CURRICULUM VITAE

NAME: Stephen Sauchi Lee 李守智
RANK: Professor of Statistics, Affiliate Professor of Bioinformatics and Computational Biology
DEPARTMENT: Department of Statistical Science
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EDUCATION BEYOND HIGH SCHOOL:

Ph.D., Florida State University, Tallahassee, FL, December 1991, Statistics
M.S., Florida State University, Tallahassee, FL, August 1989, Statistics
M.A., University of West Florida, Pensacola, FL, August 1987, Mathematics
B.S., University of Hong Kong, Hong Kong, May 1981, Mathematics

EXPERIENCE:

- Professor, Department of Statistical Science, University of Idaho, August 2016-present
- Associate Professor, Department of Statistical Science, University of Idaho, August 1999-2016
- Associate Visiting Professor, China Management Center, University of Hong Kong, September 2013-December 2013.
- Assistant Professor, Department of Statistics, University of Idaho, August 1993-1999
- Assistant Professor, Department of Mathematics, Virginia State University, August 1991-July 1993
- Teaching Assistant, Department of Statistics, Florida State University of West Florida, 1987-91
- Teaching Assistant, Department of Mathematics, University of West Florida, 1986-87

PUBLICATIONS:

1. Alex Vakanski, Jake Ferguson, **Stephen Lee**. Metrics for Performance Evaluation of Patient Exercises during Physical Therapy" *Journal of Physiotherapy and Physical Rehabilitation*. 2017
2. Alex Vakanski, Jake Ferguson, **Stephen Lee**. Mathematical Modeling and Evaluation of Human Motions in Physical Therapy using Mixture Density Neural Networks. *Journal of Physiotherapy and Physical Rehabilitation* . 2016
3. Chungwon Chung, Amanda Grimm, Grace Chung, Sang-Ho Cha, Locke Karriker, Kathleen Gibson, Kyoung-Jin Yoon, Steven Parish, Chak-sum Ho, and **Stephen Lee**. Recognition of highly diverse type-1 and -2 porcine reproductive and respiratory syndrome viruses (PRRSVs) by T-cells induced in pigs after experimental infection of type-2 PRRSV strains. *Journal of Virology.* 2016
4. Erik Robert Coats, Cynthia K Brinkman, **Stephen Lee**. Characterizing and Contrasting the Microbial Ecology of Laboratory and Full-scale EBPR Systems Cultured on Synthetic and Real Wastewaters. *Water Research*. 2016
5. Melissa Thompson, **Stephen Lee**, J Seegmiller, CP McGowan. Kinematic and Kinetic Comparison of Barefoot and Shod Running in Forefoot and Rear foot Strike Runners. *Journal of Gait and Posture.* 2015, 41: 957-9
6. Zachary Hamilton, Melanie-Angela Neuilly, **Stephen Lee,** Robert Barnoski. Isolating Modeling Effects in Risk Assessment, *Journal of Experimental Criminology*. 2015, 11: 299-318.

