THOMAS   RICHARDSON

e-mail: thomasr@u.washington.edu

EDUCATION	CARNEGIE MELLON UNIVERSITY	Pittsburgh, USA
	Ph.D. Logic, Computation & Methodology	*August, 1996*
	M.Sc. Logic & Computation	*August, 1995*
	MERTON COLLEGE	Oxford, UK
	B.A.(Hons), Mathematics & Philosophy	*August, 1992*

THESES	Ph.D. Thesis: *Feedback Models: Interpretation and Discovery*
	M.Sc. Thesis: *Properties of Cyclic Graphical Models*

EMPLOYMENT	UNIVERSITY OF WASHINGTON	Seattle, USA
	Department of Statistics	
	Chair	*July 2014-June 2019*
	Full Professor	*Fall 2007-*
	Associate Professor	*Fall 2000-Fall 2007*
	Assistant Professor	*Fall 1996-Fall 2000*
	Center for Statistics and the Social Sciences	
	Director	*June 2009-2014*
	Acting Director	*June 2006-Aug 2007*
	Department of Electrical Engineering	*Fall 2013-*
	Adjunct Professor	
	Department of Economics	*Winter 2007-*
	Adjunct Professor	
	UNIVERSITY OF WARWICK	Coventry, UK
	Lecturer	*Fall 1999-Fall 2000*

RESEARCH GRANTS	PI: ONR ($739K) *High-Dimensional Causal Model Search*.	*July 2019-June 2022*
	PI: ONR ($343K) *Statistical Methods for High-Dimensional Causal Inference*.	*July 2015-June 2019*
	Co-Investigator PCORI ($1,031K) *Learning Within Health Care Delivery Systems* (Heagerty, PI)	*Aug 2016-Mar 2020*
	Co-PI: NIH: ($5,325K) *Analytic methods for HIV treatment and co-factor effects* Harvard School of Public Health (J.Robins, PI) (UW Subcontract $502K)	*June 2005-Mar 2015*
	Co-PI: NSF ($1,030K) *Software Infrastructure for Temporal Modeling* (PI: J.Bilmes, Univ. of Washington)	*July 2008-Dec 2013*
	Co-PI: NSF ($343K) *Aging Related Degradation in Bone Mechano-transduction* (PI: S. Srinivasan, Univ. of Washington)	*July 2008-June 2013*
	Co-PI: NIH ($352K) *Predicting bone formation induced by mechanical loading using agent based models* (PI: S. Srinivasan, Univ. of Washington)	*Dec 2006-Nov 2008*
	Co-PI: CSSS Seed grant ($20K) Improved Confidence Intervals for Subvectors in IV Regression with Weak Identification (PI: Eric Zivot, UW Economics)	*Dec 2006-Dec 2007*

RESEARCH GRANTS (CONTD.)	PI: NSF-DMS ($120K) *Graphical and Algebraic Models for Multivariate Categorical Data* (Collaborative grant with M. Drton, at University of Chicago)	*July 2006-July 2009*
	PI: RRF Grant: ($24K) *Likelihood inference in regression systems in the presence of multimodality*	*Sept 2003-Sept 2004*
	PI: CSSS Seed Grant: ($15K) *Intonation in Unangas (Western Aleut), an endangered Alaskan language*, (J. Wegelin and A. Taff).	*Sept 2001-July 2002*
	Co-PI: DARPA-CFI: ($2.3K) *Graphical Models: Mixing Knowledge and Data-Driven Techniques*. (Jeff Bilmes, PI).	*Summer 2001*
	PI: NSF-DMS Grant ($155K) *Graphical Markov Models with Interpretable Structure*	*Nov 1999-Aug 2003*
	PI: EPA-NRCSE Grant ($153K) *Graphical Models for statistical and causal inferences about mortality from airborne particles (PM)*	*1999-2002*
	Co-PI: NSF-DMS Grant ($313K) *Graphical Markov Models, Structural Equation Models, and Related Models of Multivariate Dependence* PI: Michael Perlman	*June 1997-June 2000*
	PI: RRF Grant ($19k) Bayesian software tools for causal model search	*June 1997-June 1999*

