

Ding-Geng (Din) Chen, Ph.D. ASA Fellow

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QUALIFICATIONS OUTLINE

- Professor of Biostatistics with more than 20 years' experience in biostatistics research, teaching and service in academics, pharmaceutical and biotech industries.
- Invited Speaker at Major Statistics Conferences
 - Plenary speaker, 57th South Africa Statistical Association Annual Conference (2015)
 - Deming Conference on Applied Statistics (71th in 2015; 70th in 2014; 69th in 2013; 68th in 2012; 67th in 2011; 66th in 2010) (Received Plaque of Honor "Award of Recognition" for significant contribution to the success for Deming Conferences. American Statistical Association/American Society of Quality/Deming Conference on Applied Statistics)
 - Twentieth Annual Biopharmaceutical Applied Statistics Symposium (BASS XX, 2013): Applied Meta-analysis using R (received Plaque of Honor for this short course)
- Published more than 100 papers in biostatistics methodology and applications
- Seven books published and ten more books in contract to develop biostatistical clinical trial methodologies and public health applications
- Co-Editor for Springer/ICSA Book Series in Statistics (with Professor Jiahua Chen), Editor/Associate Editor/Editorial board member for several statistical journals
- Successfully Funded by NIH R01s and other federal proposals
- Chair-Elect(2012), Chair(2013), Past-Chair(2014) for Statistics Section at American Public Health Association which he won a "Outstanding Leadership Award" in 2013 from APHA.
- Program Committee Member for Biopharmaceutical Applied Statistics Symposium.

1. EDUCATION

Ph.D. in Statistics (January 1992 to June 1995)

Department of Mathematics and Statistics, University of Guelph, Canada

Dissertation: A Shrinkage Estimator for Combination of Bioassays (Published at Biometrics)

Supervisor: Professors Edward Carter, Peter Kim and John Hubert

MSC in Statistics (September 1985 to July 1987)

Department of Applied Mathematics, Hunan University, China.

MSc. Thesis: Robustness in Linear Model

Diploma in Applied Mathematics (September 1978 to July 1981)

Department of Mathematics, Jishou University, P. R. China

2. PROFESSIONAL EXPERIENCE

July 2015 to Present. University of North Carolina at Chapel Hill, NC, USA

¹Wallace H. Kuralt Distinguished Professor,

Director, Consortium for Statistical Development and Consultation, School of Social Work,
University of North Carolina at Chapel Hill, NC USA

²Clinical Professor in Biostatistics, Department of Biostatistics, Gillings School of Global Public
Health, University of North Carolina at Chapel Hill, NC USA

December 2010 to June 2015. University of Rochester Medical Center, Rochester, NY, USA

Professor in Biostatistics, Center of Research, School of Nursing

Professor in Biostatistics, Department of Biostatistics and Computational Biology, School of
Medicine and Dentistry, University of Rochester.

August 2009 to December 2010: Georgia Southern University, Statesboro, GA, USA

Karl E. Peace Endowed Eminent Scholar Chair in Biostatistics

Professor in Biostatistics, Department of Biostatistics, Jiann-Ping Hsu College of Public Health.

August 2005 to August 2009:

Professor in Biostatistics, Department of Mathematics and Statistics, South Dakota State University,

Brookings, SD.

Professor in Biostatistics, Department of Surgery, Sanford School of Medicine, University of South Dakota, Sioux Falls, SD.

July 2000 to Aug 2005: International Pacific Halibut Commission at University of Washington, Seattle, USA. Senior Quantitative Scientist

May 1996 to July 2000: Pacific Biologic Research Station, Government of Canada, B.C. Canada
Senior Research Scientist

June 1994 to May 1996: Ontario Ministry of Natural Resources, ON, Canada
Senior Statistician

January 1992 to June 1994: University of Guelph, ON, Canada.
Teaching and Research Assistant, Department of Mathematics and Statistics.

August 1987 to December 1991: Hunan University, Changsha, Hunan, China
Lecturer (US Assistant Professor-equivalent), Department of Applied Mathematics.

OTHER PROFESSORAL EXPERIENCE

August 2015 to Present: University of Pretoria, Pretoria, South Africa.
Extra-ordinary Professor, Department of Statistics, University of Pretoria, South Africa.

January 2006 to January 2009: South China Agricultural University, Guangzhou, China
Adjunct professor, Department of Applied Mathematics.

December 2005 to December 2009, Chinese Academy of Sciences, Changsha, China
Adjunct professor.

May 1997 to May 1998. Institute of Chemical Toxicology, Wayne State University, Detroit, USA.
Visiting Scholar/Biostatistician

3. MEMBERSHIPS

- 1) American Statistical Association, Fellow
- 2) American Public Health Association, Past Statistics Chair
- 3) International Chinese Statistical Association, Co-editor of Springer/ICSA Book Series in Statistics

4. PROFESSIONAL PUBLICATIONS

4.1. Books

- 1) Peace, K.E. and **Chen, D. G.** (2010). **Clinical Trial Methodology**. Chapman & Hall/CRC Biostatistics Series. FL: Boca Raton. (ISBN: 978-1-58488-917-5, 420 pages). (<http://www.taylorandfrancis.com/books/details/9781584889175/>)
- 2) **Chen, D.G.** and Peace, K.E. (2011). **Clinical Trial Data Analysis using R**. Chapman & Hall/CRC Biostatistics Series. FL: Boca Raton. (ISBN: 978-1-43-984020-7, 387 pages). (<http://www.taylorandfrancis.com/books/details/9781439840207/>)
- 3) **Chen, D. G.,** Sun, J. and Peace, K. E. (Eds. 2012). **Interval-censored Time-to-Event Data: Methods and Applications**. Chapman and Hall/CRC, Biostatistics Series. FL: Boca Raton. (<http://www.taylorandfrancis.com/books/details/9781466504257/>). (One of the six "Favorite Books from the 2012 International Society for Clinical Biostatistics Conference": <http://click.bsfransmit1.com/ViewInBrowser.aspx?pubids=9009%7c7735%7c936634%7c69639&digest=40f%2ba528OJj31oimlc7wZQ&sysid=1>)
- 4) **Chen, D. G.** and Peace, K. E. (2013). **Applied Meta-Analysis using R**. (ISBN: 978-1-46-650599-5, 342 pages). Chapman & Hall/CRC Biostatistics Series. FL: Boca Raton. (<http://www.taylorandfrancis.com/books/details/9781466505995/>)
- 5) Young, W. and **Chen, D. G.** (Eds. 2014). **Clinical Trial Biostatistics and Biopharmaceutical Applications**. (ISBN: 978-1-48-221218-1, 589 pages) Chapman & Hall. FL: Boca Raton. (<http://www.taylorandfrancis.com/books/details/9781482212181/>).
- 6) **Chen, D.G.** and Wilson, J. (Eds. 2015). **Innovative Statistical Methods for Public Health Data**. Springer. (<http://www.springer.com/us/book/9783319185354>).
- 7) He, H., Pan, W. and **Chen, DG.** (Eds. 2016). **Statistical Causal Inferences and their Applications in Public Health Records**. Springer. (<http://www.springer.com/us/book/9783319412573>)

- 8) Xie, C. and **Chen, D. G.** (2016) **Multiple Testing Adjustment in Clinical Trials and Genetic Epidemiology Studies with R.** Chapman & Hall/CRC Biostatistics Series. In contract.
(<http://www.taylorandfrancis.com/books/details/9781466586918/>)
- 9) **Chen, D.G.**, Chen, J., Lu, X., Yi, G. and Yu, H. (Eds. 2017) **Advanced Statistical Modelling in Data Sciences.** Springer. In press.
- 10) Ting, N., **Chen, D. G.** and Ho, S. (2017) **Phase II Clinical Trials: Design and Implementation.** Springer. In contract.
- 11) **Chen, D.G.** (Eds. 2017) **Monte-Carlo Simulation-Based Statistical Modelling.** Springer. In contract.
- 12) **Chen, D.G.**, Lio, Y., Ng, H.K. and Tsai, T. (Eds. m2017). **Statistical Modelling for Degradation Data.** Springer, In contract.
- 13) **Chen, DG.** Peace, K. E. and Zhang, P. (2017). **Clinical Trial Data Analysis Using R/SAS.** Chapman and Hall/CRC. 2nd Edition.
- 14) Peace, K.E., **Chen, D.G.** and Sandeep Menon. (Eds. 2017) **Design of Clinical Trials.** Springer, In Contract
- 15) Peace, K.E., **Chen, D.G.** and Sandeep Menon. (Eds. 2017) **Biostatistical Analysis of Clinical Trials.** Springer, In Contract
- 16) Peace, K.E., **Chen, D.G.** and Sandeep Menon. (Eds. 2017) **Pharmaceutical Applications.** Springer, In Contract
- 17) Xia, Y., Sun, J. and **Chen, D.G.** (2018). **Statistical Analysis of Microbiome Data with R.** springer. In contract.

