

YUEDONG WANG

EDUCATION

- 1990-1994 Ph.D., Statistics with Emphasis in Biostatistics.
Department of Statistics, University of Wisconsin-Madison.
Advisor: Grace Wahba.
- 1984-1987 M.S., Operations Research.
Institute of Applied Mathematics, Chinese Academy of Science.
- 1979-1984 B.S., Mathematics.
University of Science and Technology of China.

POSITIONS

- 2003-present Professor, Department of Statistics & Applied Probability,
University of California - Santa Barbara.
Department Chair 2008-2012, 2017-2018.
- 1999-2003 Associate Professor, Department of Statistics & Applied Probability,
University of California - Santa Barbara
- 1997-1999 Assistant Professor, Department of Statistics & Applied Probability, UCSB
- 1994-1997 Assistant Research Scientist and Assistant Professor,
Department of Biostatistics, University of Michigan

RESEARCH INTERESTS

Biostatistical modeling, bootstrap, circadian rhythm, density estimation, graphical models, functional data analysis, longitudinal data, mixed-effects models, model selection, smoothing spline, survival analysis.

REFEREED PAPERS

1. Yuedong Wang (1988), "Failure Distributions of Generalized Shock Models and Their Application", *Chinese Journal of Applied Probability and Statistics*, **3**, 240-247.
2. Yuedong Wang (1988), "Multivariate Shock Models", *J. of the Graduate School, USTC, Academia Sinica*. (In Chinese), **5**, 1-9.
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7. Jinhua Cao and Yuedong Wang (1991), "Pure Birth Shock Models In Changing Environments", *Math. Stat. and Appl. Prob.* (In Chinese), **6**, 123-127.
8. Jinhua Cao and Yuedong Wang (1991), "The NBUC and NWUC Classes of Life Distributions", *J. Appl. Prob.*, **28**, 473-479.
9. Jinhua Cao and Yuedong Wang (1992), "Characterization Problem of Superposition of Two Renewal Processes", *Chinese Journal of Applied Probability and Statistics*, **8**, 88-93.
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14. Grace Wahba and Yuedong Wang (1995), "Behavior Near Zero of the Distribution of the GCV Smoothing Parameter Estimates." *Statistics and Probability Letters*, **25**, 105-111.
15. Yuedong Wang, Grace Wahba, Rick Chappell and Chong Gu (1995), "Simulation Studies of Smoothing Parameter Estimates and Bayesian Confidence Intervals in Bernoulli SS ANOVA Models". *Communications in Statistics: Simulation and Computation*, **24**, 1037-1059.
16. Grace Wahba, Yuedong Wang, Chong Gu, Ronald Klein and Barbara Klein (1995), "Smoothing Spline Analysis of Variance of Data From Exponential Families, With Application to Wisconsin Epidemiology Study of Diabetic Retinopathy". *Annals of Statistics*, **23**, 1865-1895.
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18. Yuedong Wang (1997), "Odds Ratio Estimation in Bernoulli Smoothing Spline ANOVA Model". *The Statistician*, **46**, 49-56.
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87. Marijke J.E. Dekker, Daniele Marcelli, Bernard J. Canaud, Paola Carioni, Yuedong Wang, Aileen Grassmann, Constantijn J.A.M. Konings, Peter Kotanko, Karel M. Leunissen, Nathan W. Levin, Frank M. van der Sande, Xiaoling Ye, Vaibhav Maheshwari,

- Len A. Usvyat, and Jeroen P. Kooman (2017), “Impact of fluid status and inflammation and their interaction on survival: a study in an international hemodialysis patient cohort”, *Kidney International*, **91**: 1214-1223.
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97. Marijke Dekker, Constantijn Konings, Bernard Canaud, Paola Carioni, Adrian Guinsburg, Magdalena Madero, Jeroen van der Net, Jochen Raimann, Frank van der Sande, Stefano Stuard, Len Usvyat, Yuedong Wang, Xiaoqi Xu, Peter Kotanko, and Jeroen Kooman (2018), “Pre-dialysis fluid status, pre-dialysis systolic blood pressure and outcome in prevalent haemodialysis patients: results of an international cohort study on behalf of the MONDO initiative”, *Nephrology Dialysis Transplantation*, **33**: 2027-2034.
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BOOKS

