CURRICULUM VITAE and BIBLIOGRAPHY

CONTACT INFORMATION

Name: Mark Johannes van der Laan.

Nationality: Dutch.

Marital status: Married to Martine with children Laura, Lars, and Robin.

University address:
University of California
Division of Biostatistics
School of Public Health
108 Haviland Hall
Berkeley, CA 94720-7360
email: laan@stat.berkeley.edu.

Telephone number:
office: 510-643-9866
fax: 510-643-5163

Web address:
www.stat.berkeley.edu/ laan
Working Papers, Division of Biostatistics: www.bepress.com/ucbbiostat

EDUCATION

1990-1993: Department of Mathematics, Utrecht University.

Ph.D student of Prof. Dr. R.D. Gill. Position included 25% teaching, 75% research and education.

Specialization in Estimation in Semiparametric and Censored Data Models.

1991-1992: **University of California, Berkeley**.

Statistics Program at M.S.R.I.: "Semiparametric Models and Survival Analysis".

Research with guidance by second Promotor Prof. Dr. P.J. Bickel.

Subject: "Efficient Estimation in the Bivariate Censoring Model".

December 13, 1993: Official Public Defense of Ph.D Thesis.

1985-1990: **Masters degree in Mathematics at the University of Utrecht, The Netherlands**. Statistics Major.

1988-1989: One year study, Masters degree courses at the Department of Statistics, **North Carolina State University, Raleigh**,
North Carolina, U.S.A.
G.P.A 4.0, Dean's List.

1989-1990: Masters thesis under guidance of Prof. Dr. R.D. Gill.
Subject: The Dabrowska Estimator and the Functional Delta method.
Grade (from 1-10, 10=top): 9.5.

Official Completion: May 1, 1990.

ACADEMIC POSITIONS

2006-present: Jiann-Ping Hsu/Karl E. Peace Endowed Chair in Biostatistics.

2013-2018: Investigator and core leader of the methods workgroup of the Sustainable East African Research in Community Health (SEARCH).

2016-present: Academic Director of Center of Targeted Learning in Precision Health.

2000-present: Professor Biostatistics and Statistics (joint appointment), School of Public Health and Department of Statistics, University of California, Berkeley.

1998-2000: Associate Professor of Biostatistics and Statistics (joint appointment), School of Public Health and Department of Statistics, University of California, Berkeley.

2005-2009: Long-term statistical consultant/adjunct professor for Bioinformatics at the Aging Buck Institute, Novato.

Spring 2007: Miller Professor, UC Berkeley.

1994-1998: Assistant Professor, Biostatistics, School of Public Health, University of California, Berkeley.

Summer and Fall 2004: Visiting Assistant Professor, Biostatistics, School of Public Health, University of California, Berkeley.

1990-1993: Teaching Assistant in the Department of Mathematics during Ph.D position, Utrecht, for masters degree courses.

Algebra B and C, Math. Analysis B and C (physics students).

Intr. Stochastic Analysis, Measure and Integration theory (math. students).

Mathematics I and II (chemistry students).

Statistics for Physical Sciences.

RESEARCH AREAS See http://www.stat.berkeley.edu/~laan/Research/research.html

My main research interests are

Developing statistical methodology and theory for analyzing high dimensional **censored longitudinal data** structures.

Statistical methods for **causal inference** in longitudinal studies with both informative treatment assignment and informative censoring, clinical trials, safety analysis.

Adaptive designs.

Statistical methods for the **analysis of genomic data** in computational biology and medical/epidemiological research.

Dependent network data

The application of these methods in collaboration with scientists (**comparative effectiveness research**).

Targeted Learning: We have developed a new approach to statistical learning called targeted maximum likelihood learning. In general, based on this approach we develop machines that take out the human intervention in data analysis, and provide reliable robust and optimal estimators of the desired target estimand, with as honest assessment of uncertainty. The methods generalize machine learning to the fully automated learning

of any kind of parameter of the data generating experiment. It incorporates the state of the art in adaptive estimation we termed super-learning.

ACADEMIC AWARDS, GRANTS, HONORS

February 23, 1991: Scholarship of the VSB Foundation presented by the Chairman of the Board of Directors at the opening of the 355th anniversary of the University of Utrecht.

March 27, 1991:

Second Prize in the contest of the best (Netherlands) Masters thesis in Statistics or Operational Research (1989-1990) presented by the V.V.S.

Publication of a summary of the masters thesis in *Statistica Neerlandica*.

January, 1994 through June, 1994: Neyman Visiting Assistant Professor, Department of Statistics, University of California, Berkeley.

July 1994: **Martin Sisters Chair**, School of Public Health, UC Berkeley, 3 years ($15,000 per year).

1995: Two faculty grants of $3000 each, Committee on Research, UC Berkeley.

1995, 1996: Two junior faculty mentor grants, $750 and $1000, Office of the Chancellor, UC Berkeley.

1996-97: **Hellman Family Faculty Award**, $20,000, Office of the Chancellor, UC Berkeley.

1996: Ph.D thesis selected to be published in book form (CWI-tract) by the Centre of Mathematics and Computer Science, Amsterdam.

June 1996: **FIRST Award, 5 year NIH grant**, 1996-2001, $498,726 (total costs). Title: Locally Efficient Estimation with High Dimensional Data Structures. Score in top 7 %.

October-December, 1998: Visiting Professor, Department of Mathematics, Free University Amsterdam, host: Prof. Dr. A.W. van der Vaart.

June 1999: **NIAID Award, 3 year grant**, 1999-2002. $357,000 (total costs).

October-December, 1999: Honorary Visiting Professor, Department of Statistics, Auckland, New Zealand, host: Prof. Dr. A. Scott. Score in top 13%. Title: Causal Inference and Longitudinal Aids Studies.

September 2000, 3 year grant: **LLNL 3-year grant**, 2000-2003. Title:"Statistical Inference from Microarray Data with Applications in Breast Cancer Research".

September 2000, 3 year grant:

Academic/Industry grant of $450,000 from Life Sciences Institute (LSI) with industrial partner Chiron.

Received the highest score ever (jointly written with Ph.D student K. Pollard).

Selected to be covered by an article, photos, and video, on the web-site of the Life Science Institute.

Spring 2001: Invited to be Visiting Professor, Department of Biostatistics, Leiden University, the Netherlands, host: Prof. Dr. H. van Houwelingen.

September 2002: **Principal Investigator of NIH Award**, 5 year grant of $887,664, 2002-2006. Title: "Statistical Analysis of Longitudinal Studies with Gene Expression Data".

September 2002: **Co-Investigator**, joint UCSF/Berkeley NIH Award, 3 year grant, 2002-2005. Title: "Statistical Analysis of Complex AIDS Cohorts".

May, 2003: Visiting Professor, Department of Mathematics, Free University Amsterdam.

July 2004: **Principal Investigator of NIH Award**, 2004-2007 ($1,000,000). Title: "Data Adaptive Estimation in Epidemiology and Genomics".

June 2004: **2004 Mortimer Spiegelman Award**. The Mortimer Spiegelman Award was established in 1969 by his family and is awarded annually to a young statistician for outstanding contributions in health statistics. It is presented by the Statistics Section of the American Public Health Association (APHA).

September 2004: Selected to be on the cover in portrait-format on one of the five well-respected Tan Applied Mathematics series textbooks, edited by Applied Mathematics for Brooks/Cole, a division of Thomson Higher Education. Quotation from invitation letter: "Famous" applied mathematicians will be featured on the cover of each of the five texts in the hope that seeing a successful applied mathematician will motivate readers (students) of these texts to learn and to use the applied mathematical skills they acquire in their future careers." Based on this idea, the executive editors of the Tan series have invited me to be featured on one of the five covers of the upcoming new edition.

March 1999 until 2004: Long Term Statistical Consultant at Chiron for the Microarray Technology Research Group, Data Analysis and Method Development. Chiron is the world's second largest Biotech Company with headquarters located in Bay Area.

April 11, 2005: **2005 van Dantzig Price**.

This is the highest award in Statistics and Decision Theory in the Netherlands. Once in every 5 years the Dutch Statistical Association presents the Van Dantzig Award to either a dutch statistician or operation researcher under the age of 40.

The award is in memory of prof. dr. D. van Dantzig, the founder of Dutch mathematical statistics.

The former recipients are van Zwet (1970, Statistics), van Meurs (1975, Statistics), Hordijk (1980), Rinnooy Kan (1985), Gill (1990, Statistics), Ridder (1995), and van der Vaart (2000, Statistics).

August, 2005 **2005 Snedecor Award** joint with Nick Jewell.

We received the Snedecor Award for our paper "Case-control current status data" in Biometrika, 2004, v91, pp. 529-541.

The criteria for the award are to an individual(s) who has been (1) instrumental in the development of statistical theory in biometry, and (2) who has a noteworthy publication in biometry within three years of the date of the award. So, the award is also a tribute to the overall contribution to biometry.

The award consists of a plaque, a citation, and a cash honorarium. It was presented at the COPSS Awards and Fisher Lecture session at the Joint Statistical Meetings (JSM).

August, 2005 **2005 COPSS Award**.

The Committee of Presidents of Statistical Societies (COPSS) Awards are jointly sponsored by the American Statistical Association, the Institute of Mathematical Statistics, the Biometric Society ENAR, the Biometric Society WNAR, and the Statistics Society of Canada.

The Committee of Presidents of Statistical Societies (COPSS) Award is presented annually to a young member of one of the participating societies of COPSS. The award is presented in recognition of outstanding contributions to the statistics profession. The Presidents' Award is granted to an individual who has not yet reached his or her 41st birthday during the calendar year of the award. The award was established in 1976 and consists of a plaque and a cash award.

September, 2005 **2005 Myrto Lefkopoulou Distinguished Lectureship** at the Biostatistics Department, Harvard School of Public Health.

The lectureship was established in perpetuity in memory of Dr. Myrto Lefkopoulou, a faculty member and graduate of Harvard School of Public Health. Dr. Lefkopoulou tragically died of cancer in 1992 at the age of 34 after a courageous two-year battle. She was deeply beloved by friends, students, and faculty.

Each year the Myrto Lefkopoulou Lectureship is awarded to a promising statistician who has made contributions to either collaborative or methodologic research in the applications of statistical methods to biology or medicine, and/or who has shown excellence in the teaching of biostatistics. Ordinarily, the lectureship is given to a statistician who has earned a doctorate in the last fifteen years. The lecture is presented to a general scientific audience as the first Department colloquium of each academic year. The lectureship includes travel to Boston, a reception following the lecture, and an honorarium. Previous recipients of the Lefkopoulou Memorial Lectureship have been Marie Davidian, Danyu Lin, Bradley P. Carlin, Steven N. Goodman, Ronald Brookmeyer, Michael Boehnke, Trevor Hastie, Hans-Georg Mueller, Giovanni Parmigiani, Kathryn Roeder, and Louise Ryan.

July 1, 2005-2006 **UC Berkeley Chancellor Endowed Chair**.

Spring, 2006 **Miller Professor** funded by the Miller Institute, UC Berkeley.

July 1, 2006- **Jiann-Ping Hsu/Karl E. Peace Endowed Chair in Biostatistics**.

May, 2007 **Charles L. Odoroff Memorial Lecture**, Targeted Learning of Scientific Questions, Distinguished Lecture Award from Department of Biostatistics, University of Rochester.

July 2007 **NIH-Award Targeted Maximum Likelihood Learning and Super Learning in HIV Research** (2007-2012), 2.3 million dollar grant. Featured by UC Berkeley Sponsored Project Office as Special Award of the week.

April 22, 2009 The 10-th **Annual Abbott Laboratories Distinguished Lectureship** in Pharmaceutical Applications, A statistics and biostatistics joint seminar, Towards Robust Machine Learning Algorithms for Causal Effects that Preserve Meaningful Statistical Inference, Madison University.

July 1, 2009 **Distinguished IMS Lecture** Award.

2009 RSR Project #09-52 "Clinical Trials: Causal Inference Methodology and its Application in Evaluating Efficacy and Safety of Drugs and Other Medical Products" funded by FDA's CDER's Regulatory Science and Review Enhancement (RSR) Program, involves collaborating with Safety analysis group at FDA.

2013 FDA-funded project on HIV safety analysis.

2014 **NIH-Award, Targeted Learning**: Causal Inference for Implementation Science, (2014-2018), 2 million dollar grant.

2016 Adrienne Cupples Award for excellent in teaching, research and service in biostatistics, Boston University.

2016- P.I. Biomedical Big Data Training Grant, 5 years.

2015- P.I. Grant from Gates Foundation on Super Learning/Targeted Learning of Causal Impacts and Causal Mediation.

September 2004-present: Director of the Biostatistics and Computing core of the Superfund Research Program (Genomics in environmental science) in the School of Public Health headed by Prof Martyn Smith.

EDITORIAL WORK AND REVIEW

Associate Editor, Gastroentology (2016-), Electronic Journal of Statistics (2007-)

Associate Editor, Journal of Observational Studies (2014-)

Associate Editor, Statistics Surveys (2005-).

Associate Editor, Lifetime Data Models, 1996-2000.

Associate Editor, Biometrics, 1997-2003.

Associate Editor, Journal of Statistical Planning and Inference, 2001-2006.

Associate Editor, Statistical Applications in Genetics and Molecular Biology, 2002-present.
> **Associate Editor**, Annals of Statistics, November, 2003-2008.

Associate Editor, Founding editor, International Journal of Biostatistics (2004-present).

Editor 2012-present: International Journal of Biostatistics.

Editor, Founding editor, 2012-present Journal of Causal Inference.

Associate Editor 2012-present Epidemiological Methods.

Member of Editorial Board 2006-2008 of ASA-SIAM (Society of Industrial and Applied Mathematics) book series.

Associate Editor, Journal of the American Statistical Association, 2006-2010.
> **Associate Editor**, Journal of Statistical Methods in Medical Research, 2006-present.
> **Co-Editor** (with Sandrine Dudoit, and Robert Gentleman) of Special Issue on Genomics of Journal of Multivariate Analysis (2003).

Pharmacoepidemiology and Drug Safety Best Reviewer, 2014.

Proofread an introductory book in Statistics of Prof. Dr. E. Lehmann (1997).

Book chapter review of book on adaptive designs (2014).
> Book review (1997), "Probabilistic Causality in Longitudinal Studies," for Statistics in Medicine.

Book review (1997), "Problems and Solutions in Biostatistical Theory", Duxbury Press, Brooks/Cole Publishing Company.

Book review (1998), Introduction in Biostatistics, Text book, Duxbury Press, Brooks/Cole Publishing Company.

Book review (1999), Statistical Consulting: A Guide to Effective Communication, by Janice Derr, Duxbury Press, Brooks/Cole Publishing Company.

Book review (1999), Fundamentals of Biostatistics, Fifth Edition, by B. Rossner.

Book review (2004), Introduction in Computational Biology.

Book review (2004), The False Discovery Rate, by Yoav Benjamini, Cambridge University Press.