4.2. Peer-reviewed Publications in Statistical/Biostatistical Methodology

- 1) **Chen, D. G.** (2016). Robustness for Shrinkage estimate in combination of multivariate Bioassay. Communications in Statistics -Theory and Method. Published online.
- 2) **Chen, D.G.** (2016). Statistical meta-analysis and its efficiency: A simulation study. South Africa Statistical Journal. Accepted.
- 3) **Chen, D. G.**, Ting, N. and Ho, S. (2016) Informative Priors or Non-Informative Priors? A Bayesian Re-Analysis of Binary Data from Macugen Phase III Clinical Trials. Communications in Statistics - Simulation and Computation. Accepted.
- 4) **Chen, D.G.**, Chen, X., Lin, F., Lio, Y.L. Kitzman, H. (2015) Systemize the Probabilistic Discrete Event Systems with Moore-Penrose Generalized-Inverse Matrix Theory for Cross-Sectional

- Behavioral Data. *Journal of Biometrics and Biostatistics*. 6:219:1-6. doi: 10.4172/2155-6180.1000219.
- 5) Balakrishnan, N., Tsai, T. R., Lio, Y. L., Jiang, N. and **D. G. Chen** (2015). Reliability Inference on Composite Dynamic Systems Based on Burr Type-XII Distribution. *IEEE Transactions on Reliability*. 64(1) 144-153.
 - 6) He, H., Wang, W., Crits-Christoph, P., Gallop, R., Tang, W., **Chen, DG.** and Xin M. Tu.(2014). Structural vs. Sampling Zeros from Independent predictors: Implications for Alcohol Research. **Journal of Data Science**. 12(3): 439-460.
 - 7) Nakai, M., **Chen, D. G.**, Nishimuraa, K. and Miyamotoa, Y. (2014). Comparative Study of Four Methods in Missing Value Imputations under Missing Completely at Random Mechanism. *Open Journal of Statistics*. 4:27-37.
 - 8) Yu, L., Liu, L. and **Chen, D.G.** (2013). Weighted Least-Squares Method for Right-Censored Data in Accelerated Failure Time Model. **Biometrics**. 69: 358-365.
 - 9) **Chen, D.G.**, Yu, L. Peace, K.E. Lio, Y.L. and Wang, Y. (2013). Approximating the baseline hazard function by Taylor Series for interval-censored time-to-event data. **Journal of Biopharmaceutical Statistics** 23(3): 695-708. PMID: 23611204.
 - 10) **Chen, D.G.**, Y.L. Lio and Jiang, N. (2013). Lower Confidence Limits on the Generalized Exponential Distribution Percentiles under Progressive Type-I Interval Censoring, **Communications in Statistics-Simulation and Computation**, 42(09):2106-2117.
 - 11) Xie, C. and **Chen, D. G.** (2013) Letter to the Editor on "Graphical Approaches for multiple comparison procedures using weighted Bonferroni, Simes, or parametric tests" with "gMCP" R Package. **Biometrical Journal**. 55(2): 264-265.
 - 12) Xie, C., Lu, X. and **Chen, D. G.** (2013). Weighted Multiple Testing Corrections for Correlated Binary Endpoints. **Communication in Statistics-Simulation and Computation**. 42(8):1693-1702.
 - 13) Yu, L., Yu, R., Liu, L. and **Chen, D.G.** (2012). Extended Quasi-Likelihood with Fractional Polynomials in the Frame of the ATF model. **Statistics in Medicine**, 31(13):1369-1379.
 - 14) Samawi, H, Dunbar, M and **Chen, D.G.** (2012). Steady state ranked GIBBS sampler. **Journal of Statistical Computation and Simulation**. 82(8):1223-1238.

- 15) Lio, Y., **Chen, D.G.** and Tsai, T. (2011). Parameter Estimations for Generalized Rayleigh Distribution under Progressively Type-I Interval Censored Data. *Open Journal of Statistics*. 1:45-57.
- 16) **Chen, D. G.** (2010). Incorporating historic control information with Empirical Bayes. *Journal of Computational Statistics and Data Analysis*. 54: 1646-1656
- 17) **Chen, D.G.** and Lio, Y. (2010). Parameter Estimations for Generalized Exponential Distribution under Progressive Type-I Interval Censoring. *Journal of Computational Statistics and Data Analysis*. 54 (6): 1581-1591.
- 18) **Chen, D. G.** (2010). Estimate the relative potency in parabolic bioassay. *Journal of Advances and Applications in Statistical Sciences*. 2(1):1-18.
- 19) Zhang, P. G., **Chen, D. G.** and Roe, T. (2010). Choice of Baselines in Clinical Trials: A Simulation Study from Statistical Power Perspective. *Communications in Statistics-Simulation and Computation*. 39(7): 1305-1317.
- 20) **Chen, D. G.** (2010). Estimate the relative potency in parabolic bioassay. *Journal of Advances and Applications in Statistical Sciences*. 2(1):1-18.
- 21) **Chen, D. G.** (2009). A quantal statistical isobologram model to identify joint action for chemical mixtures. *Environmetrics*. 20(1) 101-109.
- 22) **Chen, D. G.** and Lio, Y (2009). A Novel Estimation Approach for Mixture Transition Distribution Model in High-Order Markov Chains. [Communications in Statistics-Simulation and Computation](#). [38\(5\):990-1003](#).
- 23) **Chen, D. G.** and Lio, Y (2009). A Note on the Maximum Likelihood Estimation for the Generalized Gamma Distribution Parameters under Progressive Type-II Censoring. *International Journal of Intelligent Technology and Applied Statistics*. 2(2):145-152.
- 24) **Chen, D. G.** and Lio, Y, L. (2008). Comparative Studies on Frailties in Survival Analysis, *Communications in Statistics - Simulation and Computation*. 37(8):1631-1646.
- 25) **Chen, D. G.** (2007). Bootstrapping Estimation for Relative Potency in the Combinations of Bioassays. *Journal of Computational Statistics and Data Analysis*. 51:4597-4604.
- 26) **Chen, D. G.** (2007). Dose-time-response cumulative multinomial generalized linear model. **Journal of biopharmaceutical Statistics**, Vol 17, No 1. 173-185.
- 27) Xiong, J., **Chen, D. G.** and Yang, Z. (2007). A Shrinkage Estimator for Combination of

Bioassays. **Acta Mathematicae Applicatae**, 23(3):467-476.

- 28) **Chen, D.G.** and Xiao, Y. (2006). A general model for analyzing data from mark-recapture experiment with an application to the Pacific halibut. [Environmental and Ecological Statistics](#). 13:149-161.
- 29) **Chen, D. G.**, Carter, E.M., Hubert, J. J. and Kim, P. T. (1999). Empirical Bayes Estimation for Combination of Multivariate Bioassays. **Biometrics**. 55(4), 1035-1043.

4.3. Peer-reviewed Publications in Statistical Applications

- 1) Chen, X. and **Chen, D.G.** (2016). Cognitive Theories, New Paradigm in Quantum Behavior Change, and Cusp Catastrophe Modeling in HIV-Related Behavioral Research. *Current HIV Research*. Accepted.
- 2) Hu, X., Chen, X., Cook, R.L., **Chen, D. G.** and Okafor, C. (2016) Modeling Drinking Progression in Youths with Cross-sectional Data: Solving an Under-identified Probability Discrete Event System. *Current HIV Research*. 14:93-100.
- 3) Lin, F., Heffner, K., Ren, P., Tivarus, M., Brasch, J., **Chen, D. G.**, Mapstone, M., Porsteinsson, A., & Tadin. Cognitive and Neural Effects of Vision-Based Speed of Processing Training in Older Adults with Amnesic Mild Cognitive Impairment: A Pilot Study. *Journal of the American Geriatrics Society*. (in press).
- 4) Tucker, R., Quinn, J.J., **Chen, D.G.** and Chen, L. (2016). Psychometrics of the Kansas City Cardiomyopathy Questionnaire Adapted for Family Caregiver/Significant Other. *Journal of Nursing Measurement*. Accepted.
- 5) **Chen, D.G.** (2015) Meta-analysis for psychiatric research using free software R. *Shanghai Achieve Psychiatry*. 27(3): 195-199. Doi: 10.11919/j.issn.1002-0829.215063
- 6) Tucker, R., Quinn, J.J., **Chen, D.G.** and Chen, L. (2015). Kansas City Cardiomyopathy Questionnaire (KCCQ) Administered to Hospitalized Heart Failure Patients. *Journal of Nursing Measurement*. Accepted.
- 7) Wilde, M., McMahon, J. M., McDonald, M. V., Tang, W., Wang, W., Brasch, j., Fairbanks, E., Shah, S., Zhang, F. and **Chen, D. G.** (2015). A Randomized Trial of a Self-Management Intervention in Long-Term Indwelling Urinary Catheter Users. *Nursing Research*. 64(1):24-34.
- 8) **Chen, D. G.**, Lin, F., Chen, X., Tang, W. and Kitzman, H. (2014). Cusp Catastrophe Model: a nonlinear model for health outcomes research. *Nursing Research*. 63(3): 211-220. (PubMed Central (PMC) public access at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4066972>)