1. Shuangge Ma and Yuedong Wang (2009), *Frontiers of Biostatistics and Bioinformatics*, University of Science and Technology of China Press, Hefei, China.
2. Yuedong Wang (2011), *Smoothing Splines: Methods and Applications*, Chapman & Hall/CRC Monographs on Statistics & Applied Probability, London.

BOOK CHAPTERS

1. Grace Wahba, Yuedong Wang, Chong Gu, Ronald Klein and Barbara Klein (1993), “Structured Machine Learning for ‘Soft Classification’ with Smoothing Spline ANOVA and Stacked Tuning, Testing and Evaluation”, *Advances in Neural Information Processing 6*, Cowan, J.D., Tesauro, G. and Alspector, J. (eds.), San Francisco, CA: Morgan Kaufmann Publishers, 415-422.
2. Grace Wahba, Chong Gu, Yuedong Wang and Rick Chappell (1994), “Soft Classification, a.k.a. Risk Estimation, Via Penalized Log Likelihood and Smoothing Spline Analysis of Variance”, *The Mathematics of Generalization, Santa Fe Institute Studies in the Science of Complexity*, Vol. XX, 329-360, D. Wolpert, eds, Santa Fe Institute Studies in the Sciences of Complexity, Addison Wesley.
3. Yuedong Wang (2004), Model Selection. ”Handbook of Computational Statistics (Volume I)”, J. Gentle, W. Härdle, Y. Mori (eds), Springer, 437-466.
4. Yuedong Wang and Sunwei Guo (2005), Array CGH Data Analysis. ”DNA Microarrays”, U. Nuber (eds), BIOS Scientific Publishers, 281-289.
5. Jeff Sklar, Wendy Meiring and Yuedong Wang, Flexible Statistical Methods for Array-based Comparative Genomic Hybridization Analysis. “Progress in Genome Research”, C. R. Williams eds, Nova Science Publishers.
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PAPERS IN PROCEEDINGS

1. Yuedong Wang (1987), "Laplace Transformation For Some Classes of Multivariate Life Distributions", *Reliability Theory and Applications*, Proceedings of the China-Japan Reliability Symposium, 391-401.
2. Yuedong Wang and Morton B. Brown (1996), "Optimal Experimental Designs for Calibrations with Heterogeneous Error Variances", *Proceedings of the Biopharmaceutical Section, ASA*, 276-281.
3. Wensheng Guo, Yuedong Wang and Morton B. Brown (1997), "Multiprocess State-Space Model for Hormone Time Series with Pulses and a Changing Baseline", *Proceedings of the Biopharmaceutical Section, ASA*, 276-281.
4. Chunlei Ke and Yuedong Wang (2000), "Flexible Models for Repeated Measurement Data", *Computing Science and Statistics*, Vol. 32.
5. Peter Karcher and Yuedong Wang (2000), "Smoothing Spline Analysis of Variance for Correlated Non-Gaussian Data", *Computing Science and Statistics*, Vol. 32.
6. Peter Karcher and Yuedong Wang (2000), "GNMMPack: Software for Fitting Generalized Non-parametric Mixed Effects Models", *Proceedings of the Statistical Computing Section, ASA*, 75-80.
7. Yuedong Wang and Chunlei Ke (2002), ASSIST: A Suite of S-plus functions Implementing Spline smoothing Techniques. *Proceedings of the Hawaii International Conference on Statistics*.
8. Yuedong Wang and Chunlei Ke (2002), A S-Plus Function for Fitting Smoothing Spline Models, 2002 Proceedings of the American Statistical Association, Statistical Computing Section [CD-ROM], Alexandria, VA: American Statistical Association.
9. Tiejun Tong, Anna Liu and Yuedong Wang (2005), Asymptotics of the Covariate-Matched U-Statistic Residual Variance Estimator, 2005 Proceedings of the American Statistical Association, ASA Section on Nonparametric Statistics [CD-ROM], Alexandria, VA: American Statistical Association.
10. Anna Liu and Yuedong Wang (2005), Modeling of Hormone Secretion with Marked Nonhomogeneous Poisson Process, 2005 Proceedings of the American Statistical Association, ASA Section on Statistics in Epidemiology [CD-ROM], Alexandria, VA: American Statistical Association.
11. Yu-Chieh Yang, Anna Liu and Yuedong Wang (2005), PULSE: A Suite of R Functions for Detecting Pulsatile Hormone, 2005 Proceedings of the American Statistical Association, ASA Biometrics Section [CD-ROM], Alexandria, VA: American Statistical Association.

