

Anton H. Westveld

Canberra, ACT, AUS & Richmond, VA, USA

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Affiliation

Senior Lecturer (Level C) in Statistics (Australian System) Jan 2017 - Present

Research School of Finance, Actuarial Studies and Statistics (RSFAS)

College of Business and Economics, Australian National University

Canberra, ACT, Australia

- Convenor of the [ASA DataFest](#) at ANU [2021 - Present]
- CBE representative on the CHMS Education Committee [2020 - Present]
- RSFAS Honours Program Convenor [2015 - 2019]

Affiliate Associate Professor

Aug 2023 - Present

Department of Statistical Sciences and Operations Research

Virginia Commonwealth University

Richmond, Virginia, USA

Education

Ph.D. in Statistics, University of Washington

Seattle, WA, USA

M.A. in Applied Statistics & Applied Economics, University of Michigan

Ann Arbor, MI, USA

B.A. in Economics & Political Science, University of Michigan

Ann Arbor, MI, USA

Work Experience

Associate

Jan 2013 - Dec 2017

Statistics Laboratory @ the Bio5 Institute

and the Statistics Graduate Inter-Disciplinary Program (GIDP)

University of Arizona, Tucson, AZ, USA

Lecturer (Level B) in Statistics

Jul 2014 - Dec 2016

Research School of Finance, Actuarial Studies and Statistics

College of Business and Economics, Australian National University

Canberra, ACT, AUS

Assistant Professor of Statistics

Jan 2013 - May 2014

Faculty of ESTEM

University of Canberra

Canberra, ACT, AUS

Statistician and Regular Statistics Faculty

Sep 2011 - Nov 2012

Statistics Laboratory @ the Bio5 Institute

and the Statistics Graduate Inter-Disciplinary Program (GIDP)

University of Arizona, Tucson, AZ, USA

Assistant Professor of Statistics

Jul 2007 - Aug 2011

Department of Mathematical Sciences

University of Nevada

Las Vegas, NV, USA

Post Doctoral Fellow

Jan - Jul 2007

Center for Empirical Research in the Law

Washington University

St. Louis, MO, USA

Last updated: 2025-12-04

Visiting Positions

Visiting Faculty

Aug 2019 - Feb 2020

Department of Statistics & Data Sciences
University of Texas
Austin, TX, USA

Visiting Faculty

Jul - Aug 2019

Center for Statistics and the Social Sciences
University of Washington
Seattle, WA, USA

Visiting Faculty

Dec 2017

Department of Statistics & Data Sciences
University of Texas
Austin, TX, USA

Visiting Researcher

Mar 2010

Division of Mathematics, Informatics, and Statistics
CSIRO
Canberra, ACT, AUS

Visiting Researcher

Jun - Jul 2008

Division of Computational Biology
Fred Hutchinson Cancer Research Center
Seattle, WA, USA

Continuing Education

Operational AI: Balancing National Security & Ethical Governance

Feb - Mar 2025

Whole of Government Center of Excellence and the Law School
William & Mary
Williamsburg, VA, USA

Modern Leadership: Reflections and Tools for the Values-Based Leader

May 2021

William & Mary Washington Center
Washington, DC, USA

Preparing Statisticians for Leadership:

Jul 2018

How to See the Big Picture and Have More Influence

JSM
Vancouver, BC, CAN

Scientific Publications

Marin[#], S., B. Loong, and **A.H. Westveld**. “Adaptive Shrinkage with a Nonparametric Bayesian Lasso”. Preprint: [arXiv:2411.08262](https://arxiv.org/abs/2411.08262), *Journal of Computational and Graphical Statistics* (2025).
<https://doi.org/10.1080/10618600.2025.2572327>.

Marin[#], S., B. Loong, and **A.H. Westveld**. “BOB: Bayesian Optimized Bootstrap with Applications to Gaussian Mixture Models”. Preprint: [arXiv:2311.03644](https://arxiv.org/abs/2311.03644), *Statistics and Computing* (2025).
<https://doi.org/10.1007/s11222-025-10763-y>.

