, B. (eds.) *TensiNet Symposium - Softening the habitat*. Milan, Italy: Politecnico di Milano.
- 2018, Woodward, E. & **Pedersen Zari, M.** 'Reconnecting children with nature: biophilic primary school learning environments'. *Zero Energy Mass Custom Home (ZEMCH) International Conference*, Melbourne, Australia.
- 2017, **Pedersen Zari, M.** 'What makes a city 'biophilic'? Observations and experiences from the Wellington Nature Map project'. In: Aurel, M. (ed.) *Back to the future: The next 50 years, 51st International Conference of the Architectural Science Association*. Wellington, New Zealand: The Architectural Science Association and Victoria University of Wellington.
- 2017, Rastandeh, A., Brown, D. K. & **Pedersen Zari, M.** 'Biodiversity conservation in urban environments: a review on the importance of spatial patterning of landscapes'. *Ecocity World Summit*. Melbourne, Australia.
- 2017, Chicca, F. & **Pedersen Zari, M.** 'Urban food production: Increasing resilience, livability, and a sense of community in Brazil, Cuba, and New Zealand'. *Cities, Communities and Homes: Is the Urban Future Livable?* Derby, United Kingdom.
- 2017, **Pedersen Zari, M.** & F. Chicca, 'Lessons for urban designers: Enhancing a city's liveability, sustainability, and sense of community from the bottom-up. Case studies from Havana, Cuba', *Cities, Communities and Homes: Is the Urban Future Livable?* Derby, United Kingdom.
- 2015, McIntosh, J, Campays, P, **Pedersen Zari, M.**, Marques, B., 'Education as mediation: Blurring the line between expert and lay knowledge', *8th International Conference and Exhibition of the Association of Architecture Schools of Australasia*, Christchurch, New Zealand.
- 2010, **Pedersen Zari, M.**, Jenkin, S., 'Re-defining cutting edge sustainable design: From eco-efficiency to regenerative development', *Sustainable Building Conference (SB10)*, Edited by: Easton, L., & Sharman, W., Wellington, SB10.
- 2008, **Pedersen Zari, M.** 'Bio-inspired architectural design to adapt to climate change'. *World Sustainable Building Conference*. Melbourne, Australia.
- 2008, **Pedersen Zari, M.** 'Neutralising education: Victoria university's carbon neutral faculty of architecture and design'. *World Sustainable Building Conference*. Melbourne, Australia.
- 2007, **Pedersen Zari, M.** 'Biomimetic Approaches to Architectural Design for Increased Sustainability', presented at the *Sustainable Building (SB07) Regional Sustainable Building Conference*, Auckland, New Zealand.
- 2007, **Pedersen Zari, M** and Storey, J. 'An Ecosystem Based Biomimetic Theory for a Restorative Built Environment', *Sustainable Building (SB07) Regional Sustainable Building Conference*, Lisbon, Portugal.
- 2007, Hoeller, N., **Pedersen Zari, M.**, Salustri, F., DeLuca, D., Love, M., McKeag, T., Stephens, E., Reap J., and Sopchak, L. 'Patterns from Nature', *Society for Experimental Mechanics Conference*, Massachusetts, USA.
- 2006, Storey, J and **Pedersen, M.** 'Factor X - Well Being as a Key Component of Next Generation Green Buildings', *Rethinking Sustainable Construction '06 Conference*, Sarasota, Florida, USA.

2003, Storey, J and **Pedersen, M.** 'Overcoming the Barriers to Deconstruction and Materials Reuse in New Zealand', *Proceedings Deconstruction and Materials Reuse Conference*, Gainesville, Florida, USA.

**Conference presentations / abstract publication** (*underlined author presented at conference*)

2020, Chanse, V., **Pedersen Zari, M.** Kiddle, L. and Blaschke, P. 'Developing a Nature-based Urban Design and Planning Toolkit and Agenda for Urban Resilience in Oceania's Cities'. NZGS Conference. 25<sup>th</sup> to 27<sup>th</sup> November 2020, Wellington, New Zealand.