Reviews of NSF Research Proposals (1998, 2 in 1999, 2 in 2000).

Review of NSF Research Proposals, Washington, October 17-19, 2002.

Review of research proposal for Center in Genetic Epidemiology, University of California, Irvine, (2002).

Review of Research proposals of the National Science Foundation of the Netherlands: (2003).

Review of NIH grants, 2006.

Review of NIH grants 2010, 2011, 2012.

Review of PCORI grants 2012.

Review of NSF the Netherlands (2010), (2011), (2012), (2013), (2014).

Review of Discovery grant proposals, Mathematics and Statistics Evaluation Group (2014).

Reviewing research proposal for Chancellor office UC Berkeley (2013).

CONSULTING POSITIONS

1995: Cost-effectiveness of physicians in San Francisco Hospitals for M.D. I. Ahwah: What variables of a patient in an emergency room predict sensible cost best?

1996: Cost-effectiveness of physicians in San Francisco Hospitals for M.D. I. Ahwah: Relation between acuity of a patient and sensible utilization of items by revenue center.

1996: Consultant on studies of the influence of caffeine on birth defects for Laura Fenster, California State Department of Health.

1998: Consultant on NIH grant "A Nonparametric MLE Survival Analysis Module" with P.I. Dr. Y. Zhan, Data Analysis and Products Division, Mathsoft, Inc.

1997: Statistical analysis of relation between monthly budget patient days and monthly actual patient days, Children's hospital, Oakland.

1998: Member of consulting group, consisting of faculty members of the Statistics Department, for statistical problems presented by NSA.

1998: Consultant on Cystic Fibrosis Foundation Project "Effects of Favonoids on Nasal PD in Cystic Fibrosis Patients", Pediatric Clinical Research Center, Children's Hospital, Oakland. Part of this project is concerned with linking the genotype of the Cystic Fibrosis gene to the clinical parameters.

1999-2002: Statistical consultant for CHIRON for analyzing gene expression data; coordination of statistical analysis in the Microarray Research Group at Chiron.

2005-2009: Statistical consultant for the Buck Aging Institute, Novato, CA, for the Bioinformatics core.

2007-: Statistical consultant AmGen.

January 2008-2012: Founder and CEO of Target Analytics.

2008-: Statistical consultant for pharmaceutical company.

2008-: Statistical consultant for legal cases.

2011-: Statistical consultant for Worldbank.

January 2010-2012 : Statistical consultant for world bank, implementation science, design of observational studies.

2010-: Statistical consultant FDA safety analysis group.

2012: Statistical consultant for Jansen Jansen on observational data analysis for treating Alzheimer.

2011-: Statistical consultant for Kaiser Permanente Safety Analysis.

2012-2013: Statistical consultant for Metronomx. Developed design and analysis plan, and successfully presented at FDA for drug-approval.

2014: Tax assessment consulting, Winston & Shawn.

2014: Statistical consultant Department of Health Care policy, Harvard University, development of dynamic treatment strategies for depression based on data from VA.

2016: Statistical consultant Nielsen Inc.

2016: Member of advisory board of FDA grant of Michael Rosenblum.

PRESENTED INVITED LECTURES

Efficient Estimation in Nonparametric Missing Data Models: September 17, 1992, EMS Conference, Bath.

Hoffmann-Jorgensen Weak Convergence Theory and the Proof of an Almost Sure Representation Theorem: March 20, 1991, CWI, Amsterdam. Workshop *Statistics in Large Parameter Spaces.*

General Efficiency Theory for the NPMLE and an Identity for Linear Parameters in Convex Models: April 15, 1993, Euler International Mathematical Institute, St. Petersburg, Russia. Workshop on *Nonparametric and Semiparametric Models (asymptotic problems)* of the Kolmogorov Semester on Probability and Statistics. *The Bivariate Censoring Model*: April 11, 1994, Cleveland, Ohio. Invited Speaker at the 1994 Biometric Society ENAR spring meeting on the subject "Multivariate Censored Data", held jointly with the IMS and ASA.

Proving Efficiency in Biased Sampling and Missing Data Models: June 24, 1994, Chapel Hill, North Carolina. Invited Speaker for the session "Likelihood" at the 3rd World Congress of the Bernoulli Society and 57th Annual Meeting of the Institute of Mathematical Statistics. *Locally Efficient Estimation with High Dimensional Covariate Processes*, December 16, 1994, Oberwolfach, Germany. Invited speaker for Conference on "Asymptotic Methods for High Dimensional Data". *Singly and Doubly Censored Current Status Data: Estimation, Regression and Asymptotics*, August 2, 1995, Berkeley. Invited speaker, NSF Econometrics Symposium 1995.

An Identity for NPMLE in Censored Data Models, June 24, 1996, Washington State University, Pullman, WA. Invited speaker, Joint Regional Meeting Biometric and IMS.

Locally Efficient Estimation with Current Status Data and Covariates, August 5, 1996, Chicago. Invited speaker, Joint Statistical Meeting.

Nonparametric Estimation of the Bivariate Survival Function, August 26, 1996, Vienna, Austria. Invited speaker, 4th World Congress of the Bernoulli Society.

Inference in High Dimensional Semiparametric Censored Data Models, July 7-9, 1997, Taipei, Taiwan. Speaker and organizer of session, Joint meeting with the Chinese Statistical Association and the Chinese Institute of Probability and Statistics.

Inference in High Dimensional Semiparametric Censored Data Models and Testing Treatment Effects in Observational Studies, August 18-22, 1997, University of Minnesota, Minneapolis, Minnesota. Invited speaker, Workshop of Institute of Mathematics and Applications.

October 1997, Invited by Prof. Dr. J.M. Robins, Harvard School of Public Health, Boston, to give series of lectures on proving asymptotics for semiparametric models.

Fall, 1997, Invited speaker, Statistics Seminar, Emory University, Atlanta (also invited at another University in Atlanta, but cancelled).

March 3, 1998 Invited speaker, Statistics Seminar, Department of Statistics, University of California, Berkeley.

September, 1998, Speaker Biostatistics Seminar, UC Berkeley.

Locally Efficient Estimation in Censored Data Models: Theory and Examples, October 22, 1998, Invited speaker, Statistics Seminar, Department of Statistics, Florida State University, Tallahassee.

Causality in Public Health Studies, October 29, 1998, Invited speaker, Foundations for the Future Symposium in honor of Dean P. Buffler, School of Public Health.

Locally Efficient Estimation in Censored Data Models: Theory and Examples October 23-25, 1998, Invited speaker, Conference in honor of Professor Alfred H. Clifford, Tulane University, New Orleans, Texas. Clifford lecturer: Bickel.

Current Status Data on a Stochastic Process, August 8-12, 1999, Invited speaker and discussant Joint Statistical Meeting ASA, Baltimore.

Locally Efficient Estimation with Multivariate Right Censored Data, May 15-20, 2000, Invited speaker Survival Analysis session of the 5-th World Congress of the Bernoulli Society for Probability and Mathematical Statistics, Guanajuato, Mexico.

Statistical Inference with Microarray Data using the Parametric Bootstrap, August 25, 2000, National Cancer Institute, Washington.

Statistical Inference with Microarray Data using the Parametric Bootstrap, March 28, 2001, Empirical Processes in Biostatistics, invited session ENAR/IMS.

Invited speaker of the SCI 2002 Sixth Multi-Conference on Systemics, Cybernetics and Informatics, July 14-18 Florida.

Invited speaker IISA Fourth Biennial International Conference on Statistics, Probability and Related Areas, June 14-16, 2002.

Invited speaker Genomics Seminar, University of California, Berkeley, January, 2003.

Invited speaker at a Symposium Challenges in the Statistical Analysis of Genomic Data" at the AAAS meeting, Denver, February 13-18, 2003.

Invited speaker in session on genomic data of the Joint Statistical Meeting, August 3-7, 2003.

Two lectures as the Constance van Eeden Visiting Professor, University of British Columbia, Vancouver, Canada, October 6-12, 2003.

Invited speaker, International Conference on Analysis of Genomic Data, the Harvard Medical School, May 10-11, 2004, Boston.

Invited Keynote speaker, Taipei Symposium on Statistical Genomics, Institute of Statistical Science, Academica Sinica, December 15-17, 2004.

Invited Odoroff Memorial lecture on Targeted Maximum Likelihood Learning, Department of Biostatistics, University of Rochester, September 20, 2007.

Invited Lecture on Causal Inference in Clinical Trials and Post Market Data Analysis, Federal Drug Administration (FDA), August 8, 2007.

Invited Miller Lecture on Super Learning, Miller Institute, as Miller Professor, May 3, 2007.

Invited lecture on Targeted Maximum Likelihood Learning and Super Learning in AIDS Research, April 11-13, Workshop on statistical methods in AIDS research, Vaile, Colorado.

Invited lecture on Targeted Maximum Likelihood Learning, ENAR, 12007, April 14 (lecture given by my Ph.D student Dan Rubin).

Invited presentation and organizer of Adaptive Designs Session at International Statistical Institute Meeting, Durham, South Africa, August 16-22, 2009.

Invited Distinguished Lecture, IMS meeting in Seoul, June 28-July 1, 2009.

Prominent researchers special invited session on Causal Inference in High Dimensional Applications, Joint Statistical Meeting, Washington, August 2-7, 2009.

Invited speaker, Statistics Seminar, Leiden University, the Netherlands, July 2009.

Invited speaker, Webinar (Amstat, biopharmaceutical session), attended by hundreds of industry statisticians, August 24, 2009. Presentation on genomic data analysis and biomarkers.

Organizer of Session on Recent Advances on Adaptive Designs at 57-th ISI Conference, Durban, South Africa, August 2009, Michael Rosenblum gave presentation on this session on our joint work, other speakers Scott Emerson and Bruce Turnbull.

Workshop on Causal Inference for the FDA statisticians at the FDA, September 19, 2009.

Invited speaker in workshop discussing statistical methods for causal effect assessment in safety analysis in HIV, in particular, relation between abacavir and cardiovascular disease, Amsterdam, May 10-12, 2010.

Invited speaker on adaptive designs in HIV prevention trials, June 2, 2010, Bill and Melinda Gates foundation, Seattle.

Invited speaker two seminars in the Netherlands on causal inference, June 10-17, 2010.

Invited discussant of session on dynamic treatment regimens, JSM, August 2010.

Invited speaker of workshop on community based interventions, Pepfar and Bill and Melinda Gates Foundation, Washington DC, October 6-8, 2010.

Invited speaker to give 4 lectures on Targeted Maximum Likelihood Estimation, Super Learning, and Causal Inference in 42 Winter Conference, Hemavan, Sweden, March 6-9, 2011.

Invited speaker, French Berkeley Research collaboration, Paris Descartes, January 2011.

Invited speaker, Statistics Colloquium, which is held jointly by four Montreal universities: McGill, Université Montreal, Concordia and Universitdu Quebéc á Montrál, March 25, 2011.

Invited to Division of AIDS-NIAID sponsored workshop on Quantitative Methods to Advance the Combination HIV Prevention, Gates Foundation, September 6-7, 2011.

ICSA, invited lecture in session Causal Inference and its applications in drug development , June 28, 2011.

Galician Society for Statistics and OR, Plenary Talk during the X Galician Conference (Pontevedra, Spain; November 2-5 2011).

Invited speaker, CRM Causal Inference in Health Research workshop, Montréal, May 9-13, 2011.

Invited lecture on observational longitudinal studies and causal inference, August 17-19, 2011, ISI satellite meeting on Dynamic Statistical Models, Copenhagen, Denmark.

Invited talk at Advanced Topics in Pharmacoepidemiology (114) 28th International Conference on Pharmacoepidemiology & Therapeutic Risk Management, Barcelona, August 22-26, 2012.

TMLE based approach to confounder selection, Invited talk at the International Biometric Conference, Kobe, Japan, August 26-31.

Invited speaker on comparative effectiveness research, IMS-China 2011, Xian, China, July.

Invited speaker, ENAR 2012, "Multivariate statistics in high-dimensional data", Washington DC.

Presentation at FDA to present novel statistical analysis plan for approval of drug for Chagas disease, December 16, 2012, Washington DC, part of consulting for Metronomx.

Invited speaker ENAR March 11, 2013, Orlando, Florida, new developments in the construction and optimization of dynamic treatment regimes.

Invited speaker, CMS Winter Meeting 2012 in Montréal, Targeted Learning in HIV.

Invited speaker, 7th Conference of the EMR-IBS to be held in Tel Aviv, Israel on 22-25 April 2013, and to speak in the session entitled "Graphical models/machine learning methods in biostatistics".

Annual meeting Statistical Society of Canada, Edmonton, 2013, May 29.

JSM 2014, invited to present award to Judea Pearl.

ENAR March 2014, Invited speaker session on networks.

March 2014, Invited speaker Johns Hopkins University, Targeted Learning of Optimal Dynamic Treatment, Biostatistics.

February 21, 2014, Invited speaker Colloquium Foundation of Statistics, revisiting foundations for era of Big Data.

February 18, 2014, Invited speaker, Targeted Learning of optimal dynamic treatment, Department of Pharmacoepidemiology, Harvard University.

February 19, 2014, Invited speaker Causal Inference seminar, School of Public Health, Harvard University. Targeted learning of optimal dynamic treatment and networks.

Invited speaker, June 2-6, 2014 Annual Meeting of the French Statistical Society, Rennes, France.

July 10-13, ISIS conference, Special Invited speaker, Targeted Learning for Optimal Dynamic Treatments.

August, JSM 2014, Boston, Discussant for session on recent advances in causal inference.

July 28-29, 2014, lecture in workshop Data Driven Discovery, Moore Foundation, one of 28 final candidates for 14 grants awarded by Moore Foundation. LeDell, Erin; Petersen, Maya L.; and van der Laan, Mark J. Computationally Efficient Confidence Intervals for Cross-validated AUC Estimates. Joint Statistical Meetings, August 2013. Montreal, Canada.

Atlantic Causal Inference Conference, New York, May 2016, Highly Adaptive Lasso.

Generally Efficient TMLE for Arbitrary Models and Target Parameters: A Super-learner guaranteed to converge at faster rate than $n^{-1/4}$, July 2016, IBC 2016 in Victoria, Canada.

Targeted Learning in Precision Medicine, Boston University, 2016 Adrianne Cupples Award lecture, April 7, 2016.

Targeted Learning of Optimal Subgroups in Precision Medicine, ENAR March 6-9, 2016, Austin.

Targeted Learning in Precision Medicine, JSM, August 2, 2016.

Targeted Learning of Causal Effects of Interventions on a Survival outcome, seminar within Internationa Scientific Meeting on Survival Analysis of Population-based data, August 31-September 2, 2016, London School of Hygiene and Tropical Medicine.

Targeted Learning in Precision Medicine, Workshop at UC Berkeley, Global Alliance with Cambridge University and Singapore University, March 28-29, 2016.

