Wenjie Wang

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Education

University of Connecticut (UConn) — Storrs, CT
Ph.D. in Statistics — *August 2014 – August 2019*
Advisors: Dr. Kun Chen & Dr. Jun Yan

Tongji University — Shanghai, China
B.S. in Statistics — *September 2010 – July 2014*

Industry Experience

Senior Advisor — *October, 2022 – Present*
Eli Lilly and Company — Indianapolis, Indiana

- Reinforcement learning with application to marketing
- Optimal individualized treatment rules for multiple treatments
- Potency rank prediction with active learning and transfer learning for short interfering RNA and anti-sense oligonucleotide sequences

Advisor — *September, 2019 – September, 2022*
Eli Lilly and Company — Indianapolis, Indiana

- Innovative algorithm development for diabetes research
- Statistical analysis of continuous glucose monitoring data for patients with diabetes
- Cell type annotations for single-cell RNA-sequencing data

Analyst Intern — *June, 2017 – January, 2018*
After, Inc — Norwalk, CT

- Statistical modeling for warranty analytics
- Interactive data visualization with R Shiny

Analyst Intern — *February, 2014 – July, 2014*
Department of Measurement Science (MSci), A.C. Nielsen — Shanghai, China

- SAS programming, assisted sample design, and universe estimation, etc.

Research Experience

Research Assistant — *January 2016 – July 2019*
UConn Health Center for Population Health — Farmington, CT

- Data cleaning and data integration of Connecticut All-Payer Claims Databases (APCD) and Electronic Health Records (EHR) from Connecticut Children's Medical Center (CCMC)
- A suicide prevention project by survival analysis using the APCD and CCMC data
- Website development and interactive data visualization for HealthQualityCT scorecard project using Hugo and R Shiny
- Usage of imaging procedures for dental treatment over time
- Comorbidity measures and thirty days' readmission rate of joint replacement using Hospital Inpatient Discharge Data (HIDD)

Graduate Assistant — *January 2017 – May 2017*
UConn Data Science Lab — Storrs, CT

- Set up project templates in R Mardown with HTML widgets and Shiny Applications
- Sample projects on survival analysis with deep neural network model

Teaching Experience

Teaching Assistant *August 2015 – January 2016*
Department of Statistics, UConn Storrs, CT

- Led weekly discussion sessions to reinforce material covered in Elementary Concepts of Statistics course

Peer-Reviewed Publications

Wang, W., Zhang, X. & Fu, H. (2024). Personalized Medicine with Multiple Treatments. In *Statistics in Precision Health: Theory, Methods, and Applications*. (pp. 131–161). Springer.

Toschi, E., Edwards, S., Kao, C., Xue, J., Atakov-Castillo, A., **Wang, W.**, ... & Wolpert, H. A. (2024). What really matters?: How insulin dose, timing, and distribution relate to meal composition in free-living people with type 1 diabetes. *Diabetes Technology and Therapeutics*, in press.

Wang, W., Luo, C., Aseltine, R. H., Wang, F., Yan, J., & Chen, K. (2023). Survival Modeling of Suicide Risk with Rare and Uncertain Diagnoses. *Statistics in Biosciences*, 1–27.

Yan, D., Sun, Z., Fang, J., Cao, S., **Wang, W.**, Chang, X., ... & Liu, Y. (2023). scRAA: The Development of A Robust and Automatic Annotation Procedure for Single-Cell RNA Sequencing Data. *Journal of Biopharmaceutical Statistics*, 1–14.

Edwards, S., He, X., **Wang, W.**, Poon, J. L., Meadows, E., Price, D., ... & Polonsky, W. (2022). Use of connected pen as a diagnostic tool to evaluate missed bolus dosing behavior in people with type 1 and type 2 diabetes. *Diabetes Technology & Therapeutics*, 24(1), 61–66.

Wang, W. and Yan, J. (2021). Shape-Restricted Regression Splines with R Package **splines2**. *Journal of Data Science*, 19(3), 498–517.

Wang, W., Aseltine, R., Chen, K., & Yan, J. (2020). Integrative Survival Analysis with Uncertain Event Times in Application to a Suicide Risk Study. *The Annals of Applied Statistics*, 14(1), 51–73.

Aseltine, R., **Wang, W.**, Benthien, R., Katz, M., Wagner, C., Yan, J., & Lewis, C. (2019). Reductions in Race and Ethnic Disparities in Hospital Readmissions following Total Joint Arthroplasty from 2005–2015. *The Journal of Bone & Joint Surgery*, 101(22), 2044–2050.

Caplan, D. J., Li, Y., **Wang, W.**, Kang, S., Marchini, L., Cowen, H. J., & Yan, J. (2019). Dental Restoration Longevity among Geriatric and Special Needs Patient. *JDR Clinical & Translational Research*, 4(1), 41–48.

