

Anton H. Westveld

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Google Scholar: <https://goo.gl/1KxyxU>

Affiliation

- Jan 2017 - Present **Senior Lecturer in Statistics**¹, *Research School of Finance, Actuarial Studies and Statistics*, College of Business and Economics, Australian National University, Canberra, ACT, AUS.
- RSFAS Honours Program Convenor [2015-Present].

Education

- 2007 **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

- Jan 2013 - Dec 2017 **Associate**, *Statistics Laboratory @ the Bio5 Institute & Statistics Graduate Inter-Disciplinary Program (GIDP)*, University of Arizona, Tucson, AZ, USA.
- Jul 2014 - Dec 2016 **Lecturer in Statistics**, *Research School of Finance, Actuarial Studies and Statistics*, College of Business and Economics, Australian National University, Canberra, ACT, AUS.
- Jan 2013 - May 2014 **Assistant Professor of Statistics**, *Faculty of ESTeM*, University of Canberra, Canberra, ACT, AUS.
- Sep 2011 - Nov 2012 **Statistician and Regular Statistics Faculty**, *Statistics Laboratory @ the Bio5 Institute & Statistics Graduate Inter-Disciplinary Program (GIDP)*, University of Arizona, Tucson, AZ, USA.
- Jul 2007 - Aug 2011 **Assistant Professor of Statistics**, *Department of Mathematical Sciences*, University of Nevada, Las Vegas, NV, USA.
- Faculty Member for the National Science Foundation sponsored Undergraduate Biomathematics Program at UNLV; Quantitative Social and Legal Sciences Project Leader for the Center for Applied Mathematics and Statistics at UNLV
- Jan - Jul 2007 **Post Doctoral Fellow**, *Center for Empirical Research in the Law*, Washington University, St. Louis, MO, USA.

Visiting Positions

- Dec 2017 **Visiting Faculty**, *Department of Statistics and Data Sciences*, College of Natural Sciences, University of Texas, Austin, TX, USA.
- Mar 2010 **Visiting Researcher**, *Division of Mathematics, Informatics, and Statistics*, Australia's Commonwealth Scientific and Industrial Research Organisation, Canberra, ACT, AUS.
- May - Jul 2010
- Jun - Jul 2008 **Visiting Researcher**, *Division of Computational Biology*, Fred Hutchinson Cancer Research Center, Seattle, WA, USA.

¹See this [Wikipedia](#) entry for details on Australian and New Zealand academic titles.

Peer Reviewed Papers

- 2017 M.B. Lundy, C.A. Standley, **A.H. Westveld**. [Curricular Reform in Two Medical School Tracks and the Impact on USMLE Scores](#). *Medical Science Educator*. [DOI: 10.1007/s40670-016-0368-y].
- h-index: 604
A* 2014 B.L. Hurwitz, **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*. Vol. 111, No. 29, pp. 10714–10719. [DOI: 10.1073/pnas.1319778111].
- h-index: 21
C 2014 G.S. Chiu and **A.H. Westveld**. [A Statistical Social Network Model for Consumption Data in Trophic Food Webs](#). Special issue on Modern Statistical Methods in Ecology, *Statistical Methodology* Vol. 17, pp. 139–160. [DOI: 10.1016/j.stamet.2013.09.001].
- h-index: 26 2013 A. Taylor, **A.H. Westveld**, M. Szkudlinska, P. Guruguri, E. Annabi, A. Patwardhan, T.J. Price, and H. Yassine. [The Use of Metformin is Associated with Decreased Lumbar Radiculopathy Pain](#). *Journal of Pain Research*. Vol 2013, No. 6, pp. 755–763. [DOI: 10.2147/JPR.S52205].
- New journal (2012) 2013 **A.H. Westveld** and P.D. Hoff. [Modeling of the Learning Process in Centipede Games](#). *Stat*. Vol. 2, No. 1, pp. 242–254. [DOI: 10.1002/sta4.32].
- h-index: 604
A* 2011 G.S. Chiu 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*. Vol. 108, No. 38, pp. 15881–15886. [DOI: 10.1073/pnas.1015359108].
- h-index: 33
A* 2011 **A.H. Westveld** and P.D. Hoff. [A Mixed Effects Model for Longitudinal Relational and Network Data, with Applications to International Trade and Conflict](#). *Annals of Applied Statistics*. Vol. 5, No. 2A, pp. 843–872. [DOI: 10.1214/10-AOAS403].
- h-index: 41
B 2011 G.S. Chiu, P. Guttorp, **A.H. Westveld**, S.A. Khan, and J. Liang. [A Latent Health Factor Index Modelling Approach via Generalized Linear Mixed Models, with Application to Ecological Health Assessment](#). *Environmetrics*. Vol. 22, Issue 3, pp. 243–255. [DOI: 10.1002/env.1055].
- h-index: 132 2005 T. Gneiting, A.E. Raftery, **A.H. Westveld**, and T. Goldman. [Calibrated Probabilistic Forecasting Using Ensemble Model Output Statistics and Minimum CRPS Estimation](#). *Monthly Weather Review*. Vol. 133, No. 5, pp. 1098–1118. [DOI: 10.1175/MWR2904.1].