BOOK REVIEW

1. Yuedong Wang (2002), "Interpolating Cubic Splines" by G. D. Knott, *Journal of the American Statistical Association*, **97**, 366-366.

SOFTWARE

- *GRKPACK*: a software package for analysis of binary, binomial, Poisson and Gamma data using smoothing spline ANOVA. Posted to `statlib` and `netlib`.
- *ASSIST*: a suite of S functions for fitting many non-parametric/semi-parametric linear/non-linear fixed/mixed models, including many well-known models such as polynomial splines, periodic splines, spherical splines, thin-plate splines, l-splines, generalized additive models, smoothing spline ANOVA models, projection pursuit models, multiple index models, varying coefficient models, functional linear models, and self-modeling nonlinear regression models as special cases. Posted to <http://cran.r-project.org>.
- *PULSE*: a suite of R functions for hormone pulse detection and estimation.
- *BSML*: a suite of R functions for Basis Selection from Multiple Libraries.

GRANTS

1996-1999	Principal investigator on subcontract of the NIH Grant R01 EY09946, \$64,231 investigator: Grace Wahba, Department of Statistics, University of Wisconsin.
1998-2003	Principal investigator on NIH grant R01 GM58533, \$786,840
2007-2009	Principal investigator on NSF grant DMS-0706886, \$150,448
2015-2019	Principal investigator on NSF grant DMS-1507620, \$228,108
2017-2020	Principal investigator on CKD Biomarkers Consortium Pilot and Feasibility Studies, \$50,000
2020-2023	Lead principal investigator on NIH grant R01DK130067, \$1,991,343

Ph.D. STUDENTS

1. Chair, Doctoral committee: Peter Karcher, 2000. His thesis won the student paper competition of the ASA Statistical Computing Section. Co-Founder and Chief Data Scientist at Sandy Energized Analytics
2. Chair, Doctoral committee: Chunlei Ke, 2000. His thesis won Gani prize in the Department of Statistics and Applied Probability at UCSB. Senior Director, Biostatistics at Apellis Pharmaceuticals
3. Yuchieh Yang (2002). His thesis won the Gani prize. Chair of the Department of Statistics, National Taichung Institute of Technology.
4. Tatiana Khariton (2003). Director of Quantitative Clinical Pharmacology at Inccel-erex.
5. Jeff Sklar (2003, joint with Wendy Meiring). Professor, Department of Statistics, California Polytechnic State University, San Luis Obispo.
6. Anna Liu (2004). Her thesis won Gani prize. Professor, Department of Mathematics and Statistics, University of Massachusetts, Amherst.

