

Publications (prior to appointment to CSRIO)

Refereed Journal Articles

1. Somarathna, P., Minasny, B., Malone, B.P., **Stockmann, U.**, McBratney, A.B. (2018). Accounting for the measurement error of spectroscopically inferred soil carbon data for improved precision of spatial predictions. *Science of the Total Environment* 631-632, 377-389.
2. Minasny, B., Arrouays, D., McBratney, A.B., Angers, D.A., Chambers, A., Chaplot, V., Chen, Z.S., Cheng, K., Das, B.S., Field, D.J., Gimona, A., Hedley, C., Hong, S.Y., Mandal, B., Malone, B.P., Marchant, B.P., Martin, M., McConkey, B.G., Mulder, V.L., O'Rourke, S., Richer-de-Forges, A.C., Odeh, I., Padarian, J., Paustian, K., Pan, G.X., Poggio, L., Savin, I., Stolbovoy, V., **Stockmann, U.**, Sulaeman, Y., Tsui, C.C., Vagen, T.G., van Wesemael, B., Winowiecki, L. (2018). Rejoinder to Comments on Minasny et al., 2017 Soil carbon 4 per mille *Geoderma* 292, 59-86. *Geoderma* 309, 124-129.
3. **Stockmann, U.**, Jingyi, H., Minasny, B., Triantafyllis, J., (2017). Utilizing a DUALEM-421 and inversion modelling to map baseline soil salinity along toposequences in the Hunter Valley Wine district. *Soil Use and Management* 33, 3, 413-424.
4. Minasny, B., Malone, B.P., McBratney, A.B., Angers, D.A., Arrouays, D., Chambers, A., Chaplot, V., Chen, Z.-S., Cheng, K., Das, B.S., Field, D.J., Gimona, A., Hedley, C.B., Hong, S.Y., Mandal, B., Marchant, B.P., Martin, M., McConkey, B.G., Mulder, V.L., O'Rourke, S., Richer-de-Forges, A.C., Odeh, I., Padarian, J., Paustian, K., Pan, G., Poggio, L., Savin, I., Stolbovoy, V., **Stockmann, U.**, Sulaeman, Y., Tsui, C.-C., Vågen, T.-G., van Wesemael, B., Winowiecki, L. (2017). Soil carbon 4 per mille. *Geoderma* 292, 59-86. **340 citation, Web of Science highly cited paper**
5. Jang, H.-J., Minasny, B., **Stockmann, U.**, Malone, B. (2016). Spatial pedological mapping using a portable X-ray fluorescence spectrometer at the Tallavera Grove vineyard, Hunter Valley. *Korean Journal of Soil Science and Fertilizer* 49(6), 635-643.
6. O'Rourke, S.M., **Stockmann, U.**, Holden, N.M., McBratney, A.B., Minasny, B. (2016). An assessment of model averaging to improve predictive power of portable vis-NIR and XRF for the determination of agronomic soil properties. *Geoderma* 279, 31-44.
7. **Stockmann, U.**, Cattle, S.R., Minasny, B., McBratney, A.B. (2016). Utilizing portable X-ray fluorescence spectrometry for in-field investigation of pedogenesis. *CATENA* 139, 220-231.
8. de Gruijter, J.J., McBratney, A.B., Wheeler, I., Minasny, B., Malone, B.P., **Stockmann, U.** (2015). Farm-scale soil carbon auditing. *Geoderma* 265, 120-130.
9. Horta, A., Malone, B., **Stockmann, U.**, Minasny, B., Bishop, T.F.A., McBratney, A.B., Pallasser, R., Pozza, L. (2016). Reply to "Comment on "Potential of integrated field spectroscopy and spatial analysis for enhanced assessment of soil contamination: A prospective review" by Horta et al". *Geoderma* 271, 256-257.
10. Horta, A., Malone, B.P., **Stockmann, U.**, Minasny, B., Bishop, T.F.A., McBratney, A.B., Pallasser, R., Pozza, L. (2015). Potential of integrated field spectroscopy and spatial analysis for enhanced assessment of soil contamination: A prospective review. *Geoderma* 241–242(0), 180-209. **119 citations, Web of Science highly cited paper**
11. Minasny, B., Finke, P., **Stockmann, U.**, Vanwalleghem, T., McBratney, A.B. (2015). Resolving the integral connection between pedogenesis and landscape evolution. *Earth Science Reviews* 150, 102-120.
12. **Stockmann, U.**, Malone, B.P., McBratney, A.B., Minasny, B. (2015). Landscape-scale exploratory radiometric mapping using proximal soil sensing. *Geoderma* 239–240(0), 115-129.
13. **Stockmann, U.**, Padarian, J., McBratney, A.B., Minasny, B., de Brogniez, D., Montanarella, L., Hong, S.Y., Rawlins, B.G., Field, D.J. (2015). Global soil organic carbon assessment. *Global Food Security* 6, 9-16.
14. **Stockmann, U.**, Minasny, B., McBratney, A.B. (2014). How fast does soil grow?. *Geoderma* 216, 48-61.
15. **Stockmann, U.**, Minasny, B., Pietsch, T., McBratney, A.B. (2013). Quantifying processes of pedogenesis using optically stimulated luminescence. *European Journal of Soil Science* 64(1), 145-160.

