Trevor John Hastie

1040 Campus Drive
Stanford, CA 94305
Home Phone&FAX: (650) 326-0854

Department of Statistics
Sequoia Hall
Stanford University
Stanford, CA 94305
(650) 725-2231
Updated: September 26, 2018

Born: June 27, 1953, South Africa
Married, two children
U. S. citizen, S.A. citizen
E-Mail: hastie@stanford.edu
Fax: 650/725-8977

Present Position

2013–	John A. Overdeck Professor of Mathematical Sciences, Stanford University.
2006–2009	Chair, Department of Statistics, Stanford University.
2005–2006	Associate Chair, Department of Statistics, Stanford University.
1999–	Professor, Statistics and Biostatistics Departments, Stanford University. Founder and co-director of Statistics department industrial affiliates program.
1994–1998	Associate Professor (tenured), Statistics and Biostatistics Departments, Stanford University.

Research interests include nonparametric regression models, computer intensive data analysis techniques, statistical computing and graphics, and statistical consulting. Currently working on adaptive modeling and prediction procedures, signal and image modeling, and problems in bioinformatics with many more variables than observations.

Education

1984	**Stanford University**, Stanford, California – Ph.D, Department of Statistics (Werner Stuetzle, advisor)
1979	**University of Cape Town**, Cape Town, South Africa – First Class Masters Degree in Statistics (June Juritz, advisor).
1976	**Rhodes University**, Grahamstown, South Africa – Bachelor of Science Honors Degree in Statistics.
1975	**Rhodes University**, Grahamstown, South Africa – Bachelor of Science Degree (cum laude) in Statistics, Computer Science and Mathematics.

Awards and Honors

2018	Elected to United States National Academy of Sciences.
2018	Honorary Doctorate, Leuphana University of Lüneburg, Germany.
2016	Wasserstrom distinguished lecturer, Northwestern University, Illinois.
2015	Recipient of 2015 Rhodes University distinguished alumni award.
2015	Recipient of Technometrics *Ziegel* award (dated 2014) for "An Introduction to Statistical Learning"
2014	The Emmanuel and Carol Parzen prize for Statistical Innovation, Texas A&M University.
2013	Inaugural John A. Overdeck Professor, Stanford University.
2013	Bernard G. Greenberg distinguished lecturer at Department of Biostatistics, University of North Carolina.

2011	Elected fellow of South African Statistical Society
2009–2010	Mellon Mentor, University of Cape Town
2009	Buehler-Martin lecturer, University of Minnesota.
2003	Official visitor (with Sir David Cox) at 50th anniversary of South African Statistical Association.
1998	Elected fellow of the American Statistical Association.
1997	IMS special invited speaker, IMS Pacific regional meeting, Taipei.
1996	1996 Myrto Lefkopolou award, Harvard Biostatistics Department
1996	1996 Craig award, University of Iowa.
1996	Elected fellow of the Institute of Mathematical Statistics.
1994	Elected member of International Statistics Institute.
1982	Harry Crossley Bursary, University of Cape Town. Awarded to assist in overseas doctoral research.
1980	Sir Robert Kotze Bursary, University of Cape Town. Awarded to assist in overseas doctoral research.
1979	Elected Fellow of Royal Statistical Society.
1979	Queen Victoria Scholarship, University of Cape Town. Awarded on the basis of Masters degree thesis for overseas doctoral research.
1978	National Scholarship, Rhodes University. Awarded on the basis of honors degree results for overseas doctoral research.
1977	University Research Scholarship, Rhodes University, Grahamstown. Awarded on basis of honors degree results for post-graduate research at Rhodes University.
1975	University Foundation Scholarship, Rhodes University. Awarded to the "Most Outstanding First Degree Candidate" during the period 1973 -1975.
1973	University Scholarship, Rhodes University. Awarded to the top first year student in the University in 1973.

Professional Duties and Committees

2013–2017	Judge on panel of Fundacion BBVA in Madrid to select the annual "Frontiers of Knowledge" awards.
2014	Evaluation of Statistics Department, Columbia University, NY (with Jon Wellner).
2010–2011	Served on NAS "Massive Data Analysis" panel (Michael Jordan chair)
1994–2001	Associate Editor, *Annals of Statistics*
1995–	Associate Editor, J. Data Mining and Knowledge Discovery.
1994	Chair, Statistical Computing Section, ASA
1992	Program Chair, Statistical Computing Section, ASA
1989–1991	Associate Editor, *Technometrics*
1989	Secretary-Treasurer, Statistical Computing Section, ASA

Personal Research Grants

7/15–6/19	NIH R01 EB001988 Continuation of "New Statistical Methods for Medical Signals and Imaging".
8/14–7/19	NSF DMS-1407548 Hastie "Flexible Statistical Modeling".
7/11–6/15	NIH R01 EB001988E Hastie/Johnstone/Tibshirani. Continuation of "New Statistical Methods for Medical Signals and Imaging".
8/10–7/14	NSF DMS-1007719 Hastie "Flexible Statistical Modeling".
7/08–6/12	NIH RO1-EB001988-12 Hastie/Johnstone/Tibshirani. Continuation of "New Statistical Methods for Medical Signals and Imaging".

8/05–7/09 NSF DMS-0505676 Hastie "Flexible Statistical Modeling".
7/03–6/07 NIH RO1-EB0011988-08 Hastie/Johnstone/Tibshirani. Continuation of "New Statistical Methods for Medical Signals and Imaging"
7/02–7/05 NSF DMS 0204612 Hastie "Flexible Statistical Modeling".
9/99–6/03 NIH-2RO1-CA72028 Hastie/Johnstone/Tibshirani Continuation of "New Statistical Methods for Medical Signals and Imaging"
7/98–6/01 NSF DMS-9803645 Hastie "Flexible Statistical Modeling".
9/96–8/99 NIH RO1-CA-72028-01 Hastie/Johnstone "New Statistical Methods for Medical Signals and Imaging"
7/95–6/98 NSF DMS-9504495 Hastie "Flexible Regression and Classification"

Ph.D. Student Supervision

Neil Crellin Graduated 1996. Thesis "Visualization and Regression of Image Sequence Data". Google, Mountain View.

Y. Dan Rubenstein Graduated 1998. Thesis "Discriminative vs Informative Learning". Founder and CTO of Reflectivity, a Silicon Valley micro-display manufacturer. Product Management Director, Google, Mountain View.

Gareth James Graduated 1998. Thesis "Majority Vote Classifiers: Theory and Applications". Associate Professor in Statistics, Marshall School of Business, University of Southern California.

Dirk Ormoneit Postdoctoral Student 1999-2000. Head of research team, BlueCrest Financial, London.

Eva Cantoni Postdoctoral Student 1999-2000. Currently at Econometrics Department, University of Geneva.

Mu Zhu Graduated 2001. Thesis "Feature Extraction and Dimension Reduction with applications to Classification and the Analysis of Co-Occurrence Data". Professor, Department of Statistics and Actuarial Science, University of Waterloo, Canada.

Ji Zhu Graduated 2003. Thesis" "Flexible Statistical Modelling" Professor, Statistics Department, University of Michigan.

Saharon Rosset Graduated 2003 (co-advising with Jerome Friedman). Thesis title: "Boosting and other Methods for following Regularization Optimized Coefficient Paths". Associate Professor, Statistics department, University of Tel Aviv, Israel.

Hui Zou Graduated 2005, Thesis title: "Elasticnet Regularization and Beyond". Professor, Statistics, University of Minnesota.

Mee Young Park Graduated 2006, Thesis title "Generalized Linear Models with Regularization". Quantitative Analyst, Google Inc, Mountain View.

Gillian Ward Graduated 2007. Thesis title "Problems in Ecological Modeling: Presence-only Data and Boosted Mars". Analyst at Youtube.

Ping Li Graduated 2007. Thesis title "Stable Random Projections and Conditional Random Sampling, Two Sampling Techniques for Modern Massive Datasets". Associate Professor, Statistics Department, Rutgers University.

Donal McMahon Graduated 2009. Thesis title "Research Synthesis for Multiway Tables of Varying Shapes and Size" . Analyst at Google.

Rahul Mazumder Graduated June 2012. Thesis title "Topics in Sparse Multivariate Statistics". Assistant Professor, OR and Statistics, MIT

Michael Lim Graduated August 2013. Thesis title "The group lasso: two novel applications". Data Scientist at Jump Trading, Chicago.

Will Fithian Graduated June 2015. Thesis title "Topics in Adaptive Inference". Assistant Professor, Statistics department, UC Berkeley.

Jason Lee	Graduated June 2015. Thesis title "Selective Inference and Learning Mixed Graphical Models". Assistant Professor, USC.
Hristo Paskov	(co-advised with John Mitchell, CS) Graduated 2016. Pursuing IT startup.
Qingyuan Zhao	Graduated 2016. PostDoc, U. Penn (Wharton).
Ya Le	Current student
Rakesh Achanta	Current student
Junyang Qian	Current student
Charles Zheng	Graduated June 2017. Currently with NIH.

Work and Experience

1999 -	Founder and Director, Stanford Statistic Department Industrial Affiliates program.
3/86–8/94	Member of Technical Staff, Statistics and Data Analysis Research Group, AT&T Bell Laboratories, 600 Mountain Ave, Murray Hill, New Jersey 07974.
7/92	Professor, Statistics Department, University of Cape Town — sabbatical 5-month appointment.
4/92	Member of MSRI, Berkeley. Arranged a 3-day workshop on "Neural Networks and Nonparametric Regression," with 20 invited participants.
1/85–1/86	Research biostatistician, South African Medical Research Council, Institute for Biostatistics.
6/81–12/84	Graduate student, Stanford University, Stanford California.
	Founded the department's Statistical Consulting Service, together with Rob Tibshirani.
	Member, Computations Research Group of Stanford Linear Accelerator Center. Research in statistical (motion) graphics and non-parametric regression methods. Group headed by Professor Jerome Friedman.
	Statistical consulting—projects include performance study for Syva corporation with Professor Bradley Efron, FDA study for Coherent Inc. with Professor Lincoln Moses.
1/84–4/84	Visiting researcher/student, IBM Research, Zurich. On leave of absence from Stanford. Worked on computer vision and computer typesetting (TEX) projects, and Ph.D. dissertation.
1/77-9/80	Research officer and consultant, Institute for Biostatistics, Medical Research Council, Cape Town, South Africa. Consulting with other MRC bodies in SA and University of Cape Town Medical School.
9/79–11/79	Biomathematics Department, Oxford University, Oxford, U.K. Research, and consulting work with Professor Peter Armitage for Booths Pharmaceutical company on logistic regression.
7/79–9/79	Johnson Space Center, Clear Lake City, Texas. Worked for two months in the cellular analytical lab of Dr. Steve Kimzey, on an automated cytology project.
2/79-7/79	London School of Hygiene and Tropical Medicine. Worked with Professor Michael Healy as consultant and did research on classification procedures. Projects included St. Lucia schistosomiasis study (Rockefeller Foundation) and psycho-surgery validation study with the Neuro-surgical center of the Brooks General Hospital.