Wang[#], Jiali, **A.H. Westveld**, A.H. Welsh, M. Parker, and B. Loong. “Analysis of Survey on Menstrual Disorder Among Teenagers Using Gaussian Copula Model with Graphical Lasso Prior”. *PLOS ONE* 3 (2021): 1–22. <https://doi.org/10.1371/journal.pone.0248340>.

Lundy, M.B., C.A. Standley, and **A.H. Westveld**. “Curricular Reform in Two Medical School Tracks and the Impact on USMLE Scores”. *Medical Science Educator* 27, no. 2 (2017): 201–207.
<https://doi.org/10.1007/s40670-016-0368-y>.

- Chiu, G.S., and **A.H. Westveld**. “A Statistical Social Network Model for Consumption Data in Trophic Food Webs”. Preprint: <https://arxiv.org/abs/1006.4432>, *Statistical Methodology (Special issue on Modern Statistical Methods in Ecology)* 17 (2014): 139–160. <https://doi.org/10.1016/j.stamet.2013.09.001>.
- Hurwitz, B.L., **A.H. Westveld**, J.R. Brum, and M.B. Sullivan. “Modeling Ecological Drivers in Marine Viral Communities Using Comparative Metagenomics and Network Analyses”. *Proceedings of the National Academy of Sciences of the USA* 111, no. 29 (2014): 10714–10719. <https://doi.org/10.1073/pnas.1319778111>.
- A.H. Westveld** and P.D. Hoff. “Modeling of the Learning Process in Centipede Games”. Preprint: [arXiv:1003.2253](https://arxiv.org/abs/1003.2253), *Stat* 2, no. 1 (2013): 242–254. <https://doi.org/10.1002/sta4.32>.
- Taylor, A., et al. “The Use of Metformin is Associated with Decreased Lumbar Radiculopathy Pain”. *Journal of Pain Research* 2013, no. 6 (2013): 755–763. <https://doi.org/10.2147/JPR.S52205>.
- A.H. Westveld** and P.D. Hoff. “A Mixed Effects Model for Longitudinal Relational and Network Data, with Applications to International Trade and Conflict”. Preprint: [arXiv:1009.1436](https://arxiv.org/abs/1009.1436), *Annals of Applied Statistics* 5, no. 2A (2011): 843–872. <https://doi.org/10.1214/10-A0AS403>.
- Chiu, G.S., and **A.H. Westveld**. “A Unifying Approach for Food Webs, Phylogeny, Social Networks, and Statistics”. *Proceedings of the National Academy of Sciences of the USA* 108, no. 38 (2011): 15881–15886. <https://doi.org/10.1073/pnas.1015359108>.
- Chiu, Grace S., Peter Guttorp, **Westveld, Anton H.**, Shahedul A. Khan, and Jun Liang. “Latent health factor index: a statistical modeling approach for ecological health assessment”. *Environmetrics* 22, no. 3 (2011): 243–255. <https://doi.org/10.1002/env.1055>.
- Gneiting, T., A.E. Raftery, **A.H. Westveld**, and T. Goldman. “Calibrated Probabilistic Forecasting Using Ensemble Model Output Statistics and Minimum CRPS Estimation”. *Monthly Weather Review* 133, no. 3 (2005): 1098–1118. <https://doi.org/10.1175/MWR2904.1>.

denotes a student that I supervise in some way.