AWARDS & FELLOWSHIPS	FULBRIGHT FELLOWSHIP	Buenos Aires, Arg. *Sept-Dec 2014*
	VISITING SENIOR RESEARCH FELLOW	Jesus College, Oxford *Jan-June 2008*
	INSTITUTE FOR ADVANCED STUDIES Fellowship	University of Bologna *Sept-Dec 2007*
	CENTER FOR ADVANCED STUDIES IN THE BEHAVIORAL SCIENCES Fellowship	Stanford University, Palo Alto, USA *January-June 2004*
	ISAAC NEWTON INSTITUTE Rosenbaum Fellow	Cambridge, UK *July - Dec 1997*
	25TH CONFERENCE ON UNCERTAINTY IN ARTIFICIAL INTELLIGENCE Best Paper Award	Montreal, Canada *June 2009*
	20TH CONFERENCE ON UNCERTAINTY IN ARTIFICIAL INTELLIGENCE Outstanding Student Paper Award (as co-author)	Banff, Canada *July 2004*
	12TH CONFERENCE ON UNCERTAINTY IN ARTIFICIAL INTELLIGENCE Outstanding Student Paper Award	Portland, USA *Aug 1996*

PHD STUDENTS
SUPERVISED   *Affiliation*

Defended: 2016	Wen Wei Loh	*Gent*
2016	Linbo Wang (with X.-H. Zhou, Biostatistics)	*Toronto*
2015	Roddy Theobald	*AIM, Seattle*
2012	Anna Klimova	*Bielefeld*
2011	Robin Evans	*Oxford University*
2008	Saraswata Chaudhuri (with E. Zivot; PhD in Economics)	*McGill University*
2006	Erica Moodie (PhD in Biostatistics)	*McGill University*
2005	Sanjay Chaudhuri (with M. Perlman)	*National University of Singapore*
2004	Mathias Drton (with M. Perlman)	*Univ. of Washington*
2002	Ayesha Ali	*University of Guelph*
2001	Jacob Wegelin (with P. Sampson)	*Virginia Commonwealth University*
1999	Greg Ridgeway (with D. Madigan)	*Univ. of Pennsylvania*

MSC STUDENTS

1999	Jake Brutlag	*Google*

SERVICE ON PHD
COMMITTEES

Accounting; Biostatistics; Computer Science; Economics; Electrical Engineering; Evans School of Public Policy; Finance; Fisheries; Forestry; Civil & Environmental Engineering; Linguistics; Mechanical Engineering; Political Science; Psychology; Sociology; Statistics; Urban Design and Planning.

EXTERNAL PHD
COMMITTEES

Jyväskylä: Santtu Tikka (Advisor: Juha Karvanen)	*July 2018*
ETH Zurich: Preetam Nandy (Advisor: Marloes Maathuis)	*September 2016*
ETH Zurich: Diego Colombo (Advisor: Marloes Maathuis)	*August 2013*
Radboud University: Tom Claassen (Advisor: Tom Heskes)	*June 2013*
Carnegie-Mellon University: Jiji Zhang (Advisor: Peter Spirtes)	*July 2006*

EDITING	Editor for *Statistical Science*	*2009-2014*
	Proceedings of the Twenty-Second Conference on Uncertainty in Artificial Intelligence (with R. Dechter)	*July 2006*
	Associate Editor for *The Journal of the Royal Statistical Society Series B*.	*Aug 1999-July 2004*
	Proceedings of the Eighth International Workshop on Artificial Intelligence and Statistics (with T. Jaakkola)	*Jan 2001*
	Guest Editor for *Statistics and Computing*	*Aug 1997-Aug 1999*
REVIEWING	STATISTICS: Annals of Statistics; Bernoulli; Biometrika; Behaviormetrika; Communications in Statistics; Games and Economic Behavior; International Journal of Biostatistics, International Statistical Review; Journal of Multivariate Analysis; Journal of the Royal Statistical Society; Probability Theory and Related Fields; Scandinavian Journal of Statistics; Statistical Modelling; Statistica Sinica; Statistics and Computing; Learning in Graphical Models.	
	SOCIAL SCIENCE: Erkenntnis; Sociological Methodology; Sociological Methods and Research; Synthese.	
	COMPUTER SCIENCE: Conference on AI and Statistics; International Joint Conference on AI; Journal of AI Research; Knowledge Discovery and Data Mining; Machine Learning; Neural and Information Processing Systems; IEEE	