Industry: Advisory Boards and Consulting Retainers

5/2018-	Senior Advisor, Blackrock

5/2017- Smule SAB
6/2017- Cardinal Analytx SAB
1/2017-12-2017 Huawei Consultant
10/2016 - Novartis Pharmaceuticals statistical consultant
3/2016- Nightingale Analytics SAB
6/2014 - 2016 Sumup Inc consultant
12/2012- H_2O.ai SAB
1/2006- Quantcast Inc SAB
6/2005- Celera Diagnostics SAB
6/2007-12/2017 Esurance SAB
10/2012-5/2014 Morgan Stanley
1/2011-12/2017 Opera Solutions SAB
4/2006-11/2013 Aviir SAB
12/2006-12/2015 Natera (formerly Gene Security Network) SAB
10/2010-12/2012 Pathworks Diagnostics SAB
2/2002-2/2010 Bioseek SAB
2/2008-2/2009 Facebook
9/2001-8/2005 Enkata SAB
9/2003-9/2006 Equbits SAB
2/2000-8/2002 Peakstone SAB
12/2005-4/2007 Rapt Inc SAB
5/2002-7/2006 Sports Potential Inc SAB
5/2000-10/2003 Xmine Inc SAB
8/1999-1/2001 Panoptikon Inc SAB

Special Invited Talks and Workshops

7/2017 Inaugural speaker, "Data Science, Statistics and Visualization" conference, Lisbon, Portugal.
7/2017 IASC presidential invited speaker, ISI Marakech, Morocco.
5/2017 Tinbergen Institute Econometrics Lectures, Erasmus University, Rotterdam.
11/2016 Special conference visitor, South African Statistical Association annual conference.
7/2016 Keynote speaker, Fourth Joint Biostatistics Symposium, Shanghai.
5/2016 Keynote speaker and special invited guest, Israeli Statistical Society, Tel Aviv.
7/2015 Keynote speaker in special session of International Federation of Classiciation Societies in Bologna to celebrate 25th anniversary of publication of "Generalized Additive Models".
3/2015 Keynote speaker at 70th anniversary of Dutch statistical society, Itrecht, Holland.
9/2014 Opening Keynote Speaker, Inauguration of University of Leiden Center of Data Science, Holland.
5/2014 Invited speaker, Abel Symposium for high-dimensional data, Lofoten Islands, Norway.
9/2013 PIMS 2013 "Year of Statistics" public address, UBC, Vancouver.
7/2013 Keynote speaker, Ecostats2013, Sydney, Australia.
5/2013 Keynote speaker, Conference on Applied Statistics Ireland, Dublin 2013
5/2013 Bernard G. Greenberg distinguished lecturer, Department of Biostatistics, University of North Carolina.
3/2013 Annual Invited Lecturer in Biostatistics and Bioinformatics, University of California at San Francisco.

8/2012	Keynote speaker, COMPSTAT 2012, Cyprus.
5/2012	Keynote speaker, 43rd Interface meeting, Rice University, Houston, Texas
10/2011	Keynote speaker, Chilean Statistical Society annual conference, Pucon, Chile.
8/2011	Keynote speaker, New Zealand Annual Statistics conference, Auckland.
4/2011	Delivered invited one day course on "Statistical Learning" co-organized by Australian National University and CSIRO
8/2009	Presidents invited speaker, ISI meeting, Durban, South Africa.
7/09	Keynote speaker, useR! 2009 conference, Rennes, France.
1/09	3eme Cycle de Statistique et Probilites Appliquees, Les Diablerets, Switzerland — invited lecturer.
12/08	Keynote speaker, International Association of Statistical Computing, Yokohama, Japan.
12/08	Inaugural Pao-Lu Hsu lecturer at Peking University
8/08	Keynote speaker, KDD conference, Las Vegas.
8/08	Invited speaker, Joint statistical meetings, Denver, Colorado.
5/08	Three day invited data-mining workshop, BBVA foundation, Madrid.
8/07	Invited Speaker, Statistics in Technology and Science. Satellite meeting of ISI, Porto, Portugal.
3/07	Keynote Speaker, AI& Statistics, Puerto Rico.
9/06	Keynote Speaker, RSS 2006, Belfast, Northern Ireland.
6/06	Keynote Speaker, User-R conference, Vienna.
6/06	Keynote Speaker, 50th anniversary of the School of Economics, Erasmus University, Rotterdam.
10/05	Keynote Speaker, 5th Australian Microarray Conference, Barossa Valley.
5/05	Keynote Speaker, 11th ASMDA (Applied Stochastic Models and Data Analysis) conference, Brest, France.
2/05	Conference Keynote Speaker, First South African Data Mining Conference, Stellenbosch, South Africa.
11/04	Keynote Speaker, SAS datamining conference, Las Vegas.
8/04	Special Guest, Ecology conference, Riederalp.
11/03	Official conference guest (with Sir David Cox), 50th anniversary of the South African Statistical Association.
9/03	Plenary speaker, Italian classification society meeting, U. Bologna.
8/03	Invited speaker, ASA 2003, San Francisco.
1/03	Invited speaker, SPIE conference of "Document Retrieval and Recognition", Santa Clara, California.
8/02	Keynote speaker, "Compstat 2002", Berlin, Germany.
8/02	Invited Speaker, ASA 2002, New York.
7/02	Invited speaker at "Current Trends and Advances in Nonparametric Statistics", Hersonissos, Crete.
7/02	Invited speaker at "17th International Workshop on Statistical Modeling" in Chania, Crete.
6/02	Plenary speaker at "Multiple Classification Systems", Sardinia.
5/02	Plenary speaker, "Spring Research Conference", Michigan.
12/01	Invited speaker at "New trends in optimization and computational algorithms", Kyoto, Japan
10/01	Keynote speaker at Splus user conference, Philadelphia.
7/01	Special invited speaker at "GLM/GAM in Ecology" conference at Riederalp, Switzerland.
4/00	Invited speaker at Snobird conference, Utah; invited to speak on DNA expression arrays.

7/99	Special invited visitor of Norwegian Statistical Society, to spend 3 weeks in Oslo collaborating with young Norwegian investigators [grant covers expenses for myself and family for entire stay]
3/99	Invited speaker, Spanish Biometrics Society meeting, Mallorca, Spain.
1/99	Tutorial lecturer, American Association for Artificial Intelligence biennial meeting, Fort Lauderdale, Fl. "Boosting"
12/98	Invited speaker, International Biometrics Society meeting, Cape Town, South Africa
8/98	Plenary Speaker, Sinape. Annual Brazilian Statistical conference, Caxambu.
7/98	Keynote speaker, Australian Statistical Society Meeting, Gold Coast.
8/97	Special invited IMS keynote address "Modern Advances in Classification", Taipei, Taiwan.
12/96	Invited tutorial "From Statistics to Neural Networks", annual NIPS meeting, Denver, Colorado.
11/96	Invited speaker at memorial conference for Stefano Franscini, Acona, Switzerland.
11/96	Myrto Lefkopolou lecture and award, Harvard University.
7/96	Invited speaker at "International Modeling Conference", Orvieto, Italy.
6/96	Short course on "Modern Regression and Classification" at Applied Statistics week, University Pompeu Fabra, Barcelona.
4/96	Short course on "Modern Regression and Classification", ENAR, Richmond.
4/96	Craig lecture and award, Iowa State University.
3/96	3eme Cycle de Statistique et Probilites Appliquees, Villars, Switzerland — invited lecturer.
4/95	Invited speaker at Neural Network and Statistics workshop at Edinburgh, RSS special session at Edinburgh, and to visit Bristol and Bath in UK.
1/95	Invited short course on "Nonparametric regression and Classification", AI & Statistics workshop, Fort Lauderdale.
12/94	Invited to deliver paper at Neural Information Processing Conference, Denver.
6/94	Invited paper at "Statistics in Industry" conference at University of Tokyo, Japan.
9/93	Keynote speaker, STATCOMP 93, Wollongong, Australia.
6/93	Invited speaker, NATO ASI meeting on Neural Networks and Statistics, Les Arcs, France.
3/92	"Statistical Models in S," Interface meeting, College Station, Texas.
9/91	Keynote speaker at International Genstat meeting, Papendal, Holland.
6/91	Keynote speaker at US Classification Society Meeting, New Brunswick, NJ.
6/91	"Modelling Human Signatures," Total Least Squares Conference, Leuven, Belgium.
3/91	"Generalized Additive Models in S," International Smoothing Workshop, Heidelberg, Germany.
9/90	"Statistical Models in S," COMPSTAT, Dubrovnik, Yugoslavia.
8/90	Keynote speaker at "Generalized Linear Models" workshop at State University of New York, Stonybrook.
8/90	One-day short course at ASA meeting (Anaheim) on "Generalized Additive Models." Talk: "Confidence Sets for Nonparametric Regression" at the same meeting.
6-7/90	Visiting Professor, Summer Quarter, Stanford University. Taught 7-week course on "Generalized Additive Models."
2/90	"Statistical Models in S," First International S Conference, Wellington, New Zealand.