16. Vanwalleghem, T., **Stockmann, U.**, Minasny, B., McBratney, A.B. (2013). A quantitative model for integrating landscape evolution and soil formation. *Journal of Geophysical Research* 118, 1-17.
17. **Stockmann, U.**, Adams, M., Crawford, J., Field, D.J., Henakaarchchi, N., Jenkins, M., Minasny, B., McBratney, A.B., de Remy de Courcelles, V., Singh, K., Wheeler, I., Abbott, L., Angers, D.A., Baldock, J., Bird, M., Brookes, P.C., Chenu, C., Jastrow, J.D., Lal, R., Lehmann, J., O'Donnell, A.G., Parton, W.J., Whitehead, D., Zimmermann, M. (2013). The knowns, known unknowns and unknowns of sequestration of soil organic carbon. *Agriculture, Ecosystems and Environment* 164, 80-99. **544 citations, Web of Science highly cited paper**
18. **Stockmann, U.**, Minasny, B., McBratney, A.B. (2011). Quantifying processes of pedogenesis. *Advances in Agronomy* 113, 1-74.

Books

19. McBratney, A.B., Minasny, B., **Stockmann, U.** (2018). *Pedometrics*. Progress in Soil Science Series. Springer International Publishing, Cham, doi: 10.1007/978-3-319-63439-5.
20. **Stockmann, U.** (2011). *Quantifying processes of pedogenesis. A field study situated in the Werrikimbe National Park in south-eastern Australia*. PhD Thesis. The University of Sydney.

Book Chapters

21. Malone, B., Odgers, N.P., **Stockmann, U.**, Minasny, B., McBratney, A.B. (2018). Digital mapping of soil classes and continuous soil properties. In: McBratney, A.B., Minasny, B., **Stockmann, U.** (Eds.), *Pedometrics*. Springer International Publishing, Cham, 373-413.
22. McBratney, A.B., Fajardo, M., Malone, B., Bishop, T., **Stockmann, U.**, Odeh, I.A.O. (2018). Effective multivariate description of soil and its environment. In: McBratney, A.B., Minasny, B., **Stockmann, U.** (Eds.), *Pedometrics*. Springer International Publishing, Cham, pp. 87-112.
23. **Stockmann, U.**, Jones, E.J., Odeh, I.A.O., McBratney, A.B. (2018). Pedometric treatment of soil attributes. In: McBratney, A.B., Minasny, B., **Stockmann, U.** (Eds.), *Pedometrics*. Springer International Publishing, Cham, pp. 115-153.
24. **Stockmann, U.**, Minasny, B., McBratney, A.B. (2018). Clorpt functions. In: McBratney, A.B., Minasny, B., **Stockmann, U.** (Eds.), *Pedometrics*. Springer International Publishing, Cham, pp. 549-554.
25. **Stockmann, U.**, Salvador-Blanes, S., Vanwalleghem, T., Minasny, B., McBratney, A.B. (2018). One-Two- and Three-D pedogenic models. In: McBratney, A.B., Minasny, B., **Stockmann, U.** (Eds.), *Pedometrics*. Springer International Publishing, Cham, pp. 555-593.
26. Minasny, B., **Stockmann, U.**, Hartemink, A.E., McBratney, A.B. (2016). Measuring and modelling soil depth functions. In: Hartemink, E.A., Minasny, B. (Eds.), *Digital Soil Morphometrics*. Springer International Publishing, Cham, pp. 225-240.
27. **Stockmann, U.**, Jang, H.J., Minasny, B., McBratney, A.B. (2016). The effect of soil moisture and texture on Fe concentration using portable X-Ray fluorescence spectrometers. In: Hartemink, E.A., Minasny, B. (Eds.), *Digital Soil Morphometrics*. Springer International Publishing, Cham, pp. 63-71.
28. Minasny, B., Malone, B.P., **Stockmann, U.**, Odgers, N., McBratney, A.B. (2014). *Pedometrics*. Reference Module in Earth Systems and Environmental Sciences. Elsevier.
29. McBratney, A.B., **Stockmann, U.**, Angers, D.A., Minasny, B., Field, D.J. (2014). Challenges for soil organic carbon research. In: Hartemink, A.E. & K. McSweeney (Ed.): *Soil Carbon*. Progress in Soil Science Series. Springer. Cham et al., p. 3-16.
30. Waring, C., **Stockmann, U.**, Malone, B.P., Whelan, B., McBratney, A.B. (2014). Is percent 'Projected Natural Vegetation Soil Carbon' a useful indicator of soil condition?. In: Hartemink, A.E. & K. McSweeney (Ed.): *Soil Carbon*. Progress in Soil Science Series. Springer. Cham et al., p. 219-228.