REVIEWING (CONT.)	COMPUTER SCIENCE (CONT.) Transactions on Knowledge and Data Engineering; Oxford University Press; Conference on Uncertainty in Artificial Intelligence; IEEE Transactions on Signal Processing.	
	MATHEMATICS: Journal of Combinatorial Theory	
	GRANT PROPOSAL AGENCIES: NSF; EPSRC (UK); RRF; NOW (Netherlands)	
CONFERENCE ORGANIZING	Co-organizer, week-long workshop at Mathematisches Forschungsinstitut, Oberwolfach, Germany	*May 2019*
	First UAI Workshop on Causal Structure Learning, Catalina Island,	*August 2012*
	WNAR/IMS MEETING IMS Program Chair	*June 2007*
	23RD CONFERENCE ON UNCERTAINTY IN ARTIFICIAL INTELLIGENCE General Co-Chair	*July 2007*
	22ND CONFERENCE ON UNCERTAINTY IN ARTIFICIAL INTELLIGENCE Program Co-Chair	*July 2006*
	IMS/BERNOULLI SOCIETY MEETING Session organizer	Barcelona, Spain *July 2004*
	WNAR/IMS MEETING Session organizer	Los Angeles, USA *June 2002*

CONFERENCE ORGANIZING (CONT.)	ASSOCIATION FOR AI AND STATISTICS Conference organizer (with T. Jaakkola, MIT)	Fort Lauderdale, USA *Jan 2001*
	FIELDS INSTITUTE Seminar organizer (with P.Spirtes, CMU) *Causal Structure and Conditional Independence*	Toronto, Canada Oct 1999
	IMS CONFERENCE ON GRAPHICAL MODELS Webmaster	Seattle, USA *June 1997*
ADVISORY PANELS	UNIVERSITY OF CALIFORINA, LOS ANGELES *Departmental Review Panel*	*January 2018*
	CARNEGIE-MELLON UNIVERSITY *Presidential Ten Year Review Panel*	*March 2014*
	ASSOCIATION FOR UNCERTAINTY IN AI *Council of Chairs*	*July 2006-*
	HARVARD SCHOOL OF PUBLIC HEALTH *Causal Epidemiology program*	*January 2001-*
	SOCIETY FOR AI AND STATISTICS	*January 2001-*
PROGRAM COMMITTEES	CONFERENCE ON UNCERTAINTY IN AI	*2000-17*
	CONFERENCE ON KNOWLEDGE DISCOVERY AND DATABASES	*2000*
	INTERNATIONAL WORKSHOP ON AI AND STATISTICS	*1999,2005*
	INTERNATIONAL JOINT CONFERENCE ON AI	*1999, 2002*

PROGRAM COMMITTEES (CONT.)	CONFERENCE ON NEURAL AND INFORMATION PROCESSING SYSTEMS	*1998-2000, 2002, 2005-6, 2013-19*
UW SERVICE	Member of Moore/Sloan Foundation Data Science Proposal	*March 2013*
	Department of Biostatistics Review	*February 2013*
	Faculty Field Tour	*June 1998*
	Faculty Fellows Program	*September 1996*
DEPT SERVICE	Chair	*July 2015-June 2019*
	Chair, Computing Committee	*2010-*
	Chair, MS Applied Exam	*2009*
	Chair, Pedagogy Committee	*2002-2003*
	Computing Committee	*1998-1999, 2000*
	Graduate Admissions Committee	*1998,2005,2006*
	Ph.D. Applied Prelim Committee	*2002-2004, 2006*
	M.Sc. Applied Exam Committee	*2005*
	Stochastic Modelling Prelim Committee	*1997, 1998, 2012*
	Computing Prelim Committee	*1997, 1999, 2013*
	Applied Prelim Committee	*1998, 2003*
	Executive Committee, Center for Statistics and the Social Sciences	*September 2003-*
	Search Committees, Center for Statistics and the Social Sciences	*2005-6 (Chair) 2001-2003*
	Web-developer for UIF Proposal: Center for Statistics and the Social Sciences	*April-June 1999*
PRESENTATIONS	Office of Naval Research Causal Meeting, MIT	*June 2019*
	Peking University, First International Workshop on Causal Inference,	*May 2019*
	CSSS Seminar	*January 2019*