7. Chungwon Chung, Carey Wilson, Chandima-Bandara Bandaranayaka-Mudiyanselage, Eunah Kang, D Scott Adams, Lowell S Kappmeyer, Donald P Knowles, Terry F McElwain, James F Evermann, Massaro W Ueti, Glen A Scoles, **Stephen S Lee**, Travis C McGuire. Improved diagnostic performance of a commercial Anaplasma antibody competitive enzyme-linked immunosorbent assay using recombinant major surface protein 5-glutathione S-transferase fusion protein as antigen. *Journal of Veterinary Diagnostic Investigation.* 2014 26: 61-71
8. Chungwon Chung, Carey Wilson, Travis C. McGuire, Ethan Adams, D. Scott Adams, James Evermann, Peter Timoney, **Stephen Lee**. Comparison of equine arteritis virus antibody detection by an improved cELISA with the OIE-prescribed serum neutralization assay. *Journal of Veterinary Diagnostic Investigation.* 2013. 25:182-8
9. **Stephen Lee** and Zhaofei Fan. Effect of spatial scale on modeling and predicting mean cavity tree density: a comparison of modeling methods. *Open Journal of Forestry.* 2012. 2: 219-224
10. Mary Q. Yang, Karina Laflamme, Valer Gotea, Clinton H. Joiner, Nancy E. Seidel, Clara Wong, Hanna M. Petrykowska, Jens Lichtenberg, **Stephen Lee**, Lonnie Welch, Patrick G. Gallagher, David M. Bodine, and Laura Elnitski. Genome-wide detection of a TFIID localization element from an initial human disease mutation. *Nucleic Acids Research*. 2011. 39: 2175-2187.
11. Melanie-Angela Neuilly, Kristen M. Zgoba, George E. Tita, **Stephen Lee**. Predicting Recidivism in Homicide Offenders Using Classification Tree Analysis. *Homicide Studies*. 2011. 15: 154-176.
12. Jens Lichtenberg, Kyle Kurz, Xiaoyu Liang, Rami Al-ouran, Lev Neiman, Lee J Nau, Joshua D Welch, Edwin Jacox, Thomas Bitterman, Klaus Ecker, Laura Elnitski, Frank Drews, **Stephen Lee**, Lonnie R Welch. WordSeeker: Concurrent bioinformatics software for discovering genome-wide patterns and word-based genomic signatures. *BMC Bioinformatics* 2010, **11**(Suppl 12):S6.
13. James R. Conrad, Jim Alves-Foss, **Stephen Lee.** Analyzing Uncertainty in Take-Grant Protection Graphs with TG/MC. *Journal of Computer Security*, 2010. 18: 667-698.
14. Frank Drews, Klaus Ecker, **Stephen Lee**, Laura Elnitski, Lonnie R Welch. Word-based Characterization of Promoters Involved in Human DNA Repair Pathways. *BMC Genomics* 2009, **10**(Suppl 1):S18.
15. Jens Lichtenberg, Alper Yilmaz, Joshua D Welch, Kyle Kurz, Xiaoyu Liang, Frank Drews, Klaus Ecker, **Stephen Lee**, Erich Grotewold, Lonnie R Welch. The Word Landscape of the non-coding segments of the Arabidopsis thaliana Genome. *BMC Genomics.* 2009, 10: 463.
16. Christina L. Airhart, Harold N. Rohde, Gregory A. Bohach, Carolyn J. Hovde, Claudia F. Deobald, **Stephen Lee**, Scott A. Minnich. Induction of Innate Immunity by Lipid A Mimetics Increases Survival from Pneumonic Plague. *Microbiology.* 2008. 154: 2131–2138.
17. Christina L. Airhart, Harold N. Rohde, Carolyn J. Hovde, Gregory A. Bohach, Claudia F. Deobald, **Stephen Lee,** Scott A. Minnich. Lipid A Mimetics are Potent Adjuvants for an Intranasal Pneumonic Plague Vaccine. *Journal of Vaccine.* 2008. 26: 5554-61.
18. **Stephen Lee**. Seeking Significant Oligomers via Set Partitions Expected Count. *International Journal of Computational Science.* 2008. 2: 584-598.
19. Shanyu Zheng, Jim Alves-Foss, **Stephen Lee.** The Effect of Rebalancing on the Performance of a Group Key Agreement Protocol. *Proceedings of the 31st IEEE Conference*, 2006, 983 – 989.
20. Shanyu Zheng, Jim Alves-Foss, **Stephen Lee.** Exploring Average Performance of Group Key Management Algorithms Over Multiple Operations. *Proceedings of the IASTED International Conference*, 2005, pp. 47-52.
21. Shanyu Zheng, Jim Alves-Foss, **Stephen Lee.** Performance of Group Key Agreement Protocols Over Multiple Operations. *Proceedings of the IASTED International Conference*, 2005, pp. 600-606.
22. Zhaofei Fan, **Stephen Lee**, Stephen R. Shifley, Frank R Thompson III, and David R. Larsen. Simulating the effect of landscape size and age structure on cavity tree density using a resampling technique. *Forest Science*. 2004. 5: 603-609.
23. **Stephen Lee.** On improving the binary classification accuracy of quadratic discriminant. *Journal of Statistical Computation and Simulation*. 2002. 72: 1-31
24. **Stephen Lee.** Noisy replication in skewed binary classification. *Computational Statistics & Data Analysis*. 2000. 34: 165-191.
25. **Stephen Lee.** Regularization in skewed binary classification. *Computational Statistics*. 1999. 14: 277-292.

