

Publications in international journals and books with a peer review process

(* student paper)

1. Haruzi*, P., Schmaeck, P., Zhou, Z., **van der Kruk, J.**, Vereecken, H., Vanderborght, J., Klotzsche, A., 2022 Detection of tracer plumes using full-waveform inversion of time-lapse ground penetrating radar data: a numerical study in a high-resolution aquifer model, *Water Resources Research* 58, e2021WR030110, doi:10.1029/2021WR030110
2. Mozaffari*, A., Klotzsche, A., Zhou, Z., Vereecken, H., **van der Kruk, J.**, 2021, 3-D Electromagnetic Modeling Explains Apparent-Velocity Increase in Crosshole GPR Data-Borehole Fluid Effect Correction Method Enables to Incorporating High-Angle Traveltime Data, *IEEE Transactions on Geoscience and Remote Sensing* 60, 5905710 doi:10.1109/TGRS.2021.3107451
3. Dal Bo*, I., Klotzsche, A., Bol, R., Morad, G., Weihermuller, L., Vereecken, H., and **van der Kruk, J.**, 2021, GPR and EMI Characterization of the Hyperarid Study Site of Yungay, Chile: Implications of Applying Geophysical Methods on Mars, *Earth and Space Science*, 8, e2021EA001790, doi:10.1029/2021EA001790
4. Zhou*, Z., Klotzsche, A., Schmack, J., Vereecken, H., **van der Kruk, J.**, 2021, Improvement of ground-penetrating radar full-waveform inversion images using cone penetration test data, *Geophysics* 86, H13-H25, doi:10.1190/geo2020-0283.1
5. Schaller, M., Dal Bo, I., Ehlers, T.A., Klotzsche, A., Drews, R., Espoz, J.P.F., **van der Kruk, J.** Comparison of soil characteristics from geophysical and geochemical techniques along a climate and ecological gradient, Chilean Coastal Cordillera (26 to 38 S), *Soil Discussions* 2020 1-45, doi:10.5194/soil-2020-33
6. Schaller, M., Dal Bo, I., Ehlers, T.A., Klotzsche, A., Drews, R., Espoz, J.P.F., **van der Kruk, J.**, 2020, Comparison of regolith physical and chemical characteristics with geophysical data along a climate and ecological gradient, Chilean Coastal Cordillera (26 to 38 degrees S), *Soil* 6 629-647, doi:10.5194/soil-6-629-2020
7. Zhou*, Z., Klotzsche, A., Hermans, T., Nguyen, F., Schmack, J., Haruzi, P., Vereecken, H., **van der Kruk, J.**, 2020, 3D aquifer characterization of the Hermalle-sous-Argenteau test site using crosshole ground-penetrating radar amplitude analysis and full-waveform inversion, *Geophysics* 85, H133-H148, doi:10.1190/GEO2020-0067.1
8. Gueting, N., Klotzsche, A., **van der Kruk, J.**, Vanderborght, J., Vereecken, H., Englert, A., Corrigendum to "imaging and characterization of facies heterogeneity in an alluvial aquifer using GPR full-waveform inversion and cone penetration tests" [J. Hydrol., (2015) 680-695], *Journal of Hydrology* 590, 125483, doi:10.1016/j.jhydrol.2020.125483
9. Mozaffari*, A., Klotzsche, A., Warren, C., He, G.W., Giannopoulos, A., Vereecken, H., **van der Kruk, J.**, 2020, 2.5D crosshole GPR full-waveform inversion with synthetic and measured data, *Geophysics* 85, H71-H85, doi:10.1190/GEO2019-0600.1
10. Yu*, Y., Klotzsche, A., Weihermuller, L., Huisman, J.A., Vanderborght, J., Vereecken, H., **van der Kruk, J.**, 2020, Measuring vertical soil water content profiles by combining horizontal borehole and dispersive surface ground penetrating radar data, *Near Surface Geophysics*, 18 (3), 275-294, doi:10.1002/nsg.12099
11. Kaufmann*, M.S., Klotzsche, A., Vereecken, H., **van der Kruk, J.**, 2020, Simultaneous multichannel multi-offset ground-penetrating radar measurements for soil characterization, *Vadose Zone Journal* 19, e20017, doi:10.1002/vzj2.20017
12. Kaufmann*, M.S., von Hebel, C., Weihermuller, L., Baumecekr, M., Doring, T., Schweitzer, K., Hoble, E., Bauke, S.L., Amelung, W., Vereecken, H., **van der Kruk, J.**, 2020, Effect of fertilizers and irrigation on multi-configuration electromagnetic induction measurements, *Soil Use and management* 36 (1) 104-116, doi:10.1111/sum.12530
13. Klotzsche, A., Larm, L., Vanderborght, J., Cai, G.C., Morandage, S., Zorner, M., Vereecken, H., **van der Kruk, J.**, 2019, Monitoring Soil Water Content Using Time-Lapse Horizontal Borehole GPR Data at the Field-Plot Scale, *Vadose Zone Journal* 18, 190044, doi:10.2136/vzj2019.05.0044
14. Klotzsche, A., Vereecken, H., **van der Kruk, J.**, 2019, Review of crosshole ground-penetrating radar full-waveform inversion of experimental data: Recent developments, challenges, and pitfalls, *Geophysics* 84, H13-H28, doi:10.1190/GEO2018-0597.1
15. Klotzsche, A., Vereecken, H., **van der Kruk, J.**, 2019, GPR full-waveform inversion of a

- variably saturated soil-aquifer system, *Journal of Applied Geophysics* 170, 103823, doi:10.1016/j.jappgeo.2019.103823
16. von Hebel, C., **van der Kruk, J.**, Huisman, J.A., Mester, A., Altdorff, D., Endres, A.L., Zimmermann, E., Garre, S., Vereecken, H., 2019 Calibration, Conversion, and Quantitative Multi-Layer Inversion of Multi-Coil Rigid-Boom Electromagnetic Induction Data, *Sensors* 19 (21), 4753, doi:10.3390/s19214753
 17. Dal Bo*, I., Klotzsche, A., Schaller, M., Ehlers, T.A., Fuentes Espoz, J.P., Vereecken, H., **van der Kruk, J.**, 2019, Geophysical imaging of regolith in landscapes along a climate and vegetation gradient in the Chilean Coastal Cordillera, *Catena* 180, 146-159 doi:10.1016/j.catena.2019.04.023
 18. Wang H., Wellmann, F., Zhang, T., Schaaf, A., Kanig, R.M., Verweij, E., von Hebel, C., **van der Kruk, J.**, 2019, Pattern extraction subsoil heterogeneity and soil-crop interaction using unsupervised Bayesian machine learning: an application to satellite-derived NDVI time series and electromagnetic induction measurements, *JGR Biogeosciences* 124, 1524-1544 doi:10.1029/2019JG005046
 19. Altdorff, D., Botschek, J., Honds, M., **van der Kruk, J.**, Vereecken, H., 2019, In-situ detection of tree root systems under heterogeneous anthropogenic soil conditions using ground penetration radar *Journal of Infrastructure Systems* 25 (3), 05019008 doi:10.1061/(ASCE)IS.1943-555X.0000501
 20. Brogi*, C. Huisman, J.A., Pätzold, S., von Hebel, C., Weihermüller, L., Kaufmann, M.S., **van der Kruk, J.**, Vereecken, H., 2019, Large-scale soil mapping using multi-configuration EMI and supervised image classification, *Geoderma* 335, 133-148 doi:10.1016/j.geoderma.2018.08.001
 21. Tan*, X., Mester, A., von Hebel, C., Zimmermann, E., Vereecken, H., van Waasen, S., **van der Kruk, J.**, 2019, Simultaneous calibration and inversion algorithm for multiconfiguration electromagnetic induction data acquired at multiple elevations, *Geophysics* 84, EN1-EN14, doi:10.1190/GEO2018-0264.1
 22. von Hebel, C., Matveeva, M., Verweij, E., Rademske, P., Kaufmann, M.S., Brogi, C., Vereecken, H., Rascher, U., **van der Kruk, J.**, 2018 Understanding Soil and Plant Interaction by Combining Ground-Based Quantitative Electromagnetic Induction and Airborne Hyperspectral Data, *Geophysical Research Letters* 45 (15), 7571-7579, doi:10.1029/2018GL078658
 23. Liu*, T., Klotzsche, A., Pondkule, M., Vereecken, H., Su, Y., **van der Kruk, J.**, 2018, Radius estimation of subsurface cylindrical objects from ground-penetrating-radar data using full-waveform inversion, *Geophysics* 83 (6), H43-H54, doi:10.1190/GEO2017-0815.1
 24. Bogen, H.R., Montzka, C., Huisman, J.A., Graf, A., Schmidt, M., Stockinger, M., von Hebel, C., Hendricks-Franssen, H.J., **van der Kruk, J.**, Tappe, W., Lücke, A., Baatz, R., Bol, R., Groh, J., Ptz, T., Jakobi, J., Kunkel, R., Sorg, J., Vereecken H., 2018, The TERENO-Rur Hydrological Observatory: A Multiscale Multi-Compartment Research Platform for the Advancement of Hydrological Science, *Vadose Zone Journal* 17, 180055, doi:10.2136/vzj2018.03.0055
 25. Klotzsche, A., Jonard, R., Looms, M.C., **van der Kruk, J.**, Huisman, J.A., 2018, Measuring soil water content with ground penetrating radar: a decade of progress, *Vadose Zone Journal* 18:180052, doi:10.2136/vzj2018.03.0052
 26. Looms, M., Klotzsche, A., **van der Kruk, J.**, Larsen, T., Edsen, A., Tuxen, N., Hamburger, N., Keskinen, J., Nielsen, L., 2018, Mapping sand layers in clayey till using crosshole ground penetrating radar *Geophysics* 83, A21-A26 doi:10.1190/geo2017-0297.1
 27. Robinet, J. von Hebel, C., Govers, G., **van der Kruk, J.**, Minellac, J.P.G., Schlesner, A., Ameijeiras-Marinod, Y., Vanderborght, J., 2018, Spatial variability of soil water content and soil electrical conductivity across scales derived from Electromagnetic Induction and Time Domain Reflectometry *Geoderma* 314: 160174 doi:10.1016/j.geoderma.2017.10.045.
 28. Mangel, A., Moysey, S.M.J., **van der Kruk, J.**, 2017, Resolving Infiltration-Induced Water Content Profiles by Inversion of Dispersive Ground-Penetrating Radar Data, *Vadose Zone Journal*, 16, 10 doi:10.2136/vzj2017.02.0037.
 29. Lai, W.L., Lambot, S., **van der Kruk, J.**, 2017, Foreword to the Special Issue on Advances in Ground-Penetrating Radar Research and Applications, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10: 4271-4272, doi:10.1109/JSTARS.2017.2756138.