- 9) Blackmore, E. R., Groth, S.W., **Chen, D. G.**, Gilchrist, M.A. and O'Connor, T.G. and Moynihan, J.A. (2014). Depressive symptoms and proinflammatory cytokines across the perinatal period in African American women. *Journal of Psychosomatic Obstetrics & Gynecology*, 35(1):8-15.
- 10) Brown, M.L., Yukata, K., Farnsworth, C.W., **Chen, D.G.**, Awad, H., Hilton, M. J., O'Keefe, R. J., Xing, J., Mooney, R. A. and Zuscik, M. J. (2014). Delayed Fracture Healing and Increased Callus Adiposity in a C57BL/6J Murine Model of Obesity-Associated Type 2 Diabetes Mellitus. "PLoS ONE". 9(6): 1-11.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4049817/pdf/pone.0099656.pdf>.
- 11) Lin, F., Roiland, R, **Chen, D. G.** and Qiu, C.(2014). Linking Cognition and Frailty in Middle and Old Age: Metabolic Syndrome Matters. *International Journal of Geriatric Psychiatry*. 30(1) 64-71.
- 12) Lin, F., Roiland, R., Polesskaya, O., Chapman, B., Johnson, M., Brasch, J., **Chen, D.**, & Mapstone, M.(2014). Fatigability Disrupts Cognitive Processes' Regulation of Inflammatory Reactivity in Old Age. *The American Journal of Geriatric Psychiatry*. 22(12) 1544-1554.
- 13) Lin F., Heffner K.L., Mapstone M., **Chen D. G.**, & Porsteinsson A.P.(2014). Frequency of Mentally Stimulating Activities Modifies the Relationship between Cardiovascular Reactivity and Executive Function in Old Age. *The American Journal of Geriatric Psychiatry*. 22(11):1210-1221.
- 14) Lin, F., Roiland, R., Heffner, K., Johnson, M., **Chen, DG.**, & Mapstone, M. (June, 2014). Evaluation of Objective and Perceived Mental Fatigability in Older Adults with Vascular Risk. *Journal of Psychosomatic Research*. 76(6):458-464.
- 15) Chen, X., Stanton, B., **Chen, D.G.** and Li, M. (2013). Is Intention to Use Condom a Linear Process? Cusp Modeling and Evaluation of an HIV Prevention Intervention Trial. *Nonlinear Dynamics, Psychology, and Life Sciences* 17(3):385-403.
- 16) Baumgarten, K. M., Oliver, H. A., Foley, J. **Chen, D.G.**, Autenried, P., Duan, S. and Heiser, P. (2013). Human Growth Hormone May Be Detrimental When Used to Accelerate Recovery from Acute Tendon-Bone Interface Injuries. *Journal of Bone and Joint Surgery*, 95(9):783-789.
- 17) Lin, F., **Chen, D. G.**, Vance, D., Ball, K, K. and Mapstone, M.(2013). Longitudinal Relationships between Subjective Fatigue, Cognitive Function, and Everyday Functioning in Old Age. *International Psychogeriatrics*. 25(02) 275-285.
- 18) Lin, F., **Chen, D. G.**, Vance, D. and Mapstone, M. (2013). Trajectories of Combined Laboratory- and Real world-based Speed of Processing in Community-Dwelling Older adults. *Journal of*

Gerontology Series B: Psychological Sciences and Social Sciences 68(3):364-373.
(<http://psychsocgerontology.oxfordjournals.org/content/68/3/364.full.pdf+html>)

- 19) Stein, K. **Chen, DG.** , Colleen, K., Collen, C. and Trabold, N. (2013). Disordered Eating Behaviors in Young Adult Mexican American Women: Prevalence and Associations with Health Risks. *Eating Disorders*, 14(4):476-483.
- 20) Stein, K. F. Wing, J. Corte, C., **Chen, D.G.**, Nuliyala, U. and Wing, J. (2013). A randomized clinical trial of an identity intervention program for women with eating disorders. *European Eating Disorders Review* 21(2): 130-142 (March 2013).
- 21) Lin, F., Friedman, E., Quinn, J., **Chen, D.**, & Mapstone, M. Effect of Leisure Activities on Inflammation and Cognitive Function in an Aging Sample. *Archives of Gerontology and Geriatrics*. 54(3): 398-404. [PMID: 22377120]
- 22) Malekian, R., Abdullah, A. and **Chen, D. G.** (2011) ROMA: determine the maximum end-to-end delay based on a new Resource reservation method over Mobile IPv6 routing Architecture. *Australian Journal of Basic and Applied Sciences*, 5(4):239-251.
- 23) **Chen, Ding-Geng**, Karl E. Peace, Lili Yu, Yuhlong Lio, Yibin Wang. (2010) Interval-Censoring in Biomedical and Biopharmaceutical Clinical Trials. *BIOCOMP 2010*: 779-784.
- 24) Updegraff, K., Zimmerman, Kozak, P., **Chen, D. G.** and Price, M. (2010). Estimating the uncertainty of modeled carbon sequestration: The GreenCert(TM) System. *Environmental Modelling & Software*. 25:1565-1572.
- 25) Aloia, J.F, **Chen, D-G**, Yeh, J.K. and Chen, H.(2010). Serum vitamin D metabolites and intestinal calcium absorption efficiency in women. *American Journal of Clinical Nutrition*. 92(4):835:840.
- 26) Aloia, J. F., **Chen, D. G.** and Chen, H. (2010). The 25(OH)D/PTH Threshold in Black Women. *Journal of Clinical Endocrinology & Metabolism*. 95(11):5069-5073.
- 27) Moyad, M. A., Robinson, L. A., Zawada, E. T., Kittelsrud, J. **Chen, D. G.**, Reeves, S. G and Weaver, S. (2010). Immunogenic Yeast-Based Fermentate for Cold/Flu-like Symptoms in Nonvaccinated Individuals. *The Journal of Alternative and Complementary Medicine*. 16(2): 213-218.
- 28) **Chen, D. G.** and Lio, Y (2009). A Note on the Maximum Likelihood Estimation for the Generalized Gamma Distribution Parameters under Progressive Type-II Censoring. *International Journal of Intelligent Technology and Applied Statistics*. 2(2):145-152.

- 29) Wang, X and **Chen, D.G.** Recombinant murine cytomegalovirus vector activates human monocyte-derived dendritic cells in a NF- κ B dependent pathway. *Molecular Immunology* 46 (2009) 3462–3465
- 30) Lester, P. E. Stefanacci, R.G. **Chen, D.G.** Nursing Home Procedures on Transitions of Care. *Journal American Medical Directors Association*. 2009 Nov;10(9):634-8. Epub 2009 Oct 9.
- 31) (Affymetrix Microarray)** Fedora Sutton, **D. G. Chen**, Xijin Ge and Don Kenefick (2009). Cbf genes of the Fr-A2 allele are differentially regulated between long-term cold acclimated crown tissue of freeze-resistant and -susceptible, winter wheat mutant lines. ***BMC Plant Biology***. 9(34)1-9.
- 32) Assimacopoulos, A., Alam, R., Arbo, M., Nazir, J., **Chen, D. G.** and Weaver, S. (2008). A Brief Retrospective Review of Medical Records Comparing Outcomes for Inpatients Treated via Telehealth versus In-person Protocols: Is telehealth equally effective as in-person visits for treating neutropenic fever, bacterial pneumonia, and infected bacterial wounds? [*Telemedicine and e-Health*, 14\(8\):762-768.](#)
- 33) Moyad, M, Robinson, L. Zawada, E. Kittelsrud, J. **Chen, D. G.**, Reeves, S. Weaver, S. A.(2008). Effects of a modified yeast supplement on cold/flu symptoms. ***Urologic Nursing***, 28(1):50-55.
- 34) **(Statistics in cDNA Microarray)** Guo, X, Rosa, A., **Chen, D. G.** and Wang, X.(2008). Molecular Mechanisms of Primary and Secondary Mucosal Immunity Using Avian Infectious Bronchitis Virus as a Model System. ***Veterinary Immunology and Immunopathology***. 121(3-4):332-343.
- 35) Xiong, J., **Chen, D. G.** and Zhao, Y. (2007). A State-space model for mark-recapture experiments and its applications. *Journal of Shenzhen University (Science and Engineering)*, 24(3):322-323.
- 36) Kittelsrud, J., Fieldsend, J., Bishop, D. T., **Chen, D. G.**, Knoflicek, W. and Dressing, M. C. (2007). Comparison of Three Outreach Strategies to Achieve Weight Loss in a Rural, Adult Population: Results of the South Dakota School District Benefit Fund OPTIFAST Outreach Research Study. *Telemedicine Information Exchange*. 1-10.
- 37) Baker, D.R., Moxley, R.A., Steele, M.B., LeJeune, J.T. Christopher-Hennings, J., **Chen, D. G.**, Hardwidge, P. R. and Francis, D. H. (2007). Virulence variation among *Escherichia coli* O157:H7 strains isolated from human disease outbreaks and healthy cattle. ***Applied and Environmental Microbiology***. 7338-7346.
- 38) **(Statistics in Affymetrix Microarray)** Liu, Y., Fu Li, **Chen, D. G.** and Deeb, S. S.(2007).