Peer Reviewed Conference Proceedings Papers

- 2013 G.S. Chiu and **A.H. Westveld**. [Physical Statistics or Statistical Physics? A Brief Overview of Bayesian Melding](#). 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, December 2013, pp. 2506–2512. ISBN: 978-0-9872143-3-1.

Other Peer Reviewed Items

- 2013 G.S. Chiu and **A.H. Westveld**. [Integrating Food Webs, Phylogeny, Social Networks, and Statistics](#). First Global Conference on Research Integration and Implementation. Digital Poster #602.

Conference Proceedings Papers

- 2011 M.V. Myroshnychenko and **A.H. Westveld** (advisor). [Analysis of Morris Water Maze Data with Bayesian Statistical Methods](#). In *UNLV McNair Scholars Institute Annual Report 2011-2012*. University of Nevada Las Vegas. Poster associated with the paper [joint with Dr. Jefferson Kinney].

- 2009 K.M. Quinn and **A.H. Westveld**. [Bayesian Inference for Semi-parametric Quantal Response Equilibrium Models](#). In *JSM Proceedings*, Section on Bayesian Statistical Science. Alexandria, VA: American Statistical Association. 2919-2933.
- 2007 N.M. Jensen, A.D. Martin, and **A.H. Westveld**. [Foreign Direct Investment: A Longitudinal Social Network Approach](#). Presented at the Political Methodology Meeting [**Stored at OpenSIUC**].
- 2005 **A.H. Westveld** and P.D. Hoff. Statistical Methodology for Longitudinal Social Network Data. Presented at the Joint Statistical Meeting and the American Political Science Association Meeting [**Stored at the American Political Science Association Conference Proceedings website**].
- 2005 B. Letnes and **A.H. Westveld**. Transnational Corporations, Economic Development and Human Rights: On the Importance of Assets and Institutions. Presented at the 2005 American Political Science Association Meeting [**Stored at the American Political Science Association Conference Proceedings website**].

Working Papers

- 2017 J. Wang, B. Loong, **A.H. Westveld** (co-primary advisor), and A. Welsh. [A Copula-based Imputation Model for Missing Data of Mixed Type in Multilevel Data Sets](#). *arXiv Methodology (stat.ME)* [arXiv:1702.08148]. [**submitted for review**].

Competitive Grants & Other Funding

- 2018 Evidence-based inference for network relations using latent space network modelling: Case studies from the Australian political landscape (\$34,000 from the [ANU RSSS Cross College Grant](#)); In collaboration with the other PIs: Dr. Grace Chiu and Dr. Shawn Treier.
Co-PI
- 2016 Sustainable Farming Practices (\$2 million AUD from the Ian Potter Foundation); In collaboration with Professor David Lindenmayer (PI), Associate Professor Emma Schultz, Dr. Grace Chiu.
Co-PI
- 2016 Sustainable Farming Practices Pilot project - 1 year grant (\$70,000 AUD); In collaboration with Professor David Lindenmayer (PI), Associate Professor Emma Schultz, Dr. Grace Chiu.
Co-PI
- 2016 - 2018 IBISWorld, Melbourne, Australia - 3 year grant (\$150,000 AUD); This award is being used to offer a Ph.D. scholarship to Ms. F. Swen Kuh, who is jointly supervised by myself and Dr. Grace Chiu (PI).
Co-PI
- 2009 - 2012 Clark County District Attorney's Office Family Support Division, Nevada - 3 year (\$48,050.50); Child Support Policies via Randomized Experiments (Evidenced Based Policy).
Sub-grant PI
- 2009 - 2012 Natural Sciences and Engineering Research Council (NSERC) of Canada Discovery Grant "Health indices for aquatic ecosystems" (\$5,000).
Sub-grant PI
- 2008 New Researchers' US Federal Stimulus Award (\$10,000)
PI
- 2007 - 2008 Nevada System of Higher Education (NSHE), NSF EPSCoR RING TRUE (\$30,000)
PI