2020, Blaschke, P., Kiddle, L., **Pedersen Zari, M.** and Chanse, V. 'The potential of nature-based solutions for climate change adaptation and increased resilience in Aotearoa and Pacific Ocean Cities'. NZGS Conference. 25<sup>th</sup> to 27<sup>th</sup> November 2020, Wellington, New Zealand.

2020, MacKinnon, R., and **Pedersen Zari, M.** 'The importance of urban green spaces during a global pandemic'. NZGS Conference. 25<sup>th</sup> to 27<sup>th</sup> November 2020, Wellington, New Zealand.

2020, Donaldson, T., and **Pedersen Zari, M.** 'Urban design for the support of coastal biodiversity. NZGS Conference'. 25<sup>th</sup> to 27<sup>th</sup> November 2020, Wellington, New Zealand.

2020, Delpy, F., and **Pedersen Zari, M.** 'Working with ecosystem services assessment tools in cities of the Pacific islands for more effective urban design'. NZGS Conference. 25<sup>th</sup> to 27<sup>th</sup> November 2020, Wellington, New Zealand. (Virtual).

2020, Varshney, K., **Pedersen Zari, M.** and Bakshi, N. 'Integrating ecosystem services with building rating tools: the need for Nature-based Solutions in architectural design'. NZGS Conference. 25<sup>th</sup> to 27<sup>th</sup> November 2020, Wellington, New Zealand.

2020, Blaschke, P., **Pedersen Zari, M.**, Kiddle, L., and Chanse, V. 'The potential of nature-based solutions for climate change adaptation and increased resilience in Pacific Ocean Cities'. *Pacific Ocean Pacific Climate change Conference*, Apia, Samoa. (Virtual).

2020, Chanse, V., **Pedersen Zari, M.**, Blaschke, P., and Kiddle, L. 'Developing a Nature-based Urban Design and Planning Toolkit and Agenda for Urban Resilience in Oceania's Cities'. *Pacific Ocean Pacific Climate change Conference*, Apia, Samoa. (Virtual).

2019, Blaschke, P., Kiddle, L., **Pedersen Zari, M.** et al. 'Ocean Cities. Using ecosystem services-based solutions to increase resilience in Oceania's urban areas'. *Oceania Ecosystem Services Forum*, Christchurch, New Zealand.

2018, Blaschke, P., **Pedersen Zari, M.** 'Wellington central city green spaces: is there enough and do they deliver optimum ecosystem services?' *New Zealand Ecological Society Conference*, Wellington, New Zealand.

2018, Blaschke, P., **Pedersen Zari, M.** et al. 'The outdoor housing environment matters too: the role of urban green space in the central city'. *8<sup>th</sup> ICEERB Housing Sustainability in Urban Areas Conference*, Wellington, New Zealand.

2018. **Pedersen Zari, M.** 'Generous cities: urban ecosystem biomimicry' (Key Note). *Generous Cities Summit*, Tempe, Arizona, United States of America.

2018, **Pedersen Zari, M.** 'Biophilic urbanism: understanding and designing nature experiences in cities'. *Activating Biophilic Cities (ABC) International Conference*, London, England. 2018, **Pedersen Zari, M.** 'Urban ecosystem services: habitat provision'. *European Forum on Urban Forestry (EFUF) International Conference*, Helsinki, Finland. (Invited special issue journal publication).

2007, **Pedersen Zari, M.** 'Closed Loop Materials Cycles: Architectural Education to Affect Change'. *Building Materials Reuse Association (BMRA) Conference on Deconstruction, Building Materials Reuse, and C&D Recycling*, Madison, Wisconsin United States of America.

2007, **Pedersen Zari, M.** 'Biomimetic Approaches to Architectural Design', *Sustainable Building (SB07) Regional Sustainable Building Conference*, Toronto, Canada. Poster.

