

CURRICULUM VITAE:

ERIC C. TASSONE

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EDUCATION:

Emory University, Atlanta, GA.

Ph.D., Biostatistics, 2006.

- Dissertation: “Small Area Estimation of Local Health Disparity via Bayesian Hierarchical Models.”
- Advisor: Lance A. Waller, Ph.D.

University of Virginia School of Law, Charlottesville, VA.

J.D., 1998.

University of Florida, Gainesville, FL.

M.S., Applied Mathematics, 1996.

B.S., Mathematics with Economics minor, 1993.

PROFESSIONAL EXPERIENCE:

Google, Inc., Mountain View, CA.

Data Scientist: Technical Lead, Manager, and Mentor, 2007–2019.

- **Google Product Ecosystem**, 2016–2019: Data Science Manager and Technical Lead. Investigated cross-product user behavior and identified opportunities to improve user experiences and increase company revenue. Represented team in cross-company working groups in areas of user trust and information quality.
- **YouTube**, 2014–2016: Data Science Technical Lead for Creator issues. Contributed to interdisciplinary team of marketing experts, business analysts, and data scientists working on music efforts, adding experimental and quantitative rigor to ensure promising programs worked at scale. Presented to CEO and assisted senior leadership with goal setting. Advised strategic efforts in content growth and valuation. Led revamp of forecasting of key YouTube metrics, such as Watch Time and Views, to enrich business intelligence and better plan capacity needs.
- **Forecasting**, 2009–2014: Data Science Technical Lead for search traffic forecasting. Created in-house statistical software in R used across Google for time series forecasting, improving business insights and reducing capacity planning costs. Delivered reports to the CEO and senior executives on state of Google search traffic. Won Google’s Excellent Papers award in statistics for “Large-Scale Parallel Statistical Forecasting Computations in R,” with Murray Stokely and Farzan Rohani. Improved short-term, fine-timescale forecasting by extending existing methods and incorporating real-time data feeds. Wrote “Our quest for robust time series forecasting at scale” with Farzan Rohani in 2017 on *The Unofficial Google Data Science Blog*: <https://bit.ly/35JITLP>.
- **Search Infrastructure**, 2007–2012: Data Science Manager and Technical Lead for Index Policy & Product Metrics. Coordinated index strategy and policy. Built tools for principled quantitative decision-making about content discovery, indexing, and refresh, leading to substantial resource conservation. Co-inventor on patent application for “Estimating rate of change of documents” (US20130212100A1). Served as liaison to public policy and legal teams.
- **Data Scientist Job Ladder Leadership**, 2009–2019: Mentored nine Nooglers, hosted three interns, and managed numerous Data Scientists and Product Analysts. Served on Hiring Committee, conducted on-

site and phone interviews, and led interview training sessions for Googlers interviewing Data Scientist candidates. Gave recruiting talks on campuses and hosted visiting data science student groups. Served as internal data science consultant. Led group activities of hundreds of data scientists for three years at Google's annual Data Science Summit. Created "Data Science Connect," a program to connect Data Scientists across the company to foster community, knowledge sharing, and collaboration, with an emphasis on inclusion of newer hires.

Duke University, Nicholas School of the Environment and Earth Sciences, Durham, NC.

Postdoctoral Research Associate, 2006–2007.

Developed spatial Bayesian statistical methods for analyzing disparities in birth outcomes. Influenced and helped craft preventive intervention programs as part of the Children's Environmental Health Initiative. Led research teams publishing in leading journals and presenting results at conferences.

Centers for Disease Control and Prevention, Atlanta, GA.

Public Health Fellow, 2004–2006.

Association of Schools of Public Health & Centers for Disease Control and Prevention fellowship titled, "Assessment of Geographic, Racial, and Ethnic Disparities in Cardiovascular Disease using Small Area Analysis." Extended Bayesian disease mapping methods to estimate, explain, and help prevent county-level disparity in heart disease and stroke. Led presentations of research at conferences and agency meetings. Prepared manuscripts as lead author for submission to top journals. Evaluated proposed extramural research.

Emory University, Department of Biostatistics, Atlanta, GA.

Research Assistant, 1999–2004.

Developed and applied Bayesian methods and created computer code for hierarchical spatial mapping of disease disparity. Conducted statistical and legal research into environmental justice claims based on the Environmental Protection Agency's Interim Guidance for Investigating Title VI Administrative Complaints Challenging Permits. Implemented software to calculate exposure distributions, environmental equity contours, and relative distribution measures in environmental justice cases. Co-developed study of environmental justice claim from Flint, Michigan, presented at 2000 Joint Statistical Meetings of the American Statistical Association.

Carlton Fields Law Firm, Tampa, FL.

Associate and Summer Associate, 1998–1999 and 1997.

Primary practice in Environmental, Land Use, and Administrative Law. Experience with federal, state, and local environmental laws and regulations; Fair Housing Act; Intellectual Property; and Telecommunications issues. Researched legal issues and wrote memoranda on litigation and *pro bono* matters. Drafted responses for and assisted co-counsel at administrative penalty hearings.

