Chongliang (Jason) Luo

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Education

Ph.D. Statistics, University of Connecticut. 08/2013 - 08/2017
Dissertation: On integrative reduced-rank models and applications
Advisors: Kun Chen, Dipak Dey

M.S. Statistics, University of Science and Technology of China. 08/2010 - 05/2013
Advisor: Shuguang Zhang

B.S. Statistics, University of Science and Technology of China. 08/2006 - 05/2010

Awards

- Doctoral Dissertation Fellowship, Fall 2016, The Graduate School, University of Connecticut.
- Student Paper Award, ICSA Applied Statistical Symposium, June 2015, Fort Collins, CO.
- Outstanding Student Scholarship, Fall 2008, University of Science and Technology of China.

Postdoc & Teaching Experiences

Postdoctoral Researcher, University of Pennsylvania. 08/2018 - present
Supervisor: Yong Chen

Postdoctoral Researcher, University of Connecticut Health Center. 08/2017 - 08/2018
Supervisors: Robert Aseltine, Kun Chen

Instructor & Teaching assistant, UConn. 08/2013 - 08/2017
Stat 1100 (Elementary Concepts of Statistics),
Stat 1000 (Introduction to Statistics), 3375 (Introduction to Mathematical Statistics) and 5025 (Introduction to Biostatistics).

Research Experiences

Research Interests

- Statistical methodology on data integration and distributed learning algorithms.
- Meta-analysis methods.
- Dimension reduction and variable selection.
- Collaborative healthcare data analyses:
  opioid use and mental health outcomes, pharmacovigilance, neorology, etc.

Journal Publications (* : co-first author)

1. Duan, R.*, **Luo, C.***, Schuemie, M.J., Tong, J., Liang, J., Boland, M.R., Bian, J., Xu, H., Berlin, J.A., Moore, J.H., Mahoney, K.B. and Chen, Y. (2020) Learning from local to global - an efficient distributed algorithm for modeling time to event data. *Journal of the American Medical Informatics Association*, 27(7):1028–1036. (R package pda on github)

2. Liu, J.*, **Luo, C.***, Li, M., Wang, Y., Xu, X., Yang, Lu., Qin, B., Chen, Y., Jiang, Y., Peng, F. (2020) Predictors of post-infectious inflammatory response syndrome in HIV-negative immunocompetent cryptococcal meningitis. *Journal of Neurology, Neurosurgery, and Psychiatry, to appear.*

3. Falcone, M.*, **Luo, C.***, Chen Y., Birtwell D., Cheatle M., Duan R., Gabriel P.E. et al. (2020) Risk of persistent opioid use following major surgery in matched samples of patients with and without cancer. *Cancer Epidemiology and Prevention Biomarkers*, 29(11):2126-2133. DOI: 10.1158/1055-9965.EPI-20-0628.

4. Du, J., **Luo, C.**, Shegog, R., Bian, J., Chen, Y., Tao, C. (2020) Deep Learning and Behavioral Theory: An Improved Analytic Method to Understand HPV Vaccination Intentions from Twitter Discussion. *JAMA Network Open*, 3(11):e2022025. doi: 10.1001/jamanetworkopen.2020.22025..

5. Du, J., Cunningham, R. M., Xiang, Y., Li, F., Jia, Y., Boom, J. A., Myneni, S., Bian, J., **Luo, C.**, Chen, Y., Tao, C. (2019). Leveraging deep learning to understand health beliefs about the Human Papillomavirus Vaccine from social media. *NPJ digital medicine*, 2, 27. https://doi.org/10.1038/s41746-019-0102-4.

6. Liu, L., Liang, J., Liu, Q., **Luo, C.**, Liu, J., Fan, R., Chen Z., Chen Y., Peng F., Jiang, Y. (2019). Elevated plasma homocysteine levels in anti-N-methyl-D-aspartate receptor encephalitis. *Frontiers in Neurology*, 10:464.

7. **Luo, C.**, Chen, K., Liang, J., Li, G., Wang, F., Dey, D. (2018). Leveraging mixed-type and incomplete outcomes via a generalized reduced rank regression. *Journal of Multivariate Analysis*, 167:378-394.