30. Gueting*, N., Vienken, T., Klotzsche, A., **van der Kruk, J.**, Vanderborght, J., Caers, J., Vereecken, H., and Englert, A., 2017, High resolution aquifer characterization using crosshole GPR full-waveform tomography: Comparison with direct-push and tracer test data *Water Resources Research*, 53: 49-72, doi:10.1002/2016WR019498.
31. Altdorff, D., von Hebel, C., Borchard, N., **van der Kruk, J.**, Bogena, H.R., Vereecken, H., Huisman, J.A., 2017, Potential of catchment-wide soil water content prediction using electromagnetic induction in a forest ecosystem, *Environmental Earth Sciences* 76: 111 doi:10.1007/s12665-016-6361-3.
32. Keskinen, J., Klotzsche, A., Looms, M.C., Moreau, J., **van der Kruk, J.**, Holliger, K., Stemmerik, L., Nielsen, L., 2016, Full-waveform inversion of Crosshole GPR data: Implications for porosity estimation in chalk *Journal of Applied Geophysics* 140: 102-116, doi:10.1016/j.jappgeo.2017.01.001.
33. Cai, G., Vanderborght, J., Klotzsche, A., van der Kruk, J., Neumann, J., Hermes, N., and Vereecken, H., 2016, Construction of Minirhizotron Facilities for Investigating Root Zone Processes, *Vadose Zone Journal* 15, 9, doi:10.2136/vzj2016.05.0043.
34. **van der Kruk, J.**, Gueting, N., Klotzsche, A., He, G., Rudolph, S., von Hebel, C., Yang, X. Weihermiller, L., Mester, A., Vereecken, H., 2015, Quantitative multi-layer electromagnetic induction inversion and full-waveform inversion of crosshole ground penetrating radar data, *Journal of Earth Science*, 26, 844850 doi:10.1007/s12583-015-0610-3.
35. Altdorff, D., Bechtold, M., **van der Kruk, J.**, Vereecken, H., Huisman, J.A., 2016, Mapping peat layer properties with multi-coil offset electromagnetic induction and laser scanning elevation data, *Geoderma*, 261, 178-189, doi:10.1016/j.geoderma.2015.07.015.
36. Mangel, A., Moysey, S.M.J., **van der Kruk, J.**, 2015, Resolving precipitation induced water content profiles by inversion of dispersive GPR data: A Numerical Study, *Journal of Hydrology*, 525, 496505 doi:10.1016/j.jhydrol.2015.04.011.
37. Gueting*, N., Klotzsche, A., **van der Kruk, J.**, Vanderborght, J., Vereecken, H., Englert, A., 2015, Imaging and characterization of facies heterogeneity in an alluvial aquifer using GPR full-waveform inversion and cone penetration tests, *Journal of Hydrology*, 524, 680695, doi:10.1016/j.jhydrol.2015.03.030.
38. Derobert, X., Ihamouten, A., **van der Kruk, J.**, Lambot, S., Foreword Special Issue on Advanced Ground-Penetrating Radar (GPR), 2015, *Near Surface Geophysics*, 13, 209-210, doi:doi:10.3997/1873-0604.2015020
39. **van der Kruk, J.**, Tools and Techniques: Ground-Penetrating Radar, In *Treatise on Geophysics (Second Edition)* Editor-in-Chief: Gerald Schubert ISBN: 978-0-444-53803-1, Chapter 11.07, Pages 209-232,
40. Vereecken, H., Huisman, J.A., Hendricks Franssen, H.J., Brggemann, N., Bogena, H.R., Kollet, S., Javaux, M., **van der Kruk, J.**, and Vanderborght, J., 2015, Soil hydrology: Recent methodological advances, challenges, and perspectives, *Water Resources Research*, 51, 26162633, doi:10.1002/2014WR016852.
41. Rudolph*, S., **van der Kruk, J.**, von Hebel, C., Ali, M., Herbst, M., Montzka, C., Ptzold, S., Robinson, D.A., Vereecken, H. and Weihermiller, L., 2015, Linking satellite derived LAI patterns with subsoil heterogeneity using large-scale ground-based electromagnetic Induction measurements, *Geoderma*, 241-242, 262-271 doi:10.1016/j.geoderma.2014.11.015.
42. Simmer, C., Thiele-Eich, I., Masbou, M., Amelung, W., Crewell, S., Diekkrueger, B., Ewert, F., Hendricks Franssen, H., Huisman, J.A., Kemna, A., Klitzsch, N., Kollet, S., Langensiepen, M., Loehnert, U., Rahman, M., Rascher, U., Schneider, K., Schween, J., Shao, Y., Shrestha, P., Stiebler, M., Sulis, M., Vanderborght, J., Vereecken, H., **van der Kruk, J.**, Zerenner, T., Waldhoff, G., 2015 Monitoring and Modeling the Terrestrial System from Pores to Catchments - the Transregional Collaborative Research Center on Patterns in the Soil-Vegetation-Atmosphere System, *Bulletin of the American Meteorological Society*, 96, 1765 - 1787 doi:10.1175/BAMS-D-13-00134.1.
43. Stadler, A., Rudolph, S., Kupisch, M., Langensiepen, M., **van der Kruk, J.**, Ewert, F., 2014, Quantifying the effects of soil variability on crop growth using apparent soil electrical conductivity measurements, *European Journal of Agronomy*, 64, 8-20 doi:10.1016/j.eja.2014.12.004.
44. Klotzsche*, A., **van der Kruk, J.**, Bradford, J., Vereecken, H., 2014, Detection and identification of high contrast layers with limited lateral extent using an amplitude analysis ap-

- proach and crosshole GPR full-waveform inversion: synthetic and experimental data, *Water Resources Research*, 50, 69666985 doi:10.1002/2013WR015177.
45. H. Vereecken, J.A. Huisman, Y. Pachepsky, C. Montzka, **J. van der Kruk**, H. Bogaen, L. Weihermuller, M. Herbst, G. Martinez, J. Vanderborght, 2014, On the spatio-temporal dynamics of soil moisture at the field scale, *Journal of Hydrology*, doi:10.1016/j.jhydrol.2013.11.061
 46. C. von Hebel*, S. Rudolph, A. Mester, J. A. Huisman, P. Kumbhar, H. Vereecken, **J. van der Kruk**, 2014, Three-dimensional imaging of subsurface structural patterns using quantitative large-scale multi-configuration electromagnetic induction data, *Water Resources Research*, 50, 27322748, doi:10.1002/2013WR014864
 47. Mester*, A., Zimmermann, E., **van der Kruk, J.**, Vereecken, H., van Waasen, S., 2014, Development and drift-analysis of a modular electromagnetic induction system for shallow ground conductivity measurements, *Measurement Science and Technology*, 25 055801, 13pp, doi:10.1088/0957-0233/25/5/055801
 48. S. Busch*, **J. van der Kruk**, H. Vereecken, 2014, Improved characterization of fine texture soils using on-ground GPR full-waveform inversion, *IEEE, Transactions in Geoscience and Remote Sensing*, 52, 3947-3958, doi:10.1109/TGRS.2013.2278297
 49. S. Busch*, L. Weihermüller, J. A. Huisman, C. M. Steelman, A.L. Endres, H. Vereecken, **J. van der Kruk**, 2013, Coupled hydrogeophysical inversion of time-lapse surface GPR data to estimate hydraulic properties of a layered subsurface, *Water Resources Research*, 49, 84808494, doi:10.1002/2013WR013992
 50. X. Yang*, A. Klotzsche, G. Meles, H. Vereecken, **J. van der Kruk**, 2013, Improvements in crosshole GPR full-waveform inversion and application on data measured at the Boise Hydrogeophysics Research Site, *Journal of Applied Geophysics*, 99, 114-124, doi:10.1016/j.jappgeo.2013.08.007
 51. A. Klotzsche*, **J. van der Kruk**, N. Linde, J. Doetsch, H. Vereecken, 2013, 3D characterization of high-permeability zones in a gravel aquifer using 2D crosshole GPR full-waveform inversion and waveguide detection, *Geophysical Journal International*, 195, 932-944, doi:10.1093/gji/ggt275
 52. R. Knight, J. Cannia, J. Doetsch, J. Fleming, B. Grimm, D. Heinze, C. Hobza, J. A. Huisman, J. Irving, A. Kemna, A. Menghini, B. Minsley, S. Moysey, F. Nguyen, Jonathan Nyquist, A. Parsekian, D. Rucker, K. Singha, B. Smith, **J. van der Kruk**, 2013, The state of the science and vision of the future: Report from the Hydrogeophysics Workshop, *The Leading Edge* 32, 814-818, doi:10.1190/tle32070814.1
 53. J. Vanderborght, J.A. Huisman, **J. van der Kruk**, H. Vereecken, 2013, Geophysical Methods for Field-Scale Imaging of Root Zone Properties and Processes, "Soil-Water-Root Processes: Advances in Tomography and Imaging" p. 247-282, SSSA Special publication 61, Eds. S.H. Anderson and J.W. Hopmans, 2013
 54. R. Knight, J. Irving, **J. van der Kruk**, 2013, Studying Hydrological Properties and Processes at Scales From Centimeters to Watersheds - SEG-AGU Hydrogeophysics Workshop, Boise, Idaho, 8-11 July 2012, EOS, 94, 21, doi:10.1002/2013EO020008
 55. D. Altdorff, J. Epting, **J. van der Kruk**, P. Dietrich, P. Huggenberger, 2013, Delineation of fluvial sediment architecture of subalpine riverine systems using noninvasive hydrogeophysical methods, *Environmental Earth Sciences*, 69, 633-644, doi:10.1007/s12665-013-2304-4
 56. A. Kalogeropoulos*, **J. van der Kruk**, J. Huginschmidt, J. Bikowski, E. Bruhwiler, 2013, Full-waveform GPR inversion to assess chloride gradients in concrete, *NDT&E International*, 57, 74-84, doi:10.1016/j.ndteint.2013.03.003
 57. M. Oberröhrmann*, A. Klotzsche, H. Vereecken, **J. van der Kruk**, 2013, Optimization of acquisition setup for cross-hole GPR fullwaveform inversion using checkerboard analysis, *Near Surface Geophysics*, 11, 197-209, doi:10.3997/1873-0604.2012045
 58. **J. van der Kruk**, E.C. Slob, L. Crocco, 2013, Foreword on NSG Special issue on Advanced GPR Imaging and Inversion for hydrogeophysical and subsurface property estimation, *Near Surface Geophysics*, 11, 115-116, doi:10.3997/1873-0604.2013014
 59. **J. van der Kruk**, E.C. Slob, L. Crocco, 2013, GPR imaging and inversion for hydrogeophysical and subsurface property estimation is focus of special NSG issue, *First Break*, 31, 16-17