Working Papers

- Chiu, Grace S., et al. “Model-based Calibration of Gear-Specific Fish Abundance Survey Data as a Change-of-Support Problem”. *arXiv Statistics Methodology* (2025). **Submitted**, <https://doi.org/10.48550/arXiv.2505.05767>.
- Wolff[#], Malcolm, Adrian Dobra, **Anton H. Westveld**, and Grace S. Chiu. “Modeling Human Spatial Mobility Patterns with the Lévy Flight Cluster Model”. *arXiv Statistics Methodology* (2025). **Under Revision**, <https://doi.org/10.48550/arXiv.2509.00298>.
- Kuh[#], F.S., G.S. Chiu, and **A.H. Westveld**. “Latent Causal Socioeconomic Health Index”. *arXiv Statistics Methodology* (2023). **Under Revision**, <https://arxiv.org/abs/2009.12217>.
- Kuh[#], F.S., G.S. Chiu, and **A.H. Westveld**. “Modeling National Latent Socioeconomic Health and Examination of Policy Effects via Causal Inference”. *arXiv Statistics Applications* (2019). <https://arxiv.org/abs/arXiv:1911.00512>.
- Wang[#], J., **A.H. Westveld**, B. Loong, and A.H. Welsh. “An Imputation model by Dirichlet Process Mixture of Elliptical Copulas for Data of Mixed Type”. *arXiv Statistics Methodology* (2019). <https://arxiv.org/abs/1910.05473>.
- Wang[#], J., **A.H. Westveld**, B. Loong, and A.H. Welsh. “A Copula-based Imputation Model for Missing Data of Mixed Type in Multilevel Data Sets”. *arXiv Statistics Methodology* (2017). <https://arxiv.org/abs/1702.08148>.

Conference Papers

- C.H. Chien[#], A. Haller, and **A.H. Westveld**. “Firm Business Networks”. *International Workshops on Contextualized Knowledge Graphs, and Semantic Statistics co-located with 17th International Semantic Web Conference* (2018). <http://ceur-ws.org/Vol-2317/>.
- Chiu, G.S., and **A.H. Westveld**. “Physical Statistics or Statistical Physics? A Brief Overview of Bayesian Melding”. ISBN: 978-0-9872143-3-1, *In Piantadosi, J., Anderssen, R.S. and Boland J. (eds) MODSIM2013, 20th International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand* (2013): 2506–2512. <https://www.mssanz.org.au/modsim2013/A7/chiu.pdf>.
- Jensen, N.M., A.D. Martin, and **A.H. Westveld**. “Foreign Direct Investment: A Longitudinal Social Network Approach”. *Political Networks Conference* (2011). http://opensiuc.lib.siu.edu/pnconfs_2010/51/.
- Myroshnychenko[#], M.V., and **A.H. Westveld**. “Analysis of Morris Water Maze Data with Bayesian Statistical Methods”. *Poster associated with the paper* [joint with Dr. Jefferson Kinney]. *UNLV McNair Scholars Institute Annual Report 2011-2012, University of Nevada Las Vegas* (2011): 65–71. https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=1002&context=mcnair_journal.
- Quinn, K.M., and **A.H. Westveld**. “Bayesian Inference for Semi-parametric Quantal Response Equilibrium Models”. *JSM Proceedings, Section on Bayesian Statistical Science* (2009). <https://github.com/awest3/awest3.github.io/blob/main/docs/extraFiles/SpqreJsmProc09.pdf>.
- A.H. Westveld** and P.D. Hoff. “Statistical Methodology for Longitudinal Social Network Data”. *APSA Proceedings* (2005). <https://convention2.allacademic.com/one/apsa/apsa05/>.
- Letnes, B., and **A.H. Westveld**. “Transnational Corporations, Economic Development and Human Rights: On the Importance of Assets and Institutions”. *APSA Proceedings* (2005). <https://convention2.allacademic.com/one/apsa/apsa05/>.

Technical and Client Reports

- Chien[#], Chien-Hung, A.H. Welsh, and **A.H. Westveld**. “Australian Business Networks”. *ABS Research Paper* (2019). <https://www.abs.gov.au/ausstats/abs@.nsf/mf/1351.0.55.063>.
- Chiu, G.S., S. Treier, A.H. Westveld, and N. Erskine. “Progress Report on ‘Evidence-based inference for network relations using latent space network modelling: Case studies from the Australian political landscape’”. *Report prepared for ANU College of Arts and Social Sciences* (2019).
- Macatangay, K., **A.H. Westveld**, and B. Kunkel. “Intervening for Success”. *Report prepared for Clark County District Attorney, Family Support Division and the U.S. Department of Health and Human Services* (2012).

Competitive Grants & Other Funding

- Consulting**, at [Virginia Institute of Marine Science](#) (William & Mary). 2022
- Statistical Consultant (Bayesian methodology) - [U.S. Greater Amberjack Research Program](#).
- Instructor** at the [Australian Institute of Health and Welfare](#). 2019
- One day statistics and data science with R workshop.
- International Collaborator** of the [SFI Centre for Research Training Foundations of Data Science](#). 2019
- Co-PI** of ANU RSFAS & RSSS cross-college grant. 2018
- Evidence-based inference for network relations using latent space network modelling: Case studies from the Australian political landscape.

- In collaboration with the other PIs: Dr. Shawn Treier and Dr. Grace Chiu.
- Co-PI** for sustainable farming practices from the Ian Potter Foundation. 2018
- In collaboration with Professor David Lindenmayer (PI) et al., including Associate Professor Emma Schultz, Dr. Grace Chiu (CBE Co-PIs).
- Co-PI** for sustainable farming practices pilot project - 1 year grant. 2016
- In collaboration with Professor David Lindenmayer (PI) et al., including Associate Professor Emma Schultz, Dr. Grace Chiu (CBE Co-PIs).
- Co-PI** for IBISWorld philanthropic grant. 2016-2018
- IBISWorld, Melbourne, Australia - 3 year grant; Part of this grant was used to create the IBISWorld Ph.D. Scholarship awarded to Ms. F. Swen Kuh, who is jointly advised by myself and Dr. Grace Chiu (PI).
- Sub-grant PI** for Clark County District Attorney's Office Family Support Division, Nevada, USA. 2009-2012
- Child Support Policies via Randomized Experiments (Evidenced Based Policy) funded from the US Department of Health & Human Services.
- Sub-grant PI** of NSERC Discovery Grant. 2009
- Statistical modelling of health indices for aquatic ecosystems.
- PI** of the New Researchers' US Federal Stimulus Award. 2008
- PI** of the Nevada System of Higher Education, NSF EPSCoR RING TRUE. 2007 - 2008

Courses Taught, Convened⁺, & Developed*

- Statistical Learning⁺⁺** 2015 - 2017, 2021 - Present
ANU STAT 3040/4040/7040 [undergraduate, honours, graduate - some years graduate and undergraduate were not jointly taught]
- Statistical Inference⁺** 2014 - 2020, 2024 - Present
ANU STAT3013/4027/8027 [undergraduate, honours, graduate]
- Statistics for Data Analysis A & B⁺⁺** 2021
ANU Micro-credential Course [professional]
- Regression Modelling + Introduction to GLMs⁺** 2020
ANU STAT 2008/2014/6014 [undergraduate and graduate]
- Regression Modelling⁺** 2018 [944 students enrolled]
ANU STAT 2008/6038 [undergraduate and graduate]
- Managing the Research Process⁺⁺** 2016 - 2018
ANU STAT 4010 [honours]
- Introduction to Mathematical Statistics⁺** 2014
ANU STAT2001/6039 [undergraduate and graduate]
- Econometrics⁺** 2014
UC 6541/6551 [undergraduate and graduate]
- Problem Evaluation and Resolution⁺** 2013 - 2014
UC 8730 [undergraduate]
- Introduction to Business Statistics⁺** 2013
UC 5123/6275 [undergraduate and graduate]
- Aided in developing a course on **network data*** 2012
for the School of Information: Science, Technology, and Arts (SISTA)
UA [undergraduate]

Applied Statistics for the Biological Sciences ⁺ UNLV STAT 391 [undergraduate]	2008 - 2010
Experimental Design and Analysis ⁺ UNLV STAT 713 [graduate]	2008 - 2010
Bayesian Data Analysis ⁺⁺ UNLV STAT 753 [graduate]	2009
Independent study for Bayesian Data Analysis ⁺⁺ UNLV STAT 753 [graduate]	2008 - 2011
Regression Analysis II ⁺⁺ (GLMs, LMMs, GLMMs) UNLV STAT 762 [graduate]	2010 - 2011
Statistical Decision Theory ⁺ UNLV Stat 765 [graduate]	2008
Multivariate Analysis ⁺ UNLV Stat 764 [graduate]	2007
Note: Australian National University (ANU), University of Arizona (UA), University of Canberra (UC), University of Nevada, Las Vegas (UNLV)	

Research Advising and Mentoring

Santiago Marin Ardila , Ph.D. student in Statistics, RSFAS, ANU. <ul style="list-style-type: none"> Project: Bayesian Posterior Approximation and Non-Parametrics 	2023 - Present Co-Pri Adv
Chris Malone , Master's in Statistics, RSAF, ANU. <ul style="list-style-type: none"> Project: Bayesian Inference of Eradication of Incipient Tephritid Fruit Fly LinkedIn: https://www.linkedin.com/in/cm-ds/ 	2021 - 2022 Co-Pri Adv
Malcolm Wolff , Ph.D. student in Statistics, Univ. of Washington, Seattle. <ul style="list-style-type: none"> Project: Statistical Modelling of Human Movement, Social Activity Spaces, and Networks LinkedIn: https://www.linkedin.com/in/malcolm-wolff-82b1586a/ 	2021 - Present Co-Adv
Fui Swen Kuh , IBISWorld Ph.D. Scholar in Statistics, RSFAS, ANU. <ul style="list-style-type: none"> Project: A Holistic Bayesian Framework for Modelling Latent Socio-Economic Health Winner of the Inaugural Poster competition of the ASA Social Statistics Section - JSM 2018 LinkedIn: https://www.linkedin.com/in/swenkuh/ 	2016 - 2022 Co-Pri Adv
Joseph Chien , Ph.D in Statistics, Mathematical Sciences Institute, ANU. <ul style="list-style-type: none"> Project: Using Administrative Data to Gain Insights into Microdrivers of Productivity LinkedIn: https://www.linkedin.com/in/joseph-chien-hung-chien-6a5184a9/ 	2016 - 2021 Assoc Adv
Jiali Wang , Ph.D in Statistics, RSFAS, ANU. <ul style="list-style-type: none"> Project: Recent Developments of Copula-Based Models to Handle Missing Data of Mixed-Type in Multivariate Analysis Recipient of the 2018 Dennis Trewin Prize presented by the Statistical Society of Australia - Canberra Branch. LinkedIn: https://www.linkedin.com/in/jiali-wang-89244513b/ 	2015 - 2018 Co-Pri Adv

Mark Dawkins , Honours in Statistics (H1), RSFAS, ANU.	2017 Co-Pri Adv
<ul style="list-style-type: none"> Project: Melded Bayesian Inference for Stochastic Theoretical Models with Applications in Agent Based Modelling LinkedIn: https://www.linkedin.com/in/mark-dawkins-479762122/ 	
Jaron Lee , Honours in Statistics (H1), RSFAS, ANU.	2016 Pri Adv
<ul style="list-style-type: none"> Project: A Variational Bayes Approach to Clustered Latent Preference Models for Directed Network Data Recipient of an ANU University Medal LinkedIn: https://www.linkedin.com/in/jaron-jr-lee/ 	
Fui Swen Kuh , ANU Summer Research Scholar from the Department of Statistics, University of Auckland.	2015 Pri Co-Adv
<ul style="list-style-type: none"> Project: Social Network Analysis on Food Web and Dispute Data LinkedIn: https://www.linkedin.com/in/swenkuh/ 	
Seoyoon Cho , CSIRO Industrial Trainee from the Department of Statistics, Korea University.	2014 Co-Adv
<ul style="list-style-type: none"> Project: Modeling Network Data Using PyStan Received Ph.D. in Biostatistics from University of North Carolina 	
Hyangki Lee , CSIRO Industrial Trainee from the Department of Statistics, Korea University.	2014 Co-Adv
<ul style="list-style-type: none"> Project: Modeling Network Data Using PyStan 	
Yaroslav Mukhin , M.S. in Statistics, University of Nevada, Las Vegas.	2010 - 2012 Mentor
<ul style="list-style-type: none"> Project: Inference for the Solow Growth Model: A Bayesian Melding Approach Received Ph.D. in Economics from Massachusetts Institute of Technology LinkedIn: https://www.linkedin.com/in/yaroslav-mukhin-6b7890229/ 	
Maxym Myroshnychenko , NSF Biomathematics Scholar and UNLV McNair Scholar, University of Nevada, Las Vegas.	2010 - 2012 Pri Adv
<ul style="list-style-type: none"> Project: Analysis of Morris Water Maze Data with Bayesian Statistical Methods Received Ph.D. in Neuroscience from Indiana University Bloomington LinkedIn: https://www.linkedin.com/in/maxym-myroshnychenko-b79b2b51/ 	

[Internship \(Consulting\) Advising & Mentoring](#)

Rory Williams , ANU College of Business and Economics Internship Program.	2021 Pri Adv
<ul style="list-style-type: none"> Joint internship through Australian Department of Social Services 	
James Kondilios , ANU College of Science Internship Program.	2019 Pri Adv
<ul style="list-style-type: none"> Joint internship through Airservices Australia 	
Jizhi Li , ANU College of Science Internship Program.	2017 Pri Adv
<ul style="list-style-type: none"> Joint internship through the National Disability Insurance Agency, Australia 	
Yiran Yao , ANU College of Science Internship Program.	2017 Pri Adv
<ul style="list-style-type: none"> Joint internship through the National Disability Insurance Agency, Australia 	

Selected Professional Activities & Awards

- Associate Editor** for the Journal of the American Statistical Association. 2019 - Present
- Associate Editor** for the quarterly bulletin of the International Society for Bayesian Analysis. 2016 - Present
- Instructor** for the statistics/data science workshop for the National Youth Science Foundation of Australia. 2019
- Best Poster Award.** Young Statisticians' Meeting (satellite meeting of the ISI), Dublin, IRL. 2011
- Title: Dirichlet Processes for Quantal Response Equilibrium Models - Examination of Pegged Exchange Rate Policies
- Best Poster Award.** Political Networks Conference, Cambridge, MA, USA. 2011
- Title: A Bayesian Mixed Effects Model for Longitudinal Social Network Data
- Student Paper Award.** Joint Statistical Meeting, Salt Lake City, UT, USA. 2007
- ASA Section on Bayesian Statistical Science
- Title: A Bayesian Mixed Effects Model for Longitudinal Social Network Data

Recent Seminars

- Invited.** Professor Adrian Raftery's [ABCDE Conference](#), University of Washington, Seattle, WA, USA. 2024
- Modelling National Latent Socioeconomic Health and Examination of Policy Effects
- Invited.** Virginia Chapter of the American Statistical Association Conference, Charlottesville, VA, USA. 2024
- Bayesian Optimized Bootstrap (BOB) for Uncertainty Quantification in Gaussian Mixture Models
- Invited.** The International Environmetrics Society, Adelaide, AUS. 2024
- A Bayesian Melding Approach for Stochastic Agent-Based Models
- Invited.** Virginia State University, Petersburg, VA, USA. 2023
- A Bayesian Melding Approach for Stochastic Agent-Based Models
- Invited.** Virginia Commonwealth University, Richmond, VA, USA. 2023
- A Bayesian Melding Approach for Stochastic Agent-Based Models

Professional Societies

- American Statistical Association** 2002 - Present
- American Political Science Association** 2002 - Present
- Statistical Society of Australia** 2010 - Present
- International Society for Bayesian Analysis** 2017 - Present