8/89	General Methodology lecture, ASA, Washington.
6/89	Two-day speaker, "Diagnostics Quarter," University of Minnesota.
4/89	Short course on "Generalized Additive Models," Canadian Statistical Meetings, Ottawa.
2-3/89	Three-day course on "Generalized Additive Models," Australian National University, Canberra.
8/87	"Correspondence Analysis," 4-hour tutorial (with Michael Greenacre), ASA meeting, San Francisco.
7/87	"A new algorithm for matched case-control studies with applications to additive models," 2nd International Data Analysis Meeting, Perugia, Italy.
3/87	"Generalized additive models: the additive Cox Model," Biometrics Meetings, Dallas, TX.
2/87	"Principal Profiles," Interface meeting, Philadelphia, PA.
8/86	"Generalized additive models: a GAIM analyst's toolbox," ASA annual meetings, Chicago, Illinois.
3/86	"Generalized additive models; some applications," Biometric Society meetings, Atlanta, Georgia.
9/85	"Generalized additive models: introduction and applications." Second international conference on generalized linear models, Lancaster, England.
8/85	"Principal Curves and Surfaces," ASA annual meetings, Las Vegas, Arizona.
6/85	" Non-Parametric Logistic Regression," South African Statistical Association meeting, University of the Western Cape, Cape Town."
6/84	"Principal Curves and Surfaces"— New Methods in Multivariate Statistics, AMS summer conference, Brunswick, Maine (organized by P. Huber, P. Diaconis and P. Bickel).
4/84	"Non-parametric Logistic Regression," Department of Mathematics, Imperial College, London, England.

Teaching

10/2017	Five lectures on "Statistical Learning" taught to European physicists, organized by University of Padua.
2014-	Developed a 14 hour MOOC called "Statistical Learning" with Rob Tibshirani. So far has had 180,000 registrations (with about 12% completing the entire course.
2001-2017	"Statistical Learning and Data Mining". Two day public short course taught twice a year (with R. Tibshirani). Currently on version IV.
1996-2000	"Modern Regression and Classification". Two day public short course taught twice a year (with R. Tibshirani)
9/94 -	Graduate and undergraduate teaching at Stanford University.
8/92	One-semester honors course on "Computer Intensive Methods" at University of Cape Town.
8/80	One-day short course at ASA meeting, Anaheim, on "Generalized Additive Models."
6-7/90	Visiting Professor, Summer Quarter, Stanford University. Taught 7-week course on "Generalized Additive Models."
4/89	Short course on "Generalized Additive Models," Canadian Statistical Meetings, Ottawa.
2-3/89	Invited 3-day course on "Generalized Additive Models," Australian National University, Canberra.
2/80–6/80	One-semester lecture course on Survival Analysis in the Honors program at the University of Cape Town.

1/76–12/76 Rhodes University, Grahamstown, South Africa. Junior Lecturer in Department of Mathematical Statistics. Lectured the undergraduate one year course on Business Mathematics and Statistics.

Books

[1] Trevor Hastie and R. Tibshirani. *Generalized Additive Models*. Chapman and Hall, 1990.

[2] J. Chambers and Trevor Hastie. *Statistical Models in S*. Wadsworth/Brooks Cole, Pacific Grove, California, 1991.

[3] T. Hastie, R. Tibshirani, and J. Friedman. *The Elements of Statistical Learning: Prediction, Inference and Data Mining*. Springer Verlag, New York, 2001.

[4] T. Hastie, R. Tibshirani, and J. Friedman. *The Elements of Statistical Learning: Prediction, Inference and Data Mining*. Springer Verlag, New York, second edition, 2009.

[5] Gareth James, Daniela Witten, Trevor Hastie, and Rob Tibshirani. *An Introduction to Statistical Learning with Applications in R*. Springer Texts in Statistics. Springer, New York, 2013.

[6] Trevor Hastie, Robert Tibshirani, and Martin Wainwright. *Statistical Learning with Sparsity: the Lasso and Generalizations*. Chapman and Hall, CRC Press, 2015.

[7] Bradley Efron and Trevor Hastie. *Computer Age Statistical Inference; Algorithms, Evidence and Data Science*. Cambridge University Press, July 2016.

Refereed Journal Articles

[1] Trevor Hastie. A closer look at the deviance. *American Statistician*, 41, 1985.

[2] Trevor Hastie and R. Tishirani. Generalized additive models (with discussion). *Statistical Science*, 1, 1986.

[3] Trevor Hastie and Robert Tibshirani. Non-parametric logistic and proportional odds regression. *Applied Statistics*, 36:260–276, 1987.

[4] Trevor Hastie and Tibshirani. Local likelihood estimation. *Journal of the American Statistical Association*, 82, 1987.

[5] Trevor Hastie and M. Greenacre. The geometric interpretation of correspondence analysis. *Journal of the American Statistical Association*, 82, 1987.

[6] Trevor Hastie and R. Tibshirani. Generalized additive models; some applications. *Journal of the American Statistical Association*, 82, 1987.

[7] Trevor Hastie, J. Botha, and C. Schnitzler. Regression with an ordered categorical response. *Statistics in Medicine*, 8, 1989.

[8] Trevor Hastie and W. Stuetzle. Principal curves. *Journal of the American Statistical Association*, 84(406):502–516, 1989.

[9] A. Buja, Trevor Hastie, and R. Tibshirani. Linear smoothers and additive models (with discussion). *Annals of Statistics*, 17:453–555, 1989.

[10] Trevor Hastie and R. Tibshirani. A method for exploring the nature of covariate effects in the proportional hazards model. *Biometrics*, 46, 1990.

[11] E. Kishon and Trevor Hastie. 3-d curve matching using splines. *J. Robotic Systems*, 8(6), 1991.

[12] T. Hastie, J. Fan, and E. Kishon. A model for signature verification. U.S. Patent 5,111,512, 1992.

[13] Trevor Hastie, W. Nelson, and W Turin. Statistical methods for online signature verification. *International Journal of Pattern Recognition and Artificial Intelligence*, 1992.

[14] Trevor Hastie, L. Clark, L. Psota-Kelty, D. Sinclair, and J. Rauchut. Sources of particle contamination in an ic manufacturing environment. *Aerosol Science and Technology*, 16:43–50, 1992.

[15] Trevor Hastie, L. Sleeper, and R. Tibshirani. Flexible covariate effects in the Cox model. *Breast Cancer Research and Treatment*, 22:241–250, 1992. (special issue).

[16] Trevor Hastie and Robert Tibshirani. Varying coefficients models (with discussion). *J. Royal Statist. Soc. (Series B)*, 55:757–796, 1993.

[17] Trevor Hastie and C. Loader. Local regression: Automatic kernel carpentry (with discussion). *Statistical Science*, 8:120–143, 1993.

[18] Trevor Hastie, R. Tibshirani, and A. Buja. Flexible discriminant analysis by optimal scoring. *Journal of the American Statistical Association*, 89:1255–1270, 1994.

[19] T. Hastie and R. Tibshirani. Discriminant analysis by gaussian mixtures. *J. Royal Statist. Soc. (Series B)*, 58:155–176, 1996.

[20] Trevor Hastie, A. Buja, and R. Tibshirani. Penalized discriminant analysis. *Annals of Statistics*, 23:73–102, 1995.

[21] Charles B. Roosen and Trevor J. Hastie. Automatic smoothing spline projection pursuit. *Journal of Computational and Graphical Statistics*, 3:235–248, 1994.

[22] T. Hastie and R. Tibshirani. Generalized additive models in medical research. *Statistics Methods in Medical Research*, 4:187–196, 1995.

[23] T. Hastie and R. Tibshirani. Discriminant adaptive nearest neighbor classification. *IEEE Pattern Recognition and Machine Intelligence*, 18:607–616, 1996.

[24] T. Hastie. Pseudosplines. *Journal of the Royal Statistical Society, Series B*, 58:379–396, 1995.

[25] T. Hastie and R. Tibshirani. Generalized additive models. In S. Kotz and C. Reid, editors, *Encyclopaedia of the Statistical Sciences*, volume 4, pages 187–196. Elsevier, 1995.

[26] T. Hastie. *Encyclopaedia of Biostatistics*, chapter Neural Networks. John Wiley, 1998.

[27] T. Hastie, R. Tibshirani, and A. Buja. Flexible discriminant and mixture models. In J. Kay and M. Titterington, editors, *Statistics and Artificial Neural Networks*. Oxford University Press, 1998.

[28] G. James and T. Hastie. Error coding and pacts. *Journal of Computational and Graphical Statistics*, 1998.

[29] T. Hastie and R. Tibshirani. Classification by pairwise coupling. *Annals of Statistics*, 26(2), 1998.

[30] T. Hastie and P. Simard. Metrics and models for handwritten character recognition. *Statistical Science*, 13(1):54–65, 1998.

[31] T. Hastie and R. Tibshirani. Bayesian backfitting. *Statistical Science (with discussion)*, 15(3):193–223, 2000.

[32] T. Hastie, D. Ikeda, and R. Tibshirani. On the detection of mammographc masses. *Journal of Computational and Graphical Statistics*, 8(3):531–543, 1999.

[33] T. Wu, S. Schmidler, T. Hastie, and D. Brutlag. Regression analysis of multiple protein structures. *J. Computational Biology*, 5(3):585–95, 1998.

[34] J. Friedman, T. Hastie, and R. Tibshirani. Additive logistic regression: a statistical view of boosting (with discussion). *Annals of Statistics*, 28:337–307, 2000.

[35] G. James, T. Hastie, and C. Sugar. A principal component models for sparse functional data. *Biometrika*, 87:587–602, 2000.

[36] Gareth James and Trevor Hastie. Functional linear discriminant analysis for irregularly sampled curves. *Journal of the Royal Statistical Society, Series B*, 63:533–550, 2001.

[37] T. Hastie, R. Tibshirani, M. Eisen, A. Alizadeh, R. Levy, L. Staudt, D. Botstein, and P. Brown. "Gene shaving" as a method for identifying distinct sets of genes with similar expression patterns. *Genome Biology*, 1(2):1–21, 2000.

[38] T. Hastie, R. Tibshirani, D. Botstein, and P. Brown. Supervised harvesting of expression trees. *Genome Biology*, 2(1):1–12, 2001.