## International and Governmental Reports / Articles / Other publications

- ✓2020, Blaschke, P., Chapman, R., Gyde, E., Howden-Chapman, P., Ombler, J., **Pedersen Zari, M.**, Perry, M., Randal, E. *Green Space in Wellington's Central City: Current Provision, and Design for Future Wellbeing*. A Report for Wellington City Council prepared by the New Zealand Centre for Sustainable Cities.
- ✓2019, Blaschke, P., Gawler, S., Kiddle, L., Loubser, D. **Pedersen Zari, M.**, *Ocean Cities: Sustainable Urban Development For Islands. Regional Policy Guide*. A Report for United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).
- 2017, **Pedersen Zari, M.**, Blaschke, P. M., Livesey, C., Martinez-Almoyna Gual, C., Weaver, S., Archie, K. M., Jackson, B., Komugabe-Dixon, A., Loubser, D., Maxwell, D., Rastandeh, A. & Renwick, J. *'Ecosystem-based Adaptation (EbA) Project Implementation Plans, Port Vila, Vanuatu'*. Wellington, New Zealand: Report prepared by Victoria University of Wellington for the Pacific Ecosystem-based Adaptation to Climate Change Programme (PEBACC) of the Secretariat of the Pacific Regional Environment Programme (SPREP).
- 2017, Blaschke, P. M., **Pedersen Zari, M.**, Archie, K. M., Jackson, B., Komugabe-Dixon, A., Livesey, C., Loubser, D., Martinez-Almoyna Gual, C., Maxwell, D., Rastandeh, A., Renwick, J. & Weaver, S. *'Ecosystem Assessment and Ecosystem-Based Adaptation (EbA) Options for Port Vila, Vanuatu'*. Wellington, New Zealand: Report prepared by Victoria University of Wellington for the Pacific Ecosystem-based Adaptation to Climate Change (PEBACC) Programme of the Secretariat of the Pacific Regional Environment Programme (SPREP).
- ✓2009, **Pedersen Zari, M** & Jenkin, S. *'Rethinking our built environments: Towards a sustainable future'*, Wellington, Ministry for the Environment. 55 pages (18 724 words). Peer reviewed.
- ✓2009, **Pedersen Zari, M.** *'Towards a sustainable future: Adopting a regenerative approach to development'*, Wellington, Ministry for the Environment. 24 pages (4440 words). ✓2009, **Pedersen Zari, M.** *'Regenerative Design for the Future'*, in BUILD, Vol. 115, December 2009-January 2010. Pages 68-69.
- ✓2008, **Pedersen Zari, M**, Couchman, A., Quenneville, P., Hill, D., Wood, C., Huddart, A., Gromm, P. *New Zealand as a Test Bed: Leading the World beyond Sustainable Built Environments*. Discussion paper for Cabinet, New Zealand Government.
- 2007, **Pedersen Zari, M.** *Biomimicry and Design*. Report for Building Research Association of New Zealand.
- 2005, Storey, J., Charleson, A., Gjerde, M. and **Pedersen, M.** *'The State of Deconstruction in NZ'*, in Abdol R. Chini (Ed), *Deconstruction and Materials Reuse – an International Overview*. CIB Publication 300. Final Report of Task Group 39 on Deconstruction. The International Council for Research and Innovation in Building and Construction, University of Florida. 92 pages (31000 words). Peer reviewed.

## Popular Press / Articles / Other

- 2021, **Pedersen Zari, M.** and Latai-Niusulu, A. Invited radio interview on Radio New Zealand National *'New research looks at climate impacts on Pacific urbanisation'*. Aired 28/01/21. L. Hanly reporter. <https://www.rnz.co.nz/international/programmes/datelinepacific/audio/2018781210/new-research-looks-at-climate-impacts-on-pac-urbanisation>
- 2020, Anderlini, C. and **Pedersen Zari, M.** *'Looking to nature to design climate-resilient cities'*. Newsroom (ideasroom), Available: <https://www.newsroom.co.nz/ideasroom/looking-to-nature-to-design-climate-resilient-cities>
- 2020, Blaschke, P., Chapman, R., Howden-Chapman, P. and **Pedersen Zari, M.** *'A Green Covid-19 Recovery Programme for Wellington'*. Wellington Scoop, Available: <http://wellington.scoop.co.nz/?p=127717>
- 2020, MacKinnon, R. and **Pedersen Zari, M.** *'Investigating our need for Nature during the Covid-19 Pandemic in Aotearoa'*. Business Scoop, Available: <http://business.scoop.co.nz/2020/05/20/in-crisis-do-we-turn-to-nature/>
- 2020, Bakshi, N. and **Pedersen Zari, M.** *'Climate Explained: How White Roofs Help to Reflect the Sun's Heat'*. Stuff Environment, Available: <https://www.stuff.co.nz/environment/climate-news/121008357/climate-explained-how-white-roofs-help-to-reflect-the-suns-heat>
- 2017, **Pedersen Zari, M.**, Whale, R., de Roiste, M., Cruz, E., Milne, K. *'Wellington Nature Map: Biophilic Cities'*, Wellington City Council, *Wellington*. Available:

<http://wellington.govt.nz/recreation/enjoy-the-outdoors/wellington-nature-map>

2016, **Pedersen Zari, M.** and Cruz, E. 'Growth in Living Buildings', in BUILD, Vol. 153, April. Pages 82-84.

2015: **Pedersen Zari, M** and Whale, R. Invited radio interview on Radio New Zealand National 'Reframing the great outdoors' (biophilic design attributes). Aired 20/05/15.

2010, **Pedersen Zari, M.** 'Regenerative Design for the Future', in BUILD, Vol. 115, December/ January. Pages 68-69.

2007, **Pedersen Zari, M.** 'Nature Inspired Design', in BUILD, Vol. 102, October-November. Pages 90-91.

## Research funding, awards and recognition

### External Research Funding / Contracts and Consultancies:

2021-24: *Wellbeing through Nature-based Urban Design: Co-designing Climate Adaptations in Oceania*. Primary investigator (team of 5). Marsden Fund (standard). \$NZ870,000.

2019: *Biophilic Design workshops and design consultation*. Tennent and Brown Architects. Part of Living Building Challenge project 'The Living Pā' (VUW).

2018/9: *Green space in Wellington's central city: current provision, and design for future well-being*. In conjunction with 8 co-authors from VUW (SoA and SGEES) and Otago University. Wellington City Council. \$NZ15,462. Invited co-author and section leader. My contribution approx. 20%.

2018/9: *Ocean cities: sustainable urban development for islands. Building ocean-friendly climate resilience in pacific island developing states regional policy guide*. In conjunction with 4 co-authors from VUW (SoA and SGEES), SPREP, & ICLEI Oceania. United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). \$NZ12,000. Invited co-author and section leader. My contribution approx. 30%.

2017: *Pacific Ecosystem-based Adaptation to Climate Change (PEBACC) project*. In conjunction with 12 co-authors from VUW (SoA and SGEES). Secretariat of the Pacific Regional Environment Programme (SPREP). \$NZ35,000. Section leader of a multi-disciplinary team. PEBACC is a five year initiative implemented by SPREP in partnership with the governments of Fiji, Solomon Islands and Vanuatu. The project is part of the International Climate Initiative (IKI). Our focus was on Port Vila, Vanuatu. My contribution approx. 40%.

2017/8: *Vernacular architecture and its relationship to ecology and climate in Tibet*. Firebird Foundation Research Fellowship (United States of America). \$NZ9,895. Publications from this primarily oral history project along with building science research are under development at present.

2017: *Biophilic Design workshops and design consultation*. Tennent and Brown Architects. Part of Living Building Challenge Ruatoria town hub project.

2016/7: *Biophilic Map of Wellington project*. M. Pedersen Zari, R. Whale, M. de Roiste. Wellington City Council Our Living City Fund (2 grants). \$NZ9,000. I was the principle investigator, designer and researcher. This led to the creation of an [online urban biophilia map](#) and research findings. My contribution approx. 90%.

2016: *Living Building Challenge Redlist Materials for Tennent Brown Architects Tūhoe Projects*. Completed by Architecture student B. Everitt. Tennent and Brown Architects. \$NZ3000. This was a VUW Summer Scholarship contribution. An additional \$NZ3000 was funded by VUW.

