

## Education

2004, University of Reading, UK

**PhD Soil Science and Precision Agriculture** - full scholarship

1997, University of Reading, UK

**MSc in Soil Spatial Analysis and Land Evaluation**, Pass with Distinction - full scholarship

1995, University of Oxford, St Hugh's College, UK

**BA/MA Honours in Geography II(i)**

## Professional Experience since PhD

January 2021-present: Associate Professor

**Brigham Young University, Department of Geography**

Fall 2017-Fall 2022: Affiliate Assistant Professor

**Auburn University, Crop, Soil and Environmental Sciences Department**

Fall 2014-2019: Affiliate Researcher, resident in UK

**Brigham Young University, Department of Geography**

September 2007 – August 2008: Visiting Scholar

**Grant F. Walton Center for Remote Sensing and Spatial Analysis, Rutgers University, New Jersey**

January-July 2005, June-September 2007, May-August 2009, May-August 2010, May-August 2012

Visiting Scholar, **University of Cambridge, Department of Geography, UK**

Fall 2004 – Winter 2014, Winter 2020: Part-time Faculty and Associate Lecturer, Classes: Quantitative Methods,

Mentored Research, Landforms; Climatology, Physical Geography, **Brigham Young University, Department of Geography**

## Selected Publications

### Edited Volumes/Books

Kerry, R. (Guest Editor) 2023-4. Special Issue: The Importance of Soil Spatial Variability in Precision Agriculture. *Agronomy*, MDPI.

Kerry, R. & Escolà, A. 2021. *Sensing Approaches for Precision Agriculture*. Springer Nature, Switzerland AG.

Kerry, R. (Guest Editor), Stafford, J. V. & Lowenberg DeBoer, J.M. 2019. Special Issue: The 11<sup>th</sup> European Conference on Precision Agriculture, *Precision Agriculture*, 20:2.

Kerry, R., Oliver, M. A. & Haining, R. P. Guest Editors 2010. Special Issue: Geostatistical Methods in Geography: Applications in Physical Geography. *Geographical Analysis*. 42:2.

Kerry, R. (Guest Editor). 2008. Special Issue on Spatial Variation in Precision Agriculture. *Precision Agriculture*. Volume 9.

### Peer-reviewed Book Chapters

Kerry, R., Oliver, M. A. & Frogbrook, Z. L. 2010. Sampling I. In: M.A. Oliver (ed.) *Geostatistical Applications for Precision Agriculture*. Springer. pp. 35-64.

Goovaerts, P. & Kerry, R. 2010. Use of ancillary data in precision agriculture. In: M.A. Oliver (ed.) *Geostatistical Applications for Precision Agriculture*. Springer. pp. 167-194.

### Peer-reviewed Journal Articles (2021 onwards)

Kerry, R., Ingram, B., Oliver, M. A. & Frogbrook, Z. L. 2024. Soil Sampling and Sensed Ancillary Data Requirements for Soil Mapping in Precision Agriculture I. Delineation of Management Zones to Determine Zone Averages of Soil Properties. *Precision Agriculture*. 25, 1181-1211.

Kerry, R., Ingram, B., Oliver, M. A. & Frogbrook, Z. L. 2024. Soil Sampling and Sensed Ancillary Data Requirements for Soil Mapping in Precision Agriculture II. Contour Mapping of Soil Properties with Sensed Z-score Data for comparison with Management Zone Averages. *Precision Agriculture*. 25, 1212-1234.

Turner, I., Kerry, R., Jensen R. R., Flint, E. A., Svedin, J., Hansen, N. C., Hopkins, B. & Hammond, K. 2023. Automated Analysis of Snowmelt from Sentinel-2 Imagery to Determine Variable Rate Irrigation Zones in the American Mountain West. *Geocarto International*, 38, 2230939.

Tueller, G., Kerry, R., Young, S. 2023. Spatial Investigation of the Links between Aflatoxin Legislation, Climate, and Liver Cancer at the Global Scale. *Spatial and Spatio-temporal Epidemiology*. 46, 100592.

Hammond, K., Kerry, R., Jensen, R. R., Spackman, R., Hulet, A., Hopkins, B.G., Yost, M. A., Hopkins, A.P. & Hansen, N. C. 2023. Assessing Within-field Variation of Alfalfa Leaf Area Index with UAV Visible Vegetation Indices. *Agronomy*, 13, 1289.

Kerry, R., Ingram, B., Hammond, K., Shumate, S., Gunther, D., Jensen, R. R., Schill, S., Hansen, N. C. & Hopkins, B. G. 2023. Spatial Analysis of Soil Moisture and Turfgrass Health to Determine Zones for Spatially Variable Irrigation Management. *Agronomy*, 13, 1267.