[39] R. Tibshirani, G. Walther, and T. Hastie. Estimating the number of clusters in a dataset via the gap statistic. *Journal of the Royal Statistical Society, B*, 63:411–423, 2001.

[40] Robert Tibshirani, Trevor Hastie, Balasubramaniam Narasimhan, Michael Eisen, Gavin Sherlock, Pat Brown, and David Botstein. Exploratory screening of genes and clusters from microarray experiments. *Statistica Sinica*, 12:47–59, 2002.

[41] Olga Troyanskaya, Michael Cantor, Gavin Sherlock, Pat Brown, Trevor Hastie, Robert Tibshirani, David Botstein, and Russ B. Altman. Missing value estimation methods for dna microarrays. *Bioinformatics*, 17(6):520–525, 2001.

[42] Antoine Guisan, Thomas Edwards, and Trevor Hastie. Generalized linear and generalized additive models in studies of species distributions: setting the scene. *Ecological Modelling*, 157:89–100, 2002.

[43] Robert Tibshirani, Trevor Hastie, Balasubramanian Narasimhan, and Gilbert Chu. Diagnosis of multiple cancer types by shrunken centroid of gene expression. *Proceedings of the National Academy of Sciences*, 99, 2002.

[44] Eva. Cantoni and Trevor Hastie. Degrees-of-freedom tests for smoothing splines. *Biometrika*, 89(2):251–263, 2002.

[45] T. Yee and T. Hastie. Reduced rank multinomial models. *Statistical Modelling*, 3:15–41, 2003.

[46] Trevor Hastie, Rob Tibshirani, and Jerome Friedman. Note on "Comparison of model selection for regression" by Vladimir Cherkassky and Yunqian Ma. *Neural Comput*, 15(7):1477–1480, Jul 2003. Comment.

[47] Mu Zhu and Trevor Hastie. Feature extraction for non-parametric discriminant analysis. *Journal of Computational and Graphical Statistics*, 12(1), 2003.

[48] Brad Efron, Trevor Hastie, Iain Johnstone, and Robert Tibshirani. Least angle regression. *Annals of Statistics*, 32(2):407–499, 2004. (with discussion).

[49] Francesca Dominici, Aidan McDermott, and Trevor Hastie. Semi-parametric regression with applications in time series studies for air pollution and mortality. *Journal of the American Statistical Associaition*, 99(468):938–948, 2005.

[50] Ji Zhu and Trevor Hastie. Classification of expression arrays by penalized logistic regression. *Biostatistics*, 5(3):427–443, 2004.

[51] Trevor Hastie and Rob Tibshirani. Efficient quadratic regularization for expression arrays. *Biostatistics*, 5(3):329–340, 2004.

[52] Saharon Rosset, Ji Zhu, and Trevor Hastie. Boosting as a regularized path to a maximum margin classifier. *JMLR*, 5:941–973, August 2004.

[53] Robert Tibshirani, Trevor Hastie, Balasubramanian Narasimhan, Scott Soltys, Gongyi Shi, Albert Koong, and Quynh-Thu Le. Sample classification from protein mass spectrometry, by 'peak probability contrasts'. *Bioinformatics*, 20(17):3034–44, 2004.

[54] Trevor Hastie, Saharon Rosset, Robert Tibshirani, and Ji Zhu. The entire regularization path for the support vector machine. *Journal of Machine Learning Research*, (5):1391–1415, 2004.

[55] Mu Zhu, Trevor Hastie, and Guenther Walther. On model formulation in constrained ordination analysis. *Ecological Modelling*, 187(4):524–536, 2005.

[56] Hui Zou and Trevor Hastie. Regression shrinkage and selection via the elastic net. *JRSS B*, 67(2):301–320, 2005.

[57] Hui Zou, Trevor Hastie, and Rob Tibshirani. Sparse principal component analysis. *Journal of Computational and Graphical Statistics*, 15(2):265–286, 2006.

[58] Eric Bair, Trevor Hastie, Debashis Paul, and Robert Tibshirani. Prediction by supervised principal components. *Journal of the American Statistical Association*, 101:119–137, 2006.

[59] Dirk Ormoneit, Michael Black, Trevor Hastie, and Hedvig Kjellström. Representing cyclic human motion using functional analysis. *Image and Vision Computing*, 23(14):1264–1276, 2005.

[60] John Leathwick, D. Rowe, J. Richardson, Jane Elith, and Trevor Hastie. Using multivariate adaptive regression splines to predict the distributions of new zealand's freshwater diadromous fish. *Freshwater Biology*, 50:2034–2051, 2005.

[61] Ji Zhu and Trevor Hastie. Kernel logistic regression and the import-vector machine. *Journal of Computational and Graphical Statistics*, 14(1):185–205, 2005.

[62] J. Leathwick, J. Elith, M. Francis, T. Hastie, and P. Taylor. Variation in demersal fish species richness in the oceans surrounding new zealand: an analysis using boosted regression trees. *Marine Ecology Progress Series*, 2006.

[63] Mee Young Park, Trevor Hastie, and Robert Tibshirani. Averaged gene expressions for regression. *Biostatistics*, 8:212–217, 2007.

[64] Yaqian Guo, Trevor Hastie, and Robert Tibshirani. Regularized linear discriminant analysis and its application in microarrays. *Biostatistics*, 8:86–100, 2007.

[65] John Leathwick, Jane Elith, and Trevor Hastie. Comparative performance of generalized additive models and multivariate adaptive regression splines for statistical modelling of species distributions. *Ecological Modelling*, 199:188–196, 2006.

[66] Robert Tibshirani and Trevor Hastie. Outlier sums for differential gene expression analysis. *Biostatistics*, 8(1):2–8, Jan 2007.

[67] Mee-Young Park and Trevor Hastie. An l1 regularization path for generalized linear models. *J. Royal Statistical Society B*, 69(4):659–677, 2007.

[68] Mee-Young Park and Trevor Hastie. Penalized logistic regression for detecting gene interactions. *Biostatistics*, 9:30–50, 2008. originally published online on April 11, 2007.

[69] Hui Zou, Trevor Hastie, and Robert Tibshirani. On the degrees of freedom of the lasso. *Annals of Statistics*, 35(5):2173–2192, 2007.

[70] Jerome Friedman, Trevor Hastie, Holger Hoefling, and Robert Tibshirani. Pathwise coordinate optimization. *Annals of Applied Statistics*, 2(1):302–332, 2007.

[71] Trevor Hastie, Jonathan Taylor, Robert Tibshirani, and Guenther Walther. Forward stagewise regression and the monotone lasso. *Electron. J. Statist.*, 1:1–29, 2007.

[72] Ping Li, Trevor Hastie, and Ken Church. Nonlinear estimators and tail bounds for dimension reduction in l1 using cauchy random projections. *Journal of Machine Learning Research*, 8:2497–2532, 2007.

[73] Jerome Friedman, Trevor Hastie, and Robert Tibshirani. Sparse inverse covariance estimation with the graphical lasso. *Biostatistics*, 9:432–441, 2008.

[74] Robert Tibshirani and Trevor Hastie. Margin trees for high-dimensional classification. *Journal of Machine Learning Research*, 8:637–652, 2007.

[75] Gill Ward, Trevor Hastie, Simon Barry, Jane Elith, and John Leathwick. Presence-only data and the em algorithm. *Biometrics*, 65(2):554–563, 2009.

[76] Debashis Paul, Eric Bair, Trevor Hastie, and Robert Tibshirani. "Pre-conditioning" for feature selection and regression in high-dimensional problems. *Annals of Statistics*, 36(4):1595–1618, 2008.

[77] Trevor Hastie, Jonathan Taylor, Robert Tibshirani, and Guenther Walther. Forward stagewise regression and the monotone lasso. *Electronic Journal of Statistics*, 1:1–29, 2007.

[78] John Leathwick, Jane Elith, W. Chadderton, D. Rowe, and Trevor Hastie. Dispersal, disturbance and the contrasting biogeographies of new zealand's diadromous and non-diadromous fish species. *Journal of Biogeography*, pages 1–17, 2008.

[79] Jane Elith, John Leathwick, and Trevor Hastie. A working guide to boosted regression trees. *Journal of Animal Ecology*, 77:802–813, 2008.

[80] Hui Zou, Ji Zhu, and Trevor Hastie. New multicategory boosting algorithms based on multicategory fisher-consistent losses. *Annals of Applied Statistics*, 2(4):1290–1306, 2008.

[81] Daniela Witten, Rob Tibshirani, and Trevor Hastie. A penalized matrix decomposition with applications to sparse canonical correlation analysis and principal components. *Biostatistics*, 10:515–534, 2009.

[82] Jerome Friedman, Trevor Hastie, and Robert Tibshirani. Regularization paths for generalized linear models via coordinate descent. *Journal of Statistical Software*, 33(1):1–22, 2010.

[83] T. Wu, Y. Chen, T. Hastie, E. Sobel, and K. Lange. Genome-wide association analysis by penalized logistic regression. *Bioinformatics*, 25(6):714–721, March 2009.

[84] Jane Elith, Steven Phillips, Trevor Hastie, Miroslav Dudik, Yung En Chee, and Colin Yates. A statistical explanation of maxent for ecologists. *Diversity and Distribution*, November 2010.

[85] Rahul Mazumder, Trevor Hastie, and Rob Tibshirani. Spectral regularization algorithms for learning large incomplete matrices. *Journal of Machine Learning Research*, 11:2287–2322, 2010.

[86] Michael Greenacre and Trevor Hastie. Dynamic visualization of statistical learning algorithms in the context of high-dimensional textual data. *Journal of Web Semantics*, 8(2):163–168, 2010.

[87] Noah Simon, Jerome Friedman, Trevor Hastie, and Rob Tibshirani. Regularization paths for cox's proportional hazards model via coordinate descent. *Journal of Statistical Software*, 39(5):1–13, 2011.

[88] Rahul Mazumder, Jerome Friedman, and Trevor Hastie. *Sparsenet*: Coordinate descent with non-convex penalties. *Journal of the American Statistical Association*, 106(495):1125–1138, 2011.

[89] Gen Nowak, Trevor Hastie, Jonathan Pollack, and Robert Tibshirani. A fused-lasso latent feature model for analyzing multi-sample acgh data. *Biostatistics*, 12(4):776–791, 2011.