2008. *A Value Case for Regenerative Development in New Zealand* in collaboration with URS (an engineering consultancy) for the New Zealand Ministry for the Environment. ~\$NZ33,330. My contribution approx. 75%.

### Book contracts:

2019/20: Contract with Routledge/Taylor Francis (Earthscan) to write *Ecologies Design: Transforming Architecture, Landscape, and Urbanism*. In conjunction with P. Connolly and M. Southcombe. Estimated publication 2020.

2017: Contract with Routledge/Taylor Francis (Earthscan) to write *Regenerative Urban Design and Ecosystem Biomimicry*. Published in 2018.

2016: Contract with Elsevier (Woodhead) to write *Materials for a Healthy, Ecological and Sustainable Built Environment*. In conjunction with E.K. Petrovic and B. Vale. Published in 2017.



### Competitively Awarded Internal Research Funding:

2020. Faculty Strategic Research Initiative Funding for *Nature based-solutions for climate resilient Pacific cities: Kiribati, Samoa, and Vanuatu case studies* with colleague V. Chanse and in association with L. Kiddle, P. Blaschke, R. Kiddle, A. Latai-Niusulu, W. Missack and T. Bakineti. \$NZ5000.
2020. VicTeach Funding for *Decolonising the Crit* event. With colleagues R. Kiddle, and H. Hopewell. \$NZ2500.
2019. Faculty Strategic Research Initiative Funding for *Wellbeing through relationships to land and ocean: nature based-solutions for climate resilient Pacific cities* with colleagues L. Kiddle, P. Blaschke, V. Chanse. \$NZ4500.
2018. VUW internally funded Summer Scholarship \$NZ6000. Completed by Architecture masters student E. Nathu. *Stories of discrimination. On gender balance in architectural education.* With E. Petrovic.
2018. Research and Study Leave Grant recipient. Research in Denmark and Europe 6 months. Field work in Tibet 1 month. New Zealand based research 3 months. \$NZ11,585.
- 2017: Sustainability Distinctiveness Theme Grant recipient for an interdisciplinary project investigating *Mapping of Urban Agriculture and Transformative Citizenship* with colleagues A. Milligan (Faculty of Education), A. Rastandeh (Landscape Architecture), K. Archie (Climate Change Research Institute), J. Cranefield (School of Information Management). \$NZ4000.
2016. Research Establishment Grant recipient for the *Regenerative Urban Environments and Ecosystem Services* project. \$NZ9938.
2015. Research Streams Development Grant recipient for the *Ecology is Not a Metaphor* project with colleagues P. Connolly and M. Southcombe. \$NZ4000.

### Speaking, key note, and teaching invitations

2021. Panelist with colleagues A. Kilford, H. Smith, and I. Horrocks for 'The City in the Anthropocene: Performing Urban Geology and Te Taiao' In *What if the City was a Theatre Symposium and Performance Event*. Curated by M. Nixon. February.
2021. Invitation to produce the online Trans-Tasman Regen Roundtable #2 with colleague D. Hes. February.
2020. Invited speaker to the New Zealand Centre for Sustainable Cities seminar series. 'Green infrastructure for central Wellington post-COVID' Wellington City Art Gallery, Wellington. July.  
<http://sustainablecities.org.nz/2020/07/seminar-greenspace-in-the-city-post-lockdown/>
2019. Invited speaker to the 'Wellington Urban Ecology Research Symposium', hosted by the Centre for Biodiversity and Restoration Ecology (VUW). Zealandia, Wellington. September.
2019. Invited keynote speaker at the 'Biophilic Summit', hosted by Toi Te Ora Public Health Bay of Plenty and Lakes. Tauranga, Aotearoa. June.
2019. Invited lecture at the Department of Architecture and Built Environment, University of Nottingham. Nottingham, United Kingdom. June.
2019. Invited keynote speaker at the '6th International TensiNet Symposium: Softening the Habitats: Sustainable Innovations in Minimal Mass Structures and Lightweight Architectures', Hosted by Politecnico di Milano. Milan, Italy. June.
2019. Invited presenter at the 'partner meeting', International Biophilic Cities Network. Online (international). June.
2019. Public speaker at PARKing Space Symposium: the role of public spaces in Aotearoa cities. This was a public lecture seminar related to urban sustainability in Wellington organised by R. Kiddle as part of the Building Better Homes, Towns, and Cities National Science Challenge. Wellington, Aotearoa. March.
2018. Visiting scholar at Aarhus School of Architecture in Denmark. April – October.
2018. Invited guest lecturer (public) at the Royal Copenhagen Academy of Fine Arts Architecture School (KADK), Denmark. September.
2018. Invited guest lecturer to the Architecture Masters Programme at Aalborg University, Denmark. September.
2018. Invited postgraduate students session and guest lecture at the Politecnico di Milano School of Architecture. Milan, Italy. September.