Advising & Mentoring

- 2016 - Present Fui Swen Kuh, Ph.D. student in Statistics, RSFAS, ANU.
Co-Primary Advisor
 - Project: Indicators of Socio-Economic Health and Causal Modeling
- 2016 - Present Joseph Chien, Ph.D. student in the Mathematical Sciences Institute, ANU.
Co-Advisor
 - Project: Preference Matching Models in Employment

- 2015 - Present Jaili Wang, Ph.D. student in Statistics, RSFAS, ANU.
Co-Primary Advisor • Project: Multiple Imputation of Multilevel Data Sets
- 2017 Mark Dawkins, Honours student in Statistics, RSFAS, ANU.
Co-Primary Advisor • Thesis: Melded Bayesian Inference for Stochastic Theoretical Models with Applications in Agent Based Modelling
• Currently a research assistant in Statistics at ANU, AUS.
- 2016 Jaron Lee, Honours student in Statistics, RSFAS, ANU.
Primary Advisor • Thesis: **A Variational Bayes Approach to Clustered Latent Preference Models for Directed Network Data**
*Based on his thesis and undergraduate coursework Jaron Lee received an **ANU University Medal**.
• Will be a Ph.D. student in Computer Science at Johns Hopkins University starting in the Fall of 2018.
- Nov - Jan 2015 Fui Swen Kuh, ANU Summer Research Scholar from the Department of Statistics, University of Auckland.
Primary Advisor • Project: **Social Network Analysis on Food Web and Dispute Data**
• Currently a Ph.D. student in Statistics at ANU, AUS
- Jul - Aug 2014 Seoyoon Cho, CSIRO Industrial Trainee from the Department of Statistics, Korea University.
Co-Advisor • Project: Modeling Network Data Using PyStan
• Currently applying to Ph.D. programs in Biostatistics [accepted at the University of North Carolina, USA]
- Jul - Aug 2014 Hyangki Lee, CSIRO Industrial Trainee from the Department of Statistics, Korea University.
Co-Advisor • Project: Modeling Network Data Using PyStan
- Aug 2010 - 2012 Yaroslav Mukhin, M.S. student in Statistics, University of Nevada, Las Vegas. Currently, he is a Ph.D. studies in Economics at
Mentor • Project: Inference for the Solow Growth Model: A Bayesian Melding Approach
• Currently a Ph.D. candidate in Economics at the Massachusetts Institute of Technology, USA
- Aug 2010 - 2012 Maxym Myroshnychenko, NSF Biomathematics Scholar and a UNLV McNair Scholar, University of Nevada, Las Vegas.
Advisor • Project: **Analysis of Morris Water Maze Data with Bayesian Statistical Methods**
• Currently a Ph.D. candidate in Neuroscience at Indiana University, USA

Courses Taught and Developed

- 2018 **Regression Modelling**; ANU STAT 2008/6038 [undergraduate and graduate].
- 2016 - present (yearly) **Managing the Research Process***; ANU STAT 4010 [honours].
- 2015 - 2017 (yearly) **Statistical Learning***; ANU STAT 3040/7040 [undergraduate and graduate].
- 2014 - present (yearly) **Statistical Inference**; ANU STAT3013/8027 [undergraduate and graduate].
- 2014 (1x) **Introduction to Mathematical Statistics**; ANU STAT2001/6039 [undergraduate and graduate].
- 2014 (1x) **Econometrics**; UC 6541/6551 [undergraduate and graduate].
- 2013 - 2014 (3x) **Problem Evaluation and Resolution**; UC 8730 [undergraduate].
- 2013 (2x) **Introduction to Business Statistics**; UC 5123/6275 [undergraduate and graduate].
- 2012 Aided in developing a course on **network data*** for the School of Information: Science, Technology, and Arts (SISTA). UA [undergraduate].
- 2008 - 2010 (4x) **Applied Statistics for the Biological Sciences**; UNLV Stat 391 [undergraduate].
- 2008 - 2010 (2x) **Experimental Design and Analysis**; UNLV Stat 713 [graduate].
- 2009 (1x) **Bayesian Data Analysis***; UNLV Stat 753 [graduate].
- 2008 - 2011 (3x) Independent study for **Bayesian Data Analysis***; UNLV Stat 753 [graduate].