[90] Line Clemmensen, Trevor Hastie, Daniela Witten, and Bjarne Ersboll. Sparse discriminant analysis. *Technometrics*, 53(4):406–413, 2011.

[91] Rob Tibshirani, Jacob Bien, Jerome Friedman, Trevor Hastie, Noah Simon, Jonathan Taylor, and Ryan Tibshirani. Strong rules for discarding predictors in lasso-type problems. *J. Royal Statistical Society B*, 74, 2012.

[92] Rahul Mazumder and Trevor Hastie. Exact covariance thresholding into connected components for large-scale graphical models. *Journal of Machine Learning Research*, 13:723–736, March 2012.

[93] Rahul Mazumder and Trevor Hastie. The graphical lasso: New insights and alternatives. *Electronic Journal of Statistics*, 6:2125–2149, 2012.

[94] Trevor Hastie and Will Fithian. Inference from presence-only data; the ongoing controversy. *Ecography*, 36:864–867, 2013. (Editor's Choice).

[95] Jianqiang Wang and Trevor Hastie. Boosted varying-coefficient regression models for product demand prediction. *Journal of Computational and Graphical Statistics*, 23(2):361–382, 2014.

[96] Will Fithian and Trevor Hastie. Finite-sample equivalence in statistical models for presence-only data. *Annals of Applied Statistics*, 7(4):1917–1939, 2013.

[97] Jason Lee and Trevor Hastie. Learning the structure of mixed graphical models. *Journal of Computational and Graphical Statistics*, 24(1):230–253, 2015.

[98] Julia Viladomat, Rahul Mazumder, Alex McInturff, Douglas McCauley, and Trevor Hastie. Assessing the significance of global and local correlations under spatial autocorrelation; a nonparametric approach. *Biometrics*, 70(2), June 2014.

[99] David I. Warton, Bill Shipley, and Trevor Hastie. Cats regression — a model-based approach to studying trait-based community assembly. *Methods in Ecology and Evolution*, 6(4):389–398, 2015.

[100] Michael Lim and Trevor Hastie. Learning interactions via hierarchical group-lasso regularization. *Journal of Computational and Graphical Statistics*, 24(3):627–654, 2015.

[101] Will Fithian and Trevor Hastie. Local case-control sampling: Efficient subsampling in imbalanced data sets. *Annals of Statistics*, 42(5):1693–1724, 2014.

[102] William Fithian, Jane Elith, Trevor Hastie, and David Keith. Bias correction in species distribution models: Pooling survey and collection data for multiple species. *Methods for Ecology and Evolution*, 6(4):424–438, 2015. first published online Oct 2014.

[103] Stefan Wager, Trevor Hastie, and Bradley Efron. Confidence intervals for random forests: the jacknife and the infinitesimal jacknife. *Journal of Machine Learning Research*, 15:1625–1651, 2014.

[104] Lucas Jansen, Will Fithian, and Trevor Hastie. Effective degrees of freedom: a flawed metaphor. *Biometrika*, 102(2):479–485, 2015.

[105] Trevor Hastie, Rahul Mazumder, Jason Lee, and Reza Zadeh. Matrix completion and low-rank SVD via fast alternating least squares. *Journal of Machine Learning Research*, 16:3367–3402, 2015.

[106] Ian W. Renner, Jane Elith, Adrian Baddeley, William Fithian, Trevor Hastie, Steven J. Phillips, Gordana Popovic, and David I. Warton. Point process models for presence-only analysis. *Methods in Ecology and Evolution*, 6(4):366–379, 2015.

[107] Scott Powers, Trevor Hastie, and Rob Tibshirani. Customized training with an application to mass spectrometric imaging of cancer tissue. *Annals of Applied Statistics*, 9(4):1709–1725, 2015.

[108] Jingshu Wang, Qingyuan Zhao, Trevor Hastie, and Art B. Owen. Confounder adjustment in multiple hypothesis testing. *Ann. Statist.*, 45(5):1863–1894, 2017.

[109] Nicholas Boyd, Trevor Hastie, Stephen Boyd, Benjamin Recht, and Michael Jordan. Saturating splines and feature selection. *Journal of Machine Learning Research*, 18(197):1–32, 2018.

[110] Scott Powers, Trevor Hastie, and Rob Tibshirani. Nuclear penalized multinomial regression with an application to predicting at-bat outcomes in baseball. *Statistical Modeling*, 18(5-6):1–23, 2018.

[111] A. Groll, T. Hastie, and G. Tutz. Selection of effects in Cox frailty models by regularization methods. *Biometrics*, 73(3):846–856, Sep 2017.

[112] Scott Powers, Junyang Qian, Kenneth Jung, Alejandro Schuler, Nigam Shah, Trevor Hastie, and Robert Tibshirani. Some methods for heterogeneous treatment effect estimation in high-dimensions. *Statistics in Medicine*, March 2018.

Refereed Medical Journal Articles as Statistical Collaborator

[1] B. Arndt, P. Botha, and T. Hastie. Survey of antiobiotic resistance in gram-negative bacteria using the cross product ratio. *Zbl. Bakt. Hyg., I. Abt. Orig A*, 243:483–489, 1979.

[2] L M Irwig, R S du Toit, G K Sluis-Cremer, A Solomon, R G Thomas, P P Hamel, I Webster, and T Hastie. Risk of asbestosis in crocidolite and amosite mines in South Africa. *Ann N Y Acad Sci*, 330:35–52, 1979. Comparative Study.

[3] Trevor Hastie, P. Commerford, and W. Beck. Closed mitral valvotomy: Actuarial analysis of results in 654 patients over 12 years and analysis of preoperative predictors of long-term survival. *Annals of Thoracic Surgery*, 33, 1982.

[4] Allan Herman and Trevor Hastie. An analysis of gestational age, neonatal size and neonatal death using nonparametric logistic regression. *Journal of Clinical Epidemiology*, 43, 1990.

[5] P.A. Heidenreich, K.M. McDonald, T. Hastie, B. Fadel, V. Hagan, B.K. Lee, and M.A. Hlatky. Meta-analysis of trials comparing beta-blockers, calcium antagonists, and nitrates for stable angina. *JAMA*, 281(20):1927–36, 1999.

[6] M.K. Gould, A.D. Dembitzer, T.J. Doyle, R.L. Hastie, and A.M. Garber. Low molecular weight heparins compared with unfractionated heparin for the treatment of acute deep vein thrombosis: A meta-analysis of randomized controlled trials. *Annals of Internal Medicine*, 130:800–809, 1999.

[7] Laura Bachrach, Trevor Hastie, May-Choo Wang, Balasubramaniam Narasimhan, and Robert Marcus. Bone mineral acquisition in healthy asian, hispanic, black and caucasian youth. a longitudinal study. *J. Clin. Endocrinol. Metab.*, 84:4702–4712, 1999.

[8] P A Heidenreich, A Go, K A Melsop, T Alloggiamento, K M McDonald, V Hagan, T Hastie, and M A Hlatky. Prediction of risk for patients with unstable angina. *Evid Rep Technol Assess (Summ)*, (31):1–3, Aug 2000.

[9] S. Eliaz, C. Blazy, L. Freund, T. Hastie, and A. Riess. Brain anaotomy, gender and ig in children and adolescents with fragile-x syndrome. *Brain*, 124:1610–1618, 2001.

[10] Therese Sorlie, C. Perou, Robert Tibshirani, Turid Aas, Stephanie Geisler, Hilde Johnsen, Trevor Hastie, Michael B. Eisen, Matt van de Rijn, Stefanie S. Jeffrey, Thor Thorsen, Hanne Quist, John C. Matese, Patrick O. Brown, David Botstein, Per Eystein Lonninngg, and Anne-Lise Borresen-Dale. Gene expression patterns of breast carcinomas distinguish tumor subclasses with clinical implications. *Proceedings of the National Academy of Sciences*, 98:10869–10874, 2001.

[11] Fleischmann D., Hastie TJ., Dannegger FC., Paik DS., Tillich M., Zarins CK., and Rubin GD. Quantitative determination of age-related geometric changes in the normal abdominal aorta. *J. Vascular Surgery*, 33(1):97–105, Jan 2001.

[12] S. Chaparro, Gao S., Perlroth M., Montoya J., Hastie T., Miller JL., Oyer PE., and Schroeder J. Posttransplantation lymphoproliferative disease in heart and heart-lung transplant recipients: thirty years experience at our hospital. *J Heart Lung Transplant*, 20(2):258, Feb 2001.

[13] Sandip Biswal, Trevor Hastie, Thomas P Andriacchi, Gabrielle A Bergman, Michael F Dillingham, and Philipp Lang. Risk factors for progressive cartilage loss in the knee: a longitudinal magnetic resonance imaging study in forty-three patients. *Arthritis Rheum*, 46(11):2884–2892, Nov 2002.

[14] Hongjuan Zhao, Trevor Hastie, Dr Michael L Whitfield, Prof Anne-Lise Borresen-Dale, and Dr. Stefanie S Jeffrey. Optimization and evaluation of t7 based rna linear amplification protocols for cdna microarray analysis. *BMC Genomics*, 3(31), October 2002.

[15] Therese Sorlie, Robert Tibshirani, Joel Parker, Trevor Hastie, J S Marron, Andrew Nobel, Shibing Deng, Hilde Johnsen, Robert Pesich, Stephanie Geisler, Janos Demeter, Charles M Perou, Per E Lonning, Patrick O Brown, Anne-Lise Borresen-Dale, and David Botstein. Repeated observation of breast tumor subtypes in independent gene expression data sets. *Proc Natl Acad Sci U S A*, 100(14):8418–8423, Jul 2003.

[16] Tomasz A Timek, David T Lai, Frederick Tibayan, David Liang, George T Daughters, Paul Dagum, Mary K Zasio, Sidney Lo, Trevor Hastie, Neil B Jr Ingels, and D Craig Miller. Ischemia in three left ventricular regions: Insights into the pathogenesis of acute ischemic mitral regurgitation. *J Thorac Cardiovasc Surg*, 125(3):559–569, Mar 2003.

[17] Marci E Schaner, Douglas T Ross, Giuseppe Ciaravino, Therese Sorlie, Olga Troyanskaya, Maximilian Diehn, Yan C Wang, George E Duran, Thomas L Sikic, Sandra Caldeira, Hanne Skomedal, I-Ping Tu, Tina Hernandez-Boussard, Steven W Johnson, Peter J O'Dwyer, Michael J Fero, Gunnar B Kristensen, Anne-Lise Borresen-Dale, Trevor Hastie, Robert Tibshirani, Matt van de Rijn, Nelson N Teng, Teri A Longacre, David Botstein, Patrick O Brown, and Branimir I Sikic. Gene expression patterns in ovarian carcinomas. *Mol Biol Cell*, 14(11):4376–4386, Nov 2003. Comparative Study.

[18] David Hessl, Bronwyn Glaser, Jennifer Dyer-Friedman, Christine Blasey, Trevor Hastie, Megan Gunnar, and Allan L. Reiss. Cortisol and behavior in fragile x syndrome. *Psychoneuroendocrinology*, 27(7):855–872, 2002.

[19] Shao-Zhou Gao, Sandra V Chaparro, Mark Perlroth, Jose G Montoya, Joan L Miller, Sue DiMiceli, Trevor Hastie, Phillip E Oyer, and John Schroeder. Post-transplantation lymphoproliferative disease in heart and heart-lung transplant recipients: 30-year experience at Stanford University. *J Heart Lung Transplant*, 22(5):505–514, May 2003.

[20] Tomasz A Timek, Sten L Nielsen, David T Lai, Frederick Tibayan, David Liang, George T Daughters, Philip Beineke, Trevor Hastie, Neil B Jr Ingels, and D Craig Miller. Mitral annular size predicts Alfieri stitch tension in mitral edge-to-edge repair. *J Heart Valve Dis*, 13(2):165–73, 2004.

[21] Pantaleo Romanelli, Gary Heit, Bruce C Hill, Alli Kraus, Trevor Hastie, and Helen M Bronte-Stewart. Microelectrode recording revealing a somatotopic body map in the subthalamic nucleus in humans with Parkinson disease. *J Neurosurg*, 100(4):611–8, 2004.

[22] Olaug Kristin Rodningen, Jens Overgaard, Jan Alsner, Trevor Hastie, and Anne-Lise Borresen-Dale. Microarray analysis of the transcriptional response to single or multiple doses of ionizing radiation in human subcutaneous fibroblasts. *Radiother Oncol*, 77(3):231–40, 2005.

[23] Ana Lisa Taylor Tavares, Gregory S X E Jefferis, Mandy Koop, Bruce C Hill, Trevor Hastie, Gary Heit, and Helen M Bronte-Stewart. Quantitative measurements of alternating finger tapping in Parkinson's disease correlate with UPDRS motor disability and reveal the improvement in fine motor control from medication and deep brain stimulation. *Mov Disord*, 20(10):1286–98, 2005.

[24] Lauren B Gerson, Nighat Ullah, Trevor Hastie, George Triadafilopoulos, and Mary Goldstein. Patient-derived health state utilities for gastroesophageal reflux disease. *Am J Gastroenterol*, 100(3):524–33, 2005.

[25] Chi JT, Wang Z, Nuyten DS, Rodriguez EH, Schaner ME, Salim A, Wang Y, Kristensen GB, Helland A, Borresen-Dale AL, Giaccia A, Longaker MT, Hastie T, Yang GP, Vijver MJ, and Brown PO. Gene Expression Programs in Response to Hypoxia: Cell Type Specificity and Prognostic Significance in Human Cancers. *PLoS Med*, 3(3):e47, 2006.

[26] Howard Y Chang, Dimitry S A Nuyten, Julie B Sneddon, Trevor Hastie, Robert Tibshirani, Therese Sorlie, Hongyue Dai, Yudong D He, Laura J van't Veer, Harry Bartelink, Matt van de Rijn, Patrick O Brown, and Marc J van de Vijver. Robustness, scalability, and integration of a wound-response gene expression signature in predicting breast cancer survival. *Proc Natl Acad Sci U S A*, 102(10):3738–43, 2005.

[27] Lauren B Gerson, Nighat Ullah, Trevor Hastie, and Mary K Goldstein. Does cancer risk affect health-related quality of life in patients with Barrett's esophagus? *Gastrointest Endosc*, 65(1):16–25, Jan 2007.

[28] Jen-Tsan Chi, Edwin H Rodriguez, Zhen Wang, Dimitry S A Nuyten, Sayan Mukherjee, Matt van de Rijn, Marc J van de Vijver, Trevor Hastie, and Patrick O Brown. Gene expression programs of human smooth muscle cells: tissue-specific differentiation and prognostic significance in breast cancers. *PLoS Genet*, 3(9):1770–84, 2007.

[29] Martin Buess, Dimitry Sa Nuyten, Trevor Hastie, Torsten Nielsen, Robert Pesich, and Patrick O Brown. Characterization of heterotypic interaction effects in vitro to deconvolute global gene expression profiles in cancer. *Genome Biol*, 8(9):R191, 2007.

[30] A. Tutt, A. Wang, C. Rowland, C. Gillett, K. Lau, K. Chew, H. Dai, S. Kwok, K. Ryder, H. Shu, R. Springall, P. Cane, B. McCallie, L. Kam-Morgan, S. Anderson, H. Buerger, J. Gray, J. Bennington, L. Esserman, T. Hastie, S. Broder, J. Sninsky, B. Brandt, and F. Waldman. Risk estimation of distant metastasis in node-negative, estrogen receptor-positive breast cancer patients using an RT-PCR based prognostic expression signature. *BMC Cancer*, 8:339, 2008.

[31] D. S. Nuyten, T. Hastie, J. T. Chi, H. Y. Chang, and M. J. van de Vijver. Combining biological gene expression signatures in predicting outcome in breast cancer: An alternative to supervised classification. *Eur. J. Cancer*, 44:2319–2329, Oct 2008.

[32] K. C. Jensen, D. A. Turbin, S. Leung, M. A. Miller, K. Johnson, B. Norris, T. Hastie, S. McKinney, T. O. Nielsen, D. G. Huntsman, C. B. Gilks, and R. B. West. New cutpoints to identify increased HER2 copy number: analysis of a large, population-based cohort with long-term follow-up. *Breast Cancer Res. Treat.*, 112:453–459, Dec 2008.

[33] O. K. Rdningen, A. L. Brresen-Dale, J. Alsner, T. Hastie, and J. Overgaard. Radiation-induced gene expression in human subcutaneous fibroblasts is predictive of radiation-induced fibrosis. *Radiother Oncol*, 86:314–320, Mar 2008.

[34] A. H. Beck, C. H. Lee, D. M. Witten, B. C. Gleason, B. Edris, I. Espinosa, S. Zhu, R. Li, K. D. Montgomery, R. J. Marinelli, R. Tibshirani, T. Hastie, D. M. Jablons, B. P. Rubin, C. D. Fletcher, R. B. West, and M. van de Rijn. Discovery of molecular subtypes in leiomyosarcoma through integrative molecular profiling. *Oncogene*, Nov 2009.

[35] S. Suthram, J. T. Dudley, A. P. Chiang, R. Chen, T. J. Hastie, and A. J. Butte. Network-based elucidation of human disease similarities reveals common functional modules enriched for pluripotent drug targets. *PLoS Comput. Biol.*, 6:e1000662, Feb 2010.

[36] S. S. Shen-Orr, R. Tibshirani, P. Khatri, D. L. Bodian, F. Staedtler, N. M. Perry, T. Hastie, M. M. Sarwal, M. M. Davis, and A. J. Butte. Cell type-specific gene expression differences in complex tissues. *Nat. Methods*, 7:287–289, Apr 2010.

[37] M. Mell, J. J. White, B. B. Hill, T. Hastie, and R. L. Dalman. No increased mortality with early aortic aneurysm disease. *J. Vasc. Surg.*, 56(5):1246–1251, Nov 2012.

[38] D. S. Cross, C. A. McCarty, E. Hytopoulos, M. Beggs, N. Nolan, D. S. Harrington, T. Hastie, R. Tibshirani, R. P. Tracy, B. M. Psaty, R. McClelland, P. S. Tsao, and T. Quertermous. Improved coronary risk assessment among intermediate risk patients using a clinical and biomarker based algorithm developed and validated in two population cohorts. *Curr Med Res Opin*, Oct 2012.

[39] B. A. Goldstein, T. Assimes, W. C. Winkelmayer, and T. Hastie. Detecting clinically meaningful biomarkers with repeated measurements: An illustration with electronic health records. *Biometrics*, 71(2):478–486, Jun 2015.

[40] X. Guo, V. Y. Jo, A. M. Mills, S. X. Zhu, C. H. Lee, I. Espinosa, M. R. Nucci, S. Varma, E. Forgo, T. Hastie, S. Anderson, K. Ganjoo, A. H. Beck, R. B. West, C. D. Fletcher, and M. van de Rijn. Clinically Relevant Molecular Subtypes in Leiomyosarcoma. *Clin. Cancer Res.*, 21(15):3501–3511, Aug 2015.

[41] J. P. Ku, J. L. Hicks, T. Hastie, J. Leskovec, C. Re, and S. L. Delp. The mobilize center: an NIH big data to knowledge center to advance human movement research and improve mobility. *J Am Med Inform Assoc*, 22(6):1120–1125, Nov 2015.

[42] D. G. Contopoulos-Ioannidis, C. Ley, W. Wang, T. Ma, C. Olson, X. Shi, H. S. Luft, T. Hastie, and J. Parsonnet. Effect of long-term antibiotic use on weight in adolescents with acne. *J. Antimicrob. Chemother.*, 71(4):1098–1105, Apr 2016.

[43] J. J. Hughey, T. Hastie, and A. J. Butte. ZeitZeiger: supervised learning for high-dimensional data from an oscillatory system. *Nucleic Acids Res.*, 44(8):e80, May 2016.

[44] A. Mezer, A. Rokem, S. Berman, T. Hastie, and B. A. Wandell. Evaluating quantitative proton-density-mapping methods. *Hum Brain Mapp*, 37(10):3623–3635, Oct 2016.

[45] L. Hou, J. Coller, V. Natu, T. J. Hastie, and N. F. Huang. Combinatorial extracellular matrix microenvironments promote survival and phenotype of human induced pluripotent stem cell-derived endothelial cells in hypoxia. *Acta Biomater*, 44:188–199, Oct 2016.

[46] N. M. Ioannidis, J. H. Rothstein, V. Pejaver, S. Middha, S. K. McDonnell, S. Baheti, A. Musolf, Q. Li, E. Holzinger, D. Karyadi, L. A. Cannon-Albright, C. C. Teerlink, J. L. Stanford, W. B. Isaacs, J. Xu, K. A. Cooney, E. M. Lange, J. Schleutker, J. D. Carpten, I. J. Powell, O. Cussenot, G. Cancel-Tassin, G. G. Giles, R. J. MacInnis, C. Maier, C. L. Hsieh, F. Wiklund, W. J. Catalona, W. D. Foulkes, D. Mandal, R. A. Eeles, Z. Kote-Jarai, C. D. Bustamante, D. J. Schaid, T. Hastie, E. A. Ostrander, J. E. Bailey-Wilson, P. Radivojac, S. N. Thibodeau, A. S. Whittemore, and W. Sieh. REVEL: An Ensemble Method for Predicting the Pathogenicity of Rare Missense Variants. *Am. J. Hum. Genet.*, 99(4):877–885, Oct 2016.

[47] A. N. Goldstein-Piekarski, M. S. Korgaonkar, E. Green, T. Suppes, A. F. Schatzberg, T. Hastie, C. B. Nemeroff, and L. M. Williams. Human amygdala engagement moderated by early life stress exposure is a biobehavioral target for predicting recovery on antidepressants. *Proc. Natl. Acad. Sci. U.S.A.*, 113(42):11955–11960, Oct 2016.

[48] B. Jo, R. L. Findling, C. P. Wang, T. J. Hastie, E. A. Youngstrom, L. E. Arnold, M. A. Fristad, and S. M. Horwitz. Targeted use of growth mixture modeling: a learning perspective. *Stat Med*, Nov 2016.

[49] N. M. Ioannidis, J. R. Davis, M. K. DeGorter, N. B. Larson, S. K. McDonnell, A. J. French, A. J. Battle, T. J. Hastie, S. N. Thibodeau, S. B. Montgomery, C. D. Bustamante, W. Sieh, and A. S. Whittemore. FIRE: functional inference of genetic variants that regulate gene expression. *Bioinformatics*, 08 2017.

[50] L. Hou, J. J. Kim, M. Wanjare, B. Patlolla, J. Coller, V. Natu, T. J. Hastie, and N. F. Huang. Combinatorial Extracellular Matrix Microenvironments for Probing Endothelial Differentiation of Human Pluripotent Stem Cells. *Sci Rep*, 7(1):6551, Jul 2017.

[51] A. M. Sailer, P. J. Nelemans, T. J. Hastie, A. S. Chin, M. Huininga, P. Chiu, M. P. Fischbein, M. D. Dake, D. C. Miller, G. W. Schurink, and D. Fleischmann. Prognostic significance of early aortic remodeling in acute uncomplicated type B aortic dissection and intramural hematoma. *J. Thorac. Cardiovasc. Surg.*, 154(4):1192–1200, Oct 2017.

[52] A. Shcherbina, C. M. Mattsson, D. Waggott, H. Salisbury, J. W. Christle, T. Hastie, M. T. Wheeler, and E. A. Ashley. Accuracy in Wrist-Worn, Sensor-Based Measurements of Heart Rate and Energy Expenditure in a Diverse Cohort. *J Pers Med*, 7(2), May 2017.

[53] B. Jo, R. L. Findling, T. J. Hastie, E. A. Youngstrom, C. P. Wang, L. E. Arnold, M. A. Fristad, T. W. Frazier, B. Birmaher, M. K. Gill, and S. M. Horwitz. Construction of longitudinal prediction targets using semisupervised learning. *Stat Methods Med Res*, page 962280216684163, Jan 2016.

[54] Y. S. Low, A. C. Daugherty, E. A. Schroeder, W. Chen, T. Seto, S. Weber, M. Lim, T. Hastie, M. Mathur, M. Desai, C. Farrington, A. A. Radin, M. Sirota, P. Kenkare, C. A. Thompson, P. P. Yu, S. L. Gomez, G. W. Sledge, A. W. Kurian, and N. H. Shah. Synergistic drug combinations from electronic health records and gene expression. *J Am Med Inform Assoc*, 24(3):565–576, May 2017.

Published Discussions

[1] Trevor Hastie. Comment on 'Graphical Methods for Assessing Logistic Regression Models' by J. Landwehr, D. Pregibon and A. Shoemaker. *Journal of the American Statistical Association*, 79, 1984. comment.

[2] T Hastie and R. Tibshirani. Comment on 'Projection Pursuit' by P. Huber. *Annals of Statistics*, 13:435–475, 1985.

[3] Trevor Hastie and R. Tibshirani. Discussion of 'What is Projection Pursuit?' by M. Jones and R. Sibson. *Journal of the Royal Statistical Society—Series A*, 150, 1987.

[4] Trevor Hastie and R. Tibshirani. Discussion of 'Monotone Splines in Action' by J. Ramsay. *Statistical Science*, 4, 1988.

[5] T. Hastie. Discussion of 'Flexible Parsimonious Smoothing and Additive Modelling' by Friedman, J.H. and Silverman, B.W. *Technometrics*, 31:3–39, 1989.

[6] A. Buja, D. Duffy, T. Hastie, and R. Tibshirani. Discussion of "Multivariate Adaptive Regression Splines" by J. Friedman. *Annals of Statistics*, 19, 1991.

[7] Trevor Hastie and E. Kishon. Discussion of "Procrustes Methods in the Statistical Analysis of Shape" by Colin Goodall. *Journal of the Royal Statistical Society, series B*, 53, 1991.

[8] Trevor Hastie and R. Tibshirani. Discussion of "The Π Method for Estimating Multivariate Functions from Noisy Data" by Leo Breiman. *Technometrics*, 33, 1991.

[9] T. Hastie and C. Mallows. Comment on "A Statistical View of Some Chemometric Regression Tools" by J. Friedman and I. Frank. *Technometrics*, 35(2):140–143, 1993.

[10] Trevor Hastie and R. Tishirani. Discussion of "Regression Using Fractional Polynomials" by J. Royston and D. Altman. *Journal of the Royal Statistical Society—Series B*, 57:355, 1995.

[11] Trevor Hastie. Discussion of "Polynomial Splines and Their Tensor Products in Function Estimation" by C. Stone. *Annals of Statistics*, 1994.

[12] Trevor Hastie and R. Tibshirani. Discussion of "Neural Networks and Statistics" by B. Ripley. *Journal of the Royal Statistical Society—Series B*, 56:409–456, 1994.

[13] D. Donoho, I. Johnstone, G. Kerkyachairan, and D. Picard. Wavelet shrinkage; asymptopia? (with discussion). *J. Royal. Statist. Soc.*, 57:201–337, 1995.

[14] T. Hastie and R. Tibshirani. Discussion of "Polynomial splines and their Tensor Products in Extended Linear Modelling" by Stone, Hansen, Kooperberg and Truong. *Annals of Statistics*, 25(4):1371–1470, 1997.

[15] T. Hastie and R. Tibshirani. Discussion of 'Prediction Multivariate Responses in Multiple Linear Regression' by Leo Breiman and Jerome Friedman. *Journal of the Royal Statistical Society, series C*, 59:46–47, 1997.

[16] N. Crellin, T. Hastie, and I. Johnstone. Discussion of "Non-Linear Fourier Time Series Analysis for Human Brain Mapping by Functional Magnetic Resonance Imaging" by N. Lange and S. Zeger. *Applied Statistics*, 46(1):22–23, 1997.

[17] Mu Zhu and Trevor Hastie. Discussion of "Dimension Reduction and Visualization in Discriminant Analysis" by D. Cook and X. Yin. *Australian and New Zealand Journal of Statistics*, 43(2):179–185, 2001.

[18] Jerome Friedman, Trevor Hastie, Saharon Rosset, Rob Tibshirani, and Ji Zhu. Discussion of 3 Boosting papers by (1) Wenxin Jiang, (2) Gabor Lugosi and Nicolas Vayatis, and (3) Tong Zhang. *Annals of Statistics*, 32(1):102–107, 2004.

[19] Trevor Hastie and Ji Zhu. Discussion of "Support Vector Machines with applications" by Javier Moguerza and Alberto Munoz. *Statistical Science*, 21(3):352–357, 2006.

[20] Trevor Hastie. Discussion of "Boosting Algorithms: regularization, Prediction and Model Fitting" by Peter Bühlmann and Torsten Hothorn. *Statistical Science*, 22(4):513–515, 2007.

[21] Bradley Efron, Trevor Hastie, and Robert Tibshirani. Discussion of "The Dantzig Selector" by Emmanuel Candes and Terrence Tao. *Annals of Statistics*, 35:2313–2351, 2007.

[22] Daniela Witten, Trevor Hastie, and Robert Tibshirani. Discussion of "on consistency and sparsity of principal components in high dimensions" by iain johnstone and arthur lu. *Journal of the American Statistical Association*, 104(486):698–699, 2009.

[23] Jerome Friedman, Trevor Hastie, and Robert Tibshirani. Discussion of "Evidence Contrary to the Statistical View of Boosting" by David Mease and Aaron Wyner. *Journal of Machine Learning Research*, 9:175–180, 2008.

[24] Qingyuan Zhao, Charles Zheng, Trevor Hastie, and Robert Tibshirani. Discussion of "Causal inference by using invariant prediction: Identification and confidence intervals" by Jonas Peters, Pete Bühlmann and Nicolai Meinshausen. *J. Roy Statist. Soc. B*, 78:1005–1007, 2016.

Published Conference Proceedings

[1] Trevor Hastie. Generalized additive models: a gaim analyst's toolbox. In *Proceedings of the Statistical Computing Section, American Statistical Association*, 1986.

