**Jisung Cha**

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**EDUCATION**

**COLUMBIA UNIVERSITY**, New York, NY

***Ph.D. in Measurement, Evaluation and Statistics*,** May 2011

**Thesis Title**: Application of ordered latent class regression model in educational assessment

**Advisor**: Matthew S. Johnson

**COLUMBIA UNIVERSITY** New York, NY

***M.S. in Applied Statistics*,** February 2006

**UNIVERSITY of PENNSYLVANIA**, Philadelphia, PA

***M.A. in Policy Research, Evaluation and Measurement*,** May 2003

**YONSEI UNIVERSITY**, Seoul, Korea

***B.A. in Psychology,*** May 1996

**HONORS AND AWARDS**

**Helen Walker Scholarship for Academic Excellence, COLUMBIA UNIVERSITY**, 2006

**EMPLOYMENT**

***Sr. Data Analyst*,** September 2011 – **Present**

New York City Department of Health**,** New York, NY

* Published on evaluating incentive programs conducted by DOHMH.
* Conducted statistical analyses of datasets including electronic health records, Medicaid claim data, and Emdeon claim data.
* Created the database from the raw records of 10 community health centers.
* Created reproducible quarterly document on Preventive Services using knitr.
* Developed dashboard metrics for providers in the areas of preventive service utilization, cancer screening, tobacco use, and medication adherence using Medicaid claim data.
* Provided lectures on statistics and data visualization.

***Junior Statistician: ETS Project***, January 2007 – January 2008

**COLUMBIA UNIVERSITY**, New York, NY

PI: Prof. Lawrence T. DeCarlo

* Investigated statistical models for multiple ratings on open-ended items
* Conducted Monte Carlo simulation study in order to examine the properties of signal detection theory using latent class model
* Analyzed large-scale dataset in order to evaluate the quality of raters’ scoring by means of latent class regression model using both MLE and Bayesian method
* Prepared conference proposals and papers

***Teaching Assistant*** January 2004 – May 2011

**COLUMBIA UNIVERSITY**, New York, NY

Experimental Design and Linear Regression, Multidimensional Scaling and Clustering, Multivariate Analysis, Multilevel and Longitudinal Analysis, Latent Structure Analysis, Psychological Measurement.

**Professional Training**

* Introduction to SAS and Hadoop, SAS Institution (2015, Spring)
* Machine Learning with Python, Data Science Academy (2015, Spring)

**PUBLICATIONS**

* Silfen, S.L., Cha, J., Wang, J., Land, T.G., Shih, S.C. Patient characteristics associated with smoking cessation interventions and quit attempt rates across ten community health centers using electronic health records. American Journal of Public Health (in press).
* Wang, J., Cha, J., Sebek, K.M., McCullough, C.M., Parsons, A.S., Singer, J., & Shih, C.S. (2014) Factors related to clinical quality improvement for small practices using an EHR. Health Service Research Vol 49(6), 1729-1746.
* Wang, J., Winther, C., Cha, J., McCullough, C.M., Parsons, A.S., Singer, J., & Shih, C.S. (2014) Patient-Centered Medical Home and Quality Measurement in Small Practices. American Journal of Managed Care,Vol 20(6), 481-489

**WORKING PAPERS**

* Wang, J., Cha, J and Shih, S. (2014) Factors related to meaningful use achievement among NYC primary care providers
* Cha, J. & Johnson, M.S. (2011) Application of Ordered Latent Class Regression in Educational Assessment. Teachers College Columbia University.
* Cha, J. & Johnson, M.S. (2010) Efficient Re-weighting of Multiple Raters in Constructed Response Item Scoring, Technical report. Teachers College Columbia University.

**CONFERENCE PRESENTATIONS**

* Cha, J., Silfen, S.L., Wang, J., Land, T.G. & Shih, S.C. (2013) Patient characteristics associated with smoking cessation interventions and quit attempt rates across ten community health centers using electronic health records. United hospital fund.
* Shih, S.C., Cha, J. & Wang, J. (2013) Improving the delivery of smoking cessation intervention in primary care across ten community health centers. American Public Health Association, Boston, MA.
* Cha, J (2011) Examining the utilities of diagnostic scoring on students’ written responses by means of ordered latent class regression model. Paper presented at the annual meeting of the National Council Measurement in Education, New Orleans, LA.
* Cha, J. & Johnson, M.S. (2010) Ordered latent class regression model in educational assessment. Paper presented at 75th Annual Meeting of the Psychometric Society, Atlanta, GA.
* Cha, J. & Johnson, M.S. (2010) Ordered latent class regression model applied to constructed response scoring. Paper presented at the annual meeting of the National Council on Measurement in Education, Denver, CO.

**ADVANCED COURSE TAKEN**

Applied Bayesian Methods, Item response theory, Latent Structural Modeling, Multilevel and Longitudinal Analysis, Theory of Multivariate Analysis, Statistical Modeling II and III, Multidimensional Scaling and Clustering, Item Response Theory Model, Introduction to SAS and Hadoop, Python with Machine Learning

**COMPUTER SKILLS**

SAS, SAS enterprise miner, R, Python, SQL Server, Stan, Stata, SAS, Winbugs, Latent Gold, M-plus, Matlab, Latex, C++, Hadoop

**REFERENCES**

Available upon request