8. **Luo, C.**, Liu, J., Dey, D., Chen, K. (2016). Canonical Variate Regression. *Biostatistics*, 17(3):468-483. (R package CVR on CRAN).

9. **Luo, C.**, Feng, Q., Zhang, S. (2013). Several Topological Indices of Random Binary Tree. *Journal of University of Science and Technology of China*, 43:12.

10. (Book chapter) **Luo, C.**, Chen, K. and Dey, D. (2016) Partially supervised sparse factor regression model for multi-class classification. In Lin, J., Wang, B., Hu, X., Chen, K., & Liu, R. (Eds.). *Statistical Applications from Clinical Trials and Personalized Medicine to Finance and Business Analytics - Selected Papers from the 2015 ICSA/Graybill Applied Statistical Symposium.* Springer.

Preprints and Submissions (* : co-first author)

11. **Luo, C.**, Duan, R., Edmondson, M., Shi, J., Maltenfort, M., Morris, J., Forrest, C., Hubbard, R., Chen, Y. (2020) Distributed Proportional Likelihood Ratio Model with Application to Data Integration across Clinical Sites. *Biometrics, under review.*

12. Wang, W., **Luo, C.**, Aseltine, R., Wang, F., Yan, J., Chen, K. (2020) Suicide Risk Modeling with Uncertain Diagnostic Records. *JASA, under review.*

13. **Luo, C.**, Marks-Anglin, A., Duan, R., Lin, L., Hong, C., Chu, H., Chen, Y. (2020) Accounting for small-study effects using a bivariate trim and fill meta-analysis procedure. *medRxiv* 2020.07.27.20161562; doi: https://doi.org/10.1101/2020.07.27.20161562. (R package xmeta on CRAN)

14. **Luo, C.**, Islam, M.N., Sheils, N., Reps, J., Buresh, J., Duan, R., Tong, J., Edmondson, M., Schumie, M.J., Chen, Y. (2020) Lossless Distributed Linear Mixed Model with Application to Integration of Heterogeneous Healthcare Data. *medRxiv, to appear.*

15. **Luo, C.**, Jiang, Y., Du, J., Tong, J., Huang, J., Lo Re, V., Ellenberg, S.S., Poland, G.A., Tao, C., Chen, Y. (2020) Prediction of post-vaccination Guillain-Barré syndrome using data from a passive surveillance system. *Pharmacoepidemiology and Drug Safety, under revision.*

16. Edmondson, M., **Luo, C.**, Duan, R., Maltenfort, M., Forrest, C., Chen, Y. (2020) ODAH: A one-shot distributed algorithm for modeling zero-inflated counts using EHR data in multiple sites. *JAMIA, under review.*

17. Marks-Anglin, A., **Luo, C.**, Piao, J., Gibbons, M., Schmid, C., Ning, J., Chen, Y. (2020) EMBRACE: an EM-based Bias Reduction Approach through Copas-Model Estimation for Quantifying the evidence of selective publishing in network meta-analysis. *Biometrics, under revision.*

18. Duan, R., Chen, Z., Tong, J., **Luo, C.**, Lyu, T., Tao, C., Maraganore, D., Bian, J., Chen, Y. (2020) Leverage Real-world Longitudinal Data in Large Clinical Research Networks for Alzheimer's Disease and Related Dementia (ADRD). *medRxiv* 2020.08.03.20167619; doi: https://doi.org/10.1101/2020.08.03.20167619.

19. (In preparation) **Luo, C.**, Chen, K., Doshi, R., Rickles, N., Aseltine, R. (2020) The association of prescription opioid use with suicide attempts: an analysis of statewide medical claims data.

Softwares

1. CVR: R package on Canonical Variate Regression (on CRAN);
2. xmeta: R package on statistical methods of meta analysis (on CRAN);
3. pda: R package on privacy-preserving distributed algorithms (on github).

Professional Services

- Journal reviewer: Annals of Applied Statistics, Sankhya B.

- Conference organizer: section "Statistical Methodology for Healthcare Data Analysis" at the New England Statistical Symposium, 2019.
- Membership: ASA, ENAR, ICSA.
- Healthcare quality rating: mine the Connecticut All Payers Claims Database (APCD) to rate the healthcare quality of organizations in the HealthscoreCT project. This is part of my work at UConn Health Center.