- Identification of multiple photoreceptor genes regulated by Thyroid hormone in the human retinoblastoma cell line WERI by expression microarray analysis. **Vision Research** 47(17) 2314-2326.
- 39) Nishida, T., **Chen, D. G.** and Mohri, M. (2007). Fuzzy logic analysis for the spawner-recruitment relationship of bigeye tuna in the Indian Ocean incorporating the environmental regime shift. **Ecological Modelling**. 203: 132-140.
- 40) Dreyfus-León, M. and **D. G. Chen** (2007). Recruitment prediction with Genetic Algorithms with application to the Pacific Herring Fishery. **Ecological Modelling**, 203: 141-146.
- 41) **Chen, D. G.** and Hare, S. R. (2006). Neural network and fuzzy logic models for pacific halibut recruitment analysis. *Ecological Modelling*. Vol 195. 11-19.
- 42) **Chen, D. G.** and Soyupak, S. (2005). A Comparison of Regression, Neural Network and Fuzzy Logic Models for Estimating Chlorophyll-A Concentrations in Reservoirs. *International Journal of Ecology and Development*. Vol. 3:65-77.
- 43) **Chen, D.G.** (2004). Bias and bias correction in fish recruitment prediction. *North American Journal of Fisheries Management*, 24:724-730.
- 44) **Chen, D.G.**, Xie, Y., Mulligan, T.J. and MacLennan, D.N.(2004). Optimal partition of effort between observations of fish density and migration speed for a riverine hydro-acoustic Duration-in-beam sampling method. *Fisheries Research*, 67:275-282.
- 45) Pounds, J.G., Jamal Haider, **D. G. Chen** and Moiz Mumtaz. (2004). Interactive Toxicity of Simple Chemical Mixtures of Cadmium, Mercury, Methylmercury and Trimethyltin: Model-dependent Responses. *Environmental Toxicology and Pharmacology* 18:101-113.
- 46) Nishida, T. and **D. G. Chen**. (2004). Incorporating spatial autocorrelation into the General Linear Model with an application to the yellowfin tuna (*Thunnus albacares*) longline CPUE data. *Fisheries Research* 70:265-274.
- 47) Soyupak, S. and **Chen, D.G.** (2004). Fuzzy Logic Model to Estimate Seasonal Pseudo Steady State Chlorophyll-a Concentrations in Reservoirs. *Environmental Modeling & Assessment* 9:51-59.
- 48) **Chen, D.G.** (2006). Classification of fish stock-recruitment relationships in different environmental regimes by fuzzy logic with bootstrap re-sampling approach. *Ecological Informatics*. 385-408.
- 49) Irvine, J.R., **Chen, D.G.** and Jon T. Schnute (2003). Retrospective Sampling: A Planning Tool

- for Field Programs. *Fisheries* 28(8): 25-30.
- 50) **Chen, D.G.** and Holtby, L.B. (2002). A regional meta-model for stock-recruitment analysis using empirical Bayesian approaches. *Canadian Journal of Fishery and Aquatic Sciences*. 59(9):1503-1514.
- 51) **Chen, D.G.**, Irvine, J.R. and Cass, A.(2002). Incorporating Allee effects in fish stock-recruitment models and applications for determining reference points. *Canadian Journal of Fishery and Aquatic Sciences*, 59(2):242-249.
- 52) **Chen, D. G.** (2001).Detecting Environmental Regimes in Fish Stock-Recruitment Relationships by Fuzzy Logic. *Canadian Journal of Fishery and Aquatic Sciences*. 58: 2139-2148.
- 53) **Chen, D. G.** and J. Irvine (2001). A Semiparametric Approach to Analyze Stock-recruitment Relationship with environmental effects and Fishery Interventions. *Canadian Journal of Fishery and Aquatic Sciences*. 58: 1178-1186.
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- 57) **Chen, D.G.** and Pounds, J.G. (1998). A non-linear isobolgram model with Box-Cox transformation to both sides for chemical mixtures. *International Journal of Environmental Health Perspectives*. 106,Supplement 6, 1367-1371.
- 58) Sullivan, T.P., Wagner, R.G., Pitt, D.G., Lautenschlager, R.A and **Chen, D.G.** (1998). Changes in diversity of plant and small mammal communities after herbicide application in sub-boreal spruce forest. *Canadian Journal of Forest Research* 28: 168-177.
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- 60) **Chen, D.G.** (1990). Comparison of linear model. (in Chinese). *Journal of Hunan University*.17(2),119-23. (**Mathematical Review Quote Number: MR 1 084 927**)
- 61) **Chen, D. G.** (1989). The Relationship between the Least Squares Estimate and the Best Linear Unbiased Estimate (in Chinese). *Hunan Daxue Xuebao (Journal of Hunan University)*. 6(1), 132-137. (**Mathematical Review Quote Number: MR 90m:62157**)

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- 63) Wang, L.Z and **Chen, D.G.** (1988). The analysis of the un-equilibrium of aggregate demand and aggregate supply. (in Chinese). *Journal of Jishou University*, Vol. 3, p. 13-20.
- 64) **Chen, D.G.** (1987). Optimal control of sale price. (in Chinese). *Journal of Mathematical Economics*, 1987 Special Issue, p. 265-267.
- 65) Wong, L.Z and **Chen, D.G.** (1987). (in Chinese). Evaluation on the theory of international constraint income and payment growth. *Journal of Jishou University*. 1, p. 2-9.

4.4. Book Chapters and Precedings

- 1) **Chen, D.G.** and Ho, Shuyen. 2016. From Statistical Power to Statistical Assurance: It's Time for the Paradigm Change in Clinical Trial Design. In *JSM Proceedings*, Biopharmaceutical Statistics Section. Alexandria, VA: American Statistical Association. In press.
- 2) **Chen, D.G.**, Chen, X. and Feng Lin (2015) Solve Probabilistic Discrete Event Systems with Moore-Penrose Generalized-Inverse Method to Extract Longitudinal Characteristics from Cross-Sectional Survey Data. In *Chen, D.G. and Wilson, J. (Eds.): Innovative Statistical Methods for Public Health Data*. Springer. Chapter 5: page 81-96.
- 3) Hua He, Wenjuan Wang, **Chen, D. G.** and Wan Tang (2015). On the effects of structural zeros in regression models. In *Chen, D.G. and Wilson, J. (Eds.): Innovative Statistical Methods for Public Health Data*. Springer. Chapter 6: page 97-116.
- 4) Yu-Jau Lin, Y. L. Lio, **Chen, D. G.** and Nan Jiang (2015). Modeling Based on Progressively Type-I Interval Censored Sample. In *Chen, D.G. and Wilson, J. (Eds.): Innovative Statistical Methods for Public Health Data*. Springer. Chapter 7: page 117-152.
- 5) Xinguang (Jim) Chen and **Chen, D. G.** (2015). Cusp catastrophe modeling in medical and health research. In *Chen, D.G. and Wilson, J. (Eds.): Innovative Statistical Methods for Public Health Data*. Springer. Chapter 12: page 265-190.
- 6) Yan Ma, Wei Zhang and **Chen, D. G.** (2015). Meta-analytic Methods for Public Health Research. In *Chen, D.G. and Wilson, J. (Eds.): Innovative Statistical Methods for Public Health Data*. Springer. Chapter 15: page 325-340.
- 7) Hu, C. Dignam, J. and **Chen, DG.** (2014). Competing Risks and Their Applications in Cancer Clinical Trials. In *Walter, Y. and Chen, D.G.(Eds.): Clinical Trial Biostatistics and*