TEACHING EXPERIENCE:

University of Virginia, Darden School of Business, Charlottesville, VA.

Adjunct Professor, 2015–2016, 2016–2017, and anticipated in 2021–2022.

Co-instructed "Data Science for Business" twice, including case development, code revision, data procurement and preparation, and project grading. Co-developing with Casey Lichtendahl case materials, data, and code for new cloud-based course "Analytics for Experiments, Forecasts, and Growth" to expand Darden's offerings at the intersection of data science and business.

Duke University, Department of Statistical Science, Durham, NC.*Instructor, 2007.*

Co-instructed introductory statistics course, “Statistics in the Courtroom,” with emphasis on use of statistics in legal settings. Revised existing course materials including syllabus, lectures, homework, projects, and examinations. Evaluated student performance and assigned final course grades. Held office hours and review sessions.

Emory University, Career Master of Public Health Program, Atlanta, GA.*Instructor, 2003–2005.*

Co-created and instructed biostatistics course focused on maternal and child health issues and tailored to online environment. Designed and implemented syllabus, weekly notes, homework assignments, web-based learning exercises, and exams. Held distance-based virtual office hours. Evaluated student performance and assigned grades.

Emory University, Department of Biostatistics, Atlanta, GA.*Teaching Assistant, 2000–2002.*

Instructed computer lab section for graduate-level biostatistics class. Taught students individually at office hours. Led exam review sessions. Designed and implemented weekly lab notes and homework assignments. Co-created materials for online class in Career Master of Public Health Program.

University of Florida, Department of Mathematics, Gainesville, FL.*Teaching Assistant, 1994–1996.*

Instructed discussion sections in Pre-Calculus, Calculus I, and Calculus II, including experimental computer lab sections using Maple software. Evaluated course grades. Held office hours.

PEER-REVIEWED PUBLICATIONS:

4. **Tassone, E.C.**, Miranda, M.L., and Gelfand, A.E., “Disaggregated Spatial Modeling for Areal Unit Categorical Data.” *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 59(1), January 2010, 175–190.
3. **Tassone, E.C.**, Casper, M.L., and Waller, L.A.. “Small Area Racial Disparity in Stroke Mortality: An Application of Bayesian Spatial Hierarchical Modeling.” *Epidemiology*, 20(2), March 2009, 234–241.
2. Miranda, M.L., Overstreet Galeanoa, M.A., **Tassone, E.C.**, Allen, K.D., and Horner, R.D. “Spatial Analysis of the Etiology of Amyotrophic Lateral Sclerosis among 1991 Gulf War Veterans.” *NeuroToxicology*, 29(6), November 2008, 964–970.
1. Williams, K., Edwards, S., **Tassone, E.C.**, Gray, S., Swamy, G., Gelfand, A.E., and Miranda, M.L. “Effect of Air Pollution (PM2.5 & PM10) on Low Birthweight in North Carolina.” *American Journal of Obstetrics and Gynecology*, 195(6), December 2006, S213–S213.

SOLICITED PUBLICATIONS:

2. Grimes, C., Ford D., and **Tassone, E.C.** “Keeping a Search Engine Fresh: Risk and Optimality in estimating refresh rates for web pages.” *Proceedings of INTERFACE 2008*.
1. **Tassone, E.C.**, and Waller, L.A. (2000). “Environmental Justice, GIS, and the Select Steel Case.” *Public Health GIS News and Information* (Number 37), 9–11.

BLOG POSTS:

Tassone, E.C. and Rohani, F. (2017). “Our quest for robust time series forecasting at scale.” *The Unofficial Google Data Science Blog*, accessible at <https://bit.ly/35JITLP>.

BOOK CHAPTERS:

Stokely, M., Rohani, F., and **Tassone, E.C.** “Large-Scale Time-Series Forecasting.” *Big Data and Business Analytics*. Liebowitz, J. (Ed.). CRC Press, 2013. 191–210.

CONFERENCE PRESENTATIONS:

9. **Tassone, E.C.**, Miranda, M.L., and Gelfand, A.E. “Loglinear Modeling for Point-Referenced Spatial Data.” Joint Statistical Meetings, 29 July–02 August 2007. Salt Lake City, Utah.
8. *Invited presentation*: **Tassone, E.C.**, Miranda, M.L., and Gelfand, A.E. “Flexible Modeling of Health Disparity: A Disaggregation Approach to Spatial Modeling of Areal Unit Categorical Data.” Centers for Disease Control and Prevention & Agency for Toxic Substances and Disease Registry’s Eleventh Biennial Symposium on Statistical Methods: Analyzing and Mapping Health Inequities to Impact Policies for Eliminating Disparities, 17–18 April 2007. Atlanta, Georgia.
7. **Tassone, E.C.**, Miranda, M.L., and Gelfand, A.E. “A Disaggregation Approach to Bayesian Spatial Modeling of Categorical Data.” ENAR Biometric Society Spring Meeting, 11–14 March 2007. Atlanta, Georgia.
6. **Tassone, E.C.**, Casper, M., Waller, L.A., Williams, I., and Moore, K. “Determinants of County-Level Stroke Mortality in the Southeastern United States, 1999–2002.” Joint Statistical Meetings, 07–11 August 2005. Minneapolis, Minnesota.
5. **Tassone, E.C.**, Casper, M., Waller, L.A., Williams, I., and Moore, K. “Small Area Racial Disparities in Stroke Mortality in the Southeastern United States, 1999–2002.” ENAR Biometric Society Spring Meeting, 20–23 March 2005. Austin, Texas.
4. **Tassone, E.C.**, Waller, L.A., Casper, M., Williams, I., and Greenlund, K. “Small Area Racial Disparities in Heart Disease Mortality.” The Second National CDC Prevention Conference on Heart Disease and Stroke, 17–19 August 2004. Atlanta, Georgia.
3. **Tassone, E.C.**, Waller, L.A., Casper, M., Williams, I., Greenlund, K., and Neff, L. “Extending Bayesian Approaches to Measuring and Mapping Small Area Disparities: Heart Disease Mortality Disparity in Counties in the Southeastern United States.” Joint Statistical Meetings, 03–07 August 2003. San Francisco, California.
2. *Invited presentation, ENAR Student Travel Award Winner*: **Tassone, E.C.**, Waller, L.A., Casper, M., Williams, I., Greenlund, K., and Neff, L. “Bayesian Approaches to Measuring and Mapping Small Area Racial Disparities in Heart Disease Mortality in South Carolina.” ENAR Biometric Society Spring Meeting, 30 March–02 April 2003. Tampa, Florida.
1. *Invited presentation*: Waller, L.A. and **Tassone, E.C.** “A Statistical Assessment of an Environmental Justice Complaint in Flint, Michigan.” Joint Statistical Meetings, 13–17 August 2000. Indianapolis, Indiana.

GRANT AND FELLOWSHIP SUPPORT:

- Selected for the National Institutes of Health’s “Health Disparities Research Loan Repayment Program,” August 2007. (Declined award.)
- Duke University, Children’s Environmental Health Initiative: Postdoctoral Fellowship, 2006–2007.
- Association of Schools of Public Health & Centers for Disease Control and Prevention Public Health Fellowship program: Fellow, 2004–2006, “Assessment of Geographic, Racial, and Ethnic Disparities in Cardiovascular Disease using Small Area Analyses.”
- Student Paper Travel Award to attend International Biometric Society’s Eastern North American Region (ENAR) Spring Meeting, March 2003 for “Bayesian Approaches to Measuring and Mapping Small Area Racial Disparities in Heart Disease Mortality in South Carolina.”

- Environmental Protection Agency, “Science to Achieve Results” (STAR) Graduate Fellowship program: Fellow, 2001–2004. Project title: “Statistical Methods for Assessing Environmental Justice”. Project Amount: \$78,810.
- Travel Support to attend NSF-CBMS Regional Conference in the Mathematical Sciences: Environmental Statistics. Seattle, Washington, June 2001.

AWARDS AND HONORS:

- Association of Schools of Public Health & Centers for Disease Control and Prevention Public Health Fellow, 2004–2006, “Assessment of Geographic, Racial, and Ethnic Disparities in Cardiovascular Disease Using Small Area Analyses.”
- International Biometric Society’s Eastern North American Region (ENAR) Student Award to 2003 Spring Meeting, for the paper “Bayesian Approaches to Measuring and Mapping Small Area Racial Disparities in Heart Disease Mortality in South Carolina.”
- Environmental Protection Agency “Science to Achieve Results” (STAR) Graduate Fellow, 2001–2004, for the project “Statistical Methods for Assessing Environmental Justice” to study and develop statistical methodology for measuring and assessing environmental justice and related disparity measures.
- Graduation with High Honors, May 1993.
- Phi Beta Kappa (Florida Beta Chapter), April 1993.

PROFESSIONAL SERVICE:

- Data Scientist Job Ladder Leadership, Google, Inc., 2009–2019.
- Computer Advisory Committee, Emory University, Department of Biostatistics, 2003–2006.
- Founder, Statistical Software Interest Group, Emory University, Department of Biostatistics, 2003–2006.
- Diversity Committee, Emory University, Department of Biostatistics, 2001–2006.

MEMBERSHIPS:

- Florida Bar Association, 1998–present.

SPECIALIZED TRAINING:

- Attended four-day “Geometry of Redistricting Workshop” put on by the Metric Geometry and Gerrymandering Group from Tufts University, March 2018. This included Expert Witness training, with an emphasis on racially polarized voting claims and algorithmic sampling from the space of possible maps in the context of gerrymandering.

COMPUTER SKILLS:

Extensive experience with R and WinBUGS. Experience with Python, SQL, and GitHub. Proficient with Office, \LaTeX , visualization software, and Google Cloud Platform for data science, including virtual machines via Compute Engine, Cloud Storage, BigQuery, BigQuery ML, and Data Studio.