Online Targeted Learning, November 8-9, 2015, NIAID workshop in Statistical methods/mathematical models in infectious disease research.

Targeted Learning in Precision Medicine, January 14, 2016, Kaiser Permanente Big Data Seminar.

Targeted Learning in Precision Medicine, session Improving Medical Decision Making in the Era of Personalized Medicine, 11th International Conference on Health Policy Statistics (ICHPS 2015), October 8, 2015, Providence, RI.

TEACHING

University of California, Berkeley Statistics, Public Health (Biostatistics), and Bioengineering departments

STAT 102 Introduction to Theoretical Statistics; Spring 1994

PH 142A Introduction to Probability & Statistics in Biology and Public Health; Fall 1994, 1995, 1996

PH 142AB Introduction to Probability & Statistics in Biology and Public Health, Summer course; Summer 1996

BE 190C Statistical methods for clustering, regression and prediction as part of this course on Computational Biology for undergraduates; Fall 2002

STAT 210B Theoretical Statistics for Ph.D students; Spring 2005

PH 240A Introduction to modern biostatistical theory and practice; Spring 2015, 2016

PH 240B Stat C245B Biostatistical Methods: Survival Analysis; Spring 1997, 2000, 2002, 2004, 2006, 2008, 2010, 2012

PH 243B Special Topics in Biostatistics: Asymptotic Methods in Statistics, Spring 1995; Censored Data and Regression, Spring 1996, Spring 2001; Causal Inference, Spring 1999, Fall 2002; Statistical Techniques in Computational Biology, Fall 2001; Multivariate Statistical Methods in Genomics: Multiple Testing and Loss Function Based Estimation, Fall 2003, 2005, 2007, 2009; Adaptive Designs and Targeted Maximum Likelihood, Spring 2003, 2005, 2007, 2009

PH 243D Adaptive designs; Fall 2010, 2012

PH 246A/STAT C249A Censored Longitudinal Data and Causality; Fall 2011, Spring 2013

PH 252B Causal Inference in Longitudinal Studies; Fall 2004, 2006, 2008, 2010, Spring 2013

PH 295, Targeted Learning with Biomedical Big Data; Fall 2016

Consulting in Causal Inference Seminar: Fall and Spring 2009, 2010, 2011, 2012, 2013

Seminar in Genomics plus Lectures on Cross-validation methodology; Spring 2003

Computational Biology Seminar; Spring 2000

DISSERTATION ADVISING

Alan Hubbard, UC Berkeley (Biostatistics, 1998), "Applications of Locally Efficient Estimation in Censored Data Models". Biostatistics Student of the year, 1998, and received the Evelyn Fix Award from the Department of Statistics. Alan Hubbard is a Professor at the Division of Biostatistics, University of California, Berkeley.

Derick Peterson (Biostatistics, 1998),"On Nonparametric Estimation and Inference with Censored Data, Bandwidth Selection for Local Polynomial Regression, and Subset Selection in Explanatory Regression". Student of the year, 1998. Derick Peterson is Associate Professor, Department of Biostatistics, School of Medicine, University of Rochester, Rochester.

Chris Quale (Biostatistics, 2001), "Estimation of the Bivariate Survival Function with Censored Truncated Data and Hazard Estimation Based on Interval Censored data". Senior Quantitative Analyst at Google.

Maja Pavlic (Biostatistics, 2001), "Statistical Methods for Analysis of Recurrent Event Data" and "Estimation of the Number of Components in a Mixture of Normals". Funded by Biotech Company Genentech. Student of the year, 2001. Director at Pharmaceutical Company Johnson Johnson.

Jennifer Bryan (Biostatistics, 2001), "Statistical Inference for Gene-expression Analysis from cDNA Microarrays", Biostatistics Student of the year, 2001, and received the Evelyn Fix Award from the Department of Statistics. Jennifer Bryan is Professor in the Statistics Department and the Department of Biotechnology at the University of Britisch Columbia, Vancouver.

Tanya Henneman (Biostatistics, 2002), "Causal Inference in Point Treatment Studies with Applications" funded by Chancellors Opportunity Scholarship, Student of the Year, 2002. Tanya Henneman works in public health department, Berkeley, CA.

Alan Brookhart (Biostatistics, 2003), "Computer Intensive Methods in Statistics", Alan Brookhart was Instructor of Medicine, Harvard Medical School, and Biostatistician, Division of Pharmacoepidemiology and Pharmacoeconomics Brigham and Women's Hospital. Currently, he is Professor in Biostatistics and Epidemiology at UNC, Chapel Hill.

Sunduz Keles (Biostatistics, 2003), "Statistical Methods for Detection of cis-regularitory binding sites", "Double robust estimation of the Bivariate Survival Function in longitudinal studies", "Model selection in regression for censored data". Student of the year, 2003, Public Health Award 2003. Sunduz Keles is Professor, Department of Biostatistics and Statistics, University of Wisconsin, Madison.

Katherine Pollard (Biostatistics, 2003), "Computationally Intensive Statistical Methods for Analysis of Gene Expression Data". Student of the year, 2003, and received the Evelyn Fix Award from the Department of Statistics. Katherine Pollard is Professor in genomics at the Gladstone Institute UCSF.

Zhuo Yu (Statistics, 2003), "Causal inference in longitudinal studies". Received the Erich Lehmann Award from the Department of Statistics, 2003. Zhuo Yu is a Quantitative Analyst at Morgan Stanley, and former research biostatistician at Bristol-Myers Squibb company.

Annette Molinaro, (Biostatistics, 2004). "Data Adaptive Prediction in Cancer Research". Biostatistics Student of the year 2004 and received the Evelyn Fix Award from the Department of Statistics. Funded by grant from the Lawrence Livermore National Laboratory which provided access to their super-computers. Associate Professor in Residence of Neurological Surgery and Epidemiology and Biostatistics at UCSF.

Romain Neugebauer, (Biostatistics, 2004). "Double Robust Estimation in Causal Inference Models and its Application in the Analysis of Longitudinal Air Pollution Studies". Biostatistics Student of the year 2004, and received the Erich Lehmann Award from the Department of Statistics. Funded by Prof. I. Tager (epidemiology grant) and LSI/Chiron grant. Senior Statistician at Kaiser Permanente.

Biao Xing, (Biostatistics, 2005). "Fitting Multinomial mixtures to Detect cis-Regulatory Binding Sites and Pathway Analysis in Computational Biology". Associate Director of Biostatistics at Onyx (Amgen) Pharmaceuticals.

Yue Wang, (Biostatistics, 2006). "Data Adaptive Estimation in Causal Inference". Bristol Meyers.

Sandra Sinisi, "Data Adaptive Prediction with the Deletion/Substitution/Addition Algorithm: Applications in Genomics". Sr. Principal Statistician at Novartis.

Merrill Birkner, (Biostatistics, 2006). "Statistical methods for Genomic data". Funded by Genomics Training grant. Associate Director, Portfolio Management & Operations at Genentech.

Maya Petersen (joint with Prof. Art Reingold, Epidemiology, 2006), Causal effects of dynamic treatment interventions with applications in HIV research. Associate Professor Department of Biostatistics and Epidemiology at UC Berkeley.

Ed Bein, (Biostatistics, 2006, joint with Alan Hubbard). graduated Fall 2006. Independent Education Management Professional.

Oliver Bembom, (Biostatistics, 2008). "Causal inference for realistic rules". Senior Data scientist at variety of companies, currently at Pandora (2014).

Dan Rubin, (Biostatistics, 2009). Double Robust Estimation. Senior Statistician FDA, Safety analysis group.

Kelly Moore, (Biostatistics, 2009). "Targeted Maximum Likelihood in Clinical Trials and Safety Analysis". Senior statistician at Gap Inc./Growth, Innovation, Digital (GID), a division of Gap, Inc..

Cathy Tuglus, (Biostatistics, 2010). "Targeted Maximum Likelihood and Variable Importance Analysis". Biostatistics manager at Amgen.

Eric Polley, (Biostatistics, 2010). "Super Learning". Senior Statistician NIH cancer center.

Ori Stittelman, (Biostatistics, 2010). "Collaborative Targeted MLE of causal effect of treatment on time until event outcomes". Data scientist at variety of companies (e.g Wells Fargo, Media6Degrees), Senior Data Scientist at Dstillery (2014).

Sherri Rose, (Biostatistics, 2011). "Targeted Maximum Likelihood and Case Control Data". Assistant Professor Harvard School of Public Health.

Susan Gruber, (Biostatistics, 2011). "Collaborative Targeted MLE, and clinical trials". Visiting Scientist at Department of Epidemiology, Harvard, and Senior Director for Methods Research at Innovation in Medical Evidence Development and Surveillance (FDA).

Kristin Porter, (Biostatistics, 2011). Genomics Training Grant. Senior statistician at MDRC.

Jordan Brooks, (Biostatistics, 2012). Received Erich Lehmann Award. Medical researcher, biostatistics, Strauss & Shavelle, Inc.

Wenjing Zheng, (Biostatistics, 2014). "Adaptive Designs, Direct effect, Asymptotics of Cross-validated Targeted MLE". CAPS Postdoc UCSF, network analysis.

Ivan Diaz, (Biostatistics, 2013). "Causal effects of continuous exposures". Post-doc at Department of Biostatistics at Johns Hopkins University.

Paul Chaffee, (Biostatistics, 2013). "Targeted MLE in sequentially randomized controlled trials, dynamic treatments". Sr. Statistician at JustAnswer.com.

Sam Lendle, (Biostatistics, 2015). "Targeted Learning in Safety Analysis". Funded by Kaiser Permanente, works at Pandora.

Stephanie Sapp, (Biostatistics, 2014). "Big Data", graduated May, 2014. Senior Statistician at Google.

Boriska Toth, (Biostatistics, 2016). "Instrumental Variables".

Dan Brown, (Biostatistics, 2014). "Causal effects of exposure to environmental agents during jobs". SPH UC Berkeley staff member.

Laura Balzer, (Biostatistics, 2015). SEARCH trial. Laura is a postdoc in Biostatistics, and the Harvard School of Public Health.

Molly Davies, (Biostatistics, 2015). "Statistical inference for dependent data".

Oleg Sofrygin, (Biostatistics, 2016). Oleg is a postdoc on grant from Gates Foundation, UC Berkeley.

Alex Luedtke, (Biostatistics, 2016). Alex is an Assistant Professor at the Fred Hutchinson Cancer Research Center.

Erin LeDell, (Biostatistics, 2015). Erin works at H20 as professional software developer in machine learning, received Lehmann award.

Cheng Yu, started Fall 2015.

Aurelien Florent Bibaut, started Fall 2015.

Mary Combs, starts Fall 2016.

POST DOCTORAL ADVISING

Chris Andrews (1997-1998), NSF Postdoctoral Fellow in Biostatistics.

Joerg Rahnenfuhrer (2001-2002, Germany), Postdoc in Biostatistics.

Chris Andrews (2001-2002), NSF Postdoctoral Fellow in Biostatistics.

Jonas Larson (2002-2003), Denmark Postdoctoral Fellowship.

Sunduz Keles (2003-2004), Postdoctoral Fellow NIH Genomics Grant (joint with Sandrine Dudoit).

Blythe Durbin (2003-2005), Postdoctoral Fellow (joint with Sandrine Dudoit).

Supervise (jointly with Ira Tager) Romain Neugebauer (2004-2007), Assistant Researcher.

Michael Rosenblum (2006-2008), Postdoctoral Fellow.

Advisor of visitor Ph.D student G. Reevens (2007), Free University of Amsterdam.

Hui Wang (2007-2009), Postdoctoral Fellow.

Professor Mathias Drton (co-advisor with Sandrine Dudoit, Lior Pachter, and Bernd Sturmfels), Department of Mathematics, UC Berkeley (Summer 2004-Spring 2005). Project: Multiple testing procedures in graphical model selection. Current position: Assistant Professor, Department of Statistics, University of Chicago.

2011-2013: Marco Carone, Post-doctoral fellow.

2012-2013, Romain Pirrachio, Post-doctoral fellow.

Post-doctoral clinic fellow at UCSF, Carina Marquez, 2014-

Post-doctoral fellow, Wenjing Zheng, (2014-)

Advisor of Ben Arnold on K-award (2014-)

Post-doctoral fellow, Kara Rudolph, (2014-)

Advisor of clinical fellow Simon Pollett (2014-)

Post-doctoral fellow Caleb Miles (2015-).

Post-doctoral fellow David Benkezer (2016-)

Post-doctor fellow Oleg Sofrygin (2016-).

BIBLIOGRAPHY

PUBLISHED ARTICLES

1. M.J. van der Laan (1994), Modified EM-estimator of the Bivariate Survival Function. *Mathematical Methods of Statistics 3*, 213–43.

2. M.J. van der Laan (1995), An Identity for the Nonparametric Maximum Likelihood Estimator in Missing Data and Biased Sampling Models. *Bernoulli 1*, 4, pp. 335–41.

3. R.D. Gill, M.J. van der Laan, J.A. Wellner (1995), Inefficient Estimators of the Bivariate Survival Function for Three Models. *Annales de L'I.H.P. Prob. Stat. 31*, 3, 545–97.

4. N.P. Jewell, M.J. van der Laan (1995), Generalizations of Current Status Data with Applications. *Lifetime Data Analysis 1*, 101–109.

5. M.J. van der Laan (1996), Efficient Estimation in the Bivariate Censoring Model and Repairing NPMLE. *Annals of Statistics 24*, 2, 596–627.

6. M.J. van der Laan (1996), Nonparametric Estimation of the Bivariate Survival Function with Truncated Data. *Journal of Multivariate Analysis 58*, 1, 107–131.

7. M.J. van der Laan (1996), Efficiency of the NPMLE in the Line-Segment Problem. *Scand. J. Statist. 23*, 527–50.

8. M.J. van der Laan (1996), Efficient and ad hoc Estimation in the Bivariate Censoring Model. *Proceedings of the 1994 Conference on Lifetime Data Models in Reliability and Survival Analysis*, 339–346. Refereed.

9. M.J. van der Laan (1997), Nonparametric Estimators of the Bivariate Survival Function under Random Censoring. *Statistica Neerlandica 51*, 2, 178–200.

10. R.D. Gill, M.J. van der Laan, J.R. Robins (1997), Coarsening at Random: Characterizations, Conjectures and Counter-Examples. *Proceedings of the First Seattle Symposium in Biostatistics*, 1995. D.Y. Lin and T.R. Fleming (editors), Springer Lecture Notes in Statistics, 255–294 (Refereed).

11. N.P. Jewell, M.J. van der Laan (1997), Singly and Doubly Censored Current Status Data with Extensions to Multi-State Counting Processes. *Proceedings of the First Seattle Symposium in Biostatistics*, 1995. D.Y. Lin and T.R. Fleming (editors), Springer Lecture Notes in Statistics, 171–184 (Refereed).

