

Curriculum Vitae

Name: Marti J. Anderson
Present Position: Professor of Ecological Statistics / Statistical Ecology
Affiliation: New Zealand Institute for Advanced Study (NZIAS), Massey University
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Academic Qualifications:

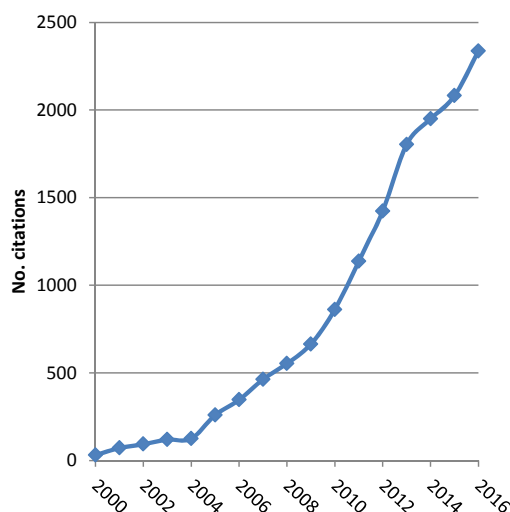
1999, M.A., Mathematical Statistics, University of Sydney, Australia (*with merit*)
1997, Ph.D., Science, Marine Ecology, University of Sydney, Australia (*best thesis prize*)
1992, Grad.Dip.Sci., Zoology (*1st class Honours*), University of Sydney, Australia
1991, B.A., Biology, Occidental College, Los Angeles, California, USA (*magna cum laude*)

Professional Positions Held:

2011-present, Professor, New Zealand Institute for Advanced Study, Massey University
2009-present, Professor, Chair in Statistics, Massey University, Albany Campus
2007-2008, Associate Professor, Department of Statistics, University of Auckland
2002-2006, Senior Lecturer, Department of Statistics, University of Auckland
1999-2001, Lecturer, Department of Statistics, University of Auckland
1997-1999, Postdoctoral Fellow, Institute of Marine Ecology & Centre for Research on Ecological Impacts of Coastal Cities, University of Sydney, Australia

Present Research and Professional Speciality:

I am an ecological statistician. My work spans several disciplines, from basic biology and ecology through to mathematical and applied statistics. My core research is in the areas of community ecology, biodiversity, marine ecology, environmental impact assessment, multivariate analysis, experimental design, and permutation, bootstrapping and resampling methods. My focus is to develop novel multivariate statistical techniques to analyse variation in ecological communities, using computer-intensive algorithms for modeling species' distributions in space and time and making valid statistical inferences in high-dimensional multi-factorial natural systems.



Research publications and outputs:

92 peer-reviewed journal articles, 1 book, 2 book chapters, 2 book reviews, 1 conference proceedings, 11 computer software programs, 34 technical reports of contract research, 86 invited conference presentations, plenary talks and public lectures.

Citations (Scopus):

h-index = 41; Total citations = 14,891;
> 1400 citations in each of 2012, 2013, and 2014;
> 2000 citations in each of 2015 and 2016;
23 articles have >100 citations;
36 articles have > 50 citations.

Supervision of research and theses:

9 Postdoctoral fellows, 9 PhD students, 6 MSc students, 8 BSc Honours students.

Software:

PERMANOVA+ for PRIMER v7 (see <http://www.primers-e.com/>)

Professional Workshops:

Since 1996, I have presented 44 invited workshops internationally (in Australia, France, Italy, New Zealand, Portugal, Sweden, the UK and the USA) on multivariate analysis for biology and ecology, focusing on methods I have developed and implemented in the software PERMANOVA+, available as an add-on package to PRIMER.

Professional Distinctions:

- 2017, Invited Plenary Speaker, Statistics in Ecology and Environmental Monitoring conference, Queenstown, New Zealand, 6-8 December 2017.
- 2016, Marsden Grant, Royal Society of New Zealand, 'Synergising ecology and evolution: discovering patterns of functional and phylogenetic diversity of New Zealand's marine fishes versus depth.'
- 2016, James Cook Fellowship, Royal Society of New Zealand, 'New multivariate statistical models of ecological communities: estimation, power and prediction.'
- 2014, Invited Plenary Speaker: International Statistical Ecology Conference, Montpellier, France.
- 2013, Fellow of the Royal Society of New Zealand (FRSNZ)
- 2013, Invited and appointed as an Associate Investigator in the Allan Wilson Centre.
- 2013, Deputy Head of the Institute of Natural and Mathematical Sciences, Massey University
- 2011, Marsden Grant, Royal Society of New Zealand, 'New robust solutions to the multivariate Behrens-Fisher problem'.
- 2011, Invited Plenary Speaker: 9th International Temperate Reefs Symposium, University of Plymouth, UK, 27 June 2011.
- 2010, Invited, Governing Board Member, New Zealand Institute of Mathematics and its Applications (NZIMA).
- 2009, National Research Council (NRC), Resident Research Associateship at the National Oceanic and Atmospheric Administration (NOAA), Corvallis, Oregon, USA.
- 2009, Invited working group member: 'A synthesis of patterns, analyses, and mechanisms of β -diversity along ecological gradients', National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, California, USA.
- 2009, Invited Plenary Speaker: 'Science informing management', 8th International Temperate Reef Symposium, University of Adelaide, South Australia, 12 Jan 2009.
- 2007, Marsden Grant, Royal Society of New Zealand, 'Biodiversity highways and biogeographic origins: a voyage of discovery in the deep sea'.
- 2006, Invited working group member: 'Synthetic macroecological models of species diversity', National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, California, USA.
- 2006, Invited working group member: 'Tools and fresh approaches for species abundance distributions', National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, California, USA.
- 2006, Vice Chancellor's University Development Fund Grant, University of Auckland
- 2005, Invited Speaker, Closing Plenary Session: 'Ecology: The Future', Ecological Society of Australia Annual Conference, 2 Dec 2005, U. of Queensland, Brisbane, Australia
- 2005, Invited Distinguished Visitor, 'Women in Science', 20-22 April 2005, School of Biological, Earth and Environmental Sciences, U. of New South Wales, Australia

- 2002, Australian Research Council Discovery Project, ‘Understanding marine biodiversity across vast scales’.
- 2001, Marsden Fast-Start Award, Royal Society of New Zealand, ‘Statistical models for environmental impact assessment: fauna in kelp plants as marine indicators’.
- 2001, Early Career Research Excellence Award, University of Auckland
- 1997, University of Sydney U2000 Postdoctoral Fellowship Award
- 1997, Jabez King Heydon Memorial Prize for the most meritorious Ph.D. thesis, School of Biological Sciences, University of Sydney, Australia
- 1993, Top thesis mark in Zoology, GradDipSci, University of Sydney
- 1991, Scholar Athlete of the Year, Occidental College
- 1991, National Science Foundation Honourable Mention, USA
- 1990, Phi Beta Kappa National Honor Society, USA
- 1990, Selles Award for Biology, Occidental College
- 1989, Richter International Fellowship, Occidental College
- 1987, Margaret Bundy Scott Scholarship, Occidental College

Editorial Boards:

- 2004 – present, Associate Editor, *Ecology Letters*
- 2004 – present, Associate Editor, *Australian & New Zealand Journal of Statistics*
- 2007 – 2016, Subject Editor (Ecological Statistics), *Ecography*

Membership in Professional Societies:

- 2000 – present, New Zealand Statistical Association
- 2000 – present, New Zealand Marine Sciences Society
- 2000 – present, Ecological Society of America
- 1993 – present, Ecological Society of Australia