26. Williams, C., **Stephen Lee**, Fisher, R., and Dickerman, L. A comparison of statistical methods for prenatal screening for Down syndrome. *Applied Stochastic Models in Business and Industry*. 1999. 15: 89-101.
27. **Stephen Lee.** Regularized tree methods for skewed binary classification. *Journal of Statistical Computation and Simulation*. 1998. 60: 287-312.
28. **Stephen Lee**. Regularized quadratic discriminant methods for skewed binary classification. *Journal of Statistical Computation and Simulation*. 1998. 60: 176-180.
29. **Stephen Lee**. Combining models to improve classification rates. *Journal of Statistical Computation and Simulation*. 1996. 58: 160-164.
30. **Stephen Lee**. On a class of nonlinear time series for biological population abundance data. *Applied Stochastic Models and Data Analysis*. 1996. 12: 193-207.
31. Chenoweth, T., Obradovic, Z. and **Stephen Lee**. Embedding Technical Analysis into Neural Network Based Trading Systems. *Applied Artificial Intelligence*. 1996. 10: 523-541.

TEACHING ACCOMPLISHMENTS:

Areas of Specialization: Undergraduate and Graduate Statistics

Courses Taught [# times since 1999]: (**Bold courses** are also currently offered as online courses through UI Engineering Outreach Office)

- Stat 150 Introduction to Statistics [7 times from 1999-2004]
- **Stat 251 Statistical Methods** [20 times from 2005-present]
- **Stat 301 Probability and Statistics** [4 times from 1999-2002]
- Stat 401 Statistical Analysis [2 times from 2000-2003]
- Stat 404 Bayesian Data Analysis [Funded externally and offered experimentally one time in 02 fall]
- Stat 507 Experimental Design [2 times from 2004-2005]
- Stat 517 Statistical Learning and Predictive Modeling [A new course]
- **Stat 519 Multivariate Analysis** [9 times from 2007-present]
- Stat 550 Regression [2 times prior to 1999]
- **Stat 565 Computer Intensive Statistics** [3 times from 2006-2010]
- Stat 597 Research and Consulting [2 times from 2008-2009]
- Stat 599 Master's Research [1 time in 2012]

Students Advised:

Graduate Students:

Advised to completion of degree-major professor (student name, degree, and year)

- Ensheng Dong, MS in Statistics, 2016. Master's thesis.
- Evan Martin, MS in Statistics, 2016. Master's thesis.
- Yuanyang Yu, MS in Statistics, 2014. Master's thesis.
- Guozhu Zhang, MS in Statistics, 2012. Master's thesis: Word Segmentation Method in Large Scale Protein and Genomic Research.
- Jungia Zhu, MS in Statistics, 2002. Master thesis: A Multinomial Probit Mixture Model for Choice-Based Conjoint Analysis
- Zhaofei Fan, MS in Statistics, 2001. Master's thesis: Analyses of Cavity Tree Distribution at Multiple Scales.
- Guanghong Shen, MS in Statistics, 2000. Master's thesis: Monte Carlo Comparison of Information-Theoretic Criteria for Logistic Model Selection in Tree Mortality Studies Mortality Studies.

- Fengbin Jin, MS in Statistics, 1995. Master's thesis: Neural Network Classifier and Statistical Classification.

Served on graduate committee (student name, degree, and year/expected year)