2018. Invited visiting scholar (2 weeks) with [CEEBIOS \(Centre Européen d'Excellence en Biomimétisme de Senlis\)](#), through the [Natural History Museum \(Muséum national d'Histoire naturelle\)](#) in Paris. Public lectures were given at the [Institute for Desirable Futures \(l'institut des futurs souhaitables\)](#) and the [Ecole nationale supérieure de création industrielle \(French national institute for advanced studies in industrial design\)](#). June / July.
2018. Invited visiting scholar at [Coburg Hochschule School of Architecture](#) in Germany. Public lecture and coordinator of an intensive special topic course in Living Architecture (2 weeks). June.
2018. Invited keynote speaker at the 'Generous Cities Summit'. Hosted by [Arizona State University and Biomimicry 3.8](#). Tempe, Arizona, United States of America. April.
2017. Co-keynote presentation with Dr M. Gjerde at the 'City Re:Invented' seminar on regenerative city development hosted by [The City of Łódź](#) in Poland and the [New Zealand Polish Embassy](#). October. (Remote presentation).
2017. Invited public lecturer at the [Natural History Museum \(Museo Nacional de Historia Natural Cubana\)](#) in Havana, Cuba, and the [Santa Clara Architecture School](#), Santa Clara, Cuba. January.
2017. Invited lecture at the [Institute for Urban Planning Research \(IPPUC\)](#), Curitiba, Brazil. January.
2011. Invited speaker (1 of 5) for the 'Regenerative Design and Development Workshop' at the [Liu Centre for Global Studies, University of British Columbia](#), Canada. April. (Remote Presentation).

### Other Professional Distinctions and external engagement

My engagement with and service to the wider academic and professional community takes many forms including appointment to journal editorial boards, editing of special journal issues, and peer review of numerous articles in international scholarly journals of high repute.

2021. Invitation to participate in the [British Academy's COP26 'Nature-based Solutions in Small Islands'](#) workshop.
2021. VUW nomination (1 of 3) to attend the 2021 [Te Manahua New Zealand Universities Women in Leadership](#) residential programme for senior academic staff.
2021. Invited reviewer of book proposal for [Springer](#).
- 2020-23. Invited to the Scientific Committee and to be Co-chair of the panel 'Design for Climate Change Adaptation' for the [International Union of Architects World Congress: 'Sustainable Futures – Leave No One Behind'](#), 2023, Copenhagen, Denmark.
2020. Invited research proposal reviewer for the [Austrian Science Fund \(FWF\)](#).
2020. Invitation to be a guest editor for the journal '[Biomimetics](#)' for a second special issue related to Biomimetic architecture and urbanism (first issue was 2019).
2020. Invitation to be a guest editor in collaboration with Dr Dom Hes (University of Melbourne) for the journal '[Sustainability](#)' for special issue Eco-Cities, Green-Blue Design and Regenerative Sustainability. Estimated publication late 2020.
2020. Invited reviewer of 2 book proposals for [Routledge](#).
- 2019-ongoing. Invited member of the Technical Advisory Group Resilient Ecosystems in the Pacific Programme, NZ [Ministry of Foreign Affairs and Trade](#).
- 2019-ongoing. Invitation to become the first New Zealand director of the [Urban Climate Change Research Network Australian Oceania Hub](#). I am one of four co-directors in the region (the other three are based in Australia).
2019. Invitation to be a guest editor of the journal '[Biomimetics](#)' for special issue: Biomimicry and Sustainable Urban Design.
2019. Invited member of international [Design Society Biomimetics Special Interest Group](#).
2018. Invited Special Workshop speaker / facilitator at the 2nd [Pacific Climate Change Conference](#), Wellington, February. Hosted by Victoria University and SPREP.
- 2017 – ongoing. Member of the [Centre for Biodiversity and Restoration Ecology](#), Victoria University of Wellington.
2017. Invited guest editor of Buildings Journal Special Issue: [Biomimetics in Sustainable Architectural and Urban Design](#) (Vol 7. No. 1)
2017. Curator of the Generous Housing Project digital exhibition at [Pataka Art + Museum in Porirua](#) (an exhibition of student sustainable interior architecture work).
- 2016-2019. [New Zealand Green Building Council](#) liaison person at VUW School of Architecture.