7. Tiejun Tong (2005). His thesis won Gani prize. Associate Professor, Department of Mathematics, Hong Kong Baptist University.
8. Yihua Jiang (2009), Senior Data Scientist, Netflix.
9. Homin Jang (2009)
10. Junqing Wu (2011), Director of Data Science at Capital One
11. Yan Xu (2011), Vice President, Sr. Quantitative Finance Analyst at Bank of America
12. Mee-Kyung Kim (2012), Senior manager biostatistics at AbbVie
13. Chi Yang Chiu (2015), Postdoctoral Fellow, NIH. Assistant Professor, Department of Preventive Medicine, University of Tennessee Health Science Center
14. Fang-I Chu (2015), Principal biostatistician at Radiation Oncology department, UCLA
15. Yuqi Chen (2016), Amgen, Biostatistics Manager
16. Jingyi He (2017), Data Scientist at Criteo
17. Ling Zhu (2017), Healthcare Analyst at Welltok
18. Jian Shi (2017), Lead Data Scientist at PayPal
19. Danqing Xu (2015), Manager, Statistics at AbbVie
20. Anna Luo (2018), Applied Scientist at Amazon Web Services
21. Changwei Xu (2018), Senior Data Scientist at Google
22. Ya Luo (2018), Principal Biostatistician at Novartis
23. Zachary Turner (2020), Research Associate at NISS

PROFESSIONAL SERVICE

- *Refereeing.* Reviewed papers for American Journal of Physiology, Annals of the Institute of Statistical Mathematics, Annals of Statistics, Biometrical Journal, Biometrics, Biometrika, Biostatistics, BMC Bioinformatics, BMC Medical Research Methodology, Canadian Journal of Statistics, Computational Statistics and Data Analysis, Fertility and Sterility, Forest Science, IEEE Transactions on Signal Processing, Inverse Problems, Journal of Agricultural, Biological and Environmental Statistics, Journal of Applied Probability, Journal of Computational and Graphical Statistics, Journal of Econometrics, Journal of Nonparametric Statistics, Journal of Machine Learning Research, Journal of Statistical Computation and Simulation, Journal of Statistical Planning and Inference, Journal of the American Statistical Association, Journal of the Royal Statistical Society BC, Journal of Time Series Analysis, Neural Computation, Neural Information Processing System (NIPS), Proceedings of the National Academy of Sciences, Statistical Science, Statistics and Computing, Statistics and Probability Letters, Statistics in Medicine, Statistical Methods in Medical Research and Statistica Sinica. Reviewed books for Chapman & Hall/CRC Press, Springer and Wiley.

- *Grant panel/review.* Statistics Panel, NSF (2008). Information Technology Research Panel, NSF (2003). Center for Scientific Review Special Emphasis Panel, NIH (Feb 1999, Oct 1999, Feb 2000). Minority Biomedical Research Support review panel, NIH (2002). Center for Scientific Review panel, Biodata Management and Analysis Study Section, NIH (2004, 2005). Center for Scientific Review panel, Biobehavioral Mechanisms of Emotion, Stress and Health Study Section, NIH (2006, 2008). Biostatistics Methods and Research Design (BMRD) study section, NIH (2011, 2014). AAAS panel for King Abdulaziz City for Science and Technology (KACST), 2012 and 2016. Reviewed grant applications for NSA, NSF and Australian Research Council.
- Directors of International Chinese Statistical Association Board (2007-2009).
- Program Committee, SIAM 2005 Data Mining Conference.
- Associate editor, Journal of Nonparametric Statistics.
- Associate editor, Statistics and Computing.
- Co-Editor, Statistics and Its Interface (2015-2018)
- Co-Editor in Chief, Statistics and Its Interface (2018-present)

PROFESSIONAL SOCIETIES

American Statistical Association (fellow)
 Royal Statistical Society (fellow)
 International Statistical Institute (fellow)
 Institute of Mathematical Statistics (fellow)
 International Biometric Society
 International Chinese Statistical Association

HONOR

Presidential Fellowship of The George Washington University, 1989 - 1990.
 David P. Byar Young Investigator Award from the Biometrics Section of the American Statistical Association, 1997.
 Elected member, International Statistical Institute, elected 2006.
 Fellow, American Statistical Association, elected 2006.
 Fellow, Institute of Mathematical Statistics, elected 2019.