Keanming Tan

August 9, 2014

Contact Information

Department of Biostatistics
University of Washington
NE Pacific St. Seattle, WA, U.S.A. 98195

website: `http://students.washington.edu/keanming/`
e-mail: `keanming@uw.edu`

Research Interests

High-dimensional data, unsupervised learning, graphical modeling, classification, and empirical Bayes.

Education

University of Washington, Seattle, Washington, U.S.A. **Sep 2011 – present**

Doctor of Philosophy (Ph.D.) in Biostatistics

- Advisor: Daniela Witten
- Research Topic: *Statistical machine learning for high-dimensional problems*

Purdue University, West Lafayette, Indiana, U.S.A. **Aug 2007 – May 2011**

Master of Science - Applied Statistics

Bachelor of Science - Actuarial Science & Mathematical Statistics

Honors and Awards

- *Best Oral Presentation - runner up*, from WNAR, June 2014.
- *Best Poster Presentation* (as voted by incoming students), from UW Biostatistics, September 2012
- *Graduate School Fund for Excellence and Innovation*, from University of Washington, July 2012
- *College of Science Outstanding Junior in Statistics*, from Purdue University, May 2009
- *Ruzicka College of Science Research Award*, from Purdue University, May 2008

Teaching

Biostatistics 571: Advanced Regression Methods for Correlated Data **Winter 2014**
Supervised by Adam Szpiro

Referee Service

Biostatistics; Journal of Computational and Graphical Statistics; Journal of the American Statistical Association (Theory and Methods)

Department Service

Admission committee for prospective MS/PhD students (2013-2014)

Publication [† indicates joint first authorship.]

K.M. Tan, N. Simon and D.M. Witten. Selection Bias Correction and Effect Size Estimation under Dependence. (Submitted)

K.M. Tan, A. Shojaie and D.M. Witten. The Cluster Graphical Lasso for Improved Estimation of Gaussian Graphical Models. (Submitted)

K.M. Tan, P. London, K. Mohan, S-I. Lee, M. Fazel, and D.M. Witten (2014). Learning Graphs With Hubs. *To appear in Journal of Machine Learning Research.*

K.M. Tan†, A. Petersen†, and D.M. Witten (2014). Classification for RNA-seq Data. Statistical Analysis of Next Generation Sequencing Data, 219-246.

K.M. Tan and D.M. Witten (2013). Sparse Biclustering of Transposable Data. *To appear in Journal of Computational and Graphical Statistics.*

B. Xi, *K.M. Tan* and C. Liu (2013). Logarithmic Transformation Based Gamma Random Number Generators. *Journal of Statistical Software* 55(4).

M. Tang†, *K.M. Tan*†, X.L. Tan, L. Sael, M. Chitale, J. Esquivel-Rodriguez, and D. Kihara (2013). *Graphical models for protein function and structure predictions.* Biological Knowledge Discovery Handbook: Preprocessing, Mining and Postprocessing of Biological Data, M. Elloumi and A.Y. Zomaya Edition, Wiley Series in Bioinformatics.

D. Schrempp, M. Childress, J. Stewart, T. Leach, *K.M. Tan*, A. Abbo, A. Gortari, P. Bonney and D. Knapp. (2013) Metronomic Administration of Chlorambucil for Treatment of Dogs with Urinary Bladder Transitional Cell Carcinoma. *Journal of the American Veterinary Medical Association* 242(11): 1534-1538.

Knapp, DW., Henry, CJ., Widmer, WR., *K.M. Tan*, Moore, GE., Ramos-Vara, JA., Lucroy, MD., Greenberg, CB., Greene, SN., Abbo, AH., Hanson, PD., Alva, R., and Bonney, PL. (2013) Randomized Trial of Cisplatin versus Firocoxib versus Cisplatin/Firocoxib in Dogs with Transitional Cell Carnicoma of the Urinary Bladder. *Journal of Veterinary Internal Medicine*, 27(1): 126-133.

Arnold, E., Childress, M., Fourez, L., *K.M. Tan*, Stewart, J., Bonney, P., and Knapp, D. (2011) Clinical Trial of Vinblastine in Dogs with Transitional Cell Carcinoma of the Urinary Bladder. *Journal of Veterinary Internal Medicine* 25(6): 1385-1390.

R Package

sparseBC, an R library for performing sparse biclustering, available at http://cran.r-project.org/web/packages/sparseBC/index.html.
Reference: *K.M. Tan* and D.M. Witten (2013). Sparse Biclustering of Transposable Data. *To appear in Journal of Computational and Graphical Statistics.*

hglasso, an R library for estimating network with hubs, available at http://cran.r-project.org/web/packages/hglasso/index.html
Reference: *K.M. Tan*, P. London, K. Mohan, S-I. Lee, M. Fazel, and D.M. Witten (2014). Learning Graphs With Hubs. *To appear in Journal of Machine Learning Research.*

Talks

K.M. Tan, N. Simon, D. Witten. (2014). Selection Bias Correction and Effect Size Estimation under Dependence, *WNAR 2014*, Honolulu, HI.

K.M. Tan, K. Mohan, P. London, M. Fazel, S.I. Lee, and D. Witten. (2013). Hub Graphical Lasso for modeling network with hubs, *WNAR 2013*, LA, CA.

Poster Presentations

K.M. Tan, D. Witten. (2012). Sparse Biclustering of Transposable Data, *Annual Biostatistics Department Retreat*, Leavenworth, WA.

K.M. Tan, D. Witten. (2012). Sparse Biclustering of Transposable Data, *Joint Statistical Meetings*, San Diego, CA.

K.M. Tan, B. Xi, and C. Liu. (2010). Two New Ratio-of-Uniforms Gamma Random Number Generators, *Purdue SIAM Computational Science and Engineering Student Conference*, Purdue University, IN.