60. N. Kettridge, A. Binley, X. Comas, N.J. Cassidy, A.J. Baird, A. Harris, **J van der Kruk**, M. Strack, A.M. Milner, J.M. Waddington, 2012, Do peatland microforms move through time? Examining the developmental history of a patterned peatland using ground penetrating radar *Journal of Geophysical Research - Biogeosciences*, 117, G03030, doi:10.1029/2011JG001876
61. S. Busch*, **J. van der Kruk**, J. Bikowski, H. Vereecken, 2012 Quantitative conductivity and permittivity estimation using full-waveform inversion of on-ground GPR data, *Geophysics*, 77, H79-H91, doi:10.1190/GEO2012-0045.1
62. J. Bikowski, J.A. Huisman, J.A. Vrugt, H. Vereecken, **J. van der Kruk**, 2012, Integrated analysis of waveguide dispersed GPR pulses using deterministic and Bayesian inversion methods, *Near Surface Geophysics*, 10, 641-652 doi:10.3997/1873-0604.2012041
63. A. Klotzsche*, **J. van der Kruk**, G. A. Meles, H. Vereecken, 2012, Crosshole GPR full-waveform inversion of waveguides acting as preferential flow paths within aquifer systems, *Geophysics*, 77, H57-H62, doi:10.1190/GEO2011-0458.1
64. D. Moghadas*, F. Andre, J.H. Bradford, **J. van der Kruk**, H. Vereecken, S. Lambot, 2012, Electromagnetic induction antenna modeling using linear system of complex antenna transfer functions, *Near Surface Geophysics*, 10, 237-247, doi:10.3997/1873-0604.2012002
65. **J. van der Kruk**, N. Diamanti, A. Giannopoulos and H. Vereecken, 2012, Inversion of dispersive GPR pulse propagation in waveguides with heterogeneities and rough and dipping interfaces, *Journal of Applied Geophysics*, 81, 8896, doi:10.1016/j.jappgeo.2011.09.013
66. G. A. Meles*, S. A. Greenhalgh, A. G. Green, H. Maurer and **J. van der Kruk**, 2012, GPR Full Waveform Sensitivity and Resolution Analysis using an FDTD Adjoint Method, *IEEE Transactions on Geoscience and Remote Sensing*, 50, 1881-1896, doi:10.1109/TGRS.2011.2170078
67. **J. van der Kruk**, A. Klotzsche, S. Busch, H. Vereecken, 2012, Neueste Ergebnisse der Dispersionsinversion und Volle-Wellenfeldinversion von Georadar Daten, Sonderband der Mitteilungen der DGG: "Rundtischgespräch Georadar, Sonderband I/2012, 77-82 ISSN-Nr. 0947-1944
68. A. Mester*, **J. van der Kruk**, E. Zimmermann, H. Vereecken, 2011, Quantitative two-layer conductivity inversion of multi-configuration electromagnetic induction measurements, *Vadose Zone Journal*, 10, 1319-1330, doi:10.2136/vzj2011.0035
69. **J. van der Kruk**, A. Klotzsche, F. Lavoue, G.A. Meles, R.W. Jacob, J.A. Doetsch, N. Linde, H. Maurer, A.G. Green, H. Vereecken, 2011, High resolution hydrogeophysical imaging and characterisation, *International Water Technology Journal, IWTC*, 1, 37-47
70. C. J. Beasley, L. Pellerin, **J. van der Kruk**, and R. Jacobs, 2011, Introduction to this special section: Geoscientists Without Borders, *The Leading Edge*, 30, 400, doi:10.1190/1.3575285
71. G. A. Meles*, S. Greenhalgh, **J. van der Kruk**, A.G. Green and H. Maurer, 2011, Taming the non-linearity problem in GPR full-waveform inversion for high contrast media, *Journal of Applied Geophysics*, 73, 174-186, doi:10.1016/j.jappgeo.2011.01.001
72. A. Kalogeopoulos*, **J. van der Kruk**, H. Hugenschmidt, K. Merz, 2011, Chlorides and Moisture Assessment in Concrete by GPR Full-Waveform Inversion, *Near Surface Geophysics*, 9, 277-285, doi:10.3997/1873-0604.2010064
73. **J. van der Kruk**, R. Streich, M. Grasmueck, 2010, Towards True-Amplitude Vector Migration of GPR Data using Exact Radiation Patterns, In *Advances in Near Surface Seismology and Ground Penetrating Radar Book*, Eds. Miller, R.D., Bradford, J.D., Holliger, K., Geophysical Developments Series 15, Society of Exploration Geophysicists, 97-116
74. K. Z. Jadoon*, S. Lambot, B. Scharnagl, **J. van der Kruk**, E. C. Slob, H. Vereecken, 2010, Quantifying Field Scale Soil Hydrogeophysical Properties using Full-Waveform Inversion of Proximal GPR Data, *Near Surface Geophysics*, 8, 483-491, doi:10.3997/1873-0604.2010036
75. F. Lavoue*, **J. van der Kruk**, J. Rings, F. Andre, D. Moghadas, J. A. Huisman, S. Lambot, L. Weihermuller, J. vanderBorgh, H. Vereecken, 2010, Electromagnetic Induction Calibration using Apparent Conductivity Modeling Based on Electrical Resistivity Tomography, *Near Surface Geophysics*, 8, 553-561, doi:10.3997/1873-0604.2010037
76. A. Klotzsche*, **J. van der Kruk**, G. A. Meles, J. A. Doetsch, H. Maurer, N. Linde, 2010, Full-Waveform Inversion of Crosshole Ground Penetrating Radar data to Characterize a Gravel Aquifer Close to the River Thur, *Near Surface Geophysics*, 8, 635-649,

- doi:10.3997/1873-0604.2010054
77. G. A. Meles*, **J. van der Kruk**, S. Greenhalgh, J. Ernst, H. Maurer, A.G. Green, 2010, A New Vector Waveform Inversion Algorithm for Simultaneous Updating of Conductivity and Permittivity Parameters from Combination Crosshole-/Borehole-to-Surface GPR Data, *IEEE Geoscience and Remote Sensing*, 48, 3391-3407, doi:10.1109/TGRS.2010.2046670
 78. C. S. Steelman*, A.L. Endres and **J. van der Kruk**, 2010, Field Observations of Shallow Freeze and Thaw processes using High-Frequency Ground-Penetrating Radar, *Hydrological Processes*, 24, 2022-2033, doi:10.1002/hyp.7688
 79. **J. van der Kruk**, R.W. Jacob, and H. Vereecken, 2010 Properties of Precipitation Induced Multi-Layer Surface Waveguides Derived from Inversion of Dispersive TE and TM GPR Data, *Geophysics*, 75, WA263-273, doi:10.1190/1.3467444
 80. **J. van der Kruk**, A. Revil, and E. Slob, 2010 Introduction to hydrogeophysics - Electric and electromagnetic methods, *Geophysics*, 75, WA1-2, doi:10.1190/1.3483599
 81. **J. van der Kruk**, C.M. Steelman, A.L. Endres, and H. Vereecken, 2009, Dispersion inversion of electromagnetic pulse propagation within freezing and thawing waveguides *Geophysical Research Letters*, 36, L18503, doi:10.1029/2009GL039581
 82. **J. van der Kruk**, R.W. Jacob, and H. Vereecken, 2009, Identifying dispersive GPR signals and inverting for surface waveguide properties, *The Leading Edge*, 28, 1234-1239, doi:10.1190/1.3249780
 83. H. Vereecken, P. Burauel, J. Groeneweg, E. Klumpp, W. Mittelstaedt, H.-D. Narres, T. Ptz, **J. Van der Kruk**, J. Vanderborght, F. Wendland 2009, Research at the agrosphere institute: From the process scale to the catchment scale, *Vadose Zone Journal*, 8, 664-669, doi:10.2136/vzj2008.0143
 84. R. Streich*, **J. van der Kruk**, 2007, Characterizing a GPR-antenna system by near-field electric field measurements *Geophysics*, 72, A51-A55, doi:10.1190/1.2753832
 85. R. Streich*, **J. van der Kruk** and A.G. Green, 2007, Vector-migration of standard co-polarized 3-D GPR data *Geophysics*, 72, J65-J75, doi:10.1190/1.2766466
 86. **J. van der Kruk**, S.A. Arcone, and L. Liu, 2007, Fundamental and higher mode inversion of dispersed GPR waves propagating in an ice layer *IEEE, Transactions on Geoscience and Remote Sensing*, 45, 2483-2491, doi:10.1109/TGRS.2007.900685.
 87. R. Streich*, and **J. van der Kruk**, 2007, Accurate imaging of multicomponent GPR data based on exact radiation patterns, *IEEE, Transactions on Geoscience and Remote Sensing*, 45, 93-103, doi:10.1109/TGRS.2006.883459.
 88. **J. van der Kruk**, 2006, Properties of surface waveguides derived from inversion of fundamental and higher mode dispersive GPR data, *IEEE, Transactions on Geoscience and Remote Sensing*, 44, 2908-2915, doi:10.1109/TGRS.2006.877286
 89. **J. van der Kruk**, R. Streich, and A.G. Green, 2006, Properties of surface waveguides derived from separate and joint inversion of dispersive TE and TM GPR data, *Geophysics*, 71, K19-K29 doi:10.1190/1.2168011
 90. B. Heincke*, A.G. Green, **J. van der Kruk**, and H. Willenberg, 2006, Semblance-based topographic migration (SBTM): a method for identifying fracture zones in 3-D georadar data, *Near Surface Geophysics* 4, 79-88, doi:10.3997/1873-0604.2005034
 91. R. Streich*, **J. van der Kruk**, and A.G. Green, 2006, Three-dimensional multicomponent georadar imaging of sedimentary structures, *Near Surface Geophysics* 4, 39-48, doi:10.3997/1873-0604.2005030
 92. D.C. Nobes, H. Rother, **J. van der Kruk**, and H. Jol, 2006, Radar "Lensing" by a small river: Can a layer of surface water improve the signal?, *Near Surface Geophysics*, 4, 69-74, doi:10.3997/1873-0604.2005033
 93. B. Heincke*, A.G. Green, **J. van der Kruk**, and H. Horstmeyer, 2005, Acquisition and processing strategies for 3-D georadar surveying a region characterized by rugged topography, *Geophysics*, 70, K53K61, doi:10.1190/1.2122414
 94. **J. van der Kruk**, 2004, Reduction of unwanted diffractions and reflections from above-surface objects, In: Ground Penetrating Radar 2nd Edition, edited by David J. Daniels, The institution of Electrical Engineers, London , United Kingdom, 333-335.
 95. **J. van der Kruk** and E.C. Slob, 2004, Reduction of reflections from above surface objects in GPR data, *Journal of Applied Geophysics* 55, 271-278 doi:10.1016/j.jappgeo.2004.02.002