PRESENTATIONS (CONT.)	Centre de Recherches Mathématiques, Montréal, Québec, Canada (two talks)	*June 2018*
	Causal Working Group, University of Washington Biostatistics	*April 2018*
	ONR Program Review, Duke University	*October, 2017*
	Columbia University, Causality Workshop	*September, 2017*
	Center for Causal Discovery, University of Pittsburgh / CMU	*April 2017*
	Mathematisches Forschungsinstitut, Oberwolfach, Germany	*March 2017*
	Joint Statistics Meetings, Chicago	*August 2016*
	Workshop on Causal Inference and Information Theory, Technical University of Munich	*May 2016*
	ISAT/DARPA What If: Machine Learning for Causal Inference Workshop	*February 2016*
	Causal Working Group, University of Washington, Department of Biostatistics,	*December 2015*
	ONR Meeting, Duke, NC	*October 2015*
	European Meeting of Statisticians (one invited; one submitted), Amsterdam	*July 2015*
	Causal Working Group, University of Washington Biostatistics	*March 2015*

PRESENTATIONS **(CONT.)**	Sackler Colloquium, National Academy of Sciences	*March 2015*
	CONICET, Mathematics Institute, Santa Fe, Argentina	*November 2014*
	CLAPEM, Cartagena, Colombia	*September 2014*
	Joint Statistics Meeting, Boston	*August 2014*
	Yale University, Department of Government	*April 2014*
	UNC, Chapel Hill, Dept of Biostatistics	*April 2014*
	University of California, Berkeley Data, Society and Inference Seminar	*March 2014*
	CMU, Department of Statistics	*March 2014*
	Institute for Health Metrics and Evaluation, Seattle	*January 2014*
	University of Oxford, Dept of Statistics	*November 2013*
	Lunteren Stochastics Workshop	*November 2013*
	Biostatistics Causal Reading Group	*November 2013*
	Causality: Perspectives from different disciplines, Vals Switzerland	*August 2013*
	Radboud University Mini-Symposium	*June 2013*
	Atlantic Causal Inference Conference	*May 2013*
	Microsoft Research Summit on Machine Learning, Paris, France	*April 2013*

PRESENTATIONS **(CONT.)**	University of Washington Biostatistics Department Seminar	*April 2013*
	CSSS Seminar	*October 2012*
	SuSTaIn workshop, University of Bristol, UK	*September 2012*
	Conference on Uncertainty in Artificial Intelligence, Catalina Island	*August 2012*
	Joint Statistics Meetings, San Diego	*August 2012*
	Eastern North American Region of the International Biometric Society	*April 2012*
	Mediation Workshop, Department of Government, Harvard University (Keynote)	*March 2012*
	Department Seminar, University of Minnesota, Minneapolis, Minnesota	*February 2012*
	Winter Workshop, University of Florida, Gainesville, Florida	*January 2012*
	IMA Conference on Applications of Algebraic Geometry, Raleigh, NC	*October 2011*
	Joint Statistics Meetings, Miami, Florida	*August 2011*
	Centre de Recherches Mathématiques, Montréal, Québec, Canada	*May 2011*
	American Institute for Mathematics, Palo Alto	*October 2010*

