

# Anton H. Westveld

Canberra, ACT, AUS & Richmond, VA, USA

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## Affiliation

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**Senior Lecturer (Level C) in Statistics (Australian System)**  
Research School of Finance, Actuarial Studies and Statistics (RSFAS)  
College of Business and Economics, Australian National University  
Canberra, ACT, Australia

Jan 2017 - Present

- 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

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**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

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### 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

<b>Visiting Faculty</b> Department of Statistics & Data Sciences University of Texas Austin, TX, USA	Aug 2019 - Feb 2020
<b>Visiting Faculty</b> Center for Statistics and the Social Sciences University of Washington Seattle, WA, USA	Jul - Aug 2019
<b>Visiting Faculty</b> Department of Statistics & Data Sciences University of Texas Austin, TX, USA	Dec 2017
<b>Visiting Researcher</b> Division of Mathematics, Informatics, and Statistics CSIRO Canberra, ACT, AUS	Mar 2010
<b>Visiting Researcher</b> Division of Computational Biology Fred Hutchinson Cancer Research Center Seattle, WA, USA	Jun - Jul 2008

## Continuing Education

<b>Operational AI: Balancing National Security &amp; Ethical Governance</b> Whole of Government Center of Excellence and the Law School William & Mary Williamsburg, VA, USA	Feb - Mar 2025
<b>Modern Leadership: Reflections and Tools for the Values-Based Leader</b> William & Mary Washington Center Washington, DC, USA	May 2021
<b>Preparing Statisticians for Leadership: How to See the Big Picture and Have More Influence</b> JSM Vancouver, BC, CAN	Jul 2018

## 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-AOAS403>.

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 Guttorm, **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/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

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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

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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/](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](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/extrFiles/SpqrJsmProc09.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 & Client Reports

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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

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<b>Consulting</b> , at <a href="#">Virginia Institute of Marine Science</a> (William & Mary).	2022
• Statistical Consultant (Bayesian methodology) - <a href="#">U.S. Greater Amberjack Research Program</a> .	
<b>Instructor</b> at the <a href="#">Australian Institute of Health and Welfare</a> .	2019
• One day statistics and data science with R workshop.	
<b>International Collaborator</b> of the <a href="#">SFI Centre for Research Training</a> . <a href="#">Foundations of Data Science</a>	2019
<b>Co-PI</b> 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.	
<b>Co-PI</b> 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).	
<b>Co-PI</b> 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).	
<b>Co-PI</b> 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).	
<b>Sub-grant PI</b> 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.	
<b>Sub-grant PI</b> of NSERC Discovery Grant.	2009
• Statistical modelling of health indices for aquatic ecosystems.	
<b>PI</b> of the New Researchers' US Federal Stimulus Award.	2008
<b>PI</b> of the Nevada System of Higher Education, NSF EPSCoR RING TRUE.	2007 - 2008

### **Courses Taught, Convened<sup>+</sup>, & Developed\***

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

**Applied Statistics for the Biological Sciences<sup>+</sup>**  
UNLV STAT 391 [undergraduate]

2008 - 2010

**Experimental Design and Analysis<sup>+</sup>**  
UNLV STAT 713 [graduate]

2008 - 2010

**Bayesian Data Analysis<sup>+</sup>\***  
UNLV STAT 753 [graduate]

2009

Independent study for **Bayesian Data Analysis<sup>+</sup>\***  
UNLV STAT 753 [graduate]

2008 - 2011

**Regression Analysis II<sup>++\*</sup>** (GLMs, LMMs, GLMMs)  
UNLV STAT 762 [graduate]

2010 - 2011

**Statistical Decision Theory<sup>+</sup>**  
UNLV Stat 765 [graduate]

2008

**Multivariate Analysis<sup>+</sup>**  
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.

2023 - Present

- Project: Bayesian Posterior Approximation and Non-Parametrics

Co-Pri Adv

**Chris Malone**, Master's in Statistics, RSAF, ANU.

2021 - 2022

- Project: Bayesian Inference of Eradication of Incipient Tephritis Fruit Fly
- LinkedIn: <https://www.linkedin.com/in/cm-ds/>