96. **J. van der Kruk**, 2004, Three-dimensional GPR imaging in the horizontal wavenumber domain for different heights of source and receiver antennas, *Near Surface Geophysics*, 2, 25-32, doi:10.3997/1873-0604.2003013
97. **J. van der Kruk**, C.P.A. Wapenaar, J.T. Fokkema and P.M. van den Berg, 2003, Improved three-dimensional image reconstruction technique for multi-component ground penetrating radar data, *Subsurface Sensing Technologies and Applications: An International Journal*, 4, 61-99, doi:10.1023/A:1023063430807
98. **J. van der Kruk**, C.P.A. Wapenaar, J.T. Fokkema and P.M. van den Berg, 2003, Three-dimensional imaging of multicomponent ground-penetrating radar data, *Geophysics*, 68, 1241-1254, doi:10.1190/1.1598116
99. **J. van der Kruk**, J.A.C. Meekes, P.M. van den Berg and J.T. Fokkema, 2000, An apparent resistivity concept for low frequency electromagnetic sounding techniques, *Geophysical Prospecting*, 48, 1033-1052, doi:10.1046/j.1365-2478.2000.00229.x
100. **J. van der Kruk**, E.C. Slob and J.T. Fokkema, 1999, Background of Ground Penetrating Radar measurements, *Geologie en Mijnbouw*, 77, 177-188, doi:10.1046/j.1365-2478.2000.00229.x
101. O.P.M. Mooijman, **J. van der Kruk**, and J.P.A. Roest, 1998, The detection of Abandoned Mine-shafts in the Netherlands, *Environmental & Engineering Geoscience*, IV, 307-316.

Publications in reviewed proceeding volumes:

102. Yu*, Y., Klotzsche, A., Weihermiller, L., Huisman, J.A., Vanderborght, J., Vereecken, H., **van der Kruk, J.** Using Horizontal Borehole and Surface Ground Penetrating Radar for Characterizing Soil Water Content Dynamics in a Field-scale Infiltration Experiment, 18th international conference on Ground Penetrating Radar, Golden, Colorado, 12-17 June 2022
103. Haruzi*, P., Schmck*, J., Zhou, Z., Vanderborght, J., Vereecken, H., **van der Kruk, J.** and Klotzsche, A., Numerical study for time-lapse GPR full-waveform inversion for salt and heat tracer tests, 18th international conference on Ground Penetrating Radar, Golden, Colorado, 12-17 June 2022
104. Haruzi, P., Schmaeck, J., **van der Kruk, J.**, Vereecken, H., Vanderborght, J., and Klotzsche, A., Time-lapse crosshole GPR full-waveform inversion to characterize flow and transport processes in aquifers, IWAGPR2021, Valletta, Malta, 1-4 December 2021
105. Schmaeck, J., Storm Hansen, F., **van der Kruk, J.**, Vereecken, H., Klotzsche, A., Characterizing agricultural management techniques with timelapse GPR and EMI measurements, IWAGPR2021, Valletta, Malta, 1-4 December 2021
106. Klotzsche A., Haruzi, P., Schmck, J., **van der Kruk, J.**, Vereecken H., Vanderborght J., Time-lapse crosshole GPR full-waveform inversion to characterize flow and transport processes in aquifers, IWAGPR2021, Valletta, Malta, 1-4 December 2021
107. Klotzsche, A., Haruzi, P., Schmck, J., Zhou, Z., Vereecken, H., Vanderborght, J., **van der Kruk, J.**, Recent development of the crosshole ground penetrating radar full-waveform inversion for hydrogeophysical applications, Sixth International Conference on Engineering Geophysics (ICEG) 25 - 28 Oct 2021 Al Ain, United Arab Emirates, 1-4
108. Zhou*, Z., Klotzsche, A., Gting, N., Haruzi, P., Vereecken, H., **van der Kruk, J.**, Improved resolution of ground penetrating radar full-waveform inversion by using cone penetration test data: A synthetic study, *SEG Technical Program Expanded Abstracts 2019*, 2898-2902
109. Klotzsche, A., Lrm, L., Weihermiller, L., Vanderborght, J., Vereecken, H., **van der Kruk, J.**, 2018, Time-lapse horizontal borehole GPR measurements to investigate spatial and temporal soil water content changes, *SEG Technical Program Expanded Abstracts 2018*, 4904-4908
110. **van der Kruk, J.**, von Hebel, C., Brogi, C., Kaufmann, M.S., Tan, X., Weihermiller, L., Huisman, J.A., Vereecken, H., Mester A., 2018 Calibration, inversion and applications of multi-configuration EMI for agricultural top-and subsoil characterization, *SEG Technical Program Expanded Abstracts 2018*, 2546-2550
111. Haruzi*, P., Gueting, N., Klotzsche, A., Vanderborght, J., Vereecken, H., **van der Kruk, J.**, 2018, Time-lapse ground-penetrating radar full-waveform inversion to detect tracer plumes:

- A numerical study, *SEG Technical Program Expanded Abstracts 2018*, 2486-2490
112. **van der Kruk, J.**, Liu, T., Mozaffari, A., Gueting, N., Klotzsche, A., Vereecken, H., Warren, C., Giannopoulos, A., 2018, GPR full-waveform inversion, recent developments, and future opportunities, *17th International Conference on Ground Penetrating Radar (GPR) 2018*, 1-6
 113. Kaufmann*, M.S., Klotzsche, A., Vereecken, H., van der Kruk, J., 2018, Simultaneous multi-channel GPR measurements for soil characterization, *17th International Conference on Ground Penetrating Radar (GPR) 2018*, 1-4
 114. Liu*, T., Klotzsche, A., Pondkule, M., Vereecken, H., **van der Kruk, J.**, Song, X., Huang, C., Su, Y., Estimation of Subsurface Cylindrical Object Properties from GPR Full-waveform Inversion, International Workshop on Advanced Ground Penetrating Radar (IWAGPR) 2017, Edinburgh, UK, 4 pp.
 115. Klotzsche*, A., **van der Kruk, J.**, He, G., Vereecken, H., GPR Full-waveform Inversion of Horizontal ZOP Borehole Data Using GprMax, 6th international conference on Ground Penetrating Radar, Hong Kong, 13-16 June 2016, 4 pp.
 116. Mozaffari*, A., Klotzsche, A., He, G., Vereecken, H., **van der Kruk, J.**, Warren, C., Giannopoulos, A., 2016, Towards 3D Full-waveform Inversion of Crosshole GPR Data, 16th international conference on Ground Penetrating Radar, Hong Kong, 13-16 June 2016, 4 pp.
 117. A. Klotzsche*, **J. van der Kruk**, A. Mozaffari, N. Gting, H. Vereecken, Cross-hole GPR full-waveform inversion and waveguide amplitude analysis: Recent developments and new challenges, 8th International Workshop on Advanced Ground Penetrating Radar, Florence, Italy, 7 Jul 2015 - 11 Jul 2015, 123-127.
 118. A. Klotzsche*, **J. van der Kruk**, H. Vereecken, Application of Crosshole GPR Full-Waveform Inversion to experimental data: Overview of Recent Developments and Possible Pitfalls, 77th EAGE Conference & Exhibition, Workshop, Madrid, Spain, 1-5 June, 2015, 123-127.
 119. J. Keskinen, M. C. Looms, J. Moreau, L. Nielsen, A. Klotzsche, **J. van der Kruk**, K. Holliger, L. Stemmerik, Full-waveform inversion of cross-hole GPR data collected in a strongly heterogeneous chalk reservoir analogue with sharp permittivity and conductivity contrasts, Extended Abstract SEG, 84st Conference and Technical Exhibition, Denver, U.S.A., 26-31 Oktober 2014, 4 pp.
 120. **J. van der Kruk**, A. Klotzsche, C. von Hebel, S. Rudolph, L. Weiermueller, A. Mester, X. Yang, and H. Vereecken, Large scale-multi-layer electromagnetic induction inversion and full-waveform inversion of ground penetrating radar, 6th International conference on Environmental and Engineering Geophysics, Xian, China, June 2014, 35-40.
 121. A. Klotzsche*, **J. van der Kruk**, H. Vereecken, J. Bradford, Characterization of Low-Velocity Waveguides in Crosshole GPR Data using Amplitude Analysis and Full-Waveform Inversion, 15th international conference on Ground Penetrating Radar, Brussels, Belgium, June 30 July 4, 2014, 4pp.
 122. A. Klotzsche*, **J. van der Kruk**, H. Vereecken, N. Linde, J. Doetsch, 3D characterization of an aquifer using full-waveform inversion and amplitude analysis, 2013 7th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), Nantes, France, 2-5 July 2013, Nantes, France, 2013, 4 pp, DOI:10.1109/IWAGPR.2013.6601519.
 123. J. Vanderborght, O. Ippisch, M. Blatt, S. Kollet, S. Rahman, T. Aljazzar, R. Maxwell, N. Schroder, M. Javaux, H.J. Hendricks-Franssen, **J. van der Kruk**, M. Oberrohrmann, A. Klotzsche, H. Vereecken, Simulation of Processes in Terrestrial Systems, Proceedings NIC Symposium, 7-8 Feb, Juelich, Germany, 2012, 303-311.
 124. A. Klotzsche*, **J. van der Kruk**, H. Vereecken, G.A. Meeles, Characterizing a low-velocity waveguide using a crosshole GPR full-waveform inversion, 14th Conference on Ground Penetrating Radar, June 4-8, Shanghai, China, 2012, 4 pp.
 125. X. Yang*, **J. van der Kruk**, J. Bikowski, P. Kumbhar, H. Vereecken, Full-waveform inversion of GPR data in frequency domain, 14th Conference on Ground Penetrating Radar, June 4-8, Shanghai, China, 2012, 5 pp.
 126. A. Kalogeropoulos*, J. Huginschmidt, **J. van der Kruk**, E. Bruhwiler, GPR Full-Waveform Inversion of Chloride Gradients in Concrete, 14th Conference on Ground Penetrating Radar, June 4-8, Shanghai, China, 2012, 4 pp.
 127. **J. van der Kruk**, A. Klotzsche, A. Mester, S. Busch, G.A. Meeles, J. Bikowski, X. Yang, H. Vereecken, Recent developments in quantitative electromagnetic induction and ground