PRESENTATIONS (CONT.)	Department of Statistics, Eidgenössische Technische Hochschule (ETH), Zürich	*July 2010*
	Valencia IX; International Meeting on Bayesian Statistics, Benidorm, Spain	*June 2010*
	25th Conference on Uncertainty in Artificial Intelligence	*June 2009*
	Banff International Research Station Workshop on Causal Inference	*May 2009*
	University of Chicago Department of Health Studies	*April 2009*
	University of Warwick Graphical Models and Genetic Applications	*April 2009*
	University of Washington Department of Biostatistics	*April 2009*
	University of Cambridge MolPAGE workshop	*March 2009*
	Harvard University Department of Government	*February 2009*
	SAMSI Workshop on Algebraic Statistics	*January 2009*
	University of Washington CSSS Seminar	*January 2009*
	University of Washington Department of Statistics	*December 2008*

PRESENTATIONS (**CONT.**)	University of Cambridge Statistics Laboratory	*June 2008*
	University of Warwick Department of Statistics	*May 2008*
	Gregynog Conference, Wales	*April 2008*
	ETH Zürich, Switzerland Statistics Seminar Applied Seminar	*April 2008*
	Max Planck Institute, Leipzig, Germany	*March 2008*
	Jesus College, Oxford, UK	*March 2008*
	University College London, UK	*February 2008*
	University of Oxford, UK	*February 2008*
	University of Pavia, Italy	*December 2007*
	University of Perugia, Italy	*November 2007*
	University of Bologna, Italy	*November 2007*
	University of Bologna, Italy Institute for Advanced Studies	*November 2007*
	University of Padua, Italy	*November 2007*
	University of Florence, Italy	*October 2007*
	WNAR/IMS Meeting UC Irvine, USA	*June 2007*
	Cornell University Statistics Department Seminar	*March 2007*

PRESENTATIONS **(CONT.)**	Institute for Mathematics and its Applications, Minneapolis Invited Talk	*March 2007*
	SAMSI Workshop on Random Matrices Invited Talk	*November 2006*
	Harvard School of Public Health Biostatistics Department Seminar	*October 2006*
	AMS Meeting, San Antonio Texas Invited Talk	*January 2006*
	Penn State Statistics Department	*November 2005*
	Graphical Models Workshop in Smögen Invited Talk	*September 2005*
	Joint Statistics Meeting Invited Talk	*August 2005*
	UW Statistics Department Seminar	*February 2005*
	Duke/SAMSI Latent Variable in the Social Sciences Meeting	*September 2004*
	Joint Statistics Meeting Invited Discussant	Toronto, Canada *August 2004*
	Stanford University, Statistics Department Department Seminar	Palo Alto, California *May 2004*
	UC Berkeley, Mathematics Department Algebraic Statistics Workshop	Berkeley, California *May 2004*

PRESENTATIONS (**CONT.**)	Center for Advanced Studies in the Behavioral Sciences	Palo Alto, California *Feb 2004*
	Social Epidemiology, Health Disparities Symposium	*May 2003*
	UW, CSSS seminar	*March, 2003*
	UW, Electrical Engineering Graphical Models Seminar	*March 2003*
	UW, Statistics Data Mining Seminar Banff IMS Conference (for M. Drton)	*Fall 2002* *August 2002*
	Univ. of Washington, CSSS Seminar Royal Statistical Society, Read paper.	*April 2002* London, *December 2001*
	Institute of Information Theory and Automation, (UTIA),	Prague, Czech Rep. *November 2001*
	School of Economics (VSE),	Prague, Czech Rep. *November 2001*
	Causal Inference Conference	Snowbird, Utah *August 2001*
	Center for Language and Speech Processing (CLSP), EE Dept., Johns Hopkins	Baltimore, Maryland *August 2001*
	European Science Foundation (ESF), Highly Structured Stochastic Systems (HSSS), Closing Workshop	Luminy, France, *November 2000*
	Department of Statistics, University of Washington	Seattle, Washington *November 2000*