[2] Trevor Hastie and F. Little. Principal profiles. In *Proceedings of 1987 Interface Meetings, Philadelphia*, 1987.

[3] Trevor Hastie and D. Pregibon. A new algorithm for matched case—control studies with applications to additive models. In *Proceedings COMPSTAT 88, Copenhagen*, 1988.

[4] Trevor Hastie, J. Chambers, and D Pregibon. Statistical models in s. In *COMPSTAT 90, Dubrovnik, Yugoslavia*, Heidelberg, 1990. Physica Verlag.

[5] Trevor Hastie, E. Kishon, M. Clark, and J Fan. A model for signature verification. In *IEEE Proceedings: Systems, Man and Cybernetics*, 1991. Charlottesville, Virginia.

[6] Trevor Hastie, P. Simard, and E. Säckinger. Learning prototype models for tangent distance. In D. S. Touretzky G. Tesauro and T. K. Leen, editors, *Advances in Neural Information Processing Systems 7*, Cambridge, MA, 1995. MIT Press.

[7] G. James and T. Hastie. Generalizations of the bias/variance decomposition for prediction error. Technical report, Stanford University Statistics Department, 1996.

[8] T. Wu, S. Schmidler, T. Hastie, and D. Brutlag. Modelling and superposition of multiple protein structures using affine transformations: analysis of the globins. In *Pacific Symposium on Biocomputing '98*, pages 509–520. World Scientific, 1998.

[9] P. Heidenreich, K. McDonald, T. Hastie, F. Bahaa, V. Hagan, B. Lee, and M Hlatky. An evaluation of beta-blockers, calcium antagonists, nitrates, and alternative therapies for stable angina. Evidence report prepared for Agency for Healthcare Research and Quality AHRQ Publication No. 00-E003, November 1999.

[10] D. Ormoneit and T. Hastie. Optimal kernel shapes for local linear regression. In S. A. Solla, T. K. Leen, and K-R. Müller, editors, *Advances in Neural Information Processing Systems*, volume 12, 2000.

[11] Dirk Ormoneit, Hedvig Sidenbladh, Michael J. Black, and Trevor Hastie. Learning and tracking cyclic human, 2001.

[12] Ji Zhu and Trevor Hastie. Kernel logisitic regression and the import vector machine. In *Advances in Neural Information Processing Systems 14*, Cambridge, MA, 2002. MIT Press.

[13] Trevor Hastie and Robert Tibshirani. Independent component analysis through product density estimation. In *Advances in Neural Information Processing System*, volume 14. MIT Press, 2002.

[14] Saharon Rosset, Ji Zhu, and Trevor Hastie. Margin maximizing loss functions. In *Neural Information Processing Systems*, volume 16, 2003.

[15] Ji Zhu, Saharon Rosset, Trevor Hastie, and Rob Tibshirani. 1-norm support vector machines. In *Advances in Neural Information Processing Systems*, 2004.

[16] Philip Beineke, Trevor Hastie, and Shivakumar Vaithyanathan. The sentimental factor: Improving review classification via human-provided information. In *Proceedings, ACL 2004*, Barcelona, 2004.

[17] Saharon Rosset, Hui Zou, Ji Zhu, and Trevor Hastie. A method for inferring label sampling mechanisms in semi-supervised learning. In *Advances in Neural Information Processing Systems*, 2005.

[18] Trevor Hastie, Saharon Rosset, Rob Tibshirani, and Ji Zhu. The entire regularization path for the support vector machine. In *Advances in Neural Information Processing Systems*, 2005.

[19] Ping Li, Trevor Hastie, and Kenneth Church. Improving random projections using marginal information. In *Proceedings of* COLT 2006, 2006.

[20] Ping Li, Kenneth Church, and Trevor Hastie. Conditional random sampling: a sketch-based sampling technique for sparse data. In *NIPS*, 2006.

[21] Ping Li, Trevor Hastie, and Ken Church. Very sparse random projections. In *KDD*, 2006. (best student paper award).

[22] Ping Li, Ken Church, and Trevor Hastie. One sketch fits all: theory and application of conditional random sampling. In *Proceedings NIPS08*, 2008.

[23] Jason Lee and Trevor Hastie. Structure learning of mixed graphical models. In *Proceedings of the 16th International Conference on Artificial Intelligence and Statistics*, volume 31, pages 388–396. JMLR: W & CP, 2013.

[24] Michael Jordan, Kathleen Carley, Ronald Coifman, Daniel Crighton, Michael Franklin, Anna Gilbert, Alex Gray, Trevor Hastie, Piotr Indyk, Theodore Johnson, Diane Lambert, David Madigan, Michael Mahoney, F. Miller Maley, Chrsitopher Olston, Yoram Singer, Alexander Szaley, and Tong Zhang. Frontiers in massive data analysis. National Research Council, National Acadamies Press, 2013. This volume was the ouput of the committee on the analysis of massive data, chaired by Michael Jordan.

[25] Hristo S Paskov, Robert West, John C Mitchell, and Trevor Hastie. Compressive feature learning. In C.J.C. Burges, L. Bottou, M. Welling, Z. Ghahramani, and K.Q. Weinberger, editors, *Advances in Neural Information Processing Systems 26*, pages 2931–2939. Curran Associates, Inc., 2013.

[26] Hristo Paskov, Trevor Hastie, and John Mitchell. An efficient algorithm for large scale compressive feature learning. In *AISTATS*, pages 760–768, 2014.

[27] Hristo Paskov, Trevor Hastie, and John Mitchell. Fast algorithms for learning with long n-grams via suffix tree based matrix multiplication. In *Uncertainty in Artificail Intelligence*, 2015.

Unpublished Technical Reports

[1] Trevor Hastie. Principal curves and surfaces. Technical report, Stanford University, November 1984.

[2] Trevor Hastie and C. Shirey. A variable bandwidth kernel smoother. Technical report, AT&T Bell Laboratories, 1988.

[3] Trevor Hastie. The MOS V cleanroom environment: Internal and external sources of particle contamination. Technical report, AT&T Bell Laboratories, 1990.

[4] Trevor Hastie and D. Pregibon. Shrinking trees. Technical report, AT&T Bell Laboratories, 1991.

[5] Trevor Hastie and R. Tibshirani. Handwritten digit recognition via deformable prototypes. Technical report, AT&T Bell Labs technical memorandum, 1992.

[6] S. Maes and T. Hastie. Dynamic mixtures of splines: a model for saliency grouping in the time frequency plane. Technical report, Statistics Department, Stanford University, 1997.

[7] R. Tibshirani, L. Lazzeroni, T. Hastie, A. Olshen, and D. Cox. A global pairwise approach to radiation hydrid mapping. Technical report, Stanford University, Division of Biostatistics, Health Research and Policy Department, 1999.

[8] Trevor Hastie, Robert Tibshirani, Michael Eisen, Pat Brown, Doug Ross, Uwe Scherf, John Weinstein, Ash Alizadeh, Louis Staudt, and David Botstein. Gene shaving: a new class of clustering methods for expression arrays. Technical report, Statistics Department, Stanford University, 2000.

[9] Trevor Hastie, Laura Bachrach, Balasubramaniam Narasimhan, and May-Choo Wang. Flexible statistical models for growth fragments: a study of bone mineral acquisition. Technical report, Division of Biostatistics, Stanford University, 2000.

[10] D. Ormoneit, T. Hastie, and M. Black. Functional analysis of human motion data. Technical report, Statistics Department, Stanford University, 2000.

[11] Ji Zhu, Saharon Rosset, Hui Zou, and Trevor Hastie. Multiclass adaboost. Technical report, University of Michigan, 2005.

[12] Mee-Young Park and Trevor Hastie. Hierarchical classification using shrunken centroids. Technical report, Stanford University, April 2005.

[13] Hui Zou, Ji Zhu, and Trevor Hastie. The margin vector, admissable loss, and multiclass margin-based classifiers. Technical report, Statistics Department, Stanford University, 2006.

[14] Mee-Young Park and Trevor Hastie. Regularization path algorithms for detecting gene interactions. Technical report, Statistics Department, Stanford University, 2006.

[15] Line Clemmensen, Trevor Hastie, and Bjarne Ersboll. Sparse discriminant analysis. Technical report, IMM, Danish Technical University, 2008.

[16] Rahul Mazumder, Jerome Friedman, and Trevor Hastie. *Sparsenet*: Coordinate descent with non-convex penalties. Technical report, Statistics Department, Stanford University, 2009.

[17] Jerome Friedman, Trevor Hastie, and Rob Tibshirani. A note on the group lasso and sparse group lasso. Technical report, Stanford University, Statistics Department, 2010.

[18] Jerome Friedman, Trevor Hastie, and Rob Tibshirani. Applications of the lasso and grouped lasso to the estimation of sparse graphical models. Technical report, Stanford University, Statistics Department, 2010.

[19] Rahul Mazumder, Trevor Hastie, and Jerome Friedman. *sparsenet: Fit sparse linear regression models via nonconvex optimization*, 2012. R package version 1.0.

[20] Noah Simon, Jerome Friedman, and Trevor Hastie. A blockwise descent algorithm for group-penalized multiresponse and multinomial regression. Technical report, Statistics Department, Stanford University, 2013.

[21] Michael Lim, Justin Ales, Benoit Cottereau, Trevor Hastie, and Anthony Norcia. Sparse eeg/meg source estimation via a group lasso, 2017. (to appear).

[22] Trevor Hastie and Rahul Mazumder. *softImpute: matrix completion via iterative soft-thresholded svd*, 2013. R package version 1.0.

[23] A. Chouldechova and T. Hastie. Generalized Additive Model Selection. *ArXiv e-prints*, June 2015.

[24] Rakesh Achanta and Trevor Hastie. Telugu ocr framework using deep learning. Technical report, Statistics Department, Stanford University, 2015.

[25] Ya Le and Trevor Hastie. Sparse quadratic discriminant analysis and community bayes. Technical report, Stanford University, 2015.

[26] Trevor Hastie, Rob Tibshirani, and Ryan Tibshirani. Extended comparisons of best subset selection, forward stepwise selection, and the lasso. Technical report, Statistics Department, Stanford University, 2017.