- penetrating radar inversion, 5th International Conference on Environmental and Engineering Geophysics (ICEEG) , June 16-18, Changsha, China, 2012, 6 pp.
128. **J. van der Kruk**, A. Klotzsche, A. Mester, S. Busch, G. Meles, H. Vereecken, High resolution electromagnetic hydrogeophysical Imaging, Sixteenth International Water Technology Conference IWTC, May 7-10 2012, Istanbul, Turkey, 8 pp.
 129. A. Mester*, **J. van der Kruk**, E. Zimmermann, H. Vereecken, Two-layer inversion of post-calibrated multi-configuration electromagnetic induction data, Near Surface Geophysics, 2011, September 1214, Leicester, United Kingdom, 2011, 4pp.
 130. J. Bikowski, **J. van der Kruk**, J.A. Huisman, H. Vereecken, and J.A. Vrugt, Explicit consideration of measurement uncertainty during Bayesian inversion of dispersive GPR data, 6th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), June 22-24, Aachen, Germany, 2011, 5 pp.
 131. A. Klotzsche*, **J. van der Kruk**, G.A. Meles, J.A. Doetsch, H. Maurer, and N. Linde, High resolution imaging of the unsaturated and saturated zones of a gravel aquifer using fullwaveform inversion, 6th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), June 22-24, Aachen, Germany, 2011, 5 pp.
 132. K. Z. Jadoon*, F. Andre, **J. van der Kruk**, E. Slob, H. Vereecken, S. Lambot, Ground-penetrating radar characterization of water as a function of frequency, salinity and temperature, 6th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), June 22-24, Aachen, Germany, 2011, 5 pp.
 133. A. Kalogeropoulos*, **J. van der Kruk**, J. Hugenschmidt Monitoring the evolution of water and chloride in concrete using GPR full-waveform inversion, 6th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), June 22-24, Aachen, Germany, 2011, 6 pp.
 134. S. Busch*, **J. van der Kruk**, J. Bikowski, H. Vereecken, Combined effective wavelet estimation and fullwaveform inversion of GPR data, 6th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), June 22-24, Aachen, Germany, 2011, 5 pp.
 135. X. Yang*, A. Klotzsche, **J. van der Kruk**, H. Vereecken, G.A. Meles, H. Maurer, Full-waveform Inversion of Cross-hole GPR Data Measured at the Boise Gravel Aquifer, 6th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), June 22-24, Aachen, Germany, 2011, 5 pp.
 136. G. Meles*, S. Greenhalgh, A.G. Green and **J. van der Kruk**, Time-domain Full-Waveform Inversion of GPR Data by Progressive Frequency-Bandwidth Expansion, 16th European Meeting of Environmental and Engineering Geophysics, 6-8 September, Zurich, Switzerland, 2010, 4pp.
 137. J. Bikowski, **J. van der Kruk**, J.A. Huisman, H. Vereecken, and J.A. Vrugt, Inversion and Sensitivity Analysis of GPR Data with Waveguide Dispersion using Markov Chain Monte Carlo Simulation, XIII Conference on Ground Penetrating Radar, June 21-25, Lecce, Italy, 2010, 5 pp.
 138. A. Klotzsche*, **J. van der Kruk**, G.A. Meles, J.A. Doetsch, H. Maurer, and N. Linde, Full-Waveform Inversion of Crosshole Ground Penetrating Radar Data to Characterize a Gravel Aquifer Close to the Thur River, Switzerland, XIII Conference on Ground Penetrating Radar, June 21-25, Lecce, Italy, 2010, 5 pp.
 139. **J. van der Kruk**, H. Vereecken, N. Diamanti, and A. Giannopoulos, Influence of Interface Roughness and Heterogeneities on the Waveguide Inversion of Dispersive GPR data, XIII Conference on Ground Penetrating Radar, June 21-25, Lecce, Italy, 2010, 5 pp.
 140. R.W. Jacob, J.F. Hermance, **J. van der Kruk**, Multiple GPR Analysis Methods for Water Content, a Multiyear Study of GPR Estimated and Soil Core Measurements of Water Content, XIII Conference on Ground Penetrating Radar, June 21-25, Lecce, Italy, 2010, 5 pp.
 141. S. Busch*, **J. van der Kruk**, J. Bikowski, H. Vereecken, Full-waveform Inversion of Multi-Offset Surface Radar, XIII Conference on Ground Penetrating Radar, June 21-25, Lecce, Italy, 2010, 5 pp.
 142. **J. van der Kruk**, Giovanni Meles, Anja Klotzsche, Rob Jacob, Joseph Doetsch, Niklas Linde, Hansruedi Maurer, Harry Vereecken, Alan Green, High resolution Ground Penetrating Radar Imaging and Characterisation, ICEEG-NSGS Workshop on Geophysics and Geohaz-

- ards, June 14-17, Chengdu, China, 2010, 11 pp.
143. **J. van der Kruk**, C. S. Steelman, and A.L. Endres, Dispersion Inversion of GPR Data Recorded Across Freezing and Thawing Induced Waveguides , 5th International workshop on Advanced Ground Penetrating Radar (IWAGPR), May 27-29, Granada, Spain, 2009, 4 pp.
 144. G. A. Meles* J.R. Ernst, H.R. Maurer, A.G. Green and **J. van der Kruk**, Simultaneous Full-Waveform Inversion of Permittivity and Conductivity Values of Georadar Data in FDTD, 5th International Workshop on Advanced Ground Penetrating Radar (IWAGPR), May 27-29, Granada, Spain, 2009, 6 pp.
 145. A. Kalogeropoulos*, J. Hugenschmidt, **J. van der Kruk**, K. Merz, GPR Full-Waveform Inversion for Chlorides and Moisture Detection in Concrete, 5th International workshop on advanced Ground Penetrating Radar (IWAGPR), May 27-29, Granada, Spain, 2009, 5 pp.
 146. **J. van der Kruk**, and R.W. Jacob, Inversion of TE and TM Dispersive GPR Data for Properties of a Layered Waveguide, Extended Abstract SEG, 78st Conference and Technical Exhibition, Las Vegas, U.S.A., 9-14 November 2008, 4 pp.
 147. G.A. Meles*, **J. van der Kruk**, J.R. Ernst, H.R. Maurer, and A.G. Green, New developments in FDTD Full-Waveform Inversion of Georadar Data: a Vectorial Approach, Twelfth international conference on Ground-Penetrating Radar, Birmingham, United Kingdom, 15-19 June 2008.
 148. **J. van der Kruk**, and R.W. Jacob, Inversion of Dispersive GPR Data Recorded Across Multilayer Waveguides, Twelfth International Conference on Ground-Penetrating Radar, Birmingham, United Kingdom, 15-19 June 2008.
 149. **J. van der Kruk**, R. Streich, M. Grasmueck, Analysis of Polarization Effects of Buried pipes in Vector-Migrated 3-D Ground-Penetrating Radar Data, Twelfth international conference on Ground-Penetrating Radar, Birmingham, United Kingdom, 15-19 June 2008.
 150. R. Streich*, and **J. van der Kruk**, Analysis of Polarization Effects of Buried Pipes in Vector-Migrated 3-D Ground-penetrating Radar Data, 4th International Symposium on Three-Dimensional Electromagnetics Freiberg, Germany, September 27 - 30, 2007, 172-175.
 151. **J. van der Kruk**, and R.W. Jacob, Inversion of Fundamental and Higher Order Mode TE and TM Dispersive GPR Data for Properties of a Thin Surface Waveguide in New England, Extended Abstract SEG, 76st Conference and Technical Exhibition, New Orleans, U.S.A., 1-6 October 2006, 4 pp. NSE 3.2.
 152. R. Streich* and **J. van der Kruk**, Characterizing a GPR-Antenna System by Near-Field Electric Field Measurements, Extended Abstract SEG, 76st Conference and Technical Exhibition, New Orleans, U.S.A., 1-6 October 2006, 4 pp. NSE 3.1.
 153. **J. van der Kruk**, S.A. Arcone and L. Liu, Fundamental and Higher Mode Inversion of Dispersed GPR Waves propagating in an Ice Layer, Eleventh international conference on Ground-Penetrating Radar, Columbus, Ohio, USA, 19-22 June 2006, ICE.2.
 154. R.W. Jacob, **J. van der Kruk**, Precipitation Induced Waveguides: Traveltime and Dispersion Analysis, Eleventh International Conference on Ground-Penetrating Radar, Columbus, Ohio, USA, 19-22 June 2006, HYD.1.
 155. R. Streich*, **J. van der Kruk**, An Efficient Vector-Migration Algorithm for Imaging Conventional 3-D GPR Data, Eleventh International Conference on Ground-Penetrating Radar, Columbus, Ohio, USA, 19-22 June 2006, CAL.2.
 156. **J. van der Kruk**, R. Streich, and A.G. Green, Dispersion Inversion of Georadar Data for Properties of a Thin-Surface Waveguide, Extended Abstract SEG, 75st Conference and Technical Exhibition, Houston, U.S.A., 6-11 November 2005, 4 pp. NSE 2.6.
 157. R. Streich*, and **J. van der Kruk**, Multicomponent Georadar Imaging that Corrects for Total-Field Radiation, Extended Abstract SEG, 75st Conference and Technical Exhibition, Houston, U.S.A., 6-11 November 2005, 4 pp, NSE 2.8.
 158. **J. van der Kruk**, R. Streich, and A.G. Green, Dispersion Inversion of Georadar Data for Properties of a Thin-Surface Waveguide, Extended Abstract EAGE 67th Conference and Technical Exhibition, Madrid, Spain, 13-16 June 2005, 4 pp, G020.
 159. R. Streich*, **J. van der Kruk**, A.G. Green, and D.C. Nobes, Three-dimensional Multicomponent Georadar Surveying Near the Alpine Fault, New Zealand, Proceedings Tenth international conference on Ground-Penetrating Radar, Delft, The Netherlands , 21-24 June