Refereed Conference Proceedings

31. **Stockmann, U.**, Triantafilis, J., Minasny, B., McBratney, A.B. (2013). Mapping soil horizon change in the viticultural region of the Hunter Valley in NSW, Australia, employing a DUALEM-421 induction probe. In: Gebbers, R., Lück, E., Rühlmann, J. (Ed.): *3rd Global Workshop on Proximal Soil Sensing*. Bornimer Agrartechnische Berichte. Heft 82. Leibniz-Institut für Agrartechnik Potsdam-Bornim e.V., p. 52-55.

32. Minasny, B., McBratney, A.B., **Stockmann, U.**, Hong, S.Y. (2013). Cubist, a regression rule approach for use in calibration of NIR spectra. In: Bellon-Maurel, V., P. Williams, G. Downey (Ed.): ST2 – Chemometrics. NIR2013 Proceedings, 2-7 June 2013, la Grande-Motte, France, p.630-633.
33. **Stockmann, U.**, Minasny, B., McBratney, A.B., Hancock, G.R., Willgoose, G. (2012). Exploring short-term soil landscape formation in the Hunter Valley, NSW, using gamma-ray spectrometry. In: Minasny, B., Malone, B.P., McBratney, A.B. (Ed.): Digital Soil Assessments and Beyond. Taylor & Francis Group. London, p. 77-82.
34. **Stockmann, U.**, McBratney, A.B., Minasny, B., Fink, D. & Pietsch, T. (2010). Investigating processes of pedogenesis in the Werrikimbe National Park in NSW, Australia. Proceedings of the 19th World Congress of Soil Science. Soil solutions for a changing world. Brisbane. Australia.

Magazine, Newspaper Articles

35. Minasny, B., McBratney, A., Malone, B., **Stockmann, U.** (2015). Eyes down: how setting our sights on soil could help save the climate. *The Conversation*.

Reports

36. McBratney, A., **Stockmann, U.** (2011). *Some Key Management Options for increasing Soil Organic Carbon: A primer of practical management for those interested in managing soil carbon*. Soil carbon summit. 31 January to 3February 2011. Sydney, Australia.
37. **Stockmann, U.**, Adams, M., Crawford, J., Field, D., Henakaarchchi, N., Jenkins, M., McBratney, A., De Remy De Courcelles, V., Singh, K., Wheeler, I. (2010). *Managing the soil plant system to mitigate atmospheric CO₂*. Soil carbon summit. 31 January to 3February 2011. Sydney, Australia.
38. Scholten, T., Schulze, E., Gruending, R., Schmid, N., **Stockmann, U.** (2005). *Historical land use and carbon storage in soils - BIOLOG: Biodiversity and Global Change - Status Report 2005*.

Workshop Presentations

39. Soil Productivity – Growing Agriculture Master Class. 9-13 May 2016. NSW Department of Primary Industries, The Crawford Fund, The University of Sydney.
40. Soil Spectral Inference workshop, 30 March – 1 April 2016, The University of Sydney.
41. Stockmann, U., Minasny, B., McBratney, A.B. (2013). How fast does soil grow?. Colloquium of the Alexander von Humboldt Foundation – Looking to the Future: International Research in a Changing World, 17-19 October 2013, Sydney, Australia.
42. Soil Carbon Sequestration Summit (31 January – 2 February, 2011) and Soil Carbon Sequestration Stakeholder Workshop (3 February, 2011), at The Australian Technology Park, The United States Studies Centre, The University of Sydney.