- Yazhuo Deng, PhD in Sports Science, expected in 2018
- Erich Seamon, PhD in Climate Change for Pacific Northwest Agriculture, expected 2018
- Elle Kohler, MS in BCB, 2017
- Dongyin Wang, MS in Statistics, 2016
- Kristen Petersen, MS in Statistics, 2016
- Letizia Tomassini, PhD in Animal Science, WSU, 2015
- Patrick Fitzsimons, MS in Geography, 2014. Master's thesis: Social Vulnerabilities in Norway
- Boya Liu, MS in Statistics, thesis, 2014
- Zhenxia Liu, PhD in Mathematics, 2013. PhD thesis: Conditional Persistence for Random Walks
- David Manz, PhD in Computer Science, 2012. PhD thesis: Adapting Group Key Management Protocols to Wireless, Ad-Hoc Networks Without the Assumption of View Synchrony
- Yuqin Liao, MS in Statistics, non-thesis, 2012
- Wei Peng, MS in Statistics, non-thesis, 2010
- Lianzhou Cui, MS in Statistics, non-thesis, 2009
- Renae Shrum, MS in Statistics, non-thesis, 2008
- Baekcheol Choi, MS in Statistics, non-thesis, 2008
- Nathaniel Brindza, MS in Statistics, non-thesis, 2008
- Hui Yan, MS in Statistics, non-thesis, 2008
- Xiuru Sun, MS in Statistics, non-thesis, 2008
- Yabo Su, MS in Statistics, non-thesis, 2007
- Man Li, MS in Statistics, non-thesis, 2007
- Shanyu Zheng, PhD in Computer Science, 2006. PhD thesis: A Communication-Computation Efficient Group Key Algorithm for Large and Dynamic Groups
- Jesse Birchman, MS in Civil Engineering, 2006. Master's thesis: Validation of Arterial Travel Time Estimation Models Using Field Data and Simulation
- Ju Qiu, MS in Statistics, non-thesis, 2006
- David Manz, MS in Computer Science, 2005. Master's thesis: A Network Simulator for Group Key Management Algorithms
- Yao Tong, MS in Geography, 2005. Master's thesis: Identification and Classification of Forest Tree Species Composition in Mixed Coniferous Forests of Northern Idaho Using SPOT 5 Imagery Northern Idaho Using SPOT 5 Imagery
- Yingyin Chen, MS in Computer Science, 2003. Master's thesis: Application of Neural Networks to Character Recognition
- Dong Pan, MS in Electrical & Computer Engineering, 2002. Master's thesis: Design and Analysis of a Radiation-Hard, Programmable Phase-Locked Loop
- Ann Abbott, MS in Statistics, 2002. Master's thesis: Finite Sample Properties of Estimators of Genetic Variance from Human Twin Data
- Zhaofei Fan, PhD in Forestry, 2001. PhD thesis: Analyses of Cavity Tree Distribution at Multiple Scales.
- Wende Wilson, MS in Statistics, 2000. Master's thesis: Use of Shrinkage Estimation for Incurred but not Reported Claims
- Lisa Follette, MS in Statistics, 2000. Master's thesis: Comparing the Effectiveness of Bar and Stacked Bar Graphs for Judgments of Proportion
- Mary Kraemer, MS in Fish and Wildlife Resources, 2000. Master's thesis: Primary Productivity of Free-Flowing and Impounded Reaches of the Lower Snake River, Idaho, Washington

- Porter Coggins, MS in Graduate Studies, non-thesis, 1999
- Ronald Berry, PhD in Chemistry, 1999. PhD thesis: New Improvements in Open-Path Fourier Transform Infrared Spectrometry

Courses Developed:

Stat 517 Statistical Learning and Predictive Modeling

This is a new course offered at UI in the fall of 2015 for the first time. I am advocating this course to be a permanent course offered for our MS program. It is planned to be a core course in the new Certificate of Analytics in our Department of Statistical Science.

Stat 251 Statistical Methods

This is the most populated course I taught over the years with more than 125 students per section. I teach one to two sections per year. It is constantly maintained and updated every semester. The recent organization of the course is a new format which involves using R – a versatile statistical software in statistical computing. It would be a challenge to teach the course using such a computing platform, however, I see the practical values of it. It would be a good investment of time and the long term benefits would outweigh the effects. This is also offered through the Engineering Outreach Stat 251 as a web-supported course.

Stat 565 Computer Intensive Statistics

Introduce newer topics such as Neural network, CART (Classification & Regression Tree), Bagging and Boosting algorithms for improving classification accuracy, and Markov Chain concepts (for MCMC) into the class. These topics were absent when the class was taught by other instructor before me. I think they contain valuable information for statisticians and I decided to include them in my statistical computing class. Also, class project and in-class presentation provided an important learning opportunity for the students.

Directed Study: Stat 565 Computer Intensive Statistics

In spring 2012, two of our MS students Sarah Krug and Rachel Bills needed this class but cannot take it during our regular course offering due to departmental teaching responsibilities. The DIS is joint directed study with Dr. Christopher Williams and other statistics colleagues.