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- 8) Ma, L. Feng, Y., **Chen, DG.** and Sun, J. (2014). Interval-censored time-to-event data and their applications in clinical trials. In *Walter, Y. and Chen, D.G.(Eds.): Clinical Trial Biostatistics and Biopharmaceutical Applications*. Chapman and Hall. Chapter 12: pp 307-333.
 - 9) Xie, C. Lu, X. and **Chen, DG** (2014). Comparative Study of Five Weighted Parametric Multiple Testing Methods for Correlated Multiple Endpoints in Clinical Trials. In *Walter, Y. and Chen, D.G.(Eds.): Clinical Trial Biostatistics and Biopharmaceutical Applications*. Chapman and Hall. Chapter 16: pp 421-434.
 - 10) **Chen, D.G.**, Chen, X., Tang, W. and Lin, F. (2014). Sample Size Determination to Detect Cusp Catastrophe in Stochastic Cusp Catastrophe Model: A Monte-Carlo Simulation-Based Approach. Lecture In W.G. Kennedy, N. Agarwal, and S.J. Yang (Eds.): SBP 2014, Lecture Notes in Computer Science 8393, pp. 35–41.
 - 11) Chen, X. and **Chen, D. G.**(2014). Mutual Information Technique in Assessing Crosstalk through a Random-Pairing Bootstrap Method. In W.G. Kennedy, N. Agarwal, and S.J. Yang (Eds.): SBP 2014, Lecture Notes in Computer Science 8393, pp. 239–246.
 - 12) Nakai, M. Lio, Y. **Chen, D. G.**, Nishimura, K. Watnabe, M. and Moyamoto, Y. (2014). Comparative studies for Cox hazards model based on the population-based cohort study of Japan. JSM Proceeding. Section on Statistics in Epidemiology, pp. 650–654.
 - 13) **Chen, DG.** Yu, L. Peace, K.E. and Sun, J. (2013). Bias and its remedy in interval-censored time-to-event applications. In D.G. Chen, K.E. Peace and J. Sun (Eds.): *Interval-Censored Time-to-Event Data: Methods and Applications*. Chapman & Hall/CRC Biostatistics Series. pp. 311-328.
 - 14) Xie, C., Lu, X., Singh, R. and **Chen, D.G.** (2013). Effect of Misspecified Correlations in Parametric Multiple Testing Methods for Correlated Tests. JSM2013 Proceeding, Biopharmaceutical Section, 1753-1764.
 - 15) **Chen, D. G.**, Yu, L. and Peace, E. K. 2012, Bias and its Remedy in Interval-Censored Time-to-Event Applications. In "Interval-Censored Time-to-Event Data: Methods and Applications" Eds. Ding-Geng Chen, Jianguo Sun, and Karl E. Peace. (Ed.). Chapter 11: pp311-328.
 - 16) Karki, A. Ge, X., **Chen, DG.**, Sutton, F. Sparse Principal Component Analysis (SPCA) of Wheat Microarray Data Identifies Co-Expressed Genes Differentially Regulated by Cold Acclimation. Proceeding of American Statistics Association. 2011: 2159-2170.
 - 17) **Chen, D. G.** and Lio, Y. L. A Parametric Bootstrap Procedure for the Generalized Exponential Distribution Under Progressive Type-I Interval Censoring. Proceeding of 2010 Joint Statistical

Meeting, (10 pages).

- 18) **Chen, D. G.** and Lio, Y.L. (2008). Simulation Studies for Mixture Transition Distribution Model in High-Order Markov Chains. In JSM Proceedings, Statistical Computing Section. Alexandria, VA: American Statistical Association.
- 19) Zhang, P. G. and **Chen, D. G. (2008)**. Statistical Power Simulations on the Choice of Baselines in Clinical Trials. In JSM Proceedings, Biopharmaceutical Section. Alexandria, VA: American Statistical Association.
- 20) **Chen, D.G.** and Irvine, J. (2007). Using fuzzy logic to quantify climate change impacts on spawner-recruitment relationships for fish from the North-eastern Pacific ocean, pp 197-209. In "Advanced Methods for Decision Making and Risk Management in Sustainability Science" Edited By J. Kropp and J. Scheran.
- 21) Nishida, T. and **D. G. Chen.** (2007). Incorporating spatial autocorrelation into the General Linear Model with an application to the yellowfin tuna (*Thunnus albacares*) longline CPUE data. In "GIS/Spatial Analysis in Fishery and Aquatic Sciences", Edited by Nishida, Kailola and Caton. Vol 3:197-212.
- 22) **Chen, D.G.** and Richard Leickly (2004). A Test for Spatially Correlated Data: an Alternative to the traditional t-test. In GIS/Spatial Analysis in Fishery and Aquatic Sciences. Edited by Nishida, T., Kailola, P. J. and Hollingworth, C. E. p223-240.
- 23) **Chen, D.G.** (2002). A Bayesian model with a bivariate normal-lognormal prior distribution and a nonlinear mixed-effect model for a regional fish stock-recruitment meta-model. 2002 Proceedings of the American Statistical Association, Bayesian Statistical Science Section, New York.
- 24) **Chen, D.G.** (2002). A Fuzzy Logic View on Classifying Stock-Recruitment Relationships in Different Environmental Regimes. In Ecological Informatics: Understanding Ecology by Biologically-Inspired Computation Edited by Recknagel, F. (Springer Verlag, Berlin) page 329-352 (Chapter 17).
- 25) Mumtaz, M. M., El-Masri, H., **Chen, D. G.**, and J.G. Pounds (2000). Joint Toxicity of Inorganic Chemical Mixtures: the Role of Dose Ratios. Metal Ions in Biology and Medicine, Vol. 6, Eds. J. Centeno, P. Collery, G. Vernet, R. Finkelman, H. Gibb and J. C. Etienne, John Libbey Eurotext, Paris, P297-299.
- 26) Pella, J., Masuda, M. and Chen, D. G. (1998). Forecast methods for in-season Management of the Southeast Alaska Chinook salmon Troll Fishery. In Fishery Stock Assessment Models Edited by

F. Funk, T. J. Quinn, J. Heifetz, J. N. Ianelli, J. E. Powers, J. F. Schweigert, P. J. Swullivan and C. I. Zhang, p287-314.

- 27) Mulligan, T., Chen, D.G. and Aubry, P. (1997). A Stochastic Migration Model for the Fraser River Salmon Management. Proceedings of the Section on Government Statistics and Section on Social Statistics of the American Statistical Association, p216-220.

4.5. Dissertation and Reports

- 1) **Chen, D.G.** (1995). A Shrinkage Estimator for Combination of Bioassays. Ph.D. Dissertation. University of Guelph.
- 2) **Chen, D.G.**, Kim, P. T., Carter, E.M. and Hubert, J.J. (1993). Combination of Parabolic Bioassays. Department of Mathematics and Statistics. University of Guelph. Statistical series 1993-266, 21p.
- 3) **Chen, D. G.**, Kim, P. T., Carter, E.M. and Hubert, J.J. (1993). Estimation for parabolic bioassay. Department of Mathematics and Statistics. University of Guelph. Statistical series 1993-261, 18p.
- 4) **Chen, D.G.**, Kim, P. T., Carter, E.M. and Hubert, J.J. (1993). A Bayesian estimator in combination of multivariate bioassays. Department of Mathematics and Statistics. University of Guelph. Statistical series 1993-260, 14p.
- 5) **Chen, D.G.**, Kim, P. T., Carter, E.M. and Hubert, J.J. (1993). A Bayesian analysis for combining slope-ratio bioassays. Department of Mathematics and Statistics. University of Guelph. Statistical series 1993-259, 16p.
- 6) **Chen, D.G.**, Kim, P. T., Carter, E.M. and Hubert, J.J. (1993). Bayesian estimation in combination of parallel-line bioassays. Department of Mathematics and Statistics. University of Guelph. Statistical series 1993-258, 10p.
- 7) **Chen, D.G.**, Kim, P. T., Carter, E. M. and Hubert, J.J. (1993). Using prior information in combination of symmetric bioassays. Department of Mathematics and Statistics. University of Guelph. Statistical series 1993-257, 21p.