2014. Invited member of the Formas Expert Review Panel for Sustainable Building and Planning Research. Formas is the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning.

2013. International Scientific Committee of the SB13 Pushing the Boundaries: Net Positive Buildings Conference in Vancouver. Organised by the University of British Columbia.

2012. Scientific Committee of the 1st International Conference on Building Sustainability (BSA) held in Portugal in May 2012. Organised by the Greenlines Institute for Sustainable Development and the University of Minho.

2010 - present. Frequent peer reviewer for international journals of high repute. For example: Building Research and Information; Architectural Science Review; S.A.P.I.E.N.S Journal; Smart and Sustainable Built Environments Journal; Intelligent Buildings International; Environment and Planning B: Planning and Design Journal; International Journal of Sustainable Development (IJSd) and others.

2008. Invitation to take part in a MED, MfE, MAF, MoRST and NZTE, research gathering to consider possible test-bed opportunities in New Zealand in the area of sustainable building. Nomination and first author to team that produced a cabinet paper for the New Zealand Government.

2007-2010. Invited member of the Patterns in Nature international research group. This is a group of mostly North American biomimicry researchers.

2007. Winner of a Building Research Scholarship awarded by Building Research New Zealand to investigate biomimicry as a potential tool to be used to address climate change in the New Zealand built environment.

2007. Winner of a New Zealand Post Graduate Study Abroad Scholarship to enable participation in the Biomimicry Institute course in biomimicry in Costa Rica. Participation was by selection and was limited to 19 top designers and architectures from around the world.

2006-2009. Invited board member of the Sustainability Trust. Holder of the Built Environment Portfolio. The Sustainability Trust is a Wellington based trust which supports local communities in addressing sustainability related issues, particularly in the areas of energy efficiency, waste minimisation, transport, climate change and community.

2006-2008. Member of the International Council for Research and Innovation in Building and Construction (CIB) W115 Construction Materials Stewardship working commission group, following the publication of 'The State of Deconstruction in New Zealand' report to Task Group 39 of CIB in 2003 and 2005.

### Academic Service at VUW

- 2021-present. Research Cluster Leader Sustainability and Wellbeing, School of Architecture.
- 2020-present. Te Ohu Tiriti (School / Faculty committee on Te Tiriti and decolonisation issues).
- 2017-2018 & 2019-present. Deputy Head of School, School of Architecture.
- 2015-2018 & 2019-present. School of Architecture Academic Committee. 2019 - 2020. VUW Te Auroa (Sustainability) Distinctiveness Theme Steering Group, Faculty of Architecture and Design representative.
- 2018 - 2020. School of Architecture Equity and Diversity Committee.
- 2014-2018 & 2007-2011. Victoria University Environmental Committee, Faculty of Architecture and Design representative.
- 2017-2018. Chairperson: Research Streams Development working group. Development of School of Architecture Research Identity Implementation Plan (2019-2021).
- 2015-2017. Director of Undergraduate Programmes, School of Architecture.
- 2015, 2017, 2019-21. Mentoring of new teaching fellows. This involves closely working with teaching fellows to make sure they understand and follow University procedures (course outlines, assessment, hand in scheduling, budgets, selection of tutors, extensions etc.) and manage the tutoring staff effectively.
- 2010 to 2012, and 2017-2018. School of Architecture Research Committee.
- 2014-2015. Chairperson: Strategic Engagements Committee (member since 2012).
- 2009 and 2010. Coordinator and judging panel: Benson Cooper Awards for Sustainability
- 2007-2009. Project Manager: Faculty of Architecture and Design carboNZero initiative. The Faculty participated in the Landcare Research programme and in June 2008 was the first such Faculty to achieve carboNZero, or any other carbon neutral certification in the world (for the period 2008/2009 only).