- Flint, E. A., Hopkins, B. G., Svedin, J. D., Kerry, R., Heaton, M. J., Jensen, R. R., Campbell, C. S., Yost, M. A. & Hansen, N. C. 2023. Irrigation zone delineation and management with a field-scale variable rate irrigation system in winter wheat. *Agronomy*, 13, 1125.
- Maleki, S., Karimi, A.; Mousavi, A., Kerry, R., Taghizadeh-Mehrjardi, R. 2023. Delineation of Soil Management Zone Maps at the Regional Scale Using Machine Learning. *Agronomy*, 13, 445.
- Kerry, R., Ingram B., Orellana, M., Ortiz, B.V. & Scully, B.T. 2023. Development of a method to assess the risk of aflatoxin contamination of corn within counties in southern Georgia, USA using remotely sensed data. *Smart Agricultural Technology*, 3, 100124.
- Mallah, S., Khaki, B. D., Davatgar, N., Scholten, T., Amirian-Chakan, A., Emadi, M., Kerry, R., Mosavi, A. H. & Taghizadeh-Mehrjardi, R. 2022. Predicting Soil Textural Classes Using Random Forest Models: Learning from Imbalanced Datasets, *Agronomy*, 12, 2613.
- Kerry, R., Ingram, B., Ortiz, B. V. & Salvacion, A. 2022. Using Soil, Plant, Topographic and Remotely Sensed Data to Determine the Best Method for Defining Aflatoxin Contamination Risk Zones Within Fields for Precision Management. *Agronomy*, 12, 2524.
- Taghizadeh-Mehrjardi, R., Sheikhpour, R., Zeraatpisheh, M., Amirian-Chakan, A., Toomanian, N., Kerry, R. & Scholten, T. 2022. Semi-supervised learning for the spatial extrapolation of soil information. *Geoderma*, 426, 116094.
- ZeraatPisheh, M., Bottega, E. L., Bakhshandeh, E. Owliaie, H. R., Taghizadeh-Mehrjardi, R., Kerry, R., Scholten, T. & Xu, M. 2022. Spatial variability of soil quality within management zones: homogeneity and purity of delineated zones. *Catena*, 209, 105835.
- Asadi, M., Fathzadeh, A., Kerry, R., Ebrahimi-Khusfi, Z. & Taghizadeh-Mehrjardi, R. 2021. Prediction of river suspended sediment load using machine learning models and geo-morphometric parameters. *Arabian Journal of Geosciences*, 14, 1926.
- Mahmoudzadeh, H., Matinfar, H. R., Kerry, R., Eskandari, S., Ebrahimi-Khusfi, Z. & Taghizadeh-Mehrjardi, R. 2021. New hybrid evolutionary models for spatial prediction of Soil properties in Kurdistan. *Soil Use and Management*, 38, 191-211.
- Svedin, J.D., Kerry, R., Hansen, N.C. & Hopkins, B.G. 2021. Identifying Within-Field Spatial and Temporal Crop Water Stress to Conserve Irrigation Resources with Variable-Rate Irrigation. *Agronomy*, 11, 1377.
- Soltani-Gerdefaramarzi, S., Taghizadeh-Mehrjardi, R., Kerry, R. & Shirmardi, M. 2021. Effect of interceptor drainage on phosphorus transport and soil chemical characteristics under different cultivation conditions. *Paddy Water Environment*, 19, 585–594.
- Kerry, R., Ingram, B., Garcia-Cela, E. Magan, N., Ortiz, B. V. & Scully, B. 2021. Determining Future aflatoxin contamination risk scenarios for corn in Southern Georgia, USA using spatio-temporal modelling and future climate simulations. *Scientific Reports*, 11, 13522.
- Smith, R., Oyler, L., Campbell, C., Woolley, E.A., Hopkins, B.G., Kerry, R. & Hansen, N.C., 2021. A new approach for estimating and delineating within-field crop water stress zones with satellite imagery, *International Journal of Remote Sensing*, 42, 6005-6024.
- Kerry, R., Ingram, B. R., Garcia-Cela, E. & Magan, N. 2021. Investigation of the potential to reduce waste through sampling and spatial analysis of grain bulks. *Biosystems Engineering*, 207, 92-105.
- Taghizadeh-Mehrjardi, R., Fathizad, H., Hakimzadeh Ardakani, M.A., Sodaizadeh, H., Kerry, R., Heung, B. & Scholten, T. 2021. Spatio-Temporal Analysis of Heavy Metals in Arid Soils at the Catchment Scale Using Digital Soil Assessment and a Random Forest Model. *Remote Sensing*, 13, 1698.
- Nabiollahi, K., Shahlaee, S., Zahedi, S., Taghizadeh-Mehrjardi, R., Kerry, R. & Scholten, T. 2021. Land Use and Soil Organic Carbon Stocks—Change Detection over Time Using Digital Soil Assessment: A Case Study from Kamyaran Region, Iran (1988–2018). *Agronomy*, 11, 597.
- Abedi F, Amirian-Chakan A, Faraji M, Taghizadeh-Mehrjardi, R., Kerry, R., Razmjoue, D. & Scholten T. 2021. Salt dome related soil salinity in southern Iran: Prediction and mapping with averaging machine learning models. *Land Degradation and Development*, 32, 1540-1554.

#### **Academic Service:**

*Editorial Board Member:* Precision Agriculture

*Treasurer – by election:* International Society of Precision Agriculture, 2020-2024

*Scientific Committee Member*

Pedometrics 2017, Wageningen, Netherlands

9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup> 13<sup>th</sup>, 14<sup>th</sup> ECPA, Spain, Israel, UK, France, Hungary, Italy

ICPA 2022, ICPA 2024

*Society Memberships:* Association of American Geographers (AAG), British Society of Soil Science (BSSS), International Association for Mathematical Geology (IAMG), International Society of Precision Agriculture (ISPA), Royal Geographical Society (RGS), Soil Science Society of America (SSSA).