Michael Seo

Contact Information

Personal Website: mikejseo.github.io

Email: swj8874[at]gmail.com

Research Interests

Bayesian methods; (network) meta-analysis; machine learning

Education

Ph.D. Biostatistics, University of Bern, 2019-2022 (Expected)

M.S. Statistics, Stanford University (GPA: 3.7), 2012-2014

B.S. Statistics, Graduation with High Distinction, Duke University (GPA: 3.7), 2007-2011

Employment

Ph.D. Student in Biostatistics, Institute of Social and Preventive Medicine, University of Bern, Switzerland, 2019-Present

Biostatistician, LLX Solutions, Boston, 2018-2019

Ph.D. Student in Biostatistics, Center for Evidence Synthesis in Health, Brown University, 2015-2018

Quantitative Analyst, In4mation Insights, Boston, 2015 Summer

Research Assistant, Department of Statistics, Stanford University, 2014-2015

Research Assistant, Children's Environmental Health Initiative, Duke University, 2011-2012

Publications

Seo M, Furukawa TA, Karyotaki E, Efthimiou O (Submitted). Developing prediction models when there are systematically missing predictors in individual patient data meta-analysis.

Seo M, Debray TPA, Ruffieux Y, Gsteiger S, Bujkiewicz S, Finckh A, Egger M, Efthimiou O (2022). Combining individual patient data from randomized and non-randomized studies to predict real-world effectiveness of interventions. *Statistical Methods in Medical Research*, To appear.

Efthimiou O, **Seo M**, Karyotaki E, Cuijpers P, Furukawa TA, Schwarzer G, Rücker G, Mavridis D (2022). Bayesian models for aggregate and individual patient data component network meta-analysis. *Statistics in Medicine*, To appear.

Seo M, White IR, Furukawa TA, Imai H, Valgimigli M, Egger M, Zwahlen M, Efthimiou O (2021). Comparing methods for estimating patient-specific treatment effects in individual patient data meta-analysis. *Statistics in Medicine*, 40, 1553-1573.

Seo M, Furukawa TA, Veroniki AA, Pillinger T, Tomlinson A, Salanti G, Cipriani A, Efthimiou O (2021). The Kilim plot: A tool for visualizing network meta-analysis results for multiple outcomes. *Research Synthesis Methods*, 12, 86-95.

Furukawa TA, Debray T, Akechi T, Yamada M, Kato T, **Seo M**, Efthimiou O (2020). Can personalized treatment prediction improve the outcomes, compared with the group average approach, in a randomized trial? Developing and validating a multivariable prediction model in a pragmatic megatrial of acute treatment for major depression. *Journal of Affective Disorders*, 274, 690-697.

Khan MS, Khan AR, Khan AI, **Seo M**, Yasmin F, Usman MS, Moustafa A, Schmid CH, Kalra A, Ikram S (2020). Comparison of revascularization strategies in patients with acute coronary syndrome and multivessel coronary disease: A systematic review and network meta-analysis. *Catheterization and cardiovascular interventions*, 96, E447-E454.

R packages

Michael Seo (2022). bipd: Bayesian Individual Patient Data Meta-Analysis using 'JAGS'. R package version 0.1. https://CRAN.R-project.org/package=bipd.

Michael Seo and Christopher Schmid (2020). bnma: Bayesian Network Meta-Analysis using 'JAGS'. R package version 1.5.0. https://CRAN.R-project.org/package=bnma.

Robert Tibshirani, **Michael Seo**, Gil Chu, Balasubramanian Narasimhan and Jun Li (2018). samr: Significance Analysis of Microarrays. R package version 3.0. https://CRAN.R-project.org/package=samr.

Contributed Presentations

Developing prediction models when there are systematically missing predictors in an individual patient data meta-analysis. Joint Statistical Meeting (JSM), Seattle; August, 2021.

bnma: Bayesian Network Meta-Analysis using 'JAGS'. Evidence Synthesis and Meta-Analysis in R Conference; January, 2021.

Predicting real world effectiveness of interventions, combining individual patient data from multiple randomized and non-randomized studies. 41st Annual Conference of the International Society for Clinical Biostatistics (ISCB), Krakow; August, 2020.

The Kilim plot: a tool for visualizing network meta-analysis results for multiple outcomes (poster). 41st Annual Conference of the International Society for Clinical Biostatistics (ISCB), Krakow; August, 2020.

Comparing methods for variable selection in individual patient data meta-analysis. XXXIst Conference of the Austro-Swiss Region (ROeS) of the International Biometric Society, Lausanne; September, 2019.

Teaching Assistantship

Applied Logistic Regression, University of Bern, 2021

Prognostic Research: from Basics to Modelling, University of Bern, 2020, 2021

Evidence Synthesis Methods, University of Bern, 2019

Applied Regression Analysis (PHP 2511), Brown, Spring 2016

Fundamentals of Probability and Statistical Inference (PHP 2515), Brown, Fall 2015

Probability and Statistics Inference (STAT 103), Duke, Spring 2011

Statistics (STAT 114), Duke, Fall 2010

Probability and Statistics for Engineers (STAT 113), Duke, Spring 2010

Probability (STAT 104), Duke, Fall 2009

Programming

R, Python, SAS, SQL, C++, Java, LaTeX

Languages

Korean, English