Tanya P. Garcia

Contact Information	Texas A&M University Statistics Department 458E Blocker Building College Station, TX 77843-3433	Phone: (979) 436 Email: tpgarcia@ Web: http://stat	
Research Interests	High-Dimensional Variable Selection, Longitudinal Diseases, Nonparametric Models, Prediction Model Analysis	• ,	<u> </u>
Employment	Associate Professor of Statistics (Tenured), Statistics, Texas A&M University Assistant Professor of Biostatistics, Departm ology and Biostatistics, Texas A&M School of P Research Assistant Professor of Statistics, Statistics, Texas A&M University Visiting Scholar, The University of Sydney, Aus Fully funded (\$7,200 AUS) four-week invitate Samuel Müller and Prof. Alan Welsh. Research Assistant, Oak Ridge National Lab, O Research Assistant, MD Anderson Cancer Center Teaching Assistant, University of Neuchâtel, Neuland Teaching Assistant, University of Western Ontar Canada Research Assistant, RWTH Institute of Operatio Logistics, Aachen, Germany Research Assistant, University of California, Irv	ent of Epidemi- ublic Health Department of tralia ion by Prof. eak Ridge, TN er, Houston, TX uchâtel, Switzer- io, London, ON, ns Research and	09/2018- 01/2013- 08/2018 07/2011-12/2012 11/2012 06/2010-08/2010 07/2008-08/2008 09/2006-06/2008 09/2005-06/2006 06/2004-08/2004 09/2002-06/2003
Education	 Teaching Assistant, University of California, Irv Ph.D., Statistics, Texas A&M University, College Adviser: Prof. Yanyuan Ma. GPA: 4.00/4.00. M.Sc., Statistics, University of Western Ontario Canada Adviser: Prof. John Braun. GPA: 4.00/4.00. M.S., Industrial Engineering and Operation University of California, Berkeley, Berkeley, CA GPA: 3.67/4.00. B.S., Mathematics, University of California, Irv. GPA: 3.939/4.00 	ge Station, TX o, London, ON, ons Research,	09/2001-06/2003 08/2011 08/2006 05/2005 06/2003

10. Principal Investigator , "Innovative statistical models for development of first Huntington's disease progression risk assessment tool." K01, NIH NINDS, K01NS099343, \$557,406.	12/2016-11/2019
9. Statistics Mentor , "Nutrition, Biostatistics and Bioinformatics." T32 DHHS-NIH-National Cancer Institute. PI: Raymond J. Carroll.	08/2017-08/2021
8. Co-Investigator , "Leveraging motor vehicle crash data for injury surveillance and research in AFF." Centers for Agricultural Safety and Health, U54 OH007541-16. PI: Eva Shipp.	12/2016-11/2019
7. Principal Investigator , "Identifying high-dimensional neuroimaging biomarkers associated with Huntington's disease motor onset." Texas A&M School of Public Health Research Enhancement and Development Initiative (REDI) Grant, \$25,000.	06/2015-08/2016
6. Principal Investigator , "Improved definition and prediction of Huntington's disease motor-onset using advanced statistical models." Huntington's Disease Society of America (HDSA) Research Fellowship, \$150,000.	11/2013-11/2015
5. National Consortium for Graduate Degrees for Minorities in Engineering and Science (GEM) PhD Fellowship, \$30,000.	2010-2011
4. Philanthropic Educational Organization (P.E.O.) Scholar Award, \$15,000.	2010-2011
3. Ford Foundation Predoctoral Fellowship Honorable Mention	2010
2. National Science Foundation's Texas A&M University System Louis Stokes Alliance for Minority Participation Bridge to the Doctor- ate Fellowship, \$94,000.	2008-2010
1. Chancellor's Opportunity Predoctoral Fellowship, University of California, Berkeley, \$67,000.	2003-2005

Publications

(* denotes equal contribution; underline denotes student or postdoctoral researcher author)

Under Review

- 27. Parast, L., Garcia, T.P., Carroll, R.J.C., and Ross, R.L. Robust methods to correct for measurement error when evaluating a surrogate marker.
- 26. <u>Kim, R.</u>, Müller, S., and **Garcia, T.P.** C2pLasso: the categorical-continuous pliable lasso to identify brain regions affecting motor impairment in Huntington disease.
- 25. <u>Lee, U.,</u> Carroll, R.J., Marder, K., Wang, Y., and **Garcia, T.P.** Estimating disease onset from change points of markers measured with error.
- 24. **Garcia**, **T.P.** and Parast, L. Dynamic landmark prediction for genetic mixture models.