5. PROFESSIONAL PRESENTATIONS

5.1. Plenary

- 1) "Big Data Era to Statistical Meta-Analysis". 57th South Africa Statistical Association Annual meeting, Pretoria, SA (Dec 1, 2015)

5.2. Invited Workshops and Short Courses

- 1) Ma, Y. and Chen, D.G. (June 12 2016). Applied Meta-analysis Using R. International Chinese Statistical Association 2016 Symposium. Atlanta.
- 2) **Chen, D.G.** (2016). Systematic Review and Meta-Analysis. Spring Training Institute, Consortium for Statistical Development and Consultation, University of North Carolina at Chapel Hill, NC, 5/19/2016.
- 3) **Chen, D.G.** (2016). Applied Meta-Analysis Using R. Conference on Statistical Practice, American Statistical Association, San Diego. 2/18/2016 1:30 to 5:30pm
- 4) Xie, C. and **Chen, D. G.** (2015). "Multiple Testing for Correlated Multiple Endpoints in Clinical Trials ". The 71th Deming Conference in Applied Statistics, Atlantic City, NJ, USA. December 7, 2015. Atlantic City, NJ, USA.
- 5) **Chen, D. G.** (2015). "Meta-Analysis with R/SAS". 57th South Africa Statistical Association annual meeting, University of Pretoria, South Africa (Dec 3, 2015)
- 6) **Chen, D. G.** and Hu, C. (2014). "Competing Risks in Cancer Clinical Trials". The 70th Deming Conference in Applied Statistics, Atlantic City, NJ, USA. December 9, 2014.
- 7) **Chen, D.G.** (2014) "Meta-Analysis using R". The Illinois Chapter of the American Statistical Association Fall Workshop (Oct 10, 2014), Chicago, IL, USA.
- 8) Sun, J. and **Chen, D.G.** (2014). "Interval-Censored Time-to-Event Data: Methods and Applications". Joint Statistical Meeting, American Statistical Association. Tuesday August 5 1-5pm. Boston, MA, USA.
- 9) **Chen, DG** (May 16 to June 6, 2013). Biostatistics in R - Applications to Clinical Trials. Online course for "Statistics.com". Arlington, VA, USA.
- 10) **D. G. Chen** (2013). Applied Meta-analysis Using R. December 10, 2013. The 69th Deming Conference in Applied Statistics, Atlantic City, NJ, USA
- 11) **Chen, DG.** (2013). Applied Meta-analysis using R. Twentieth Annual Biopharmaceutical Applied Statistics Symposium (BASS XX), Orlando, FL. 11/6-11/7, 2013. (received Plaque of Honor for this short course)

- 12) **Chen, DG** (May 17 to June 7, 2013). Biostatistics in R - Applications to Clinical Trials. Online course for "Statistics.com". Arlington, VA, USA.
- 13) **Chen, D.G.** and Sun, J. (2012): **Interval-Censored Time-to-Event Data: Methods and Applications**. December 3, 2012. The 68th Deming Conference in Applied Statistics, Atlantic City, NJ, USA.
- 14) **Chen, DG** (May 18 to June 8, 2012). Biostatistics in R - Applications to Clinical Trials. Online course for "Statistics.com". Arlington, VA, USA.
- 15) **D. G. Chen** (2012). Clinical Trial Data analysis using R. International Biometric Conference, Kobe, Japan, 8/26/2012.
- 16) **Chen, DG** (Nov 18 to Dec 2, 2011). Biostatistics in R - Applications to Clinical Trials. Online course for "Statistics.com". Arlington, VA, USA.
- 17) **Chen, DG** (May 27 to June 23, 2011). Biostatistics in R - Applications to Clinical Trials. Online course for "Statistics.com". Arlington, VA, USA.
- 18) **Chen, DG.** (June 24th to July 15th, 2011). Clinical Trial Data Analysis Using R. online course for Statcourse.com, Huntington Beach, CA, USA.
- 19) **Chen, DG.** (2011). Clinical Trial Data Analysis Using R. December 2011. The 67th Deming Conference in Applied Statistics, Atlantic City, NJ, USA.

5.3. Recent Invited Talks

- 1) **Chen, D.G.** (2016). Meta-Analysis Using R. Session on Data Synthesis and Meta-Analysis. Conference on Statistical Practice, American Statistical Association. San Diego. Feb 20, 2016.
- 2) **Chen, D.G.** (2015) "Interval-Censored Time-to-Event Data: Parametric, Nonparametric, Semi-Parametric Survival Data Analysis". Mini-plenary at 57th South Africa Statistical Association annual meeting, University of Pretoria (Dec 1, 2015)
- 3) **Chen, D.G.** (2015) "Big-data Perspectives in Biostatistics and Bioinformatics". Big-Data Summit, University of Pretoria, South Africa (Nov 28, 2015)
- 4) **Chen, X.** and **Chen, D.G.** (2015). "Theory-supported cusp catastrophe modeling in analyzing public health data", American Public Health Association Annual Conference Chicago, IL. USA. Nov 2, 2015.

- 5) **Chen, D.G.** (2014). Meta-Analysis with R. Department of Statistics, Kansas State University. December 4, 2014.
- 6) **Chen, D.G.**, Chen, X and Tang, W. (2014). Sample Size Determination for stochastic cusp catastrophe model: a simulation-based approach. 2014 American Public Health Association, Invited session "Modelling Social Behavior", 11/19/2014.
- 7) **Chen, D.G.** (2014). Meta-analysis for public health data. SON Research and Innovation Grand Rounds, University of Rochester Medical Center. 10/29/2014. Wed 12:00-13:00pm.
- 8) **Chen, D.G.** (2014) Meta-analysis with summary statistics vs. meta-analysis with individual patient-level data. Department of Mathematics and Statistics, University of Guelph. 10/28/2014, Tuesday 2:30-3:30pm.
- 9) (Invited Discussant). **Chen, D.G.** (2014) "Model the Structural Zeroes in Mental Health Research". 2014 JSM, August 5, 2014.
- 10) **Chen, D.G.** (2014) Big data and meta-analysis using R. Department of Statistics, University of Pretoria, South Africa, Monday, May 5, 2014.
- 11) **Chen, D. G.**, Chen, X., Tang, W. and Lin, F. (2014) Sample size determination to detect cusp catastrophe model: a Monte-Carlo simulation approach. The 2014 International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP), Washington, DC, 4/2-4/4, 2014
- 12) **Chen, DG**, Dungang Liu and Heping Zhang (August 7, 2013). Relative efficiency for random-effects meta-analysis using summary statistics and individual patient data. 2013 Joint Statistical Meeting, Montreal, Canada
- 13) **Chen, DG (2012)** Issues on Factorial Experimental Design. Tianjin International Joint Academy of Biotechnology and Medicine, China. July 11, 2012
- 14) **Chen, DG (2012)** ROC and Diagnostics. Tianjin International Joint Academy of Biotechnology and Medicine, China. July 10, 2012
- 15) **Chen, DG (2012)** Stock Assessment Modelling using State-of-art software R. Shanghai Fishery University, China. July 6, 2012
- 16) **Chen, DG (2012)** Statistical Computing using R. Guangzhou University, China. July 4, 2012
- 17) **Chen, DG (2012)** Bayesian Modelling. Guangzhou University, China. July 3, 2012
- 18) **Chen, D. G.** (2007) Hybrid Global Genetics Algorithms with Quasi-Newton Methods for Neural Network Models. EcoSummit 2007.

5.4. Other Presentations

- 1) Chen, X., **Chen, DG** and Lan, G. (2015). Identify Non-identifiable Markov-Based Systems for Studying the Dynamics of Adolescent Marijuana Use with Cross-Sectional Data. The 25th Annual International Conference, the Society for Chaos Theory in Psychology and Life Sciences, July 29-31, 2015, Gainesville, Florida
- 2) Quinn, J.R., Friedman, M., Stein, K.F., Tucker, R., & **Chen, D.G.** (2014, September). Family Caregivers' Perceptions of Patients' Health Status and Time to Hospitalization for Decompensating Heart Failure. Poster presentation at the 2014 State of the Science Congress on Nursing Research,
- 3) Wilde, M., McMahon, J., McDonald, M., Tang, W., Wang, W. Brasch, J., Fairbanks, E., Shah, S., Zhang, F., **Chen, D. G.** (2014, June). Self-management in long - term urinary catheter users. Paper presented at WOCN Society's 46th Annual Conference, Nashville, TN.
- 4) Zhang, F., Wilde, M.H., **Chen, D.**, Wang, W., & Tang, W.(2014). Symptoms of catheter-associated urinary tract infections (CAUTI) in long-term indwelling urinary catheter users. Poster presented at the 2014 ENRS conference, Philadelphia, PA
- 5) Stein, K., Corte, C. and Chen, DG. Identity Impairment: The Cognitive Foundation of Disordered Eating and Weight Control Behaviors (DEWCB) in Mexican American Women (MA). The 26th Eastern Nursing Research Society, 4/9-4/11, 2014. Philadelphia, PA.
- 6) Quinn, J. Friedman, M. Stein, K., Tucker, R. and Chen, DG. Family Caregivers' Perception of Patients' Health Status and Time to Hospitalization for Decompensating Heart Failure. The 26th Eastern Nursing Research Society, 4/9-4/11, 2014. Philadelphia, PA.
- 7) Chen, X. and **Chen, D. G.** Mutual information technique in assessing crosstalk through a random-pairing bootstrap method. The 2014 International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP), Washington, DC, 4/2-4/4, 2014
- 8) Quinn, J.R., Stein, K.F., Friedman, M.N., Chen, L., Tucker, R., & **Chen, D.G.** (2013) Recognition of Worsening heart failure and care seeking by chronic heart failure patients prior to hospitalization. Poster presentation at the Council for the Advancement of Nursing Science (CANS) Conference, Washington, DC, October 16, 2013.

