

1 Reading list

1.1 Books

- This book shares the same mindset of our class: with a focus on applied side of spatiotemporal statistics using R: Bivand Roger S., Pebesma, Edzer J., and Gmez-Rubio, Virgilio (2008), *Applied Spatial Data Analysis with R*, Springer (eBook available at TTU library).
- ‘Bible’ of spatiotemporal statistics, in case you want to go beyond this class to learn more spatiotemporal statistics in a more rigorous way: Cressie, N., & Wikle, C. K. (2011). *Statistics for Spatio-temporal Data*. John Wiley & Sons.
- If you want to know more about Kriging family of methods: Chiles, J. P., & Delfiner, P. (2009). *Geostatistics: Modeling Spatial Uncertainty*. John Wiley & Sons.

1.2 Topics and Related Papers

Topics	Readings (<i>see the attached reference for details</i>)
What is special about spatial?	Anselin (1990), Haining (2003, 2009)
Spatial point pattern analysis	Baddeley & Turner (2006), Baddeley et al. (2007), Diggle et al. (1983)
Species distribution modeling	Elith et al. (2011), Renner & Warton (2013), Stokland et al. (2011), Chefaoui & Lobo (2008), Anderson et al. (2006), Elith et al. (2008)
Bayesian geostatistics & applications	Diggle et al. (1998), Cameletti et al. (2013), Blangiardo et al. (2013)
Time series remote sensing imagery analysis	Verbesselt et al. (2010), Lu et al. (2004), Zhu et al. (2012)
Trajectory analysis	Miller (2015), Calenge (2006), Movebank

References

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- Anselin, L. (1990), What is special about spatial data? Alternative perspectives on spatial data analysis, *in* ‘\it Spatial Statistics, Past, Present and Future’, Institute of Mathematical Geography.

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- Baddeley, A. & Turner, R. (2006), Modelling spatial point patterns in R, in ‘Case studies in spatial point process modeling’, Springer, pp. 23–74.
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- Chefaoui, R. M. & Lobo, J. M. (2008), ‘Assessing the effects of pseudo-absences on predictive distribution model performance’, *Ecological modelling* **210**(4), 478–486.
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- Lu, D., Mausel, P., Brondizio, E. & Moran, E. (2004), ‘Change detection techniques’, *International journal of remote sensing* **25**(12), 2365–2401.
- Miller, J. A. (2015), ‘Towards a better understanding of dynamic interaction metrics for wildlife: a null model approach’, *Transactions in GIS* **19**(3), 342–361.
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