Refereed Papers

23. <u>Lee, U., Garcia, T.P.</u>, Carroll, R.J., Gilbreath, K. and Wu, G. (2019). Analysis of repeated measures data in nutrition research. *Frontiers in Bioscience, Landmark*, **24**, 1378-1390.

- 22. Shipp, E., Vasudeo, S., Trueblood, A. and Garcia, T.P. (2019). Single Logging Vehicle Crashes and Variables Associated with Injury in Louisiana. *Journal of Agromedicine*, 24, 177-185. doi: 10.1080/1059924X.2019.1567422.
- 21. **Garcia, T.P.**, Marder, K. and Wang, Y. (2019). Time-varying Proportional Odds Model for Mega-analysis of Clustered Event Times, **20**, 129-146. doi: 10.1093/bio-statistics/kxx065.
- 20. Wei, Y., Ma, Y., Garcia, T.P. and Sinha, S. (2019). Consistent estimator for logistic mixed effect models. *The Canadian Journal of Statistics*, **47**, 140-156. doi:10.1002/cjs.11482.
- 19. **Garcia, T.P.**, Wang, Y., Shoulson, I., Paulsen, J.S., and Marder, K. (2018). Disease progression in Huntington Disease: an analysis of multiple longitudinal outcomes. *Journal of Huntington Disease*, **7**, 337-344. doi: 10.3233/JHD-180297.
- 18. Dutra, J.R.*, Garcia, T.P.*, Marder, K. (2018). Huntington's Disease. In Oxford Textbook of Neurological and Neuropsychiatric Epidemiology, editors Carol Brayne, Valery Feigin, Lenore Launer, and Giancarlo Logroscino.
- 17. **Garcia**, **T.P.** and Ma, Y. (2017). Simultaneous treatment of unspecified heteroskedastic model error distribution and mismeasured covariates for restricted moment models. *The Journal of Econometrics*, **200**, 194-206.
- 16. **Garcia, T.P.**, Ma, Y., Marder, K. and Wang, Y. (2017). Robust mixed-effects model for clustered failure time data: application to Huntington's disease event measures. *Annals of Applied Statistics*, **11**, 1085-1116.
- 15. **Garcia, T.P.** and Marder, K. (2017). Statistical Approaches to longitudinal data analysis in neurodegenerative diseases: Huntington's Disease as a model. *Current Neurology and Neuroscience Reports*, **17**:14, doi:10.1007/s11910-017-0723-4.
- 14. **Garcia, T.P.**, Marder, K. and Wang, Y. (2017). Statistical modeling of Huntington disease onset. In Handbook of Clinical Neurology, vol 144, 3rd Series, editors Andrew Feigin and Karen E. Anderson.
- 13. **Garcia, T.P.*** and Müller, S.* (2016). Cox regression with exclusion frequency-based weights to identify neuroimaging markers relevant to Huntington's disease onset. *Annals of Applied Statistics*, **10**, 2130-2156.
- 12. Kohli, P., **Garcia, T.P.** and Pourahmadi, M. (2016). Linear models for cholesky factors of covariance matrices of multivariate longitudinal data. *Journal of Multivariate Analysis*, **145**, 87-100.
- 11. **Garcia, T.P.** and Ma, Y. (2015). Optimal estimator for logistic model with distribution-free random intercept. *Scandinavian Journal of Statistics*, **43**, 156-171.
- 10. Qin, J.*, **Garcia, T.P.***, Ma, Y., Tang, M.X., Marder, K. and Wang, Y. (2014). Combining isotonic regression and EM algorithm to predict genetic risk under monotonicity constraint and unknown genotypes. *Annals of Applied Statistics*, **8**, 1182-1208.
- 9. Garcia, T.P. and Müller, S. (2014). Influence of measures of significance-based weights in the weighted Lasso. *Journal of the Indian Society of Agricultural Statistics* (Invited paper), **68**, 131-144.
- 8. **Garcia, T.P.**, Müller, S., Carroll, R.J., and Walzem, R.L. (2014). Identification of important regressor groups, subgroups, and individuals via regularization methods: application to gut microbiome data. *Bioinformatics*, doi: 10.1093/bioinformatics/btt608.