- 9) Nakai, N., **Chen, DG.**, Nishimura, K., Miyamoto, Y. (August 7, 2013). Comparative Study of Four Methods in Missing Value Imputations with Dropouts from Longitudinal Studies. 2013 Joint Statistical Meeting, Montreal, Canada
- 10) Xie, C., Lu, X., **Chen, DG.**, Singh, RS. (August 7, 2013). Effect of Misspecified Correlations in Parametric Multiple Testing. 2013 Joint Statistical Meeting, Montreal, Canada.
- 11) **Chen, DG.** Chen, X and Lin, F. (July 26, 2013). Statistical Power Analysis for the Polynomial Cusp Catastrophe Model: A Simulation-Based Approach. 23rd Annual Conference for Society for Chaos Theory in Psychology and Life Sciences, Portland, OR.
- 12) Jill R. Quinn, Karen F. Stein, Maureen Friedman, Leway Chen, Rebecca Tucker, **Ding-Geng Chen** (2013) . Recognition of Worsening Heart Failure and Care Seeking by Chronic Heart Failure Patients Prior to Hospitalization. COUNCIL FOR THE ADVANCEMENT OF NURSING SCIENCE 2013, July 2013.
- 13) **D. G. Chen.** (Contributed Presentation) Interval-censored time-to-event data analysis. International Biometric Conference, Kobe, Japan, 8/30/2012
- 14) Quinn, J.R., Chen, L., Brasch, J., Smith, J.A., Tucker, R., & **Chen, D.G.** (September, 2011). Symptom Recognition and Decision to Seek Care by Both Chronic Heart Failure Patients and Their Family Caregivers/Significant Others Prior to Hospitalization. Poster presentation. 15th Annual Scientific Meeting Heart Failure Society of America. Boston, MA.
- 15) Jill R. Quinn, Rebecca Tucker, Leway Chen, Judy Brasch, Joyce A. Smith, **Ding-Geng Chen.** Comparing Perceptions of Chronic Heart Failure Patients' Health Status Prior to Hospitalization by Patients and Their Family Caregiver/Significant Others. "*Quality Care and Outcomes Research in Cardiovascular Disease and Stroke 2011 Scientific Sessions*", Washington, D.C. May 12-14, 2011
- 16) **Chen, Ding-Geng,** Yu, Lili and Lio, Y.L. Fractional Polynomials in Analyzing Interval-Censored Time-to-Event Data. Joint Statistical Meetings, American Statistical Association. Miami Beach, FL, July 30-August 4.
- 17) Lio, Y.L. and **Chen, Ding-Geng.** Simulation Study for the estimations of Generalized Rayleigh Parameters under Progressive type-I Interval Censoring. Joint Statistical Meetings, American Statistical Association. Miami Beach, FL, 7/30-8/4.
- 18) Samir S. Deeb, Darren Bisset, **Ding-Geng Chen,** Maria N. Pavlova. Regulation of Retinal Gene Expression by Thyroid Hormone and its Receptors During Mouse Development. *The Association for Research in Vision and Ophthalmology (ARVO)*. Fort Lauderdale, FL, May 1, 2011.

- 19) Sutton, Fedora, Karki, Amrit and **Chen, Ding-Geng**, Microarray data analysis using Sparse Principal Component Analysis (SPCA). The 7th International Conference on Data Mining July 18-21, 2011 Las Vegas, USA.
- 20) Xueshui Guo, **D. G. Chen**, Artur J.M. Rosa, Xiuqing Wang (Oct 20-21, 2006). Kinetics of local gene transcription profiles during the development of mucosal immunity using avian infectious bronchitis virus as a model system. American Society for Microbiology 66th Annual meeting.
- 21) Sajjad, I. and **Chen, D. G.**, Raul Jindal and John Ryan. Hemodialysis Access: a systematic review of outcomes. The 10th Biennial symposium on dialysis access. May 18-19, 2006, Arizona.
- 22) Miller, R., **Chen, D. G.**, Bottolfson, D. and Ryan, J. J. Carotid Endarterectomy Outcomes in a Medium-Sized Veterans Affairs Hospital Setting. American College of Surgery.
- 23) Shmagin, B. and **Chen, D.** Understanding and mapping water resources by multidimensional statistics and fuzzy logic: Missouri River basin case. 2006 Western SD Hydrology Conference April 18, 2006, Rushmore Plaza Civic Center – Rapid City, South Dakota.
- 24) J.G. Pounds, PL Pokorski, **D.G. Chen**, M Mumtaz: Target Organ Variability in the Toxicity of Chemical Mixtures. *The Toxicologist*, 54;2000.
- 25) Pounds, J., P. L. Pokorski, **D. G. Chen** and M. Mumtaz (2000). Target Organ Variability in the Toxicity of Chemical Mixtures. *Toxicological Sciences* 49(1S)
- 26) Pounds, J., **DG Chen**, and M Mumtaz (1998). Importance of model fitting in Assessment of Chemical Mixtures. *Toxicological Sciences* 47(1S):1543A.
- 27) **DG Chen** and JG Pounds (1998). Analysis of Chemical Mixtures by Non-linear Isobologram Model with Box-Cox Transformation-to-both-sides for Chemical Mixtures. *Toxicological Sciences* 47(1S):1687A
- 28) Hadir J, **Chen, D**, M Mumtaz, and Pounds JG.(1996). Model-dependent cytotoxic interactions of Metals. *Toxicologist*: 17:40a.
- 29) Haider, J., **Chen, D. G.** and Pounds, J. G. (1996). Model-Dependent Cytotoxic Responses to Defined Chemical Mixtures of Metals. *Fundamental and Applied Toxicology* 30(1):40a

6. GRANTS AND CONTRACTS

Active:

- 1) (NIH, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), R01HD075635. Multi-PI: Chen, X.-University of Florida and Chen, D.-University of North Carolina at Chapel Hill) Modeling quantum change in adolescent sexual initiation and condom use (with a cusp catastrophe model development). \$ 1,728,486, 07/1/2013-06/30/2018. Role: Multi-PI.

Completed

- 1) (PI: Chen): Causal Inferences for Zero-Inflated Models in Health Promotion/Health Behavior Outcomes Research. Faculty Research Support Grants, University of Rochester. 7/1/2013-6/30/2014. \$9,965
- 2) (PI: Flannery) Lung Cancer: Structured Pain/Symptom Assessment for functional Well Being. Oncology Nursing Society. The purpose of this pilot project is to examine the feasibility of a study designed to test the efficacy of a structured pain and symptom assessment as a telephone delivered intervention to reduce distress and improve wellbeing. Biostatistician. 7/2012 to 6/2014. Co-I/Biostatistician.
- 3) NIH (1 R01 DA021624-02, Olds, D.) Visiting Intervention Age-17 Follow-up of Home. This study is a longitudinal follow-up of 670 primarily African-American women and their 17-year-old firstborn children enrolled since 1990 in a highly significant randomized controlled trial (RCT) of prenatal and infancy home visiting by nurses. Nurses in this program are charged with improving pregnancy outcomes, child health and development, and maternal economic self-sufficiency. 04/01/08-02/28/14, \$1,144,772, Biostatistician.
- 4) (PI: Stein, NIH R01) Identify impairment: the cognitive foundation of risk behaviors in Hispanic women. 8/1/2011-3/31/2013, Co-I/Biostatistician.
- 5) (Deebs, PI and Chen, Co-PI). Molecular Genetics of Color Vision. NIH. \$1,960,455. 07/2008-07/2011. Co-PI.
- 6) (PI: Pesis-Katz). FAIR Health Inc. Upstate Health Research Network. "Examining the Association between Quality of Care information in the NYS Cardiac Surgery Reports and Negotiated Prices with Insurance Plans". 1/1/2011 to 6/30/2011. (Biostatistician)
- 7) Chen (PI). Developing a Nonlinear Random-Effect Model for Limits of Detection and Limits of

Quantitation in Agricultural/Environmental Measurements, USDA. 10/01/2008 to 09/31/2009. \$20,000.