12. M.J. van der Laan (1997), Book review of PROBABILISTIC CAUSALITY IN LONGITUDINAL STUDIES by Mervi Eerola, Springer-Verlag, New York, 1994, *Statistics in Medicine 16*, 23, 2761–62.

13. M.J. van der Laan, P.J. Bickel, N.P. Jewell (1997), Singly and Doubly Censored Current Status Data: Estimation, Asymptotics, Regression. *Scandinavian Journal of Statistics 24*, 289–307.

14. M.J. van der Laan, N.P. Jewell, D. Peterson (1997), Efficient Estimation of the Lifetime and Disease Onset Distribution. *Biometrika 84*, 3, 539–554.

15. M.J. van der Laan, I. McKeague (1997), Efficient Estimation from Right-Censored Data when Failure Indicators are Missing at Random. *Annals of Statistics 26* 164–82.

16. M.J. van der Laan, A. Hubbard (1997), Estimation with Interval Censored Data and Covariates. *Lifetime Data Models 3*, 77–91.

17. M.J. van der Laan (1998), Identity for NPMLE in Censored Data Models, *Lifetime Data Models 4*, 83–102.

18. M.J. van der Laan (1998), The Two-Interval Line-Segment Problem. *Scandinavian Journal of Statistics 25*, 163–86.

19. M.J. van der Laan, A. Hubbard (1998), Locally Efficient Estimation of the Survival Distribution with Right Censored Data and Covariates when Collection of Data is Delayed. *Biometrika 85*, 4, pp. 771–83.

20. M.J. van der Laan, J.M. Robins (1998), Locally Efficient Estimation with Current Status Data and Time-Dependent Covariates. *Journal of the American Statistical Association 93*, 442, 693–701.

21. A. Hubbard, M.J. van der Laan, J.M. Robins (1999), Nonparametric locally efficient estimation of the treatment specific survival distribution with right censored data and covariates in observational studies, *Statistical Models in Epidemiology, The Environment and Clinical trials*, IMA Volumes in Mathematics and its Applications, Ed. M.E. Halloran and D. Berry, Springer Verlag, Vol. 116, 135–178.

22. M.J. van der Laan, A. Hubbard (1999), Locally efficient estimation of the quality adjusted lifetime distribution with right-censored data and covariates, *Biometrics 55*, 530–36.

22. M.J. van der Laan, R.D. Gill (1999), Efficiency of the NPMLE in Nonparametric Missing Data Models. *Mathematical Methods of Statistics 8*, 2, 251–76.

23. M.J. van der Laan (1999), Discussion of 'Adjusting for Non-ignorable Drop Out Using Semiparametric Non-response Models' by Scharfstein, Rotnitzky and Robins, *the Journal of the American Statistical Association 94*, 448, 1125–1128.

24. J.M. Robins, A. Rotnitzky and M.J. van der Laan (1999), Discussion of 'On Profile Likelihood' by S.A. Murphy and A.W. van der Vaart, *Journal of the American Statistical Association 95*, 477–82.

25. M.J. van der Laan, C. Andrews (2000), The Nonparametric Maximum Likelihood Estimator in a class of doubly censored current status data models with application to partner studies, *Biometrika 87*, 61–71. 1410-1424

26. M.J. van der Laan, P. van der Laan (2000), Subset selection based on order statistics from logistic populations, *Statistics 00*, 1–9.

27. A.E. Hubbard, M.J. van der Laan, W. Enanoria, J. Colford (2000), Nonparametric Survival Estimation When Death is Reported with Delay, *Lifetime Data Models 6*, 237–50

28. C. Quale, M.J. van der Laan (2000), Inference with Bivariate Truncated Data, *Lifetime Data Analysis 6*, 4, 391–408.

29. C. Quale, M.J. van der Laan, J.M. Robins (2006), Locally efficient estimation with bivariate right censored data, *Journal of the American Statistical Association*

30. M.J. van der Laan, J. Bryan (2001), Gene Expression Analysis with the Parametric Bootstrap, *Biostatistics 2*, 3, 1–17.

31. M.J. van der Laan, N.P. Jewell (2001), The NPMLE in the Uniform Doubly Censored Current Status Data Model, *Scandinavian Journal of Statistics 28*, 537–549.

32. S.A. Murphy, M.J. van der Laan, J.M. Robins (2001), Marginal Mean Models for Dynamic Treatment Regimes, *Journal of the American Statistical Association 96*, 1410–1424.

33. M.J. van der Laan, Zhuo, Y. (2001), Comments on the millenium paper 'Inference for semiparametric models: Some questions and an answer', by P.J. Bickel and J. Kwon, in the *millennium series of Statistica Sinica*, 910–917.

34. K. Pollard, M.J. van der Laan (2002), Statistical Inference for Simultaneous Clustering of Gene Expression Data, *Journal of Mathematical Biosciences 176*, 1, 99–121.

35. J. Bryan, K. Pollard, M.J. van der Laan (2002), Paired and Unpaired Comparison and Clustering with Gene Expression Data, Special issue on Bioinformatics in *Statistica Sinica 12*, 1, 87–110.

36. M.J. van der Laan, A. Hubbard, J.M. Robins (2002), Locally Efficient Estimation of a Multivariate Survival Function in Longitudinal Studies, *Journal of the American Statistical Association 97*, 494–508.

37. C. Johnstone, T. Henneman, C. McCullogh, M.J. van der Laan (2002), Modeling Treatment Effects on Binary Outcomes with Grouped-Treatment Variables and Individual Covariates, *American Journal of Epidemiology 156*, 753–60.

38. M.J. van der Laan, A.W. van der Vaart (2002), Smooth Estimation of a monotone density *Statistics 37*, 3, 189–203.

39. S. Keles, M.J. van der Laan, M. Eisen (2002), Identification of Regulatory Elements Using A Feature Selection Method, *Bioinformatics 18*, 1167–1175.

40. M. A. Brookhart, A. E. Hubbard, M. J. van der Laan, J. M.Colford, J.N.S. Eisenberg (2002). Statistical Estimation of Parameters in a Disease Transmission Model: Analysis of a *Cryptosporidium* Outbreak. *Statistics in Medicine 21*, 23, 3627–3638.

41. Z. Yu, M.J. van der Laan (2005), Construction of counterfactuals and the G-computation formula, *Mathematical Methods of Statistics*, vol. 14, no. 4 (2005), 488–499.

42. M.J. van der Laan, N.P. Jewell (2003), Current Status and Right-Censored Data Structures when Observing a Marker at the Censoring Time, *Annals of Statistics 31*, 2, 512–35.

43. M. Miloslavsky, M.J. van der Laan (2003), Fitting of Mixtures with Unspecified Number of Components using Cross-Validation Distance Estimate, *Computational Statistics and Data Analysis 41*, 413–428.

44. N.P. Jewell, M.J. van der Laan, T. Henneman (2003), Nonparametric Estimation from Current Status Data with Competing Risks, *Biometrika 90*, 1, 183–97.

45. Jean C Norris, Mark J Van der laan, Sylvia Lane, James N Anderson, and Gladys Block, Nonlinearity in Demographic and Behavioral Determinants of Morbidity Health Serv Res. 2003 December; 38(6 Pt 2): 1791-1818. doi: 10.1111/j.1475-6773.2003.00203.

46. M.J. van der Laan, K.S. Pollard (2003), A New Algorithm for Hierarchical Hybrid Clustering with Visualization and the Bootstrap, *Journal of Statistical Planning and Inference 117*, 275–303.

47. M.J. van der Laan, K. Pollard, J. Bryan (2003), A new partitioning around medoids algorithm, *Journal of Statistical Computation and Simulation 73*, No. 8, 575–584.

48. M.J. van der Laan, A.W. van der Vaart (2006), Estimating a Survival Distribution with Current Status Data and High-Dimensional Covariates, International Journal of Biostatistics, Vol. 2 : Iss. 1, Article 9. Available at: http://www.bepress.com/ijb/vol2/iss1/9

49. M. Miloslavsky, S. Keles, M.J. van der Laan, S. Butler (2003), Recurrent event analysis in the presence of time-dependent covariates and dependent censoring, *Journal of the Royal Statistical Society, Series B, 66*, Part 1, 239–257.

50. S. Keles, M.J. van der Laan, S. Dudoit, B. Xing, M. B. Eisen (2003), Supervised detection of regulatory motifs in DNA sequences, *Statistical Applications in Genetics and Molecular Biology 2*, 1, Article 5. http://www.bepress.com/sagmb/vol2/iss1/art5S.

51. S. Dudoit, M. J. van der Laan, S. Keles, A. M. Molinaro, S. E. Sinisi, S. L. Teng (2003). Loss-based estimation with cross-validation: Applications to microarray data analysis. In G. Piatetsky-Shapiro and P. Tamayo (eds), Microarray Data Mining, Special Issue of SIGKDD Explorations, Vol. 5, No. 2, p. 56-68.

52. S. Keles, M.J. van der Laan, J.M. Robins (2004), Estimation of the bivariate survival function with generalized bivariate right censored data structures, Chapter 8, pages 143-175, in Advances in Survival Analysis, Edited by N. Balakrishnan and C.R. Rao, *Handbook of Statistics 23* , Elsevier North Holland.

53. N.P. Jewell, M.J. van der Laan (2004), Current status data: review, recent developments and open problems, Chapter 35, pages 625-643, in Advances in Survival Analysis, Edited by N. Balakrishnan and C.R. Rao, *Handbook of Statistics 23* , Elsevier North Holland.

54. K. Pollard, M.J. van der Laan (2004), Choice of null distribution in resampling based multiple testing, *Journal of Statistical Planning and Inference 125*, 85–101.

55. A. M. Molinaro, S. Dudoit, M. J. van der Laan (2004). Tree-based multivariate regression and density estimation with right-Censored data. In S. Dudoit, R. C. Gentleman, and M. J. van der Laan (eds), Special Issue on Multivariate Methods in Genomic Data Analysis, *Journal of Multivariate Analysis 90*, 1, p. 154–77.

56. N.P. Jewell, M.J. van der Laan (2004), Case control current status data, *Biometrika*, **91**, 3, 529-541.

57. J. Bryan, Z. Yu, M.J. van der Laan (2004), Analysis of longitudinal marginal structural models, *Biostatistics 5*, 3, pp. 361–80

58. M. J. van der Laan, S. Dudoit, S. Keles (2004), Asymptotic optimality of likelihood-based cross-validation, *Statistical Applications in Genetics and Molecular Biology 3*, 1, Article 4. http://www.bepress.com/sagmb/vol3/iss1/art4.

59. M.J. van der Laan, S. Dudoit, K.S. Pollard (2004), Augmentation procedures for control of the generalized family-wise error rate and tail probabilities for the proportion of false positives, *Statistical Applications in Genetics and Molecular Biology 3*, 1, Article 15. http://www.bepress.com/sagmb/vol3/iss1/art15

60. S. Keles, M. J. van der Laan, and S. Dudoit (2004), Asymptotically Optimal Model Selection Method for Regression on Censored Outcomes, *Bernoulli 10*, 6, 1011-1037.

61. S. Dudoit, M.J. van der Laan, K.S Pollard (2004), Multiple testing. Part I. Single-step procedures for control of general Type I error rates, *Statistical Applications in Genetics and Molecular Biology* Vol. 3: No. 1, Article 13. http://www.bepress.com/sagmb/vol3/iss1/art13

62. M.J. van der Laan, S. Dudoit, K.S Pollard (2004), Multiple testing. Part II. Step-down procedures for control of the family-wise error rate, *Statistical Applications in Genetics and Molecular Biology* Vol. 3: No. 1, Article 14. http://www.bepress.com/sagmb/vol3/iss1/art14

63. I.B Tager, T. Haight, B. Sternfeld, Z. Zhou, M.J. van der Laan (2004), Effects of physical activity and body composition on functional limitation in the elderly: Application of the marginal structural model, *Epidemiology 15*, 479–93.

64. S. Keles, M.J. van der Laan, C. Vulpe (2004), Regulatory Motif Finding by Logic Regression, *Bioinformatics 20*, 2799–2811.

65. S. Sinisi, M.J. van der Laan (2004), The deletion/substitution/addition algorithm in loss function based estimation: Applications in Genomics, *Journal of Statistical Methods in Molecular Biology*, Vol. 3, No. 1, Article 18, http://www.bepress.com/sagmb/vol3/iss1/art18.

66. R. Neugebauer, M.J. van der Laan (2005) Why prefer double robust estimators in causal inference? *Journal of Statistical Planning and Inference*, Volume 129, Issues 1-2, 15 February 2005, Pages 405-426.

67. B. Xing, M.J. van der Laan (2005), A statistical method for constructing transcriptional regulatory networks using gene expression and sequence data, *Journal of Computational Biology 12*, 2, 229–246.

68. C. Andrews, M.J. van der Laan, J.M. Robins (2005), Locally Efficient Estimation of Regression Parameters Using Current Status Data, *Journal of Multivariate Analysis 96*, 2, 332–51.

69. S. Dudoit, M.J. van der Laan (2005), Asymptotics of cross-validated risk estimation in estimator selection and performance assessment. *Statistical Methodology 2*, 2, 131–54.

70. K. Mortimer, R. Neugebauer, M.J. van der Laan, I.B. Tager (2005), An application of model fitting procedures for marginal structural Models, *American Journal of Epidemiology 162*, 607–17.

71. T. Haight, I. Tager, B. Sternfeld, W. Satariano, M. van der Laan (2005), Effects of body composition and leisure-time physical activity on transitions in physical functioning in the elderly. *The American Journal of Epidemiology 162*, 607–17.

72. M. van der Laan, T. Haight, I. Tager (2005), Discussion: Hypothetical interventions to define causal effects: afterthought or prerequisite? *The American Journal of Epidemiology 162*, 382–88.

73. Nicholas P. Jewell, M. van der Laan and X. Lei, Bivariate current status data with univariate monitoring times, *Biometrika*, 92, 2005, 847-862.

74. M. D. Birkner, S. E. Sinisi, M. J. van der Laan (2005), Multiple Testing and Data Adaptive Regression: An Application to HIV-1 Sequence Data, *Statistical Applications in Genetics and Molecular Biology 4*, 1, Article 8.

75. K.S. Pollard, S. Dudoit, M.J. van der Laan, MJ (2005), Multiple testing procedures: the multtest package and applications to genomics. Chapter 15 (pages 249–271) in *Bioinformatics and Computational Biology Solutions Using R and Bioconductor*, Springer, New York.

76. K.S. Pollard, M.J. van der Laan (2005), Cluster analysis of genomic data with applications in R, in *Bioinformatics and Computational Biology Solutions Using R and Bioconductor*, Springer.

77. B. Xing, M.J. van der Laan (2005), A causal inference approach for constructing transcriptional regulatory networks, *Bioinformatics 21*, 4007–13.

78. M J. van der Laan, M.D. Birkner, A.E. Hubbard (2005), Empirical Bayes and resampling based multiple testing procedure controlling tail probability of the proportion of false positives, *Statistical Applications in Genetics and Molecular Biology 4*, 1, Article 29.'