- 2004, pp. 349-352
160. B. Heincke*, **J. van der Kruk**, A.G. Green, and H. Horstmeijer, Processing Strategy for 3-D Georadar Data Acquired in Areas Characterized by Rugged Topography, Proceedings Tenth International Conference on Ground-Penetrating Radar, Delft, The Netherlands, 21-24 June 2004, pp. 283-286
 161. **J. van der Kruk**, Combination of Co- and Cross-pole 3D Ground Penetrating Radar Measurements, Extended Abstract EAGE 65th Conference and Technical Exhibition, Stavanger, Norway, 2-5 June 2003, 4 pp.
 162. **J. van der Kruk**, Multi-component Imaging for Different Heights of Source and Receiver Antennas, 2nd International Workshop on Advanced Ground Penetrating Radar, Delft, The Netherlands, May 14-16, 2003, 6pp.
 163. H. Paasche*, N. Ormuz, **J. van der Kruk** and J. Tronicke, Avoiding Miss-interpretation of GPR Measurements in Forested Areas, *Proceedings 8th meeting Environmental & Engineering Geophysical Society, Aveiro, Portugal*, September 8-12, 2002, 4pp.
 164. **J. van der Kruk** and E.C. Slob, Effective Source Wavelet Estimation, Proceedings Ninth International Conference on Ground-Penetrating Radar, Santa Barbara, California, USA, April 29 - May 2, 2002, pp. 144-149.
 165. **J. van der Kruk**, J.H. Zeeman and J. Groenenboom, Multicomponent Imaging of Different Objects with Different Strike Orientations, *Proceedings Ninth International Conference on Ground-Penetrating Radar, Santa Barbara, California, USA*, April 29 - May 2, 2002, pp. 150-155.
 166. **J. van der Kruk**, Use of Crossed Dipole Antennas in 3-D Imaging of Multi-Component GPR data, *Extended Abstract SEG, 71st Conference and Technical Exhibition, San Antonio, Texas*, September 9-14, 2001, 4 pp.
 167. J.H. Zeeman*, J. Groenenboom, and **J. van der Kruk**, Time-lapse GPR Measurement to Study the Imaging Operator, *Extended Abstract SEG, 71st Conference and Technical Exhibition, San Antonio, Texas, USA*, September 9-14, 2001, 4 pp.
 168. **J. van der Kruk**, Implications of the Choice of the Forward Model Used in the Multi-Component Imaging of Ground Penetrating Radar Data, *Extended Abstract EAGE 63rd Conference and Technical Exhibition, Amsterdam, The Netherlands*, 11-15 June 2001, 4 pp.
 169. J. Groenenboom, **J. van der Kruk** and J.H. Zeeman, 3D GPR Data Acquisition and the Influence of Positioning Errors on Image Quality, *Extended Abstract EAGE 63rd Conference and Technical Exhibition, Amsterdam, the Netherlands*, 11-15 June 2001, 4 pp.
 170. E.C. Slob, **J. van der Kruk** and J.T. Fokkema, A GPR Study for Highway Reconstruction in the Netherlands, *Extended Abstract EAGE 63rd Conference and Technical Exhibition, Amsterdam, The Netherlands*, 11-15 June 2001, 4 pp.
 171. **J. van der Kruk**, C.P.A. Wapenaar and J.T. Fokkema, Comparison of Resolution Functions of 3-D Multi-Component with 3-D Single-Component Imaging Algorithms for Ground Penetrating Radar Data, *Proceedings 5th SEGJ International Symposium - Imaging Technology - The Society of Exploration Geophysicists of Japan (SEGJ), Tokyo, Japan*, Januari 24-26, 2001, 8pp.
 172. **J. van der Kruk**, C.P.A. Wapenaar and J.T. Fokkema, Comparison of 3-D Imaging Algorithms for Ground Penetrating Radar Data, *Proceedings 6th meeting Environmental & Engineering Geophysical Society, Bochum, Germany*, September 3-7, 2000, 4pp.
 173. **J. van der Kruk** and E.C. Slob, The Influence of the Soil on Reflections from Above Surface Objects in GPR Data, *Proceedings Eight international conference on Ground-Penetrating Radar, Queensland, Australia*, May 23-26, 2000, pp. 453-457.
 174. **J. van der Kruk**, C.P.A. Wapenaar and J.T. Fokkema, Multi-component 3-D Imaging of Ground Penetrating Radar Data Using Matrix Inversion in the Spatial Fourier Domain, *Proceedings Eight International Conference on Ground-Penetrating Radar, Queensland, Australia*, May 23-26, 2000, pp. 508-513.
 175. E. C. Slob and **J. van der Kruk**, Two Coupled, Finite Electric Dipoles over an Inhomogeneous Earth, *Proceedings Seventh International Conference on Ground-Penetrating Radar, Lawrence, Kansas, USA*, May 27-30, 1998, pp. 419-424.
 176. **J. van der Kruk** and Evert C. Slob, Determination of the Effective Source Wavelet, *Proceedings Seventh international conference on Ground-Penetrating Radar, Lawrence, Kansas*,

- USA, May 27-30, 1998, pp. 625-630.
177. **J. van der Kruk**, E.C. Slob and J.T. Fokkema, General Framework for Describing Electrical and Electromagnetic Exploration Methods, *Proceedings SEG'97 Dallas, USA*, p. 374-377.
 178. **J. van der Kruk**, J.T. Fokkema, A.T. de Hoop, P.M. van den Berg, Sensitivity Analysis of Ground-Penetrating Radar Systems, *6th International Conference on Ground Penetrating Radar (GPR'96)*, september 30-October 3, 1996, Sendai, Japan, Proceedings GPR'96, pp. 323-328.
 179. **J. van der Kruk**, J.A.C. Meekes, P.M. van den Berg and J.T. Fokkema, A New Apparent Resistivity Concept for low Frequency Electromagnetic Sounding Techniques, *Extended Abstract EAGE 58th Conference and Technical Exhibition*, Amsterdam, 3-7 June 1996, ISBN 90 73781 07 8, 2 pp.

Abstracts in proceeding volumes:

1. Lena Lrm, Felix Bauer, Jan van der Kruk, Jan Vanderborght, Harry Vereecken, Andrea Schnepf, Anja Klotzsche Estimating the effect of maize crops on time-lapse horizontal cross-hole GPR data, EGU 2022
2. Non-invasive characterization of soils and aquifers: 20 years of hydrogeophysics at the Agrosphere institute, J.A. Huisman, A. Klotzsche, J. van der Kruk, and J. Vanderborght Interpore 2021
3. Lena Lrm, Anja Klotzsche, Lutz Weihermueller, Jan Vanderborght, Jan Van Der Kruk, Harry Vereecken, Andrea Schnepf, Estimating Soil Hydraulic Properties of the Soil-Plant-Root Zone using time-lapse Horizontal Borehole Ground Penetrating Radar Data in a Sequential Hydrogeophysical Inversion, AGU 2020
4. Lutz Weihermller, Jessica Schmck, Mario Mertens, Manuel Endenich, Jan van der Kruk, Harry Vereecken, Gerd Welp, Stefan Ptzold, Detection and quantification of soil compaction in a post-mining landscape by geophysical methods EGU 2020
5. P. Haruzi, J. Schmck, L. Hain, Z. Zhou, R. Hoffmann, B. Pouladi, J. de La Bernardie, J. Vanderborght, H. Vereecken, J. van der Kruk, A. Klotzsche, The potential of time-lapse GPR full-waveform inversion as high resolution imaging technique for salt, heat and ethanol transport, The XXIII International Conference on Computational Methods in Water Resources 2020, Stanford, U.S.A., 14-17 December 2020
6. Yu, Y., Klotzsche, A., Vanderbourght, J., Vereecken, H., van der Kruk, J., 2019, Monitoring Soil Water Content Changes in a Field-Scale Experiment by Combining the Complementary Horizontal Borehole and Surface GPR Data Analysis, AGU Fall Meeting 2019
7. A Klotzsche, Y Yu, L Weihermueller, JA Huisman, J Vanderborght, H Vereecken, J Van Der Kruk, Monitoring Soil Water Content Dynamics in a Field-Scale Infiltration Experiment by Combining Horizontal Borehole and Surface GPR, AGU 2019
8. Anja Klotzsche, Peleg Haruzi, Richard Hoffmann, Jessica Schmck, Zhen Zhou, Jan Vanderborght, Harry Vereecken, Jan Van Der Kruk, High resolution characterization of time-lapse tracer experiments using crosshole GPR full-waveform inversion: Synthetic and field studies AGU 2019
9. Hui Wang, Florian Wellmann, Jan Van Der Kruk, Pattern extraction of soil heterogeneity and soil-crop interaction using unsupervised Bayesian learning: an application to satellite-derived NDVI time series and electromagnetic induction measurements AGU 2019
10. von Hebel, C., Iwanowitsch* ; Kaufmann, M.* ; Weihermller, L.* ; Vereecken, H.* ; van der Kruk, J., Joint data inversion of multiple electromagnetic induction systems for high lateral, vertical, and temporal resolution toward the field scale and beyond, EGU 2019
11. Brogi*, C., Huisman, J.A., Herbst, M., Klosterhalfen, A., Weihermueller, L., von Hebel, C., **van der Kruk, J.**, Vereecken, H., 2018, Geophysics-based soil mapping for improved simulation of crop productivity beyond the field scale, AGU Fall Meeting 2018, Washington D.C., 10-14 December 2018.
12. Kaufmann*, M.S. Klotzsche, A., Dal Bo, I., Vereecken, H., **van der Kruk, J.**, 2018, Determining large scale soil permittivity with simultaneous multi-channel GPR measurement, AGU Fall Meeting 2018, Washington D.C. , 10-14 December 2018.