- 7. **Garcia, T.P.**, Müller, S., Carroll, R.J., Dunn, T.N., Thomas, A.P., Adams, S.H., Pillai, S.D., and Walzem, R.L. (2013). Structured variable selection with q-values. *Biostatistics*, DOI: 10.1093/biostatistics/kxt012.
- Wang, Y., Garcia, T.P., and Ma, Y. (2012). Nonparametric estimation for censored mixture data with application to the Cooperative Huntington's Observational Research Trial. *Journal of the American Statistical Association*, 107, 1324-1338.
- 5. Garcia, T.P., Kohli, P., Pourahmadi, M. (2012). Regressograms and mean-covariance models for incomplete longitudinal data. *The American Statistician*, **66**, 85-91.
- 4. Ye, F., Garcia, T.P., Pourahmadi, M., and Lord, D. (2012). Extension of a negative binomial GARCH model: analyzing the effects of gasoline price and VMT on DUI fatal crashes in Texas. *Transportation Research Record: Journal of the Transportation Research Board*, 2279, 31-39.
- 3. Garcia, T.P., Ma, Y., and Yin, G. (2011). Efficiency improvement in a class of survival models through model-free covariate incorporation. *Lifetime Data Analysis*, 17, 552-565.
- 2. Barber, J., Bose, C., Bourlioux, A., Braun, J., Brunelle, E., **Garcia, T.**, Hillenk, T., and Ong, B. (2010). Burning issues with PROMETHEUS, the Canada's wildfire growth simulator. *Canadian Applied Mathematics Quarterly*, **16**, 337-378.
- 1. Garcia, T., Braun, J., Bryce, R., and Tymstra C. (2008). Smoothing and bootstrapping the PROMETHEUS fire growth model. *Environmetrics*, 19, 1-13.

Presentations

Invited

invited	
49. Plenary Speaker at the 39th International Symposium on Forecasting, Thessaloniki, Greece	06/2019
48. 2019 Eastern North American Region (ENAR) Annual Meeting, Philadelphia, PA	03/2019
47. Department of Statistical Science, Southern Methodist University, Dallas, TX	10/2018
46. 2018 Joint Statistical Meeting, Vancouver, Canada	08/2018
45. International Society for Non-Parametric Statistics (ISNPS) Meeting, Salerno, Italy	06/2018
44. Institute for Mathematics and its Applications "Frontiers in Forecasting", Minneapolis, MN	02/2018
43. 10th International Conference of the ERCIM WG on Computational and Methodological Statistics, University of London, UK	12/2017
42. Texas A&M University, Department of Statistics, College Station, TX	12/2017
41. 2017 Joint Statistical Meeting, Baltimore, MD	08/2017
40. 32nd Annual Huntington's Disease Society of America Annual Convention, Schaumberg, IL	06/2017
39. International Conference on Econometrics and Statistics, Hong Kong University of Science and Technology, Hong Kong	06/2017
38. 2017 Conference on Lifetime Data Science, Storrs, CT	05/2017
37. Baylor University, Department of Statistical Science, Waco, TX	02/2017

36.	Huntington Study Group, 10th Annual HD Clinical Research Symposium, Nashville, TN	11/2016
35.	Newest Developments and Urgent Issues in Measurement Error and Latent Variable Problems, Banff, Canada	08/2016
34	2016 International Biometrics Conference, Victoria, Canada	07/2016
	2016 Eastern North American Region (ENAR) Annual Meeting, Austin, TX	03/2016
32	2015 Joint Statistical Meeting, Seattle, WA	08/2015
	International Society for Non-Parametric Statistics (ISNPS) Meet-	07/2015
01.	ing, Biosciences, Medicine, and Novel Non-Parametric Methods, Graz, Austria	01/2010
30.	International Chinese Statistical Association Applied Symposium, Fort Collins, CO	06/2015
29.	University of California, Riverside, Riverside, CA	06/2015
28.	University of North Carolina, Department of Biostatistics, Chapel Hill, NC	04/2015
27.	University of California, San Diego, Department of Family Medicine and Public Health, San Diego, CA	04/2015
26.	Manhattan College, Department of Mathematics, New York, NY	03/2015
25.	University of California, Berkeley, Department of Biostatistics, Berkeley, CA	01/2015
24.	University of California, Davis, Department of Statistics, Davis, CA	01/2015
23.	RAND Corporation, Santa Monica, CA	11/2014
	University of South Carolina, Department of Statistics, Columbia, SC	10/2014
21.	2014 Joint Statistical Meeting, Boston, MA	08/2014
20.	Australian Statistical Conference/Institute of Mathematical Statistics Annual Meeting, Australian Technology Park Sydney, Australia	07/2014
19.	The Ninth International Chinese Statistical Association (ICSA) International Conference: Challenges of Statistical Methods for Interdisciplinary Research and Big Data, Hong Kong Baptist University, Hong Kong	12/2013
18.	Columbia University, Department of Biostatistics, New York, NY	09/2013
17.	2013 Joint Statistical Meeting, Montréal, Québec, Canada	08/2013
16.	Western North American Region (WNAR) Conference, Los Angeles, CA	06/2013
15.	Sam Houston State University, Department of Mathematics and Statistics, Huntsville, TX	02/2013
14.	The Australian National University, Mathematical Sciences Institute, Canberra, New South Whales, Australia	11/2012
13.	The University of Melbourne, School of Mathematics and Statistics, Melbourne, Victoria, Australia	11/2012
12.	The University of Sydney, School of Mathematics and Statistics, Sydney, New South Whales, Australia	11/2012

	11. International Chinese Statistical Association (ICSA) Applied Symposium, Boston, MA	06/2012
	10. 8th Annual Texas A&M University System (TAMUS) Louis Stokes Alliance for Minority Participation (LSAMP) Symposium, Corpus Christi, TX	•
	9. Statistical Inverse Problems Workshop, College Station, TX	05/2012
	Contributed	
	8. Huntington Study Group, 9th Annual HD Clinical Research Symposium, Tampa Bay, Fl	10/2015
	7. Huntington Study Group, 8th Annual HD Clinical Research Symposium, Minneapolis, MN	11/2014
	6. Western North American Region Conference, Honolulu, HI	06/2014
	5. University of Florida Winter Workshop: Dimension Reduction and High Dimensional Inference, Gainesville, Fl	01/2014
	4. Huntington Study Group, 7th Annual HD Clinical Research Symposium, Charlotte, NC	11/2013
	3. Eastern Northern American Region (ENAR) Annual Meeting, Miami, FL	03/2011
	2. Emerging Researchers National Conference in Science, Technology, Engineering and Mathematics, Washington, DC	02/2011
	1. The National GEM Consortium Annual Meeting, Vienna, VA	08/2010
Teaching		
	Texas A&M Health Science Center, College Station, TX	2014 2010
	Instructor, Biostatistics II Online (Spring Semester)	2014-2018
	Instructor, Biostatistics II In-Person (Spring Semester)	2013-2015
	Instructor, Statistics II, College of Medicine (one day course)	01/2013
	University of Neuchâtel, Neuchâtel, Switzerland	C : 2007 2000
	Teaching Assistant, Calculus and Linear Models (taught in French)	Spring 2007, 2008
	Teaching Assistant, Linear Models (Graduate Level)	Fall 2007
	Teaching Assistant, Econometrics	Fall 2006
	University of Western Ontario, London, ON, Canada	
	Teaching Assistant, Operations Research	Spring 2006
	Teaching Assistant*, Applied Probability	Fall 2005
	*Awarded Teaching Assistant of the Year in the Sciences	
	University of California, Irvine, Irvine, CA	
	Teaching Assistant, Statistics, Summer Bridge	Summer 2002
	Tutor, Mathematics, Learning and Academic Resource Center	09/2001-06/2003
Honors and Awards	20. Mentoring Institute for Neuroscience Diversity Scholars (MINDS) Fellow	2017-2018

NIH NINDS funded program that promotes the advancement of underrepresented independent researchers in neuroscience.

19. S	Award, Texas A&M University* *Awarded but then unable to be used due to collaborator moving to non-SEC university.	2016-2017
18. I	Participant in 14th Meeting of New Researchers in Statistics and Probability, University of California, San Diego Travel award to attend workshop which promotes interaction and networking among new researchers in statistics and probability.	2012
17. S	ACNAS National Conference Travel Award, Seattle, WA	2012
16. I	Participant in Roadmap for a Successful Academic Career Workshop, Texas A&M University	2012
	Designed for internal and external women postdoctoral researchers and assistant professors (2 years or less) in STEM fields.	
15. A	American Statistical Association Gertrude M. Cox Award (\$2,000)	2011
	Awarded to 2 out of 1200 female applicants from throughout the US and Canada.	
14. I	Phi Kappa Phi Member, Texas A&M Chapter Awarded to top 10% of seniors and graduate students at Texas	2011
	A&M University.	
13. I	Emerging Researchers National Conference in Science, Technology, Engineering and Mathematics Travel Award Awarded to 100 applicants.	2011
12. \	William S. Connor Award, Texas A&M University	2010
	Awarded to the student whom the faculty deems the most outstanding among those students passing the preliminary examinations during the 2008-2009 academic year.	
11. F	Participant in Building Future Faculty, North Carolina State University	2010
	Awarded to 12 out of 100 applicants from graduate programs throughout the US.	
10. I	Participant in Negotiating the Ideal Faculty Position, Rice University	2010
	Awarded to 65 out of 1100 applicants from graduate programs throughout the US.	
9. T e	eaching Assistant of the Year in the Sciences, University of Western Ontario	2006
	imma Cum Laude, School of Physical Sciences, University of California, Irvine	2003
7. R	onald E. McNair Scholar, University of California, Irvine	2002-2003
	athematics Departmental Service/Undergraduate Service Award, University of California, Irvine	2003
	utstanding Senior in Mathematics, University of California, Irvine	2003

	 Leadership Scholarship, University of California, Irvine The National Dean's List, University of California, Irvine National Society of Collegiate Scholars Member, University of California, Irvine National Hispanic Scholar Finalist, University of California, Irvine 	2000-2002 2000-2003 2001 2000
Research Supervision	6. Rakheon Kim, PhD, Texas A&M University, Department of Statistics	May 2018-
	5. Unkyung Lee , Postdoctoral Trainee of DHHS-NIH National Cancer Institute T32, Texas A&M University, Department of Statistics	June 2017-
	 Weixi Zhu, MS, Texas A&M University, Department of Statistics Timothy Gibson, Honours (equivalent of Undergraduate Senior Diploma), The University of Sydney, Department of Statistics 	2018-2019 Feb-Oct 2017
	2. Satwik Acharyya, PhD, Texas A&M University, Department of Statistics	Fall 2015
	1. Sage Lane, MPH, Texas A&M Health Science Center, Department of Epidemiology and Biostatistics	Summer 2014
PhD Committee Member	Texas A&M University Department of Statistics Eli Kravitz (Chair: Raymond J. Carroll) Shuai Chen (Chair: Hongwei Zhao and Lan Zhou)	2019 2015
	Department of Mathematics Lauren Snider	2019-
	Department of Epidemiology and Biostatistics Xiaohuan Zhu (Chair: Hongwei Zhao) Shubhangi Vasudeo (Chair: Eva Shipp)	2019- 2017-
MS Committee	Texas A&M University	
Member	Department of Statistics Leo Lazcano Vanessa McMahan Genti Ndrevataj Timothy Parker Carroll Patton Michelle Perez Christopher Phelan Weixi Zhu Department of Epidemiology and Biostatistics	2019 2019 2019 2019 2019 2019 2019 2019-
	Karen Fischer	2016