Invited speaker

43. Stockmann, U., Cattle, S. (2014). Australian Soils within CZO and TERN program. Critical Zone Observatories in the Southern Hemisphere – An International Workshop. Ancient Soils and modern Landuse – A Challenge for Critical Zone Science. The University of Western Australia. Perth, 10-12 April, 2014.
44. COST Terrabites Workshop on Dynamic Global Soil Modelling, University of Cordoba, Spain, 19-21 September, 2012.

Conference Presentations

45. Acharige, N., Bishop, T., Evans, B., Filippi, P., Jones, E., Malone, B., Fajardo, M., **Stockmann, U.** (2017). Sensing of farm and district-scale soil moisture content using a mobile cosmic ray probe (COSMOS Rover). *Pedometrics25 2017*, 26 June - 1 July 2017, Wageningen, The Netherlands.
46. Somarathna, P.D.S.N., Minasny, B., Malone, B., **Stockmann, U.**, McBratney, A.B. (2017). Accounting for the measurement error to improve the accuracy of spatial modelling of soil carbon. *Pedometrics25 2017*, 26 June - 1 July 2017, Wageningen, The Netherlands.
47. **Stockmann, U.**, Malone, B., Minasny, B., McBratney, A.B. (2017). Investigating the effect of moisture for using field-portable X-ray fluorescence spectrometry for 2.5D high-resolution geochemical mapping. *Pedometrics25 2017*, 26 June - 1 July 2017, Wageningen, The Netherlands.

48. **Stockmann, U.**, O'Rourke, S., McBratney, A.B., Holden, N., Minasny, B. (2016). Utilizing model averaging to improve the prediction of agronomic soil properties from vis-NIR and pXRF. *6th Joint Australian and New Zealand Soil Science Conference*, 12-16 December 2016, Queenstown, New Zealand.
49. **Stockmann, U.**, Cattle, S.R., Minasny, B., McBratney, A.B. (2015). Utilizing portable X-ray fluorescence spectrometry for in-field investigation of pedogenesis. *SUSTAIN*, 23-26 September 2015, Kiel, Germany.
50. **Stockmann, U.**, Malone, B.P., McBratney, A.B., Minasny, B. (2015). Landscape-scale exploratory radiometric mapping using proximal soil sensing. *Pedometrics 2015*, 14-18 September 2015, Córdoba, Spain.
51. **Stockmann, U.** (2015). How fast does soil grow? *Faculty of Agriculture and Environment research symposium 'Soil to save our planet'*. 14 July 2015, The University of Sydney, Australia.
52. McBratney, A., Minasny, B., Field, D., Malone, B., **Stockmann, U.**, Padarian, J. (2014). Digital soil mapping and assessment for global soil security. *ASA, CSSA and SSSA 2014 International Annual Meeting*, USA: Soil Science Society of America.
53. **Stockmann, U.**, Minasny, B., McBratney, A., Malone, B., Hancock, G., Willgoose, G. (2014). Utilizing on-the-go radiometric mapping for the investigation of short-term pedogenic processes in the Lower Hunter Valley, NSW, Australia. *ASA, CSSA and SSSA 2014 International Annual Meeting*, USA: Soil Science Society of America.
54. Jang, H., Minasny, B., **Stockmann, U.** (2014). How does soil moisture effect the in-field prediction of soil properties from X-Ray fluorescence (XRF) spectra? *20th World Congress of Soil Sciences*, 8-13 June 2014, Jeju, Korea: International Union of Soil Sciences (IUSS).
55. Padarian, J., **Stockmann, U.**, Minasny, B., McBratney, A. (2014). Global soil carbon assessment. *20th World Congress of Soil Sciences*, 8-13 June 2014, Jeju, Korea: International Union of Soil Sciences (IUSS).
56. **Stockmann, U.**, Minasny, B., McBratney, A. (2014). Pedogeomorphometry, Integrating empirical and mechanistic models for better prediction of soil over space and time. *20th World Congress of Soil Sciences*, 8-13 June 2014, Jeju, Korea: International Union of Soil Sciences (IUSS).
57. **Stockmann, U.**, Vanwalleghem, T., Minasny, B., McBratney, A. (2014). Modelling pedogenesis over millennial time scales. *20th World Congress of Soil Sciences*, 8-13 June 2014, Jeju, Korea: International Union of Soil Sciences (IUSS). Waring, C., Stockmann, U., Whelan, B. (2014). Soil measurement scale, resolution and cost matters. *Soil Change Matters International Workshop*, 24-27 March 2014, Bendigo, Australia.
58. *Topical keynote*: **Stockmann, U.**, Vanwalleghem, T., Minasny, B., McBratney, A. (2014). Modelling soil change over millennial time scales. *Soil Change Matters International Workshop*, 24-27 March 2014, Bendigo, Australia.
59. Minasny, B., McBratney, A., Malone, B., **Stockmann, U.** (2014). Digital mapping of soil change. *Soil Change Matters International Workshop*, 24-27 March 2014, Bendigo, Australia.
60. **Stockmann, U.**, Triantafilis, J., Minasny, B., McBratney, A.B. (2013). Mapping soil horizon change in the viticultural region of the Hunter Valley in NSW, Australia, employing a DUALEM-421 induction probe. *3rd Global Workshop on Proximal Soil Sensing*. 26-29 May, Potsdam, Germany.
61. **Stockmann, U.**, Minasny, B., McBratney, A.B., Hong, S.Y. (2013). Cubist, a regression rule approach for use in calibration of NIR spectra. *NIR2013- 16th International conference on Near Infrared Spectroscopy*, 2-7 June 2013, la Grande-Motte, France.
62. **Stockmann, U.**, B. Minasny, Alex. B. McBratney, K. Singh (2013): Field estimation of soil organic carbon using NIR spectroscopy. *NIR2013- 16th International conference on Near Infrared Spectroscopy*, 2-7 June 2013, la Grande-Motte, France.
63. Minasny, B., McBratney, A., **Stockmann, U.**, Malone, B. (2013). Pedogeomorphometry: An approach to model soil across spatial and temporal scales. *ASA, CSSA and SSSA 2013 International Annual Meeting*, Madison, USA: Soil Science Society of America.

64. McBratney, A., Minasny, B., Malone, B., **Stockmann, U.**, Morris, J. (2013). Soil inference for biophysical modelling at a global extent. *ASA, CSSA and SSSA 2013 International Annual Meeting*, Madison, USA: Soil Science Society of America.
65. **Stockmann, U.**, Minasny, B., McBratney, A., Hancock, G., Willgoose, G. (2012). Application of on-the-go radiometric mapping for investigating processes of soil genesis in the Hunter Valley, NSW, Australia. *5th Joint Australian and New Zealand Soil Science Conference*, 2-7 December, Hobart, Australia.
66. **Stockmann, U.**, Minasny, B., McBratney, A.B., Hancock, G.R., Willgoose, G. (2012). Exploring short-term soil landscape formation in the Hunter Valley, NSW, using gamma-ray spectrometry. *5th Global Workshop on Digital Soil Mapping – Digital Soil Assessments and Beyond*, 10-13 April 2012, Sydney, Australia.
67. Minasny, B., **Stockmann, U.**, McBratney, A. (2012). What is the average rate of soil formation? *5th Joint Australian and New Zealand Soil Science Conference*, 2-7 December, Hobart, Australia.
68. **Stockmann, U.**, McBratney, A., Minasny, B., Fink, D., Pietsch, T. (2010). Investigating processes of pedogenesis in the Werrikimbe National Park in NSW, Australia. *19th World Congress of Soil Science Soil solutions for a changing world*, Brisbane: International Union of Soil Sciences (IUSS).
69. **Stockmann, U.**, McBratney, A., Minasny, B., Fink, D., Mifsud, C. (2009). Quantifying soil formation in the landscape. *7th International Conference on Geomorphology*, 6-11 July, Melbourne, Australia.
70. **Stockmann, U.**, McBratney, A., Minasny, B. (2008). Quantifying the rate of soil formation in the landscape. *4th Joint Conference of the Australian and New Zealand Societies of Soil Science 2008*, 30 November – 5 December, Palmerston North, New Zealand.
71. Scholten, T., Schulze, E., Gruending, R., Schmid, N., **Stockmann, U.**, Mueller, K. (2005). Historical land use and carbon storage in soils. *BIOLOG Status Seminar 2005*, Germany: Federal Ministry of Education and Research.
72. Scholten, T., Behrens, T., Schmid, N., **Stockmann, U.**, Mueller, K. (2005). The role of pedodiversity for ecosystem functioning in grassland ecosystems. *International Conference of Multifunctionality of Landscapes - Analysis, Evaluation, and Decision Support 2005*.