Co-Pri Adv

**Malcolm Wolff**, Ph.D. student in Statistics, Univ. of Washington, Seattle.

2021 - Present

Co-Adv

- Project: Statistical Modelling of Human Movement, Social Activity Spaces, and Networks
- LinkedIn: <https://www.linkedin.com/in/malcolm-wolff-82b1586a/>

**Fui Swen Kuh**, IBISWorld Ph.D. Scholar in Statistics, RSFAS, ANU.

2016 - 2022

Co-Pri Adv

- 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/>

**Joseph Chien**, Ph.D in Statistics, Mathematical Sciences Institute, ANU.

2016 - 2021

Assoc Adv

- Project: Using Administrative Data to Gain Insights into Microdrivers of Productivity
- LinkedIn: <https://www.linkedin.com/in/joseph-chien-hung-chien-6a5184a9/>

**Jiali Wang**, Ph.D in Statistics, RSFAS, ANU.

2015 - 2018

Co-Pri Adv

- 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/>

**Mark Dawkins**, Honours in Statistics (H1), RSFAS, ANU.

2017

Co-Pri Adv

- 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

- 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

2015

Pri Co-Adv

- Project: Social Network Analysis on Food Web and Dispute Data
- LinkedIn: <https://www.linkedin.com/in/swenkuh/>

**Seoyoony Cho**, CSIRO Industrial Trainee

2014

Co-Adv

- from the Department of Statistics, Korea University.
- Project: Modeling Network Data Using PyStan
- Received Ph.D. in Biostatistics from University of North Carolina

**Hyangki Lee**, CSIRO Industrial Trainee

2014

Co-Adv

- from the Department of Statistics, Korea University.
- Project: Modeling Network Data Using PyStan

**Yaroslav Mukhin**, M.S. in Statistics, University of Nevada, Las Vegas.

2010 - 2012

Mentor

- 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

- 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

- Joint internship through Australian Department of Social Services

Pri Adv

**James Kondilios**, ANU College of Science Internship Program.

2019

Pri Adv

- Joint internship through Airservices Australia

**Jizhi Li**, ANU College of Science Internship Program.

2017

Pri Adv

- Joint internship through the National Disability Insurance Agency, Australia

**Yiran Yao**, ANU College of Science Internship Program.

2017

Pri Adv

- Joint internship through the National Disability Insurance Agency, Australia

## **Selected Professional Activities & Awards**

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<b>Associate Editor</b> for the Journal of the American Statistical Association.	2019 - Present
<b>Associate Editor</b> for the quarterly bulletin of the International Society for Bayesian Analysis.	2016 - Present
<b>Instructor</b> for the statistics/data science workshop for the National Youth Science Foundation of Australia.	2019
<b>Best Poster Award.</b> 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	
<b>Best Poster Award.</b> Political Networks Conference, Cambridge, MA, USA.	2011
• Title: A Bayesian Mixed Effects Model for Longitudinal Social Network Data	
<b>Student Paper Award.</b> Joint Statistical Meeting, Salt Lake City, UT, USA. ASA Section on Bayesian Statistical Science	2007
• Title: A Bayesian Mixed Effects Model for Longitudinal Social Network Data	

## **Recent Seminars**

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<b>Invited.</b> Professor Adrian Raftery's <a href="#">ABCDE Conference</a> , University of Washington, Seattle, WA, USA.	2024
• Modelling National Latent Socioeconomic Health and Examination of Policy Effects	
<b>Invited.</b> Virginia Chapter of the ASA Conference, Charlottesville, VA, USA.	2024
• Bayesian Optimized Bootstrap (BOB) for Uncertainty Quantification in Gaussian Mixture Models	
<b>Invited.</b> The International Environmetrics Society, Adelaide, AUS.	2024
• A Bayesian Melding Approach for Stochastic Agent-Based Models	
<b>Invited.</b> Virginia State University, Petersburg, VA, USA.	2023
• A Bayesian Melding Approach for Stochastic Agent-Based Models	
<b>Invited.</b> Virginia Commonwealth University, Richmond, VA, USA.	2023
• A Bayesian Melding Approach for Stochastic Agent-Based Models	

## **Professional Societies**

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<b>American Statistical Association</b>	2002 - Present
<b>American Political Science Association</b>	2002 - Present
<b>Statistical Society of Australia</b>	2010 - Present
<b>International Society for Bayesian Analysis</b>	2017 - Present