- 2010 - 2011 (2x) **Regression Analysis II*** (GLMs, LMMs, GLMMs); UNLV Stat 762 [graduate].
- 2008 (1x) **Statistical Decision Theory**; UNLV Stat 765 [graduate].
- 2007 (1x) **Multivariate Analysis**; UNLV Stat 764 [graduate].

Note: Australian National University (ANU), University of Arizona (UA), University of Canberra (UC), University of Nevada, Las Vegas (UNLV).

*Note: * indicates a course that I developed.*

Awards

- 2011 Young Statisticians' Meeting (satellite meeting of the ISI), Dublin, IRL.
Refereed poster - **Received a best poster award.**
- 2008 Political Networks Conference, Harvard University, Cambridge, MA, USA.
Refereed poster - **Received a best poster award.**
- 2007 Joint Statistical Meeting, Salt Lake City, UT, USA.
Invited - **Received a student paper competition award from the ASA Section on Bayesian Statistical Science.**

Selected Professional Activities

- 2016 - present Associate Editor of the quarterly bulletin of the International Society for Bayesian Analysis (ISBA).
- 2015 - 2017 Council member of the Canberra branch of the Statistical Society of Australia.
- 2007 - present Reviewer for: *Advances in Data Analysis and Classification*, the *Annals of Applied Statistics*, *British Journal of Mathematical and Statistical Psychology*, the *Journal of Graphical and Computational Statistics*, *PLoS ONE*, *Political Analysis*, *Proceedings of the National Academy of Science*, *Social Networks*.
- 2011 Reviewer for the US National Science Foundation, Directorate for Biological Sciences.
- 2013 Organized an invited session for the Joint Statistical Meeting titled “**Sampling and Model Based Inference for Network Data**”.
- 2008 Organized an invited session for the Joint Statistical Meeting titled “**Political Science, Statistical Science, and Graphics**”.
- 2007 Chair for the panel on **non-parametric statistical methods** for the Joint Statistical Meeting.
- 2007 Discussant for a presentation on **statistical social network analysis** for the Political Methodology Meeting.
- 2007 Chair and discussant for the panel on **time series modeling** for the Midwest Political Science Association.
- 2005 Chair and discussant for the panel on **causality** for the American Political Science Association Meeting.
- 2007 - 2011 UNLV Committees: the hiring committee, the qualifying exam committee (designed and graded exams for several subjects over the period), the statistics faculty committee, and the undergraduate studies committee.

Professional Societies

- 2002 - Present American Statistical Association.
- Sections: Section on Bayesian Statistical Science, Environment, Social Statistics Section.

- 2002 - Present American Political Science Association.
- Sections: Political Methodology, Political Networks.
- 2010 - Present Statistical Society of Australia.
- 2017 - Present International Society for Bayesian Analysis.

Recent Presentations

- May 18, 2018 “Bayesian Melding From the Deterministic Case to the Stochastic Case”. Joint with Dr. Grace Chiu. Department of Econometrics and Business Statistics, Monash University, AUS.
Invited
- May 18, 2018 “Statistically, It’s all *Fun and Games*”. NUMBATS, Monash University, AUS.
Invited
- Dec 15, 2017 “Bayesian Melding From the Deterministic Case to the Stochastic Case”. Joint with Dr. Grace Chiu. Department of Statistics and Data Sciences, University of Texas, Austin, TX, USA.
Invited

Previous Presentations

Network Methodology and Applications

- Dec 2 - 4, 2013 RSFAS Research Summer Camp, Australian National University, Canberra, AUS.
Invited
- Nov 30, 2011 Southwest Environmental Health Sciences Center, University of Arizona, AZ, USA.
Invited