Stat 404 Bayesian Data Analyses

This is a fall 2002 course external funded by Jayne's Center in Boise, Idaho. Bayesianism is a controversial but increasingly popular approach to statistics that offers many benefits over the traditional frequentist statistical methods. This theory can incorporate expression of your prior beliefs about some unknown quantities before data are available, modifying them in the light of the data, and arriving at your updated posterior probabilities of these quantities. Bayesian theory of statistical inference leads a different approach to data analysis. Textbooks: *Bayesian Data Analysis* by Andrew Gelman, John B. Carlin, Hal S. Stern, Donald B. Rubin. Course coverage includes: Background Review: Probability; Approaches to data analysis; Bayesian Inference on the Binomial Model; Bayesian Inference on the Normal Model with known variance; Gamma Type Probability Distributions; On Conjugate priors; On Prior Distributions; On the Univariate and Multivariate Normal; Bayesian Computations: MCMC, convergence diagnostics, and recent developments; Hypothesis Testing, Bayes Factors, Model Selection and Criticism; Maximum Entropy Priors.

SCHOLARSHIP ACCOMPLISHMENTS:

Non-refereed Publications:

1. Jens Lichtenberg, Mohit Alam, Thomas Bitterman, Frank Drews, Klaus Ecker, Laura Elnitski, Susan Evans, Matt Geisler, Erich Grotewold, Dazhang Gu, Edwin Jacox, Kyle Kurz, **Stephen Lee**, Xiaoyu Liang, Pooja M. Majmudar, Paul Morris, Chase Nelson, Eric Stockinger, Joshua D. Welch, Sarah Wyatt, Alper Yilmaz and Lonnie R. Welch. Construction of Genomic Regulatory Encyclopedias: Strategies and Case Studies. *OCC BIO 2009*, pp 65-70
2. **Stephen Lee.** Predicting the Growth Origin of Potatoes. *Technical Report*, July, 2001.
3. **Stephen Lee.** Regularization in skewed binary classification. *Proceedings of the American Statistical Association joint statistical meetings*, 1997.
4. **Stephen Lee.** Combining neural and statistical classifiers via perceptron. *Proceedings of the American Association for Artificial Intelligence-1996*, Portland, OR.
5. **Stephen Lee**. Predicting atmospheric ozone using neural networks as compared to some statistical methods. *Proceedings of the IEEE Technical Applications Conference*, 1995, Nortcon, Portland, OR.
6. Chenoweth, T., Obradovic, Z. and **Stephen Lee.** Technical trading rules as a prior knowledge to a neural networks prediction system for the S&P 500 index. *Proceedings of the IEEE Technical Applications Conference*, 1995, Nortcon, Portland, OR.
7. **Stephen Lee**. A nonlinear auto-regressive time series model. *Proceedings of the American Statistical Association joint statistical meetings*, Business and Economics Section, pp. 327-330, 1992.

Invited Seminar & Presentations:

1. **Stephen Lee**. Invited Seminar. Statistical Modeling: Building a better mouse trap and others, University of Hong Kong, Dec 11, 2012.
2. Chungwon Chung, Carey Wilson, Travis C. McGuire, Ethan Adams, D. Scott Adams, James Evermann, Peter Timoney, Alfonso Clavijo, **Stephen Lee**. In-house and field validation of equine arteritis virus antibody cELISA according to OIE protocol. International Conference on Equine Infectious Diseases IX, Lexington, Kentucky, October 21-26, 2012.
3. **Stephen Lee**. 11th Annual INBRE Research Conference, Moscow, Idaho, August 6-8, 2012
4. **Stephen Lee**. The teaching of introductory statistics through projects and the R software. ASA Snake Chapter Annual Meeting at Moscow, Idaho, June, 2012.
5. Zachary Hamilton, Melanie-Angela Neuilly, Robert Barnoski, **Stephen Lee**. Building a Better Mouse Trap -The Incremental Utility Behind the Methodological Advancement of Risk Assessment. Academy of Criminal Justice Sciences. New York, 2012
6. Chungwon Chung and **Stephen Lee**. Development and validation of a new cELISA for EAV. April 2012.
7. **Stephen Lee**. Seeking Significant patterns ("words") in Sequence Data. Applied Statistics Seminar, Moscow, Idaho, April 2012.
8. **Stephen Lee**, Xiaoyu Liang, Kevin Plis, and Lonnie R Welch. High Performance Enumerative Methods for Statistical Classification of Metagenomic Sequences. GLBIO 2011.
9. **Stephen Lee**. Invited Tutorial. Regulatory and Epigenetic Landscapes of Genomes: Fundamental Concepts and *In Silico* Analysis Methods --- Statistical Methods in Computational Genomics. OCC BIO 2009. Cleveland, OH, June 15-17, 2009.
10. Jens Lichtenberg, Alper Yilmaz, Joshua Welch, Kyle Kurz, Xiaoyu Liang, Frank Drews, Klaus Ecker, **Stephen Lee**, Matt Geisler, Erich Grotewold, Lonnie Welch. The Word