79. R. Neugebauer, M. J. van der Laan (2007), Nonparametric Causal Effects based on marginal structural models, *Journal of Statistical Planning and Inference* **137**, 419–434.

80. M. Petersen, S. E. Sinisi, M.J. van der Laan (2006), Estimation of direct causal effects, *Epidemiology* 17(3): 276-284.

81. Mark J. van der Laan, Maya L. Petersen, and Marshall M. Joffe (2005) "History-Adjusted Marginal Structural Models and Statically-Optimal Dynamic Treatment Regimens ", The International Journal of Biostatistics: Vol. 1: No. 1, Article 4. http://www.bepress.com/ijb/vol1/iss1/4.

82. T. Hothorn, P. Buhlmann, S. Dudoit, A. Molinaro, and M.J. van der Laan (2005), Survival Ensembles, *Biostatistics*, **7**, No. 3, 355–373.

83. A. Barrier, A. Lemoine, P.-Y. Boelle, C. Tse, D. Brault, F. Chiappini, J. Breittschneider, F. Lacaine, S. Houry, M. Huguier, M. J. van der Laan, T. P. Speed, B. Debuire, A. Flahault, and S. Dudoit (2005). Colon cancer prognosis prediction by gene expression profiling. Oncogene, Vol. 24, No. 40, p. 6155-6164. http://www.nature.com/onc/journal/v24/n40/index.html.

84. M.A. Brookhart, M.J. van der Laan (2006), A semiparametric model selection criterion with applications to the marginal structural model, *Journal of Computational Statistics and Data Analysis 50*, 2, 457–98.

85. Z. Yu, M.J. van der Laan (2006), Double Robust Estimation in Longitudinal Marginal Structural Models, *Journal of Statistical Planning and Inference 136*, 3, 1061–89.

86. S. Mukherjee, S.J. Roberst, M.J. van der Laan (2005), Data-adaptive test statistics for microarray data, *Bioinformatics* **21**, Supplement 2, ii108-ii114, http://bioinformatics.oxfordjournals.org/cgi/content/abstract/21/$suppl_2$/ii108

87. S. Keles, M.J. van der Laan, S. Dudoit, S. Cowley, S.L. Teng (2006), Multiple testing methods for ChIP-Chip high density oligonucleotide array data. Journal of Computational Biology, Vol. 13, No. 3, p. 579-613. [http://www.liebertonline.com/doi/abs/10.1089/cmb.2006.13.579] [Tech report #147].

88. Mark J. van der Laan (2006) "Statistical Inference for Variable Importance", The International Journal of Biostatistics: Vol. 2: No. 1, Article 2. http://www.bepress.com/ijb/vol2/iss1/2

89. Mark J. van der Laan and Daniel Rubin (2006), Estimating Function Based Cross-Validation and Learning,U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 180. http://www.bepress.com/ucbbiostat/paper180, to appear in Frontiers of Statistics, Springer, Festschrift in honour of 65-th Birthday of Peter Bickel.

90. Mark J. van der Laan and Alan E. Hubbard (2006) "Quantile-Function Based Null Distribution in Resampling Based Multiple Testing," Statistical Applications in Genetics and Molecular Biology: Vol. 5: No. 1, Article 14. Available at: http://www.bepress.com/sagmb/vol5/iss1/art14.

91. Merrill D. Birkner, Alan E. Hubbard, Mark J. van der Laan, Christine F. Skibola, Christine M. Hegedus, and Martyn T. Smith (2006), "Issues of Processing and Multiple Testing of SELDI-TOF MS Proteomic Data", Statistical Applications in Genetics and Molecular Biology, Vol. 5, Issue 1: http://www.bepress.com/sagmb/vol5/iss1/art11. Also U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 200. http://www.bepress.com/ucbbiostat/paper200

92. Y. Wang, O. Bembom, M.J. van der Laan (2007), Data-Adaptive Estimation of the Treatment-Specific Mean. *Journal of Statistical Planning and Inference*, 137(6):1871-1887.

93. V. De Gruttolas, C. Flexner, D. Kuritzkes, J. Leland, M. Hughes (2006), Drug Development Strategies for Salvage Therapy: Conflicts and Solutions, AIDS Research and Human Retroviruses.

94. B. Durbin, S. Dudoit, M.J. van der Laan (2006), A Deletion/Substitution/Addition Algorithm for Classification Neural Networks, with Applications to Biomedical Data", *Journal of Statistical Planning and Inference* **138**, No 2., 464–488.

95. Daniel Rubin, Sandrine Dudoit, and Mark van der Laan (2006) "A Method to Increase the Power of Multiple Testing Procedures Through Sample Splitting," Statistical Applications in Genetics and Molecular Biology: Vol. 5: No. 1, Article 19. Available at: http://www.bepress.com/sagmb/vol5/iss1/art19

96. Sandra E. Sinisi, Romain Neugebauer, and Mark J. van der Laan (2006) "Cross-Validated Bagged Prediction of Survival," Statistical Applications in Genetics and Molecular Biology: Vol. 5: No. 1, Article 12. Available at: http://www.bepress.com/sagmb/vol5/iss1/art12

97. Merrill D. Birkner and Mark J. van der Laan (2006) "Application of a Variable Importance Measure Method," The International Journal of Biostatistics: Vol. 2: No. 1, Article 6. Available at: http://www.bepress.com/ijb/vol2/iss1/6

98. Mark J. van der Laan (2006) "Statistical Inference for Variable Importance," The International Journal of Biostatistics: Vol. 2: No. 1, Article 2. Available at: http://www.bepress.com/ijb/vol2/iss1/2

99. Aad and van der Laan, Mark J. (2006) "Estimating a Survival Distribution with Current Status Data and High-dimensional Covariates," The International Journal of Biostatistics: Vol. 2 : Iss. 1, Article 9, Available at: http://www.bepress.com/ijb/vol2/iss1/9

100. Nicholas P. Jewell, Mark J. van der Laan, and Stephen Shiboski (2006) "Choice of Monitoring Mechanism for Optimal Nonparametric Functional Estimation for Binary Data," The International Journal of Biostatistics: Vol. 2: No. 1, Article 7. Available at: http://www.bepress.com/ijb/vol2/iss1/7

101. Mark J. van der Laan, Sandrine Dudoit, Aad W. van der Vaart (2006), "The Cross-validated Adaptive Epsilon-Net Estimator", *Statistics and Decisions*, **24**, No. 3, 373–395.

102. Aad W. van der Vaart, S. Dudoit, M.J. van der Laan (2006), "Oracle Inequalities for Multi-Fold Cross-Validation", *Statistics and Decisions*, **24**, No. 3, 351–371.

103. Multivariate Methods in Genomic Data Analysis. Special Issue of the Journal of Multivariate Analysis. Edited by S. Dudoit, R.C. Gentleman, and M.J. van der Laan.

104. K. S. Pollard, M. D. Birkner, M. J. van der Laan, and S. Dudoit (2005). Test statistics null distributions in multiple testing: Simulation studies and applications to genomics. Numero double special Statistique et Biopuces, Journal de la Societe Francaise de Statistique, Vol. 146, No. 1-2, p. 77-115. [Tech report #184].

105. Romain Neugebauer, M.J. van der Laan (2006), G-computation estimation for causal inference with complex longitudinal data, *Computational Statistics & Data Analysis*, **51**, 1676–1697.

106. Romain Neugebauer and Mark J. van der Laan (2006), Causal effects in longitudinal studies: Definition and maximum likelihood estimation. *Computational Statistics & Data Analysis*, **51**, 1664–1675.

107. Sandrine Dudoit, Sunduz Keles, Mark van der Laan (2007), Multiple tests of association with biological annotation data base, IMS Lecture Notes-Monograp Series, Probability and Statistics: Essays in Honour of David A. Freedman, Institute of Mathematical Statistics. [Tech report #202], http://www.bepress.com/ucbbiostat/paper202.

108. Maya L. Petersen, Steven G. Deeks, Jeffrey N. Martin, and Mark J. van der Laan, History-Adjusted Marginal Structural Models to Estimate Time-Varying Effect Modification Am J Epi: 2007 166(9):985-93. Discussion paper. Also available as Working Paper Series. Working Paper 199. http://www.bepress.com/ucbbiostat/paper199.

109. Maya Petersen, Mark van der Laan (2007), Response to Commentary by J.M. Robins and Hernan: Effect Modification by Time-Varying Covariates", American Journal of Epidemiology. History-Adjusted Marginal Structural Models to Estimate Time-Varying Effect Modification Am J Epi: 2007 166(9):985-93.

110. O. Bembom, M.L. Petersen, M.J. van der Laan (2006), Identifying important explanatory variables for time-varying outcomes. In W. Dubitzky, M. Granzow, and D.P. Berrar (eds.), Fundamentals of Data Mining in Genomics and Proteomics, Springer, Chapter 11, p. 227-250.

111. M.L. Petersen, Y. Wang, M.J. van der Laan, D. Bangsberg (2006), Assessing the Effectiveness of Antiretroviral Adherence Interventions: Using Marginal Structural Models to Replicate the Findings of Randomized Controlled Trials. JAIDS 2006 43 (Suppl 1): S96-S103.

112. M.L. Petersen, Steven G. Deeks, Mark J. van der Laan, Individualized Treatment Rules: Generating Candidate Clinical Trials. Stat Med: 2007 26(25):4578-601.

113. Alan E. Hubbard and Mark J. van der Laan, "Population Intervention Models in Causal Inference" (October 2005). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 191, http://www.bepress.com/ucbbiostat/paper191, to appear in *Biometrika*.

114. M.J. van der Laan, A. Hubbard, N.P. Jewell (2007), Estimation of Treatment Effects in Randomized Trials with Noncompliance and a Dichotomous Outcome, technical report, Division of Biostatistics, http://www.bepress.edu/ucbbiostat, Journal of the Royal Statistical Society B (Statistical Methodology), **69**: 443–482.

115. Sandra Sinisi, E. C Polley, Maya Petersen, Soo-Yon Rhee, Mark van der Laan (2007) Super Learning: An Application to the prediction of HIV-1 Drug Resistance, Statistical Applications in Genetics and Molecular Biology: Vol. 6 : Iss. 1, Article 7. Available at: http://www.bepress.com/sagmb/vol6/iss1/art7

116. Oliver Bembom, Sunduz Keles, Mark van der Laan (2007), Supervised Detection of Conserved Motifs in DNA Sequences with cosmo. *Statistical Applications in Genetics and Molecular Biology*: Vol. 6 : Iss. 1, Article 8. Available at http://www.bepress.com/sagmb/vol6/iss1/art8.

117. Dan Rubin, Mark van der Laan (2007), A Doubly Robust Censoring Unbiased Transformation, The International Journal of Biostatistics, Vol. 3 (1), Article 4, available at http://www.bepress.com/ijb/vol3/iss1/4.

118. Mark van der Laan, Maya Petersen (2007), Statistical Learning of Origin-Specific Statically Optimal Individualized Treatment Rules, The International Journal of Biostatistics, http://www.bepress.com/ijb/vol3/iss1/6

119. Mark van der Laan, Dan Rubin (2006), Targeted Maximum Likelihood Learning, *The International Journal of Biostatistics*, Vol 2, Iss. 1, Article 11. Available at http://www.bepress.com/ijb/vol2/iss1/11.

120. Maya Petersen, Y. Wang, M.J. van der Laan, J. Fessel, R. Shafer (2007), Virologic Efficacy of Boosted Double vs. Boosted Single Protease Inhibitor Therapy AIDS: 2007 21(12): 1547-1554.

121. W.T.A Enanoria, A.E. Hubbard, M.J. van der Laan, M. Chen, J. Ruiz, J.M. Colford (2007), Early prediction of median survival among a large AIDS surveillance cohort, BMC Public Health, 7: 127.

122. Oliver Bembom, Mark van der Laan (2007), Statistical Methods for analyzing sequentially randomized trials,*Journal of the National Cancer Institute*, 99(21):1577-1582, commentary on JNCI article Adaptive therapy for androgen independent prostate cancer: A Randomized selection trial including four regimens, by Peter F. Thall, C. Logothetis, C. Pagliaro, S. Wen, M.A. Brown, D. Williams, R. Millikan (2007).

123. M.L. Petersen, A. Molinaro, S.E. Sinisi, M.J. van der Laan (2007) Cross-validated Bagged Learning. J. Multiv. Analysis: 2007 98 (9): 1693-1704. Also available as (June 2005), U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 182. http://www.bepress.com/ucbbiostat/paper182.

124. Mark J. van der Laan, Eric Polley, Alan Hubbard (2007), Super Learner, Statistical Applications in Genetics and Molecular Biology, http://www.bepress.com/sagmb/vol6/iss1/art25.

125. O. Bembom and M.J. van der Laan (2008). Analyzing sequentially randomized trials based on causal effect models for realistic individualized treatment rules. *UC Berkeley Division of Biostatistics Working Paper Series.* Working Paper 216. Available at: http://www.bepress.com/ucbbiostat/paper216, *Statistics in Medicine* 2008 Aug 30; 27(19):3689-716.

126. R. Neugebauer, M. M. Joffe, I. B. Tager and M.J. van der Laan (2007), Causal inference in longitudinal studies with history-restricted marginal structural models. Electron. J. Statist. Volume 1, 119-154.

127. J. Chen, M.J. van der Laan, M.T. Smith. A.E. Hubbard (2007), A comparison of methods to control Type I Error in Microarray studies, Statistical Applications in Genetics and Molecular Biology: Vol. 6 : Iss. 1, Article 28. Available at: http://www.bepress.com/sagmb/vol6/iss1/art28

128. M.L. Petersen, Y. Wang, M.J. van der Laan, D. Guzman, E. Riley, and D.R. Bangsberg (2007), Pillbox Organizers are Associated with Improved Adherence to HIV Antiretroviral Therapy and Viral Suppression: A Marginal Structural Model Analysis. Clin Infect Dis: 2007 45(7):908-15.

129. M.J. van der Laan and Maya L. Petersen (2007) "Causal Effect Models for Realistic Individualized Treatment and Intention to Treat Rules," The International Journal of Biostatistics: Vol. 3 : Iss. 1, Article 3.

130. Mark J. van der Laan and Maya L. Petersen, Direct Effect Models (2008), International Journal of Biostatistics, http://www.bepress.com/ijb/vol4/iss1/23

131. D. Rubin and M.J. van der Laan (2007), Empirical Efficiency Maximization: Improved Locally Efficient Covariate Adjustment in Randomized Experiments and Survival Analysis, The International Journal of Biostatistics: Vol. 4 : Iss. 1, Article 5.