Foreign Direct Investment Networks

- May 16, 2013 Canberra Applied Statistics Seminar, Australia National University, Canberra, AUS.
Invited
- Feb 21, 2013 Discipline of Mathematics & Statistics, University of Canberra, AUS.
Invited
- Jan 23, 2013 Department of Biostatistics, University of California, Los Angeles, CA, USA.
Invited
- Aug 24, 2012 School of Mathematics and Statistics, University of New South Wales, Sydney, AUS.
Invited
- 2012 Joint Statistical Meeting, San Diego, CA, USA.
Contributed - Topic contributed session: Prediction and Inference in Large-Scale Social Networks.
- Aug 29 - Sep 1, 2010 SAMSI 2010-2011 Program on Complex Networks, Opening Workshop, Research Triangle Park, NC, USA.
Refereed poster
- 2010 Political Networks Conference, Duke University, Durham, NC, USA.
Refereed

Food Webs and Phylogeny

- 2011 Young Statisticians’ Meeting (satellite meeting of the ISI), Dublin, IRL.
Refereed poster - **Received a best poster award.**
- 2010 Joint Statistical Meeting, Vancouver, British Columbia, CAN
Contributed poster

Longitudinal Social Networks

- Apr 20, 2011 Statistics GIDP, University of Arizona, Tucson, AZ, USA.
Invited
- 2010 Canberra Chapter of the Statistical Society of Australia, Canberra, AUS
Invited
- 2008 Political Networks Conference, Harvard University, Cambridge, MA, USA.
Refereed poster - **Received a best poster award.**
- 2007 Joint Statistical Meeting, Salt Lake City, UT, USA.
Invited - **Received a student paper competition award from the ASA Section on Bayesian Statistical Science.**
- 2007 Political Methodology Meeting, Pennsylvania State University, Happy Valley, PA, USA.
Refereed talk and poster
- 2007 Southern Regional Council on Statistics, Richmond, VA, USA.
Invited
- 2007 Seminar on Bayesian Inference in Econometrics and Statistics, Washington University in St. Louis, MO, USA.
Refereed
- Feb 23, 2007 Department of Mathematical Sciences, University of Nevada, Las Vegas, NV, USA.
Invited
- Feb 02, 2007 Department of Mathematics and Center for Applied Statistics, Washington University in St. Louis, MO, USA.
Invited
- Nov 30, 2006 Department of Political Science and Center for Applied Statistics, Washington University in St. Louis, MO, USA.
Invited

Statistical Game Theory

- Jan 24, 2013 Department of Statistics, University of California, Los Angeles, CA, USA.
Invited
- Dec 10 - 12, 2012 CSIRO OCE Cutting Edge Symposium, Canberra, AUS.
Invited - Integrating Systems Biology and Network Science with the Rich Data of the CSIRO Biological Collections.
- Feb 1, 2012 Statistics GIDP, University of Arizona, Tucson, AZ, USA.
Invited
- Jan 30, 2012 The School of Information: Science, Technology, and Arts, University of Arizona, Tucson, AZ, USA.
Invited
- 2009 Joint Statistical Meeting, Washington, D.C., USA.
contributed
- 2008 Institute of Mathematical Statistics New Researchers' Conference, University of Colorado, Boulder, CO, USA.
Invited
- 2008 Spring Symposium for the Nevada Chapter of The American Statistical Association, Las Vegas, NV, Las Vegas, NV, USA.
Invited
- 2003 Center for Statistics and the Social Sciences, University of Washington, Seattle, USA
Invited
- 2002 Political Methodology Meeting, University of Washington, Seattle, USA
Refereed poster

Child Support Policies via Randomized Experiments (Evidenced Based Policy)

2012 Public Performance Measurement and Reporting Network Meeting, Trenton, NJ, USA.
Refereed

2012 American Society for Public Administration, Las Vegas, NV, USA.
Refereed

Other Presentations

- Dec 3, 2008 School of Law, University of Nevada, Las Vegas, NV, USA.
Invited
- 2006 Joint Statistical Meeting, Seattle, WA, USA
Contributed
- 2005 Joint Statistical Meeting, Minneapolis, MN, USA
Contributed
- 2005 American Political Science Association, Washington, D.C., USA
Contributed
- 2003 American Political Science Association, Philadelphia, PA, USA
Contributed