Wang, W., Chen, M. H., Chiou, S. H., Lai, H. C., Wang, X., Yan, J., & Zhang, Z. (2016). Onset of persistent pseudomonas aeruginosa infection in children with cystic fibrosis with interval censored data. *BMC Medical Research Methodology*, 16(1), 1–10.

Software Packages (R Packages on CRAN)

Wang, W., & Yan, J. (2024). **splines2**: Regression Spline Functions and Classes. R package v0.5.3.

Wang, W., Chen, M.-H., Wang, X., & Yan, J. (2024). **dynsurv**: Dynamic Models for Survival Data. R package v0.4-7.

Jiang, Y., Ting, M.-L., Yan, J., & **Wang, W.** (2024). **clusrank**: Wilcoxon Rank Tests for Clustered Data. R package v1.0-4.

Wang, W. (2023). **jds.rmd**: R Markdown Templates for Journal of Data Science. R package v0.3.3.

Wang, W. (2023). **formatBibtex**: Format BibTeX Entries and Files. R package v0.1.0.

Wang, W. (2022). **abclass**: Angle-Based Large-Margin Classifiers. R package v0.4.0.

Chen, K., **Wang, W.**, & Yan, J. (2022). **rrpack**: Reduced-Rank Regression. R package v0.1-13.

Wang, W., Fu, H., & Yan, J. (2022). **reda**: Recurrent Event Data Analysis. R package v0.5.4.

Wang, W., Li, Y., & Yan, J. (2022). **touch**: Tools of Utilization and Cost in Healthcare. R package v0.1.6.

Wang, W., Chen, K., & Yan, J. (2021). **intsurv**: Integrative Survival Modeling. R package v0.2.2.

Honors & Awards

Lilly Innovator Award Top 100	*2022 & 2023*
IBM T.J. Watson Student Research Award in New England Statistics Symposium (NESS)	*2017*
Department Service Award, Department of Statistics, UConn	*2017*
Pre-Doctoral Dissertation Fellowship, Department of Statistics, UConn	*2015*
Outstanding Graduate Awards of Tongji University	*2014*
Shanghai Rong-Guang **Scholarship**	*2013*
Academic **Scholarship** of Tongji University	*2012–2013*
Social Activity **Scholarship** of Tongji University	*2012–2013*
Meritorious Winner in **Mathematical Contest in Modeling** (MCM)	*2013*
National Undergraduate Innovation Program Certificate	*2012*
Excellent **Student Cadre** of Tongji University	*2012*

Professional Memberships

American Statistical Association (ASA)
Institute of Mathematical Statistics (IMS)
New England Statistical Society (NESS)
International Chinese Statistical Association (ICSA)

Journal Reviews

BMC Medical Research Methodology
Japanese Journal of Statistics and Data Science
Journal of Biopharmaceutical Statistics
Journal of Data Science
The R Journal
Scientific Reports

Services

Associate Editor, The R Journal	*January 2024 – Present*
Communication Officer Lifetime Data Science Section, ASA	*January 2021 – Present*
IT Volunteer, New England Statistical Society (NESS)	*April 2017 – July 2019*
Student Volunteer, Connecticut Data Science Lab	*January 2017 – July 2019*

Invited Talks

Suicide Risk Modeling with Uncertain Diagnostic Records. New England Statistics Symposium, University of Connecticut, Storrs, CT. May 2022.

Shape-Restricted Regression Splines with R Package **splines2**. 63rd ISI World Statistical Congress, Virtual. July 2021.

Integrative Survival Analysis with Uncertain Event Times in Application to a Suicide Risk Study. Joint Statistical Meetings, Denver, Colorado. July 2019.

Integrative Survival Analysis with Uncertain Event Times in Application to a Suicide Risk Study. International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC), University of North Carolina at Greensboro, Greensboro, NC. October 2018.

Integrative Survival Analysis with Uncertain Event Times in Application to a Suicide Risk Study. Eastern North American Region (ENAR), Atlanta, GA. March 2018.

Invited Workshops

Introduction to R programming (Part I & Part II). Society of Industrial and Applied Mathematics (SIAM) Graduate Chapter, University of Connecticut, Storrs, CT. January 2018 & April 2018.

Posters

Integrative Survival Analysis with Uncertain Event Times in Application to a Suicide Risk Study. Eastern North American Region (ENAR), Philadelphia, PA. March 2019.

Extended Cox Model by ECM Algorithm for Uncertain Survival Records Due to Imperfect Data Integration. 31st New England Statistics Symposium, University of Connecticut, Storrs, CT. April 2017.

Onset of persistent pseudomonas aeruginosa infection in children with cystic fibrosis with interval censored data. 29th New England Statistics Symposium, University of Connecticut, Storrs, CT. April 2015.