132. Nancy S Padian, Ariane van der Straten, Gita Ramjee, Tsungai Chipato, Guy de Bruyn, Kelly Blanchard, Stephen Shiboski, Elizabeth T Montgomery, Heidi Fancher, Helen Cheng, Michael Rosenblum, Mark van der Laan, Nicholas Jewell, James McIntyre, the MIRA Team. Diaphragm and lubricant gel for prevention of HIV acquisition in southern African women: a randomised controlled trial. The Lancet - Vol. 370, Issue 9583, 21 July 2007, Pages 251-261

133. S. Dudoit, G. Houston, M.J. van der Laan (2008), Resampling-Based Empirical Bayes Multiple Testing Procedures for Controlling Generalized Tail Probability and Ex-

pected Value Error Rates: Focus on False Discovery Rate and Simulation Study, Biometrical Journal, Vol. 50, issue 5, 716–744.

134. O. Bembom, M.L. Petersen, S.-Y. Rhee , W. J. Fessel, S.E. Sinisi, R.W. Shafer, and M.J. van der Laan (2008). Biomarker discovery using targeted maximum likelihood estimation: Application to the treatment of antiretroviral resistant HIV infection. *UC Berkeley Division of Biostatistics Working Paper Series.* Working Paper 221. Available at: http://www.bepress.com/ucbbiostat/paper22. Statistics in Medicine: Vol. 28: Iss 1, 152-172.

135. Kelly Moore, M.J. van der Laan (2009), Application of Time-to-Event Methods in the Assessment of Safety in Clinical Trials, Chapter in Book titled Design, Summarization, Analysis & Interpretation of Clinical Trials with Time-to-Event Endpoints, Editor Karl E. Peace, Chapman and Hall.

136. Eric Polley, Mark van der Laan (2008), Predicting Optimal Treatment Assignment Based on Prognostic Factors in Cancer Patients, Chapter in book titled Design, Summarization, Analysis & Interpretation of Clinical Trials with Time-to-Event Endpoints, Editor Karl E. Peace, Chapman and Hall. .

137. Catherine Tuglus, Mark van der Laan (2008), "Discussion of: Treelets—An adaptive multi-scale basis for sparse unordered data" was published in the Annals of Applied Statistics 2008, Vol. 2, No. 2, 489-493.

138. Maya Petersen, Richard Moore, Steve Deeks, Mark van der Laan (2008), 'Long term consequences of the delay between virologic failure of highly active antiretroviral therapy and regimen modification, AIDS, 2008, Oct 18;22(16):2097-106.

139. Michael Rosenblum, Mark van der Laan (2008), Using Regression Models to Analyze Randomized Trials: Asymptotically Valid Hypothesis Tests Despite Incorrectly Specified Models. Biometrics. 2009; 65(3): 937-945.

140. Kelly Moore and Mark van der Laan (2009), Covariate Adjustment in Randomized Trials with Binary Outcomes: Targeted Maximum Likelihood Estimation, Statistics in Medicine 28(1), 39–64.

141. O. Bembom and M.J. van der Laan (2008), Data-adaptive selection of the adjustment set in variable importance estimation, to appear in Electronic Journal of Applied Statistics.

142. Mark van der Laan (2008), Estimation Based on Case-Control Designs with Known Prevalence Probability, The International Journal of Biostatistics: Vol. 4 : Iss. 1, Article 17.

143. Sherri Rose, Mark van der Laan (2008) "Simple Optimal Weighting of Cases and Controls in Case-Control Studies," The International Journal of Biostatistics: Vol. 4 : Iss. 1, Article 19.

144. Michael Rosenblum, Nicholas P. Jewell, Mark J. van der Laan, Stephen Shiboski, Ariane van der Straten, and Nancy Padian (2009), Analyzing Direct Effects in Randomized Trials with Secondary Interventions: An Application to HIV Prevention Trials. J R Stat Soc Ser A Stat Soc. 2009 Apr;172(2):443-465. (September 2007). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 223. http://www.bepress.com/ucbbiostat/paper223.

145. Michael Rosenblum, Mark J. van der Laan (2009), Confidence Intervals for the Population Mean Tailored to Small Sample Sizes, with Applications to Survey Sampling, The International Journal of Biostatistics, 5(1): Article 4.

146. Sherri Rose, Mark J. van der Laan (2009), "Why Match? Investigating Matched Case-Control Study Designs with Causal Effect Estimation," The International Journal of Biostatistics: Vol. 5 : Iss. 1, Article 1.

147. Katherine S. Pollard and Mark J. van der Laan (2008), Supervised Distance Matrices, Statistical Applications in Genetics and Molecular Biology, http://www.bepress.com/sagmb/vol7/iss1/art33.

148. Catherine Tuglus and Mark J. van der Laan (2009), Modified FDR Controlling Procedure for Multi-Stage Analyses SAGMB, 2009 January 1; 8(1): Article 12.

149. O. Bembom and M.J. van der Laan (2007). Estimating the effect of vigorous physical activity on mortality in the elderly based on realistic individualized treatment and intention-to-treat rules, Electron J Stat. 2007; 1: 574-596. UC Berkeley Division of Biostatistics Working Paper Series. Working Paper 217. Available at: http://www.bepress.com/ucbbiostat/paper217.

150. O. Bembom and M.J. van der Laan (2007). Data-adaptive selection of the truncation level for Inverse-Probability-of-Treatment-Weighted estimators. *Biometrics*.

151. O. Bembom, M.J. van der Laan, T. Haight, and I.B. Tager (2009). Leisure-time physical activity and all-cause mortality in an elderly cohort, Epidemiology 20(3): 424-30.

152. Influenza Vaccination and Mortality: Differentiating Vaccine Effects From Bias Bruce Fireman; Janelle Lee; Ned Lewis; Oliver Bembom; Mark van der Laan; Roger Baxter (2009), Am. J. Epidemiol. 170 (5): 650-656.

153. Rosenblum M, Deeks SG, van der Laan M, Bangsberg DR (2009) The Risk of Virologic Failure Decreases with Duration of HIV Suppression, at Greater than 50% Adherence to Antiretroviral Therapy. PLoS ONE 4(9): e7196. doi:10.1371/journal.pone.0007196

154. Tad Haight, H. Wang, M.J. van der Laan, I. Tager (2010), A cross-validation deletion-substitution-addition model selection algorithm: Application to marginal structural models. Computational Statistics & Data Analysis 54(12): 3080-3094 (2010).

155. M.J. van der Laan (2010), Targeted Maximum Likelihood Based Causal Inference Part I, Special Issue on Causal Inference of International Journal of Biostatistics, The International Journal of Biostatistics: Vol. 6 : Iss. 2, Article 2. DOI: 10.2202/1557-4679.1211 (http://www.bepress.com/ijb/vol6/iss2/2).

156. M.J. van der Laan (2010), Targeted Maximum Likelihood Based Causal Inference Part II, Special Issue on Causal Inference of International Journal of Biostatistics,The International Journal of Biostatistics: Vol. 6 : Iss. 2, Article 3. DOI: 10.2202/1557-4679.1241 (http://www.bepress.com/ijb/vol6/iss2/3).

157. M.J. van der Laan, and S. Gruber (2010) "Collaborative Double Robust Targeted Maximum Likelihood Estimation," The International Journal of Biostatistics: Vol. 6 : Iss. 1, Article 17.

158. S. Gruber, M.J. van der Laan (2010), An Application of Collaborative Targeted Maximum Likelihood Estimation in Causal Inference and Genomics", The International Journal of Biostatistics: Vol. 6 : Iss. 1, Article 18.

159. Rosenblum M, van der Laan MJ. (2010), Targeted Maximum Likelihood Estimation of the Parameter of a Marginal Structural Model, The International Journal of Biostatistics: Vol. 6 : Iss. 2, Article 19. DOI: 10.2202/1557-4679.1238. (http://www.bepress.com/ijb/vol6/iss2/19).

160. Rosenblum M, van der Laan MJ. (2010), Simple, Efficient Estimators of Treatment Effects in Randomized Trials Using Generalized Linear Models to Leverage Baseline Variables. International Journal of Biostatistics. 2010. 6(1): Article 13.

161. A.M. Molinaro, K. Lostritto, M.J. van der Laan (2010), partDSA: Deletion/Substitution/Addition algorithm for partitioning the covariate space in prediction, Bioinformatics, 26 (10), 1357–1363.

162. Ori M. Stitelman and Mark J. van der Laan (2010), Collaborative Targeted Maximum Likelihood For Time To Event Data, (March 2010). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 260, http://www.bepress.com/ucbbiostat/paper260, The International Journal of Biostatistics: Vol. 6 : Iss. 1, Article 21.

163. Moore, K., van der Laan, M. J. (2009), Increasing Power in Randomized Trials with Right Censored Outcomes Through Covariate Adjustment. Journal of Biopharmaceutical Statistics, 19 (6): 1099-1131, 2009.

164. Sherri Rose and Mark J. van der Laan (2010), A targeted maximum likelihood estimator for two-stage designs Int J Biostat (2011) http://www.bepress.com/ijb/vol7/iss1/17/

165. ML Petersen, KE Porter, S Gruber, Y Wang, MJ van der Laan (2010), Diagnosing and responding to violations in the positivity assumption, Stat Meth Med Res, http://smm.sagepub.com

166. A. Chambaz and M. J. van der Laan (2011), Targeting The Optimal Design In Randomized Clinical Trials With Binary Outcomes And No Covariate Part I. U.C. Berkeley Division of Biostatistics Working Paper Series, Working Paper 258. International Journal of Biostatistics, number 1, pages 1-32, volume 7.

167. A. Chambaz and M. J. van der Laan (2011), Targeting The Optimal Design In Randomized Clinical Trials With Binary Outcomes And No Covariate Part II. U.C. Berkeley Division of Biostatistics Working Paper Series, Working Paper 258. International Journal of Biostatistics. number 1, pages 33- , volume 7.

168. Susan Gruber, Mark van der Laan (2010), A Targeted Maximum Likelihood Estimator of a Causal Effect on a Bounded Continuous Outcome, The International Journal of Biostatistics: Vol. 6 : Iss. 1, Article 26.

169. Stitelman, Ori M.; Wester, C. William; De Gruttola, Victor; and van der Laan, Mark J. (2011), Targeted Maximum Likelihood Estimation of Effect Modification Parameters in Survival Analysis, The International Journal of Biostatistics: Vol. 7: Iss. 1, Article 19. DOI: 10.2202/1557-4679.1307 Available at: http://www.bepress.com/ijb/vol7/iss1/19

170. A. Chambaz and M. J. van der Laan (2011), Targeting The Optimal Design In Randomized Clinical Trials With Covariates, book chapter in Targeted Learning, Estimation of Causal effects in Observational and Experimental Studies, Springer Verlag, van der Laan, Rose (2011).

171. Catherine Tuglus and Mark J. van der Laan (2011), Repeated measures semiparametric regression using targeted maximum likelihood methodology with application to transcription factor activity discovery Stat Appl Genet Molec Biol (2011), http://www.bepress.com/sagmb/vol10/iss1/art2/

172. Catherine Tuglus and Mark J. van der Laan (2011), "Targeted Methods for Biomarker Discovery, the Search for a Standard" , Book chapter in Targeted Learning: Estimation of Causal Effects in Experimental and Observational Studies (2011), van der Laan, Rose, Springer New York.

173. H Wang, S Rose, MJ van der Laan (2010), Finding quantitative trait loci genes with collaborative targeted maximum likelihood learning, Stat Probab Lett. 2011 Jul 1;81(7):792-796.

174. McCulloch M1, Broffman M, van der Laan M, Hubbard A, Kushi L, Abrams DI, Gao J, Colford JM Jr. (2011), Colon Cancer Survival with Herbal Medicine & Vitamins in a Whole-Systems Approach: 10-Year Follow-Up Data Analyzed with Marginal Structural Models & Propensity Score Methods, Integr Cancer Ther., Sep;10(3):240-59. doi: 10.1177/1534735411406539. Epub 2011 Sep 30.

175. McCulloch M1, Broffman M, van der Laan M, Hubbard A, Kushi L, Abrams DI, Gao J, Colford JM Jr. (2011), Lung Cancer Survival with Herbal Medicine & Vitamins in a Whole-Systems Approach: 10-Year Follow-Up Data Analyzed with Marginal Structural Models & Propensity Score Methods,Integr Cancer Ther. 2011 Sep;10(3):260-79. doi: 10.1177/1534735411406439. Epub 2011 Aug 8.

176. Michael Rosenblum, Mark van der Laan (2011), Optimizing randomized trial designs to distinguish which subpopulations benefit from treatment, Biometrika, 98: 845-860.

177. W. Zheng, M.J. van der Laan (2011), Asymptotic theory for cross-validated targeted maximum likelihood estimation, book chapter in "Targeted Learning: Estimation of Causal Effects in Experimental and Observational Studies", van der Laan, Rose (2011), Springer New York. Also available at http://www.bepress.com/ucbbiostat/paper273/

178. I. Diaz Munoz, M.J. van der Laan (2011),Targeted Bayesian learning, book chapter in "Targeted Learning: Estimation of Causal Effects in Experimental and Observational Studies", van der Laan, Rose (2011), Springer New York. Also available at http://www.bepress.com/ucbbiostat/paper270/

179. EC Polley, S. Rose, MJ van der Laan (2011), Super learner in prediction, book chapter in "Targeted Learning: Estimation of Causal Effects in Experimental and Observational Studies", van der Laan, Rose (2011), Springer New York. Also available at http://www.bepress.com/ucbbiostat/paper266/

180. H. Wang, M.J. van der Laan (2011), Dimension Reduction with Gene Expression Data Using Targeted Variable Importance Measurement, BMC Bioinformatics, 12:312.

181. I. Diaz-Munoz, M.J. van der Laan (2012), Population intervention causal effects based on stochastic interventions, Biometrics. Jun;68(2):541-9. doi: 10.1111/j.1541-0420.2011.01685.x. Epub 2011 Oct 6.

182. K. Moore, R. Neugebauer, M.J. van der Laan, I.B. Tager (2012), Causal inference in epidemiological studies with strong confounding, Stat Med. 2012 Jun 15;31(13):1380-404. doi: 10.1002/sim.4469. Epub 2012 Feb 23.

183. Moore KL, Neugebauer R, Valappil T, van der Laan MJ. Robust extraction of covariate information to improve estimation efficiency in randomized trials. Statistics in Medicine. 2011 Doi: 10.1002/sim.4301.

184. Ori M. Stitelman, Victor De Gruttola, and Mark J. van der Laan (2012), "A General Implementation of TMLE for Longitudinal Data Applied to Causal Inference

in Survival Analysis", Int J Biostat. 2012 Sep 18;8(1). pii: /j/ijb.2012.8.issue-1/1557-4679.1334/1557-4679.1334.xml. doi: 10.1515/1557-4679.1334. Also available at U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 281, http://www.bepress.com/ucbbiostat/paper281

185. Susan Gruber and Mark J. van der Laan (2012), "Targeted Minimum Loss Based Estimator that Outperforms a given Estimator", Int J Biostat. 2012 May 18;8(1). pii: /j/ijb.2012.8.issue-1/1557-4679.1332/1557-4679.1332.xml. doi: 10.1515/1557-4679.1332.(April 2011). Also available at: U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 280, http://www.bepress.com/ucbbiostat/paper280.