Timothy Erickson John Coppin I-Chia Liao	2015 2014 2014
 Grant Reviewer 3. National Science Foundation Statistics Panel 2. Natural Sciences and Engineering Research Council of Canada (NSERC) Mathematics and Statistics Discovery Program 1. E-Rare Transnational research projects on hypothesis-driven use of multi-omic integrated approaches for discovery of diseases causes and/or functional validation in the context of rare diseases 	2019 12/2018 07/2018
 Journal Reviewer 2. Associate Editor, Biostatistics 1. Annals of Statistics, Australia New Zealand Journal of Statistics, Bioinformatics, Biometrics, BMC Bioninformatics, BMC Medical Research Methodology, The Canadian Journal of Statistics, Computational Statistics and Data Analysis, Hacettepe Journal of Mathematics and Statistics, Journal of the American Statistical Association, Journal of Multivariate Analysis, PLOS One, Science Reports, Statistica Sinica, Statistics, Statistics and Probability Letters, Statistics in Medicine, The American Statistician, The Canadian Journal of Statistics, Transportation Research Part A: Policy and Practice 	1/2019-
 External Reviewer 3. Tenure and Promotion Referee, The University of Sydney 2. Tenure and Promotion Referee, Le Moyne College 1. Doctoral dissertation of Jinqing Li, Macquarie University, Statistics Department, Australia 	04/2019 04/2016 2014
Conference/Workshop/Session Organization 15. Regional Advisory Board Member, Eastern Northern American Region/International Biometric Society (ENAR)	2019-2021
14. Speaker, International Symposium on Forecasting Early Career Researcher	06/2019
13. Chair, American Statistical Association Biometrics Section Strategic Initiative, "Developing the next Generation of Biostatisticians"	
12. Program Representative, Biometrics Eastern Northern American Region/International Biometric Society (ENAR), Atlanta, GA	2017-2018
11. Co-Chair, American Statistical Association Biometrics Section Strategic Initiative, "Developing the next Generation of Biostatisticians"	
10. Conference Co-Organizer, "Measurement Error and Complex Data Workshop," Texas A&M University, College Station, TX	04/2016

Service to the Profession

	9. Organizer, Eastern Northern American Region/International Biometric Society (ENAR) Junior Researchers Workshop, Miami, FL	03/2015
	8. Judge, Student Paper Competition, Western Northern American Region/Institute of Mathematical Sciences, Boise, ID	06/2015
	7. Invited Session Organizer, "New directions for nonparametric methods in data science," International Society for Non-Parametric Statistics (ISNPS), Salerno, Italy	06/2018
	6. Invited Session Organizer, "Rich data visualizations for informative health care decisions," Eastern Northern American Region/International Biometric Society (ENAR), Atlanta, GA	03/2018
	5. Invited Session Organizer, "Dynamic modeling for timely health care decisions," Joint Statistical Meeting (JSM), Baltimore, MD	07/2017
	4. Invited Session Organizer, "Innovative Techniques Towards More Precise Modeling," 61st Brazilian Regional Meeting, Salvador, Brazil*	05/2016
	*Cancelled due to Zika virus.	
	3. Invited Session Organizer, "Innovative Techniques Towards Solving the Complexities of Biomarker Discovery," 2016 ENAR, Austin, TX	03/2016
	2. Invited Session Organizer, "Navigating Your Career for Success at the NSF Career Award," 2015 SACNAS National Conference, National Harbor, MD	10/2015
	1. Invited Session Organizer, "Recent Advances in Spatial Statistics Techniques and their Applications to Public Health and Biological Sciences," Western Northern American Region/Institute of Mathematical Sciences, Boise, ID	06/2015
Service to the	Danaston and of Chatistics	
University	Department of Statistics	2010
	11. Co-organizer, Conference on P-Values	2019
	10. Member, MS Program Committee (including online MS)	2018-
	9. Member, Undergraduate Committee (including online MS)	2018-
	8. Panel Speaker, "Why I Chose the Post-Doc Route," Alliance for Graduate Education and the Professoriate (TAMUS AGEP) Pro- gram	11/2017
	7. Reviewer, Association of Former Students' College-Level Teaching Awards Committee	06/2010-05/2011
	6. Panel Speaker, Advice on Graduate School Admittance, 5th Annual TAMUS LSAMP Symposium	02/2009
	Department of Epidemiology and Biostatistics 5. Seminar Organizer	
	4. Member, Faculty Search Committee	2014-2015
	3. Member, Admissions Committee	01/2013-08/2018
	Texas A&M School of Public Health	-,
	2. Judge, Student Research Poster Competition at Public Health Week	2014-2018

Memberships

American Statistical Association, ENAR, Institute of Mathematical Statistics, National Society of Collegiate Scholars, Phi Beta Kappa, Phi Kappa Phi, Society for Neuroscience

Skills

C++, Fortran 77/90, \LaTeX Linux, MATLAB, R, Ruby, Stata.