PRESENTATIONS (CONT.)	Center for Statistics and the Social Sciences, University of Washington	Seattle, Washington *November 2000*
	Bernoulli-RIKEN Meeting on Neural Networks and Learning, RIKEN (Institute of Physical and Chemical Research)	Tokyo, Japan *October 2000*
	Bernoulli/IMS Joint Meeting Invited speaker	Guanajuato, Mexico *May 2000*
	University of Lancaster, UK, Department of Mathematics,	Lancaster, UK *May 2000*
	Danish Agricultural Sciences Institute	Foulum, Denmark *April 2000*
	University of Aalborg, Department of Mathematical Sciences,	Aalborg, Denmark *April 2000*
	University of Warwick, UK, Department of Statistics,	*March 2000*
	Imperial College, University of London, Department of Statistics,	*March 2000*
	ESF HSSS Conference on Graphical Models Invited speaker	Munich, Germany *March 2000*
	Dept. of Statistics, University of Toronto Departmental seminar	Toronto, Canada *November 1999*
	International Statistical Institute Conference Invited speaker	Helsinki, Finland *August 1999*
	IMS-WNAR Meeting Invited discussant	Seattle, USA *June 1999*

PRESENTATIONS (**CONT.**)	CALD Seminar, Robotics Dept, CMU Invited talk	Pittsburgh, USA *February 1999*
	Conference on AI & Statistics Speaker, plenary session	Fort Lauderdale, USA *January 1999*
	ESF HSSS Workshop on Structural Learning in Graphical Models	Tirano, Italy *September 1998*
	Joint Statistical Meetings, ASA/IMS Invited speaker	Dallas, USA *August 1998*
	Conference on Automated Learning and Discovery (ConALD)	Pittsburgh, USA *June 1998*
	Valencia Meeting on Bayesian Statistics Invited discussant	Valencia, Spain *May 1998*
	Dept. of Statistics, University of Washington	Seattle, USA *March 1998*
	Working Group on Model Based Clustering, Dept. of statistics, University of Washington	Seattle, USA *February 1998*
	Newton Institute Conference on Bayesian Methods	Cambridge, UK *December 1997*
	Dept. of Statistics, University of Oxford Departmental seminar	Oxford, UK *November 1997*
	Dept. of Statistics, University of Warwick Departmental seminar	Coventry, UK *November 1997*
	ESF HSSS Workshop on Multivariate Research with Latent Variables	Wiesbaden, Germany *November 1997*

PRESENTATIONS **(CONT.)**	Human Communications Research Center, University of Edinburgh	Edinburgh, UK *November 1997*
	Dept. of Statistics, University College London Departmental seminar	London, UK *November 1997*
	StatsLab, University of Cambridge Departmental seminar	Cambridge, UK *November 1997*
	Conference on Stochastic Model Building, Duke University	Durham, USA October 1997
	Newton Institute Conference on Graphical Models	Cambridge, UK *August 1997*
	Santa Fe Institute	Santa Fe, USA *July 1997*
	UW/Microsoft Research Workshop on Data Mining	Seattle, USA July 1997
	IMS Conference on Graphical Models Invited talk	*Seattle, USA* June 1997
	Law School, University of Washington	Seattle, USA *May 1997*
	University of Tampere	*Hämeenlinna, Finland April 1997*
	Conference on Artificial Intelligence and Statistics	Fort Lauderdale, USA January 1997

PRESENTATIONS (CONT.)	International Association for Statistical Computing (IASC)	Pasadena, USA *February 1997*
	Working Group on Model Based Clustering, Dept. of Statistics, University of Washington. Invited talk	Seattle, USA February 1997
	12th Conference on Uncertainty in Artificial Intelligence	Portland, USA August 1996
	ESF HSSS Workshop on Association Models with Latent Variables	Wiesbaden, Germany *July 1996*
	Dept. of Statistics, University of Washington	Seattle, USA *April 1996*
	11th Symposium on Computational Statistics (COMPSTAT) Speaker, section on Model Fitting	Vienna, Austria *August 1994*
SHORT COURSES	Short course at Eidgenössische Technische Hochschule (ETH) Zürich on Causal Modeling.	Zürich, Switzerland *June 2012*
	Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID) Co-taught a course on causal inference with Michael Hudgens (UNC Chapel Hill)	Seattle *June 2009-2016*
	Taught a 3 day course on causal models, counterfactuals and collapsibility	Bologna *December 2007*
	Together with N.Wermuth, taught the University of Umeå, Winter Conference Course (4 days).	Bjorgafjall *March 2006*

SHORT
COURSES
(CONT.)