186. Kristin E. Porter, Susan Gruber, Mark J. van der Laan, and Jasjeet S. Sekhon (2011), "The Relative Performance of Targeted Maximum Likelihood Estimators", Int J Biostat. Jan 1, 2011; 7(1): Article 31. Published online Aug 17, 2011. doi: 10.2202/1557-4679.1308. Also available at: U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 279, http://www.bepress.com/ucbbiostat/paper279,

187. W. Zheng, M.J. van der Laan (2012), A Targeted Maximum Likelihood Estimator of Natural Direct Effects, The International Journal of Biostatistics. Volume 8, Issue 1, Pages 1:40, ISSN (Online) 1557-4679, DOI: 10.2202/1557-4679.1361, January 2012.

188. C.W. Wester, O. Stitelman, R. Marlink, H. Bussmann, V. DeGruttolas, M.J. van der Laan (2012), Effect Modification by Sex and Baseline CD4+ Cell Count Among Adults Receiving Combination Antiretroviral Therapy in Botswana: Results from a Clinical Trial, AIDS Res Hum Retroviruses. 2012 Sep;28(9):981-8. doi: 10.1089/AID.2011.0349. Epub 2012 Mar 23.

189. Anup Malani, Oliver Bembom and Mark van der Laan (2012), Accounting for Heterogeneous Treatment Effects in the FDA Approval Process, Food Drug Law J. 2012;67(1):23-50, i.

190. Susan Gruber and Mark J van der Laan (2012), Consistent causal effect estimation under dual misspecification and implications for confounder selection procedures, Stat Methods Med Res Epub ahead of print 23 February 2012. DOI:10.1177/0962280212437451

191. Dan Rubin, Mark van der Laan (2012), A Case Study of Statistical Issues and Limitations in Personalized Medicine Research with Clinical Trials. The International Journal of Biostatistics. Volume 8, Issue 1, ISSN (Online) 1557-4679, DOI: 10.1515/1557-4679.1423, July 2012.

192. P Chaffee, MJ van der Laan (2012), Targeted maximum likelihood estimation for dynamic treatment regimes in sequential randomized controlled trials, Int J Biostat. 2012 Jun 22;8(1):Article 14. doi: 10.1515/1557-4679.1406. Also available at: http://www.bepress.com/ucbbiostat/paper277/

193. Antoine, Chambaz; Neuvial, Pierre; and van der Laan, Mark J (2012)., "Estimation of a Non-Parametric Variable Importance Measure of a Continuous Exposure", Electron. J. Statist. Volume 6 (2012), 1059-1099. Also available at: U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 292, http://biostats.bepress.com/ucbbiostat/paper292A.

194. M.J. van der Laan, M. Petersen (2012), Super Learning, book chapter in "Ensemble Machine Learning: Methods and Applications", Zhang, Cha, Ma, Yunqian (Eds.), Springer, New York.

195. Chaffee, PH and van der Laan MJ (2012), Discussion of Evaluation of Viable Dynamic Treatment Regimes in a Sequentially Randomized Trial of Advanced Prostate Cancer, Journal of the American Statistical Association, Volume 107, Issue 498, June 2012, 513-517.

196. Brooks J, van der Laan MJ. (2012), Targeted Maximum Likelihood Estimation for Prediction Calibration. Int J Biostat. 2012 Oct 31;8(1):30. doi: 10.1515/1557-4679.1385.

197. G. Geeven, M.J. van der Laan, M.C.M. de Gunst (2012), Comparison of targeted maximum likelihood and shrinkgage estimators of parameters in gene networks, Stat Appl Genet Mol Biol. 2012 Sep 25;11(5):Article 2. doi: 10.1515/1544-6115.1728.

198. M. Rosenblum, M.J. van der Laan (2012), Response to Jane Paik's reader reaction to "Using regression models to analyze randomized trials: asymptotically valid hypothesis tests despite incorrectly specified models", Biometrics. doi: 10.1111/j.1541-0420.2012.01799.x

199. S. Gruber, M.J. van der Laan (2013), An application of targeted maximum likelihood estimation to the meta-analysis of safety data, Biometrics, Mar;69(1):254-62. doi: 10.1111/j.1541-0420.2012.01829.x. Epub 2013 Feb 4.

200. Legrand M, Pirracchio R, Rosa A, Petersen M, van der Laan M, Fabiani JN, Fernandez-Gerlinger MP, Podglajen I , Safran D, Cholley B, Mainardi J. Incidence, Risk Factors and Prediction of Post-operative Acute Kidney Injury Following Cardiac Surgery For Active Infective Endocarditis: an Observational Study. Critical Care. 2013 Oct 4;17(5):R220.

201. S. Lendle, Meenakshi S. Subbaraman, M.J. van der Laan (2012), Identification and efficient estimation of the natural direct effect among the untreated, Biometrics Volume 69, Issue 2, pages 310-317, June 2013.

202. S. Lendle, B. Fireman, M.J. van der Laan (2013), Targeted maximum likelihood estimation in safety analysis, Journal of Clinical Epidemiology Volume 66, Issue 8, Supplement , Pages S91-S98, August 2013.

203. M. Carone, M. Petersen, M.J. van der Laan (2012), Targeted minimum loss based estimation of a casual effect using interval censored time to event data. Chapter 8 of Interval Censored Time To Event Data: Methods and Applications. Chapman & Hall/CRC. Editors: Ding-Geng (Din) Chen, Jianguo Sun, Karl E. Peace.

204. T.J. Haight, M.J. van der Laan, I.B. Tager (2013), Direct effects of leisure-time physical activity on walking speed, The Journal of Nutrition, Health & Aging, http://link.springer.com/article/10.1007.

205. M.J. van der Laan, L. Balzer and M.L. Petersen (2012), Adaptive matching in randomized trials and observational studies, Journal of Statistical Research, Volume 46(2), 113–156.

206. Chambaz, A. and van der Laan, M. J. (2014), Inference in Targeted Group-Sequential Covariate-Adjusted Randomized Clinical Trials. Scandinavian Journal of Statistics, 41: 104-140. doi: 10.1111/sjos.12013

207. M.J. van der Laan, S. Gruber (2012),Targeted minimum loss based estimation of causal effects of multiple time point interventions, Int J Biostat. 2012;8(1). doi: 10.1515/1557-4679.1370.

208. M.J van der Laan (2012), Targeted estimation of nuisance parameters to obtain valid statistical inference, Int J Biostat. 2014;10(1):29-57. doi: 10.1515/ijb-2012-0038.

209. M. Subbaraman, S. Lendle, M. van der Laan, J. Ahern (2013), Cravings as a mediator and moderator of drinking outcomes in the COMBINE Study, Addiction. 2013 Oct;108(10):1737-44. doi: 10.1111/add.12238. Epub 2013 Jun 4.

210. S. Rose, M.J. van der Laan (2014), A double robust approach to causal effects in case-control studies, Am J Epidemiol. Volume 179, Number 6, 663-670, doi: 10.1093/aje/kwt318. Epub 2014 Jan 31.

211. M.J. van der Laan, M. Petersen, W. Zheng (2013), Estimating the effect of a community-based intervention with two communities, Journal of Causal Inference 2013, 1(1): 1-24.

212. M. Legrant, R. Pirrachhio, A. Rosa, M. Petersen, M. van der Laan (2013), Incidence, risk factors and prediction of postoperative acute kidney injury following cardiac surgery for active infective endocarditis: an observational study, Critical Care 2013, 17:R220 doi:10.1186/cc13041.

213. Antoine Chambaz; Dominique Choudat; Catherine Huber; Jean-Claude Pairon; Mark J. van der Laan (2013), Analysis of the effect of occupational exposure to asbestos based on threshold regression modeling of case-control data, Biostatistics 2013; doi: 10.1093/biostatistics/kxt042

214. M. Petersen and J. Schwab and S. Gruber and N. Blaser and M. Schomaker and M.J. van der Laan (2013), Targeted Minimum Loss Based Estimation of Marginal Structural Working Models, Journal of Causal Inference. Volume 2, Issue 2, Pages 147-185, ISSN (Online) 2193-3685, ISSN (Print) 2193-3677, DOI: 10.1515/jci-2013-0007, June 2014. Also available at: http://biostats.bepress.com/ucbbiostat/paper312/

215. M. Schnitzer, E. Moodie, M.J. van der Laan, R. Platt, M. Klein (2014), "Modeling the impact of hepatitis C viral clearance on end-stage liver disease in an HIV co-infected cohort with Targeted Maximum Likelihood Estimation," Biometrics, (70)(1), 144–152, Also available at: http://biostats.bepress.com/ucbbiostat/paper304

216. Díaz, Ivan and van der Laan, Mark J. (2013), "Sensitivity Analysis for Causal Inference Under Unmeasured Confounding and Measurement Error Problems", Int J Biostat. 2013 Nov 19;9(2):149-60. doi: 10.1515/ijb-2013-0004. Also available at: U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 303. http://biostats.bepress.com/ucbbiostat/paper303.

217. Sapp, Stephanie; van der Laan, Mark J.; and Page (2014), Kimberly, "Targeted Estimation of Variable Importance Measures with Interval-Censored Outcomes", The International Journal of Biostatistics. Volume 10, Issue 1, Pages 77-97, ISSN (Online) 1557-4679, ISSN (Print) 2194-573X, DOI: 10.1515/ijb-2013-0009, March 2014. Also available at: U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 307. http://biostats.bepress.com/ucbbiostat/paper307.

218. I. Diaz and M. J. van der Laan (2013), Assessing the causal effect of policies: An approach based on stochastic interventions, Int J Biostat. 2013 Nov 19;9(2):161-74. doi: 10.1515/ijb-2013-0014.

219. Maya Petersen, Mark van der Laan (2013), Causal Models and Learning from Data: Integrating Causal Modeling and Statistical Estimation in the Practice of Epidemiology, Epidemiology. 2014 May;25(3):418-26. doi: 10.1097/EDE.0000000000000078. PMID: 24713881 (May 2014)

220. R. Starmans and M.J. van der Laan (2013), Inferentiele statistiek versus machine learning: een aanzet tot verzoening, Stator **42**, 1–4.

221. J. Brooks, M. J. van der Laan, D.E. Singer, A. S. Go (2013), Targeted Minimum Loss-Based Estimation of Causal Effects in Right-Censored Survival Data with Time-Dependent Covariates: Warfarin, Stroke, and Death in Atrial Fibrillation, Journal of Causal Inference. Volume 1, Issue 2, Pages 235-254, ISSN (Online) 2193-3685, ISSN (Print) 2193-3677, DOI: 10.1515/jci-2013-0001, November 2013.

222. R. Neugebauer, J. Schmittdiel, M.J. van der Laan (2014), Targeted Learning in real-world comparative effectiveness research with time-varying interventions, Statistics in Medicine, Volume 33, Issue 14, pages 2480-2520, 30 June 2014. PMID:24535915.

223. S. Rose, M.J. van der Laan (2014), Response to Invited commentary "Some advantages of the relative excess risk due to interaction", by T.J. VanderWeele and S. VanSteelandt, American Journal of Epidemiology, Volume 179, Number 6, page 672.

224. J. Brooks, D.E. Singer, A. S. Go, M.J. van der Laan (2014), Book chapter A roadmap for causal inference in safety analysis in Quantitative Evaluation of Safety in Drug Development: Design, Analysis and Reporting, Chapman and Hall/CRC, editors Q. Jang, A. Xia.

225. M.J. van der Laan, R.J.C.M. Starmans (2014), Review article: Entering the era of data science: Targeted Learning and the Integration of Statistics and Computational Data Analysis, Advances in Statistics Volume 2014 (2014), Article ID 502678, 19 pages http://dx.doi.org/10.1155/2014/502678

226. M.J. van der Laan (2014), Targeted Learning: From MLE to TMLE, book chapter in COPSS 50th Anniversary Volume, Past, Present and Future of Statistical Science', CRC Press, Taylor & Francis Group.

227. M.J. van der Laan (2014), Causal Inference for a population of causally connected units, Journal of Causal Inference. Volume 0, Issue 0, Pages 1:62, ISSN (Online) 2193-3685, ISSN (Print) 2193-3677, DOI: 10.1515/jci-2013-0002, January 2014.

228. Mireille E. Schnitzer, Mark J. van der Laan, Erica E. M. Moodie, Robert W. Platt (2014), Effect of breastfeeding on gastrointestinal infection in infants: A targeted maximum likelihood approach for clustered longitudinal data, Ann. Appl. Stat. Volume 8, Number 2 (2014), 703-725. http://dx.doi.org/10.1214/14-AOAS727.

229. Romain Pirracchio, Maya Petersen, M.J. van der Laan (2014), "Improving Propensity Score Estimators: Robustness to Model Misspecification using Super Learner", American Journal of Epidemiology, 25(6), 898–901.

230. H. Wang, Z Zhang, S. Rose, M.J. van der Laan (2014), A Novel Targeted Learning Method for Quantitative Trait Loci Mapping, to appear in GENETICS as a special highlighted article.

231. Romain Pirracchio, Maya Petersen, Matthieu Resche Rigon, Sylvie Chevret, Didier Journois, Denis Safran, Mark van der Laan (2014), Mortality prediction in the ICU: can we do better? Results from the Super ICU Learner Algorithm (SICULA) projection, a population-based study, Epub, Nov 24, 2014, Lancet Respiratory Medicine, doi:10.1016/S2213-2600(14)70239-5. PMID 25466337.

232. A. Chambaz, M.J. van der Laan, W. Zheng (2015), Group sequential clinical trials with response-adaptive randomization. Book: Modern Adaptive Randomized Clinical Trials: Statistical, Operational, and Regulatory Aspects. Edited by Alex Sverdlov (Forthcoming 2015), Springer, New York.

233. Diaz, Ivan, van der Laan, M.J. (2013), Targeted Data Adaptive Estimation of the Causal Dose–Response Curve, Journal of Causal Inference, **1**, (2), p. 171–192.

234. Miguel E, Camerer C, Casey K, Cohen J, Esterling KM, Gerber A, Glennerster R, Green DP, Humphreys M, Imbens G, Laitin D, Madon T, Nelson L, Nosek BA, Petersen M, Sedlmayr R, Simmons JP, Simonsohn U, Van der Laan M. Social science. Promoting transparency in social science research. Science. 2014; 343(6166): 30-1 54.

235. Brown D, Petersen M, van der Laan M, Costello S, Noth E, Hammond K, Cullen M, Eisen E. 0124 PM2.5 and Heart Disease in a Cohort of Aluminium Workers: An Application of Longitudinal Targeted Maximum Likelihood-based Estimation (TMLE), Occup Environ Med. 2014 Jun;71 Suppl 1:A14. doi: 10.1136/oemed-2014-102362.44.