- 8) Stein (PI) and Chen(Biostatistician). Synoptic weather forecasting and web-based information delivery systems for managing crop disease risk in multiple regions of the U.S.". USDA. \$1,180,115. 07/2008-12/2009.
- 9) A randomized, double-blind, placebo-controlled, parallel-group study to evaluate the effect of 500mg EpiCor™ on allergy symptoms. Biostatistician, \$190,000. Embria Health Inc. 03/01/2008-12/31/2008.
- 10) Chen (PI). Developing a statistical mixed model and a full Bayesian integrated approach to identify the differentially expressed genes in non-replicated/small-sample microarray experiment. \$70,494, SD Governor's 2010 Individual Research Grant. 08/07-08/08.
- 11) Gonzalez (PI), Chen (Co-PI). Metabolomics and Functional Genomics of Seed Lipid Biosynthesis in Cuphea. USDA. \$20,000. 11/06-11/08.
- 12) Chen. NSF/EPSCoR Rushmore Initiative for Excellence in Research, \$13,750. 08/2005 to 08/2006
- 13) Pounds and Chen. Agency. "Identification and Characterization of toxicant interactions". for Toxic Substances and Disease Registry. \$90,203(US), Biostatistician. May 1995 to May 1999.

7. TEACHING ACTIVITIES

- **University of North Carolina at Chapel Hill**

- 1) SOWO 916: Structural Equation Modelling for Ph.D. students(Spring 2016)
- 2) SOWO 917: Multilevel Modelling for Ph.D. students (Fall 2015, Fall 2016).

- **University of Rochester**

- 1) NUR 544: "Advanced Biostatistics Data Analysis" for Ph.D. students to advanced clinical trial design and real data analysis (2012 Fall)
- 2) NUR 511: Quantitative Methods (2013 Fall).

- **Georgia South University**

- 1) BIOS 9130: Statistics Consulting for DrPH students (2009 Fall, 2010 Fall)
- 2) BIOS 7535: Data Analysis Using SAS. 2010 Spring for MPH and DrPH students
- 3) BIOS 9331: Meta-Analysis and Research Seminar. 2010 Fall for DrPH students

- **South Dakota State University**

- 1) CSS (Computational Science and Statistics) 703: Statistical Modeling and Computing using R (2006 Fall; 2008 Fall, for Ph.D. students).
- 2) CSS 890: Research Seminar (2005 Fall; 2008 Fall, for Ph.D. students).
- 3) CSS 898: Optimization with Constraints (2007 Spring for Ph.D. students)
- 4) Stat 787: Regression Analysis II (2009 Spring for both Ph.D. and MSc. students)
- 5) Stat 792-S03: Linear Models (2005 Fall for both Ph.D. and MSc students)
- 6) Stat 791: Adaptive Design in Clinical Trials (2008 Fall for Ph.D. students)
- 7) Stat 492/592: Statistical Methods (2007 Spring and 2008 Spring for Ph.D. and MSc students; 2008 Summer for training medical directors and researchers at the Medical school)
- 8) Stat 720: Bayesian Statistics (2007 Fall for Ph.D. students)
- 9) MATH 592: Bioinformatics (2006 Fall for both undergraduate and graduate students)
- 10) MATH 791: Genetic Algorithms and Optimization (2006 Fall for Ph.D. students)
- 11) Stat 792: Statistics in Bioassay (2006 Spring for Ph.D. students)

8. PROFESSIONAL ACTIVITIES AND HONORS

8.1. Awards and Honors

- 2014: "Award of Recognition" for significant contribution to the success for Deming Conferences. American Statistical Association/American Society of Quality/Deming Conference on Applied Statistics.
- 2013: "Outstanding Leadership Award", American Public Health Association.
- 2013: "Meritorious Lecture plaque", Biopharmaceutical Applied Statistics Symposium.
- 2012: Tianjin 1000-Talents, China.

8.2. Editorial Activities

- 1) Book Series Co-Editor (with Professor Jiahua Chen), Springer/ICSA Book Series in Statistics (<http://www.springer.com/series/13402>) (2014-)
- 2) Public Health Statistics Series Book Series Co-editor (with Professor Jeffrey Wilson), Johns Hopkins University Press (2016-)
- 3) Associate Editor, Journal of Statistical Computation and Simulation (2009-)
- 4) Statistical Editor, Journal of Addictive Diseases (2016-

- 5) Editorial Board member, Journal of Bioanalysis and Biostatistics (2016-)
- 6) Editor, SOJ Clinical Trials (2015-)
- 7) Editor Board of "International Journal of Ecological Informatics" (2004-2013)
- 8) Editorial Board, Biostatistics, Bioinformatics and Biomathematics (2009-2010)
- 9) Editor, International Journal of Ecology and Development (2004-2009)

8.3. Professional Activities

- 1) Chair-elect (2012), Chair (2013), Past-Chair (2014), Statistics Section, American Public Health Association
- 2) Program Committee Co-Chair, 142th American Public Health Association Annual Meeting, New Orleans, LA, Nov 15-19, 2014
- 3) US National Institute of Health (NIH) invited special panel (2014/08 ZRG1 AARR-G (55) R RFA Panel: Tobacco Control Regulatory Research) reviewer for research proposals submitted to NIH for funding, Bethesda, MD. June 3, 2014.
- 4) Program Committee Chair, 141th American Public Health Association Annual Meeting, Boston, MA, Nov 2-6, 2013
- 5) Program Committee Chair, 140th American Public Health Association Annual Meeting, San Francisco, CA, October 27-31, 2012
- 6) Program Committee Co-Chair, 138th American Public Health Association Annual Meeting, Denver, CO, November 6-10, 2010.
- 7) Statistics Program co-Chair, 138th American Public Health Association Annual Meeting
- 8) Program Committee member of Biopharmaceutical Applied Statistics Symposium
- 9) Program moderator of BASS XVI (Nov, 2009), BASS XVII (Nov, 2010)
- 10) Section Chair for Biopharmaceutical Section, ENAR 2010, New Orleans, LA
- 11) Section Chair for Computation Statistics, JSM 2010, Vancouver.
- 12) Full member of Sigma Xi (The Scientific Research Society)
- 13) National Science Foundation special panel reviewer (October 2005).
- 14) Foundation member of the international society of ecological informatics (ISEI)
- 15) Section Chair for the 2nd international conference for ISEI in Australia, 2000
- 16) Selected member of the International Scientific Committee for the 3rd Conference of ISEI in Italy, 2002
- 17) Invited Reviewer for professional journals (JASA, Statistics in Medicine, Biometrics,

Computational Statistics & Data analysis, Journal of Statistical Computation and Simulations; Journal of Agricultural, Biological, and Environmental Statistics; Journal of Biopharmaceutical Statistics; International Journal of Ecological Modelling and Systems Ecology; Journal of Computational and Graphical Statistics; International Journal of Environmental Health Perspectives and more).

8.4. Department, School, University and National Activities

- **University of North Carolina at Chapel Hill**

- 1) Director, Consortium for Statistical Development and Consultation (<http://csdc.web.unc.edu>)
- 2) Ph.D. Sub-Committee

- **University of Rochester**

- 1) Executive member, Center for Research and Evidence-Based Practice.
- 2) Member of Ph.D. Sub-Committee
- 3) PostDoc (Dr. Wang, W., June 2013-June 2014)
- 4) Ph.D. students graduated (Suzanne O'Brian, 2011, with Ingersoll, G. and Xue, Y.; Rebecca Tucker, 2012, with Quinn, J. and Chen, L.; Annette Graph, 2013, Kearney, M. and Fielding, S.; Wu, P. 2013, with Tu, X. and He, H.; Tao Yu, 2013, with Liang, H, Salzman, P. and Qiu, X.; Xiao Zhang, 2014, with McDermott, D., Mudholkar, G. and Qiu, X.; Tian Chen, 2015, Tu, X., He, H. and Thurston, S.; Frank DiLiberto, 2014, with Quinn, J.; Brenda McQuillian, 2016, with Rhee, H.

- **Georgia Southern University**

- 1) College Promotion and Tenure Committee (2009-2010)
- 2) College Research Advisory Committee member (2009-2010)

- **South Dakota State University**

- 1) Coordinator for the biostatistics/bioinformatics Computational Sciences and Statistics (CSS) Ph.D. program at South Dakota State University (SDSU)
- 2) CSS Ph.D. Steering Committee member between SDSU and University of South Dakota.
- 3) Search Committee Chair for Bioinformatics faculty position for the bioinformatics program
- 4) Supervisor for Ph.D. students in Statistics (Tom Brandenburger, 2009, now an associate Professor at SDSU; Alfred Furth, 2009, now the vice president at Capital Card)
- 5) Supervisor for MS students in Statistics (XiangFan Yin, 2008; Krishna Deepthi, 2008; Ramu Sudhagani, 2008; Mike Wallinga, 2008; Rebaka Worthley, 2009)