Taught a five day course on Bayesian
Networks, Complex Systems Group,
Computer Science Dept., Univ. of Helsinki

Helsinki, Finland
April 1997

BIBLIOGRAPHY

PAPERS IN REFEREED JOURNALS

R. J. Evans and T. S. Richardson (2019). Smooth, identifiable supermodels of discrete DAG models with latent variables. Bernoulli, **25**, 848-876

S. A. Swanson, M. A. Hernán, M. Miller, J. M. Robins and T. S. Richardson (2018). *Partial Identification of the Average Treatment Effect Using Instrumental Variables: Review of Methods for Binary Instruments, Treatments, and Outcomes*. Journal of the American Statistical Association, **113**: 933-947.

L. Wang, X.-H. Zhou and T.S. Richardson (2017). *Identification and Estimation of Causal Effects with Outcomes Truncated by Death*. Biometrika, **104**: 597-612.

L. Wang, T. S. Richardson, X.-H. Zhou (2017). *Causal analysis in multi-arm trials with truncation by death*. Journal of the Royal Statistical Society: Series B, **79**, 719–735.

L. Wang, T.S. Richardson and J. M. Robins (2017). *On falsification of the binary instrumental variable model*. Biometrika, **104**, 229-236.

T.S. Richardson, J.M. Robins and L. Wang (2017). *On Modeling and Estimation for the Relative Risk and Risk Difference*. Journal of the American Statistical Association, **519**, 1121-1130.

L. Wang and T.S. Richardson (2017). *On the Concordant Survivorship Assumption*. Statistics in Medicine, **36** pp. 717-720

P. Nandy, M. Maathuis, T. S. Richardson. (2017) *Estimating the effect of joint interventions from observational data in sparse high-dimensional settings*. Annals of Statistics, **45**, pp. 647-674.

PAPERS IN REFEREED JOURNALS (CONT.)

J.Y. Huang, A.R. Gavin, T.S. Richardson, A. Rowhani-Rahbar, D.S. Siscovick, D.A. Enquobahrie. (2015) *Are Early-Life Socioeconomic Conditions Directly Related to Birth Outcomes? Grandmaternal Education, Grandchild Birth Weight, and Associated Bias Analyses* (with discussion). American Journal of Epidemiology. 2015 Oct 1;182(7):568-78.

D. Heckerman, C. Meek, T.S. Richardson (2014) *Variations on undirected graphical models and their relationships*. Kybernetika vol. 50, No. 3, 363-377.

T. Richardson and A. Rotnitzky (2014) *Causal etiology of the research of James M. Robins*. Statistical Science vol. 29, No. 4, 459-484.

R.J. Evans and T.S. Richardson (2014). *Markovian acyclic directed mixed graphs for discrete data*. Annals of Statistics vol. 42, No. 4, 1452-1482.

I. Shpitser, R.J. Evans, T.S. Richardson and J.M. Robins (2014). *Introduction to nested Markov models*. Behaviormetrika vol. 41, No.1, 2014, 3–39.

R.J. Evans and T.S. Richardson (2013) *Marginal log-linear parameters for graphical Markov models*. Journal of the Royal Statistical Society Ser. B, vol. 75, Issue 4, pp. 743–768.

M. Banerjee and T.S. Richardson (2013) *Exchangeable Bernoulli Random Variables and Bayes' Postulate*. Electronic Journal of Statistics, vol. 7, pp. 2193-2208.

C. Chelba, P. Xu, F. Pereira, T.S. Richardson. (2013) *Large Scale Distributed Acoustic Modeling with Back-off N-grams*, IEEE Transactions on Audio, Speech and Language Processing, vol. 21, pp. 1158-1169.

PAPERS IN REFEREED JOURNALS (CONT.)