236. Weber A, van der Laan, M, Petersen, M. (2015), Assumption trade-offs when choosing identification strategies for pre-post treatment effect estimation: An illustration of a community based intervention in Madagascar, Journal of Causal Inference, http://www.degruyter.com/view/j/jci.ahead-of-print/jci-2013-0019/jci-2013-0019.xml?format=INT

237. M. van der Laan, A. Luedtke, I. Díaz (2014), Discussion of Identification, Estimation and Approximation of Risk under Interventions that Depend on the Natural Value of Treatment Using Observational Data', by Jessica Young, Miguel Hernán, and James Robins, To appear in Epidemiologic Methods.

238. van der Laan, M J and Luedtke, A R (2014), Targeted learning of the mean outcome under an optimal dynamic treatment rule, Journal of Causal Inference. Volume 3, Issue 1, Pages 61-95, ISSN (Online) 2193-3685, ISSN (Print) 2193-3677, DOI: 10.1515/jci-2013-0022. Also available at http://biostats.bepress.com/ucbbiostat/paper329/

239. L.B. Balzer, M.L. Petersen, M.J. van der Laan (2014), Adaptive pair-matching in randomized trials with unbiased and efficient effect estimation.Statistics in Medicine, 34(6):999-1011, 2015. PMID: 25421503 Also available at http://biostats.bepress.com/ucbbiostat/paper320/

240. D. Brown, M.L. Petersen, M.J. van der Laan (2015), Occupational Exposure to PM2.5 and Incidence of Ischemic Heart Disease: Longitudinal Targeted Minimum Loss Based Estimation, to appear in Epidemiology.

241. A. R. Luedtke, M. Carone, M. J. van der Laan, "Discussion of 'Deductive derivation and Turing-computerization of semiparametric efficient estimation' by Frangakis et al.," to appear in Biometrics.

242. Petersen M, Schwab J, Geng E, van der Laan M. Comparing the effectiveness of dynamic regimes with and without marginal structural models. In: Dynamic Treatment Regimes in Practice: Planning Trials and Analyzing Data for Personalized Medicine. (Moodie E and Kosorok M, eds.). 2016, ASA-SIAM, Philadelphia, PA. http://bookstore.siam.org/sa21/

243. Stephanie Sapp, Mark J. van der Laan, and John Canny (2014). Subsemble: an ensemble method for combining subset-specifoc algorithms. Journal of Applied Statistics , 41(6):1247, 1259.

244. Hubbard, S K-Pajouh, van der Laan (2015), Statistical Inference for Data Adaptive Target Parameters, to appear in International Journal of Biostatistics.

245. M. J. van der Laan, A. R. Luedtke, and I Díaz, Discussion of Identification, estimation and approximation of risk under interventions that depend on the natural value of treatment using observational data, by Jessica Young, Miguel Hernán, and James Robins, Epidemiologic Methods, vol. 3, no. 1, pp. 21-31, 2014.

246. Petersen et al. (2015), Super Learner analysis of electronic adherence data improves viral prediction and may provide strategies for selective HIV RNA monitoring, in press for Journal of Acquired Immune Deficiency Syndrome, Epidemiology and Prevention.

247. Lendle, Samuel D and Fireman, Bruce and van der Laan, Mark J (2014), Balancing Score Adjusted Targeted Minimum Loss-based Estimation, Journal of Causal Inference 01/2015; DOI: 10.1515/jci-2012-0012

248. Erin LeDell, M. Petersen, M.J. van der Laan (2015), Computationally efficient confidence intervals for cross-validated area under the ROC curve estimates, to appear in the Electronic Journal of Statistics.

249. Moore KL, Neugebauer R, Valappil T, van der Laan MJ. Robust extraction of covariate information to improve estimation efficiency in randomized trials. Statistics in Medicine. 2011 Doi: 10.1002/sim.4301

250. J. Ahern, A Luedtke, D. Kasarek, T. Bruckner, M.J. van der Laan (2015), Racial/Ethnic differences in the role of Childhood Adversities for Mental Disorders among a Nationally Representative Sample of Adolescents, Epidemiology, to appear.

251. Lendle, Samuel D and Fireman, Bruce and van der Laan, Mark J (2015), Balancing Score Adjusted Targeted Minimum Loss-based Estimation, Journal of Causal Inference. Volume 3, Issue 2, Pages 139-155, ISSN (Online) 2193-3685, ISSN (Print) 2193-3677, DOI: 10.1515/jci-2012-0012, January 2015.

252. Le Dell, Petersen M, van der Laan M (2015), Computationally efficient confidence intervals for cross-validated area under the ROC curve estimates, Electronic Journal of Statistics, Volume 9, Number 1, 1583–1607.

253. L. Balzer, J. Ahern, S. Galea, and M.J. van der Laan (2014), Estimating Effects on Rare Outcomes: Knowledge is Power. To appear in biometrics. Technical report available at http://biostats.bepress.com/ ucbbiostat/paper310/

254. Luedtke, A R and van der Laan, M J (2014), Super-learning of an optimal dynamic treatment rule, to appear in IJB, also available at http://biostats.bepress.com/ucbbiostat/paper326/,

255. L. Balzer M.J. van der Laan, M. Petersen (2016), Adaptive Pre-specification in Randomized Trials With and Without Pair-Matching, to appear in Statistics in Medicine.

256. Lendle S, Schwab J, Petersen ML, and van der Laan, MJ (In Press). ”ltmle: An R Package Implementing Targeted Minimum Loss-based Estimation for Longitudinal Data.” Journal of Statistical Software, to appear.

SUBMITTED/REVISED PUBLICATIONS

See www.bepress.com, working paper series, Division of Biostatistics, UC Berkeley.

257. Davies, Molly M. and van der Laan, Mark J., "Optimal Spatial Prediction Using Ensemble Machine Learning" (December 2012). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 305. http://biostats.bepress.com/ucbbiostat/paper305, submitted to IJB.

258. Petersen, M.; LeDell, E.; Sarovar, V.; Schwab, J.; Etoori, D.; Gross, R.; Wilson, I.; Golin, C.; Reynolds, N.; Remien, R.; Goggin, K.; Simoni, J.; Rosen, M.; Liu, H.; van der Laan, M.; Bangsberg, D. Classification of Virologic Failure using Electronic Adherence Data: An analysis of the MACH14 Consortium. (In Review at JAIDS)

259. L. Balzer, M. Petersen, and M.J. van der Laan (2014), book chapter Tutorial for causal inference in Handbook on Big Data, Chapman and Hall. Under Review.

260. Lendle S, Schwab J, Petersen M, van der Laan M (2014). ltmle: An R Package Implementing Targeted Minimum Loss-based Estimation for Longitudinal Data. (Under review for the Journal of Statistical Software).

261. W. Zheng, Zhehui Luo and Mark van der Laan (2014), Effect Modification by Counterfactual Baseline Modifiers: a twist to a familiar story, with application to post-first-line-treatment effect modifiers. Submitted.

262. W. Zheng and Mark van der Laan (2014), Mediation Analysis in Longitudinal Data with Time-Varying Mediator and Exposures. Submitted.

263. M. Carone, I. Diaz, M.J. van der Laan (2014), Higher order targeted minimum loss-based estimation, submitted to Annals of Statistics.

R-PACKAGES

264. Contributed to resampling multiple testing methodology implemented in (see book #274): http://www.bioconductor.org/packages/release/bioc/html/multtest.html

265. Contributed to variable importance TMLE implemented in (see #203): http://cran.r-project.org/web/packages/tmle.npvi/index.html

266. K. Pollard, M. van der Laan, R package 2.26.0 hopach, http://www.bioconductor.org/packages/release/bioc/html/hopach.html

267. Erin LeDell, Maya Petersen and Mark van der Laan (2012). cvAUC: Cross-Validated Area Under the ROC Curve Confidence Intervals. R package version 1.0-0. http://CRAN.R-project.org/package=cvAUC

268. Erin LeDell, Stephanie Sapp and Mark van der Laan (2014). subsemble: An Ensemble Method for Combining Subset-Specific Algorithm Fits. R package version 0.0.9. http://CRAN.R-project.org/package=subsemble

269. Eric Polley, Mark van der Laan, R package 2.0-15 SuperLearner, http://cran.r-project.org/web/packages/SuperLearner/index.html

270. S. Gruber, M. van der Laan, R package 1.2.0-4 tmle, http://cran.r-project.org/web/packages/tmle/index.html

271. Schwab JS, Petersen ML, van der Laan MJ, with contributions from Gruber S. (2013), ltmle: Longitudinal Targeted Maximum Likelihood Estimation, (R package). cran.r-project.org/web/packages/ltmle/index.html

BOOKS

272. M.J. van der Laan (1996), Efficient and Inefficient Estimation in Semiparametric Models. CWI-tract **114**, Centre for Mathematics and Computer Science, Amsterdam, the Netherlands.
Book reviews appeared in a French Journal and in "Short Book Reviews" International Statistical Institute, Editor Dr. A.M. Herzberg. Zentrallblatt für Mathematik 838/96.

273. M.J. van der Laan, J.M. Robins (2002), Unified methods for Censored Longitudinal Data and Causality, Springer Verlag. New York.

274. S. Dudoit, M.J. van der Laan, Resampling Based Multiple Testing with Applications to Genomics, Springer Series of Statistics (2007).

275. M.J. van der Laan, S. Rose (2011), Targeted Learning, Causal Inference for Observational and Experimental Data, Springer New York.

276. Handbook on Big Data, Chapman & Hall (2015), edited by Peter Buhlmann, Petros Drineas, Michael Kane, Mark van der Laan.

277. M.J. van der Laan, S. Rose (to appear 2017), Targeted Learning in Data Science - Causal Inference for Complex Longitudinal Studies, Springer, New York.

OTHER PUBLISHED WORK

278. M.J. van der Laan, S. Rose (2010). Statistics ready for a revolution: Next generation of statisticians must build tools for massive data sets. Amstat News, 399:38-39.

279. M.J. van der Laan, Why we need a statistical revolution, http://www.stats.org/super-learning-and-the-revolution-in-knowledge/

280. M.J. van der Laan (2013), Published Interview on blog "Musings on Iraq", by Joel Wing, on the Second Lancet Study regarding Iraq Casualties. http://musingsoniraq.blogspot.com/2012/08/the-major-flaws-with-lancet-reports-on.html

281. M.J. van der Laan (2008), "The Construction and Analysis of Adaptive Group Sequential Designs" (March 2008). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 232. http://www.bepress.com/ucbbiostat/paper232.

282. Mark J. van der Laan, Sherri Rose, and Susan Gruber, "Readings in Targeted Maximum Likelihood Estimation" (September 2009). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 254. http://www.bepress.com/ucbbiostat/paper254

283. D. Rubin and M.J. van der Laan (2007), Extending Marginal Structural Models through Local, Penalized, and Additive Learning (September 2006). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 212. http://www.bepress.com/ucbbiostat/paper212Local marginal structural models.

284. Merrill D. Birkner, Alan E. Hubbard, and Mark J. van der Laan, "Data Adaptive Pathway Testing" (November 2005). U.C. Berkeley Division of Biostatistics Working Paper Series. Working Paper 197. http://www.bepress.com/ucbbiostat/paper197 .

285. M.J. van der Laan (1994), Proving Efficiency of NPMLE and Important Identities. Working Paper #44, Division of Biostatistics, UC Berkeley.

286. A. Molinaro, M. J. van der Laan, D. H. Moore, and K. Kerlikowske (2004), Survival Point Estimate Prediction in Cohorts with Nested Case-Control Study Designs.

287. M.J. van der Laan (1997), Locally Efficient Estimation with Current Status Data. *1996 Proceedings, Biometrics Section of the Annual Meeting of the American Statistical Association, Chicago*, 41–49.

288. M.J. van der Laan and D.R. Peterson (1997), Smooth Estimation and Inference with Interval Censored Data, Working Paper #66, Division of Biostatistics, UC Berkeley.

289. D.R. Peterson, M.J. van der Laan (2002), Local Polynomial Density Estimation with Interval Censored Data. Technical report, Division of Biostatistics, UC Berkeley.

290. T.A. Henneman, M.J. van der Laan, A.E. Hubbard (2002), Estimating Causal Parameters in Marginal Structural Models with Unmeasured Confounders Using Instrumental Variables, Technical report, U.C. Berkeley Division of Biostatistics Working Paper Series. Working paper 104.

291. M.J. van der Laan (1998), Nonparametric Maximum Likelihood. *Encyclopedia of Biostatistics, Survival Analysis*, **11**, John Wiley & Sons, 1998.

292. M.J. van der Laan (1998), Estimation with Interval Censored Data in Longitudinal Studies. Working Paper #74, Division of Biostatistics, UC Berkeley.

293. M.J. van der Laan, R.D. Gill, and J.M. Robins (2000), Locally efficient estimation in censored data models, Theory and Examples, Working Paper #85, Division of Biostatistics, UC Berkeley.

294. K. Pollard, M.J. van der Laan (2002), A method to identify significant clusters in gene expression data, Invited Proceedings of Sci2002, July 2002, Volume II, 318–325.

295. A. Molinaro, M.J. van der Laan, D. Moore (2002), Comparative genomic hybridization array analysis. Working Paper #106, Division of Biostatistics, University of California, Berkeley.

296. K. Pollard, M.J. van der Laan (2002), New methods for identifying significant clusters in gene expression data, Proceedings of JSM 2002.

297. Z. Yu, M.J. van der Laan (2003), Double robust estimation in longitudinal marginal structured models. Working Paper #132, Division of Biostatistics, UC Berkeley.

298. S. Dudoit and M. J. van der Laan (2003), Unified cross-validation methodology for estimator selection and applications to genomics. Bulletin of the International Statistical Institute, 54th Session Proceedings, Vol. LX, Book 2, p. 412-415.

299. van der Laan, M.J., Dudoit (2003), Unified Cross-Validation Methodology For Selection among Estimators, and a General Cross-validated Adaptive epsilon-Net Estimator: Finite Sample Oracle Inequalities and Examples, Working Paper #130, Division of Biostatistics, UC Berkeley.

300. K.S. Pollard, M.J. van der Laan (2003), Multiple testing for gene expression data: an investigation of null distributions with consequences for the permutation test, *Proceedings, 2003 International MultiConference in Computer Science and Engineering*, METMBS'03 Conference, pp. 3-9.

301. Z. Yu and M.J. van der Laan (2003), Measuring Treatment Effects Using Semiparametric Models, Working Paper #136, Division of Biostatistics, UC Berkeley.

302. T. Haight, R. Neugebauer, I. B. Tager, and M. J. van der Laan (2003), Comparison of the Inverse Probability of Treatment Weighted (IPTW) Estimator With a Naive Estimator in the Analysis of Longitudinal Data With Time-Dependent Confounding: A Simulation Study, Working Paper #140, Division of Biostatistics, UC Berkeley.

303. M.J van der Laan (2015), Observational Studies 1 (2015), 220-222, Comment on "Observational Studies" by Dr. W.G. Cochran (1972).