Spatial Methods in Population Studies Reading List

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1 Background

- Alexander, Monica, Emilio Zagheni, and Magali Barbieri (Dec. 1, 2017). "A Flexible Bayesian Model for Estimating Subnational Mortality". In: *Demography* 54.6, pp. 2025–2041. ISSN: 1533-7790. DOI: 10.1007/s13524-017-0618-7. URL: https://doi.org/10.1007/s13524-017-0618-7.
- Dormann, Carsten F. et al. (2007). "Methods to Account for Spatial Autocorrelation in the Analysis of Species Distributional Data: A Review". In: Ecography 30.5, pp. 609-628. ISSN: 1600-0587. DOI: 10.1111/j.2007.0906-7590.05171.x. URL: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.2007.0906-7590.05171.x.
- Goodchild, Michael F. et al. (Apr. 1, 2000). "Toward Spatially Integrated Social Science". In: *International Regional Science Review* 23.2, pp. 139–159. ISSN: 0160-0176. DOI: 10.1177/016001760002300201. URL: https://doi.org/10.1177/016001760002300201.
- Matthews, Stephen A. and Daniel M. Parker (Feb. 13, 2013). "Progress in Spatial Demography". In: *Demographic Research* 28, pp. 271–312. ISSN: 1435-9871. DOI: 10.4054/DemRes.2013.28.10. URL: http://www.demographic-research.org/volumes/vol28/10/.
- Voss, Paul R. (Nov. 1, 2007). "Demography as a Spatial Social Science". In: *Population Research and Policy Review* 26.5-6, pp. 457-476. ISSN: 0167-5923, 1573-7829. DOI: 10.1007/s11113-007-9047-4. URL: http://link.springer.com/10.1007/s11113-007-9047-4.

Wachter, Kenneth W. (Oct. 25, 2005). "Spatial Demography". In: *Proceedings of the National Academy of Sciences* 102.43, pp. 15299–15300. ISSN: 0027-8424, 1091-6490. DOI: 10.1073/pnas.0508155102. pmid: 16230604. URL: https://www.pnas.org/content/102/43/15299.

2 Autoregressive Models and Spatial Econometrics

- Anselin, Luc (Apr. 1, 2003). "Spatial Externalities, Spatial Multipliers, And Spatial Econometrics". In: *International Regional Science Review* 26.2, pp. 153–166. ISSN: 0160-0176. DOI: 10.1177/0160017602250972. URL: https://doi.org/10.1177/0160017602250972.
- Banerjee, Sudipto, Bradley Carlin, and Alan Gelfand (Jan. 1, 2004). "Hierarchical Modeling and Analysis of Spatial Data". In: Chapman & Hall/CRC Monographs on Statistical and Applied Probability; vol. 101. DOI: 10. 1201/9780203487808.
- Fotheringham, A S, M E Charlton, and C Brunsdon (Nov. 1, 1998). "Geographically Weighted Regression: A Natural Evolution of the Expansion Method for Spatial Data Analysis". In: *Environment and Planning A: Economy and Space* 30.11, pp. 1905–1927. ISSN: 0308-518X. DOI: 10.1068/a301905. URL: https://doi.org/10.1068/a301905.
- Golgher, André Braz and Paul R. Voss (Oct. 1, 2016). "How to Interpret the Coefficients of Spatial Models: Spillovers, Direct and Indirect Effects". In: Spatial Demography 4.3, pp. 175–205. ISSN: 2164-7070. DOI: 10.1007/s40980-015-0016-y. URL: https://doi.org/10.1007/s40980-015-0016-y.
- Haining, Robert P (2004). "Part E: Modelling Spatial Data". In: *Spatial Data Analysis*, pp. 289–378.
- Jin, Xiaoping, Sudipto Banerjee, and Bradley P. Carlin (Nov. 1, 2007). "Order-Free Co-Regionalized Areal Data Models with Application to Multiple-Disease Mapping". In: Journal of the Royal Statistical Society. Series B, Statistical methodology 69.5, pp. 817-838. ISSN: 1369-7412. DOI: 10.1111/j.1467-9868.2007.00612.x. pmid: 20981244. URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2963450/.
- Kissling, W. Daniel and Gudrun Carl (June 16, 2007). "Spatial Autocorrelation and the Selection of Simultaneous Autoregressive Models". In:

- Global Ecology and Biogeography 0.0, 070618060123007-??? ISSN: 1466-822X, 1466-8238. DOI: 10.1111/j.1466-8238.2007.00334.x. URL: http://doi.wiley.com/10.1111/j.1466-8238.2007.00334.x.
- Lee, Duncan (June 2011). "A Comparison of Conditional Autoregressive Models Used in Bayesian Disease Mapping". In: *Spatial and Spatio-Temporal Epidemiology* 2.2, pp. 79–89. ISSN: 1877-5853. DOI: 10.1016/j.sste. 2011.03.001. pmid: 22749587.
- Leroux, Brian G., Xingye Lei, and Norman Breslow (2000). "Estimation of Disease Rates in Small Areas: A New Mixed Model for Spatial Dependence". In: Statistical Models in Epidemiology, the Environment, and Clinical Trials. Ed. by M. Elizabeth Halloran and Donald Berry. Red. by Willard Miller. Vol. 116. The IMA Volumes in Mathematics and Its Applications. New York, NY: Springer New York, pp. 179–191. ISBN: 978-1-4612-7078-2 978-1-4612-1284-3. DOI: 10.1007/978-1-4612-1284-3_4. URL: http://link.springer.com/10.1007/978-1-4612-1284-3_4.
- Lesage, James P. (Apr. 1, 1997). "Bayesian Estimation of Spatial Autoregressive Models". In: *International Regional Science Review* 20.1-2, pp. 113–129. ISSN: 0160-0176. DOI: 10.1177/016001769702000107. URL: https://doi.org/10.1177/016001769702000107.
- Matthews, Stephen A. and Tse-Chuan Yang (Mar. 2, 2012). "Mapping the Results of Local Statistics: Using Geographically Weighted Regression". In: *Demographic Research* 26, pp. 151–166. ISSN: 1435-9871. DOI: 10. 4054/DemRes.2012.26.6. URL: http://www.demographic-research.org/volumes/vol26/6/.
- Pacifici, Krishna et al. (2017). "Integrating Multiple Data Sources in Species Distribution Modeling: A Framework for Data Fusion*". In: *Ecology* 98.3, pp. 840–850. ISSN: 1939-9170. DOI: 10.1002/ecy.1710. URL: https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/ecy.1710.
- Reich, Brian J., Montserrat Fuentes, and David B. Dunson (Mar. 2011). "Bayesian Spatial Quantile Regression". In: *Journal of the American Statistical Association* 106.493, pp. 6–20. ISSN: 0162-1459, 1537-274X. DOI: 10.1198/jasa.2010.ap09237. URL: http://www.tandfonline.com/doi/abs/10.1198/jasa.2010.ap09237.

3 Space-Time Models

- Cressie, Noel A. C. and Christopher K. Wikle (2011). *Statistics for Spatio-Temporal Data*. Wiley Series in Probability and Statistics. Hoboken, N.J. Wiley. 588 pp. ISBN: 978-0-471-69274-4.
- Epperson, Bryan K. (July 30, 2000). "Spatial and Space-Time Correlations in Ecological Models". In: *Ecological Modelling* 132.1, pp. 63-76. ISSN: 0304-3800. DOI: 10.1016/S0304-3800(00)00305-7. URL: http://www.sciencedirect.com/science/article/pii/S0304380000003057.
- Wikle, Christopher K. and Mevin B. Hooten (2004). "Hierarchical Bayesian Spatio-Temporal Models for Population Spread". In: Applications of Computational Statistics in the Environmental Sciences: Hierarchical Bayes and MCMC Methods. Ed. by JS Clark and Gelfand, A.
- Wikle, Christopher K, L Mark Berliner, and Cressie, Noel (1998). "Hierarchical Bayesian Space-Time Models". In: *Evironmental and Ecological Statistics*, p. 38.

4 Disease Mapping

- Best, Nicky, Sylvia Richardson, and Andrew Thomson (Feb. 1, 2005). "A Comparison of Bayesian Spatial Models for Disease Mapping". In: Statistical Methods in Medical Research 14.1, pp. 35–59. ISSN: 0962-2802. DOI: 10.1191/0962280205sm388oa. URL: https://doi.org/10.1191/0962280205sm388oa.
- Lawson, Andrew B (June 2020). "NIMBLE for Bayesian Disease Mapping". In: Spatial and Spatio-temporal Epidemiology 33, p. 100323. ISSN: 18775845. DOI: 10.1016/j.sste.2020.100323. URL: https://linkinghub.elsevier.com/retrieve/pii/S1877584520300010.
- Lawson, Andrew B. et al. (Sept. 2012). "Bayesian 2-Stage Space-Time Mixture Modeling With Spatial Misalignment of the Exposure in Small Area Health Data". In: Journal of agricultural, biological, and environmental statistics 17.3, pp. 417–441. ISSN: 1085-7117. DOI: 10.1007/s13253-012-0100-3. pmid: 28943751. URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5607961/.
- Napier, Gary et al. (Oct. 1, 2019). "A Bayesian Space—Time Model for Clustering Areal Units Based on Their Disease Trends". In: *Biostatistics* 20.4, pp. 681–697. ISSN: 1465-4644. DOI: 10.1093/biostatistics/kxy024.

- URL: https://academic.oup.com/biostatistics/article/20/4/681/5039880.
- Riebler, Andrea et al. (Aug. 1, 2016). "An Intuitive Bayesian Spatial Model for Disease Mapping That Accounts for Scaling". In: Statistical Methods in Medical Research 25.4, pp. 1145–1165. ISSN: 0962-2802. DOI: 10.1177/0962280216660421. URL: https://doi.org/10.1177/0962280216660421.
- Wakefield, J. (Apr. 1, 2007). "Disease Mapping and Spatial Regression with Count Data". In: *Biostatistics* 8.2, pp. 158-183. ISSN: 1465-4644, 1468-4357. DOI: 10.1093/biostatistics/kxl008. URL: https://academic.oup.com/biostatistics/article-lookup/doi/10.1093/biostatistics/kxl008.
- Wakefield, Jon et al. (Sept. 1, 2019). "Estimating Under-Five Mortality in Space and Time in a Developing World Context". In: Statistical Methods in Medical Research 28.9, pp. 2614–2634. ISSN: 0962-2802. DOI: 10.1177/0962280218767988. URL: https://doi.org/10.1177/0962280218767988.