## Teaching

### Postgraduate teaching, supervision, and examination

2020 - present: Co-founder (with Dr R. Kiddle, and Dr. V. Chanse) of the Te Ātea: Spatial Justice Co-design Lab for the Master of Architecture, Master of Interior Architecture, Master of Landscape Design, and Master of Building Science programmes at the School of Architecture, VUW.

2015 - 2020: Co-founder (with Dr P. Connolly, and Mr M. Southcombe) of the Ecologies Design Lab for the Master of Architecture, Master of Interior Architecture, Master of Landscape Design, and Master of Building Science programmes at the School of Architecture, VUW.

- 2016 - present: Supervisor to 9 PhD students (2 completions, 4 ongoing at VUW, 1 ongoing at University of Otago, 1 ongoing at Utrecht University, 1 ongoing at National History Museum, Paris)
- 2021 – present: *Te Ātea: Spatial Justice Co-design Lab*. Supervisor to 5 design-led research Masters students (5 ongoing).
- 2015 - 2020: *Ecologies Design Lab*. Supervisor to 17 design-led research Masters students (17 completions).
- 2019, 2020: *ARCI412 Architecture Design Double Studio: Biophilic Design* (stream of 11 - 18 students). Core course Architecture. Year four.
- 2015 and 2011: Leader of *International Field trips to Nepal / India / China / Tibet* (23-32 students over 5 weeks). Year four.
- 2015 - present: Internal masters examiner and external masters examiner for various universities.
- 2015: Internal PhD examiner
- 2014: External PhD examiner (University of Sydney)

### International Internship Supervision / Collaboration *(These students where funded by their host institution. They approached me, wanting to study with me in New Zealand as interns)*

- 2020: *F. Delpy*, Master of Bio-inspired Design, Department of Biology, Utrecht University, Netherlands (6 months). *Urban Ecosystem Services Tools for Designers in Oceania project*.
- 2020: *R. MacKinnon*, Master of Bio-inspired Design, Department of Biology, Utrecht University, Netherlands (6 months). *Urgent Biophilia project*.
- 2018/19 *K. Hecht*, Master of Bio-inspired Design, Department of Biology, Utrecht University, Netherlands (6 months). *Strategies for designing urban ecosystem services map project*.
- 2018 *M. Poulsen*, PhD Fellow, Department of Architecture, Aalborg University, Denmark (2 months). *New Zealand and Danish climate adaptive architecture project*.
- 2016 *E. Cruz*, Civil Engineering, University of Centrale Lyon, France (3 months). *Biophilic map of Wellington project*.

### Undergraduate teaching *(A selection since 2015)*

- 2015-2021: *BILD331 Regenerative Architecture* (54 - 72 students). Core course Building Science. Elective Architecture, Interior Architecture, Landscape Architecture. Year three.
- 2019-2021: *INTA211 Interior Architecture Studio* (48 - 65 students) (in conjunction with Teaching Fellows A. Andersen and M. Abbott). Core course Interior Architecture. Year two.
- 2018: *INTA312 Interior Architecture Design Double Studio* (27 students). Core course Interior Architecture. Year three.
- 2015: *BILD232 Sustainable Architecture and Design* (113 students). Core course BBS. Core course Building Science. Elective Architecture, Interior Architecture, Landscape Architecture. Year two.
- 2015: *INTA311 Interior Architecture Studio* (45 students, 15pts) (in conjunction with Teaching Fellow V. Soana). Core course Interior Architecture. Year three.
- 2015: *SARC 383/483 International Field Trip to Nepal/Tibet* (23 students). Elective.