T.J. vanderWeele, T.S. Richardson (2012). *General theory for interactions in sufficient cause models with dichotomous exposures*. Annals of Statistics, 40: pp. 2128-2161.

D. Colombo, M.H. Maathuis, M. Kalisch and T.S. Richardson (2012). *Learning high-dimensional directed acyclic graphs with latent and selection variables*. Annals of Statistics, 40: pp. 294-321.

X. de Luna, T.S. Richardson and I. Waernbaum (2011). *Identification of covariates for the non-parametric estimation of an average treatment effect*. Biometrika, 98(4): pp. 861-875

T.S. Richardson, R. J. Evans and J.M. Robins (2011) *Transparent Parametrizations of Potential Outcome Models* (with discussion). In Bayesian Statistics 9, J.M. Bernardo, M.J. Bayarri, J. O. Berger, A. P. Dawid, D. Heckerman, A. F. M. Smith and M. West (Eds.), pp. 569–610.

S. Srinivasan, T. Gross, S. Bain, B. Ausk, J. Prasad, and T.S. Richardson (2010). *Rescuing Loading Induced Bone Formation at Senescence*. PLoS Comp Bio. doi:10.1371/journal.pcbi.1000924

S. Chaudhuri, T.S. Richardson , J. Robins, and E. Zivot (2010). *Split-Sample Score Tests in Linear Instrumental Variables Regression*. Econometric Theory. 26 : pp 1820-1837.

A.Glynn, T.S. Richardson and M. Handcock (2010) *Resolving Contested Elections: The Limited Power of Post-Vote Vote Choice Data*. Journal of the American Statistical Association. 105(489): 84-91.

E.E. Moodie, T.S. Richardson (2010). *Bias Correction in Non-Differentiable Estimating Equations for Optimal Dynamic Regimes*. Scandinavian Journal of Statistics. 37: 126-146.

M. Drton, M. Eichler, T.S. Richardson (2009). *Computing Maximum Likelihood Estimates in Recursive Linear Models with Correlated Errors*. Journal of Machine Learning Research. 10, 1989-2008.

PAPERS IN REFEREED JOURNALS (CONT.)

A. Ali, T.S. Richardson and P. Spirtes (2009) *Markov Equivalence for Ancestral Graphs*. Annals of Statistics. 37, 2808-2837.

M. Drton, T.S. Richardson (2008). *Binary Models for Marginal Independence*. Journal of the Royal Statistical Society Ser. B. 70(2), pp. 287 -309

M. Drton, T.S. Richardson (2008). *Graphical Methods for Efficient Likelihood Inference in Gaussian Covariance Models*. Journal of Machine Learning Research 9, pp. 581-602.

A. Glynn, J. Wakefield, M. Handcock, T. S. Richardson (2008) *Alleviating Linear Ecological Bias and Optimal Design with Subsample Data*. Journal of the Royal Statistical Society Ser.A. 171(1) pp.179-202.

S. Chaudhuri, M. Drton, T. S. Richardson (2007). *Estimation of a Covariance Matrix with Zeros*. Biometrika 94(1), pp. 199-216.

E.E. Moodie, T.S Richardson, D. Stephens (2007). *Demystifying Optimal Dynamic Treatment Regimes*. Biometrics 63(2), pp. 447-455.

S. Srinivasan, B. J. Ausk, S. L. Poliachik, S. E. Warner, T. S. Richardson, T. S. Gross (2007) *Rest-Inserted Loading Rapidly Amplifies the Response of Bone to Small Increases in Strain and Load Cycles*. Journal of Applied Physiology 102: 1945-1952

J. A. Wegelin, A. Packer, and T. S. Richardson (2006). *Latent models for cross-covariance*. Journal of Multivariate Analysis, 97(1): 79-102.

M. Drton and T. S. Richardson (2004). *Multimodality of the likelihood in the bivariate seemingly unrelated regression model*. Biometrika **91**(2): 383-392.

T.S. Richardson (2003). *Markov Properties for Acyclic Directed Mixed Graphs*. The Scandinavian Journal of Statistics, March 2003, vol. 30, no. 1, pp. 145-157(13).

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