Landscape of the Noncoding Segments of the Arabidopsis Thaliana Genome. *OCC BIO 2009.*

11. **Stephen Lee**. Invited Seminar. Special Topics in Bioinformatics. The 16-th Annual International Conference on Intelligent Systems for Molecular Biology. Toronto, Canada, July 19-22, 2008.
12. Frank Drews, Klaus Ecker, Kyle Kurz, **Stephen Lee**, Xiaoyu Liang, Jens Lichtenberg, Joshua D. Welch, and Lonnie R. Welch. Poster Presentation. WordSeeker: A High Performance Bioinformatics Pipeline for Computational Regulatory Genomics, 2008
13. **Stephen Lee**. Invited Seminar, Computing Oligomer Expected Count through Set Partitions. Salt Fork, Ohio, Sep 20/21, 2007.
14. Ted Kisha and **Stephen Lee**. Using Prevosti's Distance Coefficient For Direct Statistical Analysis of Population Differences. American Society of Horticultural Sciences in New Orleans, 2006.
15. **Stephen Lee**. Modeling and predicting cavity tree density. American Statistical Association joint statistical meetings, 2005.
16. **Stephen Lee**. Regularization in skewed binary classification. American Statistical Association joint statistical meetings, 1997.
17. **Stephen Lee**. Capabilities and limitations of artificial neural networks. Department of Sttaistics, University of Idaho, 1997.
18. **Stephen Lee**. Combining neural and statistical classifiers via preceptron. American Association for AI-1996 workshop, 1996.
19. **Stephen Lee**. Regularization in skewed binary classification. Joint applied statistics seminar of the University of Idaho and Washington State University, 1996.
20. **Stephen Lee**. Predicting atmospheric ozone using neural networks as compared to some statistical methods. IEEE Technical Application Conference, 1995.
21. **Stephen Lee**. Evaluating the predictive performance of artificial neural networks and statistical models. Joint applied statistics seminar of the University of Idaho and Washington State University, 1995.
22. **Stephen Lee**. On Box and Jenkins time series models. Washington State University, 1994.
23. **Stephen Lee**. A nonlinear auto-regressive time series model. American Statistical Association joint statistical meetings, 1992.
24. **Stephen Lee**. Estimation and testing of some nonlinear time series models. Biometrics Society Spring meeting, March 1991.
25. **Stephen Lee**. Stochastic models obtained from some difference equations. American Statistical Florida Chapter Meeting, January 1991.

Invited Lectures, Workshops, and Seminars:

- Invited Applied Statistics Seminar. Seeking Significant patterns ("words") in Sequence Data., Moscow, Idaho, April 2012.
- Invited Tutorial. Regulatory and Epigenetic Landscapes of Genomes: Fundamental Concepts and *In Silico* Analysis Methods --- Statistical Methods in Computational Genomics. Cleveland, OH, June 15-17, 2009.
- Invited Seminar. Special Topics in Bioinformatics. The 16-th Annual International Conference on Intelligent Systems for Molecular Biology. Toronto, Canada, July 19-22, 2008.
- Invited Seminar, Workshop in Bioinformatics. Computing Oligomer Expected Count through Set Partitions. Salt Fork, Ohio, Sep 20/21, 2007.

Grants and Contracts Awarded:

- STRONG-R Change Initiative, Stephen Lee UI PI; Zachary Hamilton, PI. In the past 30 years the criminal justice system has witnessed an increase in the use of actuarial risk assessment to predict recidivism and structure organizational decision making. In addition to predicting recidivism, general offender risk assessments now may assist

practitioners to determine offender custody levels, guide contact standards during community supervision, and/or determine intervention and service priority/eligibility. In North America, it is nearly inconceivable that an offender would evade an assessment of risk following conviction. Despite the undeniable influence of today's assessment systems, due to the relatively small group of researchers involved in creating general offender assessments for use in the justice system (e.g., Andrews, 1982; Andrews & Bonta, 1995; Barnoski & Drake, 2007; Baird, 1981; Brennan & Oliver, 2000; Duwe, 2013; Latessa, Smith, Lemke, Markarios, & Lowenkamp, 2009) access of development procedures is limited. We contend that limited access to assessment development has, in turn, led to the restricted knowledge and relatively limited critique of current assessment models and instruments. The current study addresses three objectives. First, we tackle the concepts and issues that confound the core provisions of risk assessment modeling and prediction. Next, we present detailed validation findings surrounding the development of the Static Risk Offender Needs Guide - Revised (STRONG-R) for Washington State felony offenders. Finally, we compare the STRONG-R with two additional risk assessment models to extend the discussion of methodological advancements and their real world impact for jurisdictions considering tool adoption. Total fund awarded $108,000 for one year, starting from August 2013, with a possible extension of a second year. The amount of budget directly under my control is $11,396 for the first year.

- A one week research exchange program on Data Mining Applications on Transportation and Carbon Taxing, during 2013 summer, at two universities in Taiwan, the National Chiao Tung University at Taipei, and the National Cheng Kung University at Tainan . Approx $2,500. It was held in October of 2013 for a week. I am the sole recipient of the fund in full amount.
- Jayne's Center in Boise, Idaho, to fund a Stat 404 Bayesian Data Analysis in, approximate $5000, fall 2002.
- SAS EMiner software one year Contract in 2001.
- Idaho Potato Commission for $43,000 through the Statistical Consulting Center, 2000-2003.
- Schroeter, Goldmark, & Bender, $120/hr on a random sampling experiment project through the Statistical Consulting Center, 2001.
- Research seed-grant award, approximately $4000 Research Council, University of Idaho, July 1994-June 1995.

Grant Applications Submitted:

- R21 proposal titled: "Integrated Approach for Environmental Health Monitoring: Exposure Signatures of Pesticides", with PI: Dan (Annie) Du, Co-Investigator: Yuehe Lin. Collaborator: Christopher D. Simpson (University of Washington), and Statistical Consultant: Stephen S. Lee (University of Idaho) was submitted to the US National Institute for Occupational Safety and Health (NIOSH) in Nov, 2014, with a requested budget of $275K.

Grants and Contracts (applied but not awarded):

- Project Title: High Performance Enumerative Methods for Statistical Classification of Genomic Sequences. Sequence-Based Approach to Bioforensics Analysis (SBA).Technical Focus Area: TFA-4 Taxonomic classification of metagenomic sequences, applied in 2011
- UI Seed grant application on "Seeking for Genome-wide DNA Patterns", applied in February 2011
- Research proposal submitted to Center for Disease Control on October 1995 with principal investigator Curt Braun, applied in March 1996.

Honors and Awards:

- Apple Polisher Certificate of Appreciation, University of Idaho Student Alumni Relations Board, March 2007
- Certificate of Appreciation, Mathematics and Science Enrichment Outreach Program, Virginia State University, 1992
- First-Year Student Best-in-Theory Award, Department of Statistics, Florida State University, 1988
- United States Collegiate Mathematics Award, 1988
- Scholastic All-American Collegiate Award, 1988
- Member of the Honor Society of Phi Kappa Phi, 1988

SERVICE:

Major Committee Assignments:

University level:
- Graduate Council nominee, nominated spring 2012
- Faculty Affairs Committee, 2012-2014
- Promotion & Tenure Committee, 2000-2001

College level:
- COS Faculty Council, 2013-2015
- College of Science Safety Committee, 2007-2009
- COS Scholarship and Awards Committee, 2005-2006
- University Diversity Task Force Committee, 2000-2003
- Sabbatical Evaluation Committee, 2001-2003
- Religious Studies Coordinating Committee, 1998-1999

Department level:
- Department of Statistical Science Chair Search Committee, 2012
- Associate Professor of Statistics Search Committee, 2009
- Graduate Committee, 2000-2002, 2006-2008
- Curriculum Development Committee, 1998-1999
- Basic Statistics Committee, Chair, 1995-1997
- Ad Hoc Research Advisory Committee, 1995-1996

Professional and Scholarly Organizations:

- American Statistical Association Snake River Chapter President, June 2013-May 2014
- Associate Editor of *International Journal of Computational Bioscience*, 2012-2015

Outreach Service:

External Reviewer:
- Promotion and Tenure External Reviewer for Dr. Frank Drews, School of Electrical Engineering and Computer Science, Ohio University, Athens, Ohio, 2009
- Tenure External Review for Dr. Alexei N. Fedorov, Department of Medicine, University of Toledo, Toledo, Ohio, 2009

Statistician Expert Witness:

- Deliver Statistical Data Analysis and Evidence in Boise Court for Idaho Potato Commission,
  2003

Judge:

- University of Idaho Innovation Showcase: Research, Scholarship and Vision, April 19, 2012

Consultant:

- Consultant to University community through the Statistical Consulting Center, University of Idaho, 2000-2003
- Consultation to faculty and students at University of Idaho and Washington State University
- USDA, Pullman, WA
- Private Statistical Consultant

Engineering Outreach:

- Maintaining and developing the following Engineering Outreach courses in undergraduate and graduate Statistics courses
  - Stat 251 (video-recorded in Summer 2012)
  - Stat 301 (video-recorded in Summer 2007)
  - Stat 519 (video-recorded in Fall 2009)
  - Stat 565 (video-recorded in Fall 2012)

Community Service:

International Liaison:

- Connecting Chinese universities with Rebecca Brown, Director of International Programs, and Mary Ellen Brewick, Coordinator for International Marketing, International Program Office at UI. Visited IPO outreach office at Canton, China, summer of 2011
- Serving Chinese students in our Pullman/Moscow community at courts, prisons, churches, and hospitals

Visiting Scholar Connection:

- http://www.visitingscholars.org/ at Idaho Worldwide Network Locations VSA Network Office #30, 2012-present

PROFESSIONAL DEVELOPMENT:

Teaching:

- *Statistics: Unlocking the Power of Data* by Robin H. Lock, et al., Reviewed in 2012
- *Statistics for Engineers and Scientists* by William Navidi, Reviewed in 2002
- *Applied Statistics: Concepts and Controversies* by Tom Wonnacott and David Moore. Reviewed in 2001
- *Statistical Reasoning foe everyday life* by Bennett, Griggs and Triola. Reviewed in 2001

Scholarship:

- 11th Annual INBRE Research Conference, Moscow, Idaho. August 6-8, 2012
- ASA Snake Chapter Annual Meeting at Moscow, Idaho. June, 2012
- OCC BIO 2009. Cleveland, OH, June 15-17, 2009

- The 16-th Annual International Conference on Intelligent Systems for Molecular Biology. Toronto, Canada, July 19-22, 2008.
- Institute of Creation Research meeting on "Creation Genetics" at San Diego, CA on Jan 7-10, 2007
- Workshop on Special Topics in Bioinformatics. Salt Fork, Ohio, Sep 20/21, 2007
- Institute of Creation Research meeting on "Creation Genetics" in San Diego, CA on Jan 2-6, 2006
- NeuroScience Retreat: "Muscle and Nerve", at CdA, Data Blitz presentation on May 16-17, 2006
- ASA Joint Statistical Meeting at Minneapolis, Minnesota, August 7-11, 2005
- Meeting with Dr. Abraham Chen at Micron, Inc in Boise, ID, 2004
- Meeting with Drs. Gary and Wusi Maki, University of Idaho Center of Advanced Microelectronics Biomolecular Research (CAMBR), 2003
- Meeting with Dr. Motomi Mori at Oregon Health Science University at Portland, OR in the area of Genome and Micro-array data analysis, 2003
- Meeting with Dr. John Elder at Elder Research, VA, 2003
- Pacific Northwest Statistics Group Meeting at Vancouver, BC, Canada, March, 2002
- ASA Snake Chapter Annual Meeting at Caldwell, ID, May, 2002
- Bayesian Inference and Maximum Entropy conference, August, 2002
- ASA LearnSTAT Program: Hierarchical Bayes Methods and Software for Data Analysis workshop, October 24-25, 2002.
- Pacific Northwest Statistics Group Meeting at Portland, OR, November 9, 2002
- SAS onsite training workshop on the EMiner software, Dec 2001
- Workshop on Designing Successful Grant Proposals. WSU, Pullman, WA, 2000
- Professional membership:
    - American Statistical Association
    - Mathematics Association of America
    - Biometric Society
    - Institute of Mathematical Statistics
    - Royal Statistical Society
    - International Association for Statistical Computing
    - Interface of Computing Science and Statistics