13. Dal Bo*, I., Schaller, M., Klotzsche, A., Weihermueller, L., Kaufmann, M.S., Ehlers, T.A., Fuentes Espoz, J.P., Vereecken, H., **van der Kruk, J.**, 2018, Geophysical imaging of the top and subsoil Critical Zone using ground penetrating radar along the Chilean Coastal Cordillera (26 to 38 S), AGU Fall Meeting 2018, Washington D.C., 10-14 December 2018.
14. Klotzsche, A., Mozaffari, A., Liu, T., Warren, C., Giannopoulos, A., Vereecken, H., **van der Kruk, J.**, 2018, Recent developments for GPR full-waveform inversion of experimental data, AGU Fall Meeting 2018, Washington D.C., 10-14 December 2018.
15. Brogi*, C., Huisman, J.A., Weihermüller, L., Ptzold, S., von Hebel, C., **van der Kruk, J.**, Vereecken, H., 2018, Large-scale subsurface characterization using image classification of multi-configuration electromagnetic induction data assisted by direct soil sampling, European Geosciences Union General Assembly, Vienna, Austria, 8-13 April, 2018.
16. Wang, H., Wellmann, F., Kanig, M., von Hebel, C., **van der Kruk, J.**. Learning patterns from data in an unsupervised manner: A Bayesian approach for spatial and statistical pattern extraction of subsoil heterogeneity using satellite derived NDVI, European Geosciences Union General Assembly, Vienna, Austria, 8-13 April, 2018.
17. von Hebel, C., Matveeva, M., Verweij, E., Rascher, U., Rademske, P., Brogi, C., Kaufmann, M.S., Mester, A., Vereecken, H., **van der Kruk, J.**, 2018, Understanding soil-plant interaction by analyzing quantitative electromagnetic induction measurements and inversions together with airborne hyperspectral data, European Geosciences Union General Assembly, Vienna, Austria, 8-13 April, 2018.
18. Weihermueller, L., Kaufmann, M.S., Steinberger, P., Ptzold, S., **van der Kruk, J.**, Vereecken, H., 2018, Fertilization effects on the electrical conductivity measured by EMI, ERT, and GPR, European Geosciences Union General Assembly, Vienna, Austria, 8-13 April, 2018.
19. Schmück*, J., Klotzsche, A., **van der Kruk, J.**, Vereecken, H., Bechtold, M., 2017, Geophysical characterization of peatlands using crosshole GPR full-waveform inversion: Case study from a bog in northwestern Germany, AGU Fall Meeting 2017, New Orleans, 11-15 December 2017.
20. Dal Bo*, I., Klotzsche, A., Schaller, M., Ehlers, T.A., Vereecken, H., **van der Kruk, J.**, 2017, Multiscale Geophysical Characterization of Weathering Fronts Along a Climate and Vegetation Gradient in Chile, AGU Fall Meeting 2017, New Orleans, 11-15 December 2017.
21. Huisman, J.A., Brogi, C., Ptzold, S., Weihermueller, L., von Hebel, C., **van der Kruk, J.**, Vereecken, H., 2017, Use of Large-Scale Multi-Configuration EMI Measurements to Characterize Subsurface Structures of the Vadose Zone, AGU Fall Meeting 2017, New Orleans, 11-15 December 2017.
22. Schmück*, J., Klotzsche, A., G'úting, Vereecken, H., **van der Kruk, J.**, GPR full-waveform inversion at different scales to image the critical zone, SEG-AGU Hydrogeophysics workshop, 24-27 July, Stanford, U.S.A., 2017.
23. von Hebel, C., **van der Kruk, J.**, Mester, A., Altdorff, D., Endres, A., Huisman, J.A., Vereecken, H., Calibration and large-scale inversion of fixed-boom multi-configuration electromagnetic induction data for soil characterization, European Geosciences Union General Assembly, Vienna, Austria, 24-28 April, 2017.
24. Brogi*, C., Huisman, J.A., Kaufmann, M.S., von Hebel, C., **van der Kruk, J.**, and Vereecken, H., Use of large-scale multi-configuration EMI measurements to characterize heterogeneous subsurface structures and their impact on crop productivity, European Geosciences Union General Assembly, Vienna, Austria, 24-28 April, 2017.
25. Robinet, J., von Hebel, C., Govers, G., van der Kruk, J., Minella, J.P.G., Schlesner, A., Ameijeiras-Marino, Y., Vanderborght, J., Can we quantify the variability of soil moisture across scales using Electromagnetic Induction?, European Geosciences Union General Assembly, Vienna, Austria, 24-28 April, 2017.
26. Kaufmann*, M.S., von Hebel, C., Brogi, C., Baumecker, M., Dring, T., Amelung, W., Vereecken, H., and van der Kruk, J., Multi-configuration electromagnetic induction measurements at long term agricultural test sites in Germany with different fertilizer and irrigation managements, European Geosciences Union General Assembly, Vienna, Austria, 24-28 April, 2017.
27. Wang, H., Wellmann, F., Verweij, E., von Hebel, C., and van der Kruk, J., Identification and Simulation of Subsurface Soil patterns using hidden Markov random fields and remote

- sensing and geophysical EMI data sets, European Geosciences Union General Assembly, Vienna, Austria, 24-28 April, 2017.
28. Mester, A., Zimmermann, E., Tan, X., von Hebel, C., van der Kruk, J., van Waasen, S., Custom modular electromagnetic induction system for shallow electrical conductivity measurements, European Geosciences Union General Assembly, Vienna, Austria, 24-28 April, 2017.
 29. Tan*, X., Mester, A., von Hebel, C., van der Kruk, J., Zimmermann, E., Vereecken, H., van Waasen, S., Novel quantitative calibration approach for multi-configuration electromagnetic induction (EMI) systems using data acquired at multiple elevations, European Geosciences Union General Assembly, Vienna, Austria, 24-28 April, 2017.
 30. Tan*, X., Mester, A., von Hebel, C., **van der Kruk, J.**, Zimmermann, E., Vereecken, H., van Waasen, S., Simultaneous calibration and multi-layer soil inversion using short-offset electromagnetic induction (EMI) data acquired at multiple elevations, 77th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Potsdam, Germany, March 27-30, 2017.
 31. Klotzsche, A., **van der Kruk, J.**, Gueting, N., Vereecken, H., Recent achievements in high resolution characterization of aquifers using crosshole GPR full-waveform inversion, Novcare, Dresden, German, June 6-9, 2017.
 32. Klotzsche, A., **van der Kruk, J.**, Vereecken, H., Advancements and challenges in crosshole GPR full-waveform inversion for hydrological applications, AGU Fall Meeting 2016, San Francisco, 12-16 December 2016.
 33. Mozaffari*, A., Klotzsche, A., He, G., Giannopoulos, A., Warren, C., Vereecken, H., **van der Kruk**, 2.5D Crosshole GPR full-waveform inversion utilizing GprMax3D, AGU Fall Meeting 2016, San Francisco, 12-16 December 2016.
 34. Gueting*, N., Viencken, T., Klotzsche, A., **van der Kruk, J.**, Vanderborght, J., Caers, J., Vereecken, H., and Englert, A., High resolution aquifer characterization using crosshole GPR full-waveform tomography: Comparison with direct-push and tracer test data, AGU Fall Meeting 2016, San Francisco, 12-16 December 2016.
 35. C. von Hebel, **J. van der Kruk**, A. Mester, D. Altdorff, E. Zimmermann, A. Endres, and H. Vereecken, Calibration and multi-layer inversion of multiple electromagnetic induction sensor data, European Geosciences Union General Assembly, Vienna, Austria, 23-28 April, 2016.
 36. J. Robinet, C. von Hebel, **J. Van der Kruk**, G. Govers, Jan Vanderborght, Mapping patterns of soil properties and soil moisture using electromagnetic induction to investigate the impact of land use changes on soil processes, European Geosciences Union General Assembly, Vienna, Austria, 23-28 April, 2016.
 37. X. Tan*, A. Mester, E. Zimmermann, **J. van der Kruk**, 1D Inversion for Electromagnetic Induction (EMI) Measurements from Multiple Elevations, 76th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hannover, Germany, March 14-17, 2016.
 38. S. Sieber, J.F Wellmann, K. Heinzmann, M. Hruska, C. Clauser, **J. van der Kruk**, M.Sc. Programme in Applied Geosciences and Applied Geophysics at RWTH Aachen University, 76th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hannover, Germany, March 14-17, 2016.
 39. N. Gueting*, A. Klotzsche, **J. van der Kruk**, J. Vanderborght, H. Vereecken, A. Viencken, and A. Englert, High resolution imaging of aquifer properties using full-waveform GPR tomography, AGU Fall Meeting 2015, AGU, San Francisco, USA, 13-18 December, 2015.
 40. A. Klotzsche, N. Gueting, **J. van der Kruk**, J. Vanderborght, T. Viencken, A. Englert, and H. Vereecken, High resolution subsurface characterization of the Krauthausen aquifer using GPR full-waveform inversion, Chapman Conference The MADE Challenge for Groundwater Transport in Highly Heterogeneous Aquifers, Valencia, Spain, 5-8 October, 2015
 41. N. Gueting*, A. Klotzsche, **J. van der Kruk**, J. Vanderborght, H. Vereecken, and A. Englert, Spatially highly resolved mapping of aquifer heterogeneities using ground penetrating radar full-waveform tomography, International Association of Hydrogeologists, IAH, Rom, Italy, 13-18 September, 2015.
 42. J. Keskinen, M. Looms, L. Nielsen, A. Klotzsche, **J. van der Kruk**, J. Moreau, L. Stemmerik, K. Holliger, Full-waveform Inversion of Crosshole GPR Data Collected in Strongly Heterogeneous Chalk: Challenges and Pitfalls, European Geosciences Union General Assembly, Wien, sterreich, 12-17 April, 2015.

43. N. Gueting*, A. Klotzsche, A. Englert, J. Vanderborght, H. Vereecken, and **J. van der Kruk**, Full-waveform inversion of crosshole GPR data measured at the test site Krauthausen, 75th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hannover, Germany, March 23-26, 2015.
44. A. Klotzsche, **J. van der Kruk**, and H. Vereecken, Mapping soil water content variability using time-lapse horizontal borehole ground penetrating radar data, 75th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hannover, Germany, March 23-26, 2015.
45. A. Mester*, E. Zimmermann, **J. van der Kruk**, Accuracy-analysis for the Modular Electromagnetic Induction Array ELMA for Near-Surface Electrical Conductivity Measurements, 75th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hannover, Germany, March 23-26, 2015.
46. **J. van der Kruk**, X. Yang, A. Klotzsche, C. von Hebel, S. Busch, A. Mester, J.A. Huisman, H. Vereecken, Recent advancements in quantitative full-wavefield electromagnetic induction and ground penetrating radar inversion for shallow subsurface characterization, AGU Fall Meeting 2014, San Francisco, 15-19 December 2014.
47. C. von Hebel*, S. Rudolph, A. Mester, J.A. Huisman, C. Montzka, L. Weihermüller, H. Vereecken, **J. van der Kruk**, Toward catchment vadose zone characterization by linking geophysical electromagnetic induction and remote sensing RapidEye data, AGU Fall Meeting 2014, San Francisco, 15-19 December 2014.
48. D. Altdorff, M. Honds, J. Botscheck, and **J. van der Kruk**, Detection of 3D tree root systems using high resolution ground penetration radar, AGU Fall Meeting 2014, San Francisco, 15-19 December 2014.
49. A. Klotzsche*, **J. van der Kruk**, J. Bradford, H. Vereecken, Characterizing spatially limited high-porosity layers in aquifers using crosshole GPR full-waveform and waveguide amplitude analysis, AGU Fall Meeting 2014, San Francisco, 15-19 December 2014.
50. A.R. Mangel, S.M.J. Moysey, and **J. van der Kruk**, Inverting GPR dispersion curves to resolve water content profiles of precipitation induced low-velocity waveguides, AGU Fall Meeting 2014, San Francisco, 15-19 December 2014.
51. A. Klotzsche*, **J. van der Kruk** and H. Vereecken, Monitoring soil properties using ground penetrating radar at different scales, Internationaler Workshop Monitoring von Bodeneigenschaften auf unterschiedlichen räumlichen Skalen, Braunschweig, 19-20. November 2014
52. C. von Hebel*, S. Rudolph, L. Weihermüller, J.A. Huisman, A. Mester, H. Vereecken, **J. van der Kruk**, Combined satellite and proximal soil sensing approach for improved catchment characterization, TERENO International Conference 2014, September 29th - October 2nd 2014, Bonn, Germany.
53. A. Klotzsche*, **J. van der Kruk**, and H. Vereecken, Surface ground penetrating radar full-waveform inversion to characterize soil water content at the Selhausen test site, TERENO International Conference 2014, September 29th - October 2nd 2014, Bonn, Germany.
D. Altdorff, C. von Hebel, **J. van der Kruk**, N. Borchard, H.R. Bogaen, H. Vereecken 1, and J.A Huisman, Potential of catchment-wide soil water content mapping using electromagnetic induction in a forest ecosystem with low soil electrical conductivity, AGU Chapman conference on Catchment spatial organization and complex behavior, Luxembourg city, Luxembourg, September 23 -26 2014.
54. A. Klotzsche*, **J. van der Kruk**, H. Vereecken, Crosshole GPR full-waveform inversion for hydrogeophysical applications, XX International conference on Computational Methods in Water Resources, 10-13 June 2014, Stuttgart
55. C. von Hebel*, A. Mester, J.A. Huisman, S. Rudolph, H. Vereecken, **J. van der Kruk**, Towards 3-D Catchment Scale Characterization using Inverted Electromagnetic Induction Data, XX International conference on Computational Methods in Water Resources, 10-13 June 2014, Stuttgart
56. N. Gueting*, A. Englert, J. Vanderborght, **J. van der Kruk** and H. Vereecken, Imaging and characterization of spatial connectivity in a heterogeneous alluvial aquifer, Tagung der Fachsektion Hydrogeologie der Deutschen Geologischen Gesellschaft Bayreuth.
57. X. Yang*, **J. van der Kruk**, A. Klotzsche, H. Vereecken, GPR full-waveform inversion using a combined frequency- and time-domain approach, European Union, General Assembly 2014, Vienna, Austria, 27 April-2 May, 2014.

58. **J. van der Kruk**, A. Kalogeropoulos, J. Hugenschmidt, A. Klotzsche, S. Busch, and H. Vereecken, Full-waveform inversion of GPR data for civil engineering applications, European Union, General Assembly 2014, Vienna, Austria, 27 April-2 May, 2014.
59. N. Gueting*, A. Klotzsche, **J. van der Kruk**, J. Vanderborght, H. Vereecken and A. Englert, Full-waveform inversion of crosshole GPR data to investigate spatial connectivity in a heterogeneous alluvial aquifer, European Union, General Assembly 2014, Vienna, Austria, 27 April-2 May, 2014.
60. J. Keskinen, L. Nielsen, M.C. Looms, J. Moreau, L. Stemmerik, A. Klotzsche, **J. van der Kruk** and K. Holliger, Waveform analysis of crosshole GPR data collected in heterogeneous chalk deposits, European Union, General Assembly 2014, Vienna, Austria, 27 April-2 May, 2014.
61. A. Denk, P. Dietrich, **J. van der Kruk** K. Roth, U. Wollschlaeger, Investigation and modelling of the influence of soil moisture content and soil temperature on apparent electrical conductivity, European Union, General Assembly 2014, Vienna, Austria, 27 April-2 May, 2014.
62. D. Altdorff, M. Bechtold, **J. van der Kruk** B. Tiemeyer, C. von Hebel, and J. A. Huisman, Mapping SOC content and bulk density of a disturbed peatland relict with electromagnetic induction and DEM data, European Union, General Assembly 2014, Vienna, Austria, 27 April-2 May, 2014.
63. C. von Hebel*, Achim Mester, Johan A. Huisman, Sebastian Rudolph, Harry Vereecken, Jan van der Kruk Large-Scale 3D Multi-Layer Electromagnetic Induction Data Inversion, 74th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Karlsruhe, Germany, March 9 - 13, 2014.
64. D. Altdorff, J. van der Kruk, J.A. Huisman, H. Vereecken, Potential of soil water content mapping using electromagnetic induction in a forested catchment, 74th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Karlsruhe, Germany, March 9 - 13, 2014.
65. D. Altdorff, N. Schliffke, M. Riedel, V. Schmidt, J. van der Kruk, J.B. Stoll, M. Becken, UAV-borne electromagnetic induction and ground-penetrating radar measurements: a feasibility test, 74th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Karlsruhe, Germany, March 9 - 13, 2014.
66. A. Klotzsche*, J. van der Kruk, H. Vereecken, High resolution velocity and attenuation characterisation of aquifers using crosshole GPR full-waveform inversion, 74th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Karlsruhe, Germany, March 9 - 13, 2014.
67. N. Gueting*, A. Klotzsche, N. Gueting, C. Hyatt, A. Englert, J. Vanderborght, H. Vereecken, and J. van der Kruk, Full-waveform inversion of crosshole GPR measurements data acquired at the Krauthausen test site, 74th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Karlsruhe, Germany, March 9 - 13, 2014.
68. X. Yang*, J. van der Kruk, A. Klotzsche, and H. Vereecken, Combined frequency- and time-domain full-waveform inversion of cross-hole GPR data, 74th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Karlsruhe, Germany, March 9 - 13, 2014.
69. A. Stadler, S. Rudolph, M. Kupisch, M. Langensiepen, **J. van der Kruk**, F. Ewert, Crop growth heterogeneity at the field scale: Quantification, modeling and understanding, ASA, CSSA, & SSSA International Annual Meetings, Tampa, USA, 3-6 November 2013.
70. S. Busch*, **J. van der Kruk**, L. Weihermuller, J.A. Huisman, A.L. Endres, H. Vereecken, Full-waveform inversion of surface ground penetrating radar and coupled hydrogeophysical inversion for soil hydraulic property estimation, Rundtischgesprch Georadar, Freiberg, Germany, 26-27 September 2013.
71. A. Klotzsche*, **J. van der Kruk**, N. Linde, J. Bradford, J. Doetsch, H. Vereecken, Crosshole GPR full-waveform inversion and amplitude analysis of waveguides for 2D and 3D characterization of aquifers, Rundtischgesprch Georadar, Freiberg, Germany, 26-27 September 2013.
72. M. Bechtold, B. Tiemeyer, A. Don, D. Altdorff, C. von Hebel, **J. van der Kruk**, J.A. Huisman, Kombinierte vis-NIR und ECa Feldmessungen in einem Hochmoor-Relikt zur Erfassung der rumlichen Variabilitt von Bodenkohlenstoff-Konzentrationen und Vorrten, Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, DBG, Rostock, Germany, 7-12 September, 2013.
73. A. Klotzsche*, **J. van der Kruk**, H. Vereecken, Imaging of regions of preferential flow in

- aquifers using full-waveform inversion of crosshole ground penetrating radar, international Novcare conference, 13-16 Mai Leipzig, Germany
74. **J. van der Kruk**, C. von Hebel, A. Mester, S. Rudolph, D. Altdorff, H. Vereecken, Recent developments in large scale quantitative multilayer inversion with calibrated multi-offset EMI systems, international Novcare conference, 13-16 Mai Leipzig, Germany
 75. A. Klotzsche*, **J. van der Kruk**, N. Linde, J. Doetsch, and H. Vereecken, Crosshole GPR full-waveform inversion and amplitude analysis of waveguides for 3D characterization of a gravel aquifer, European Union, General Assembly 2013, Vienna, Austria, 07-12 April, 2013
 76. M. Bechtold, B. Tiemeyer, A. Don, D. Altdorff, **J. van der Kruk**, J.A. Huisman, Revealing spatial distribution of soil organic carbon contents and stocks of a disturbed bog relict by in-situ NIR and apparent EC mapping European Union, General Assembly 2013, Vienna, Austria, 07-12 April, 2013
 77. D. Altdorff, **J. van der Kruk**, M. Bechtold, B. Tiemeyer, J.A. Huisman, Subsurface structures and properties of a medium-scale peatland area by means of hydrogeophysical methods, General Assembly 2013, Vienna, Austria, 07-12 April 2013.
 78. X. Yang*, **J. van der Kruk**, J. Bikowski, P. Kumbhar, and H. Vereecken, Frequency-domain full waveform inversion of cross-hole and on-ground GPR data, General Assembly 2013, Vienna, Austria, 07-12 April, 2013
 79. S. Rudolph*, C. von Hebel, M. Ali, A. Stadler, M. Herbst, C. Montzka, S. Patzold, L. Weihermüller, **J. van der Kruk**, H. Vereecken, Validation of a paleo river system derived by ground based electromagnetic induction measurements with satellite based RapidEye images, General Assembly 2013, Vienna, Austria, 07-12 April, 2013
 80. C. von Hebel*, S. Rudolph, J. A. Huisman, H. Vereecken, **J. van der Kruk**, from 1D-Multi-Layer-Conductivity-Inversion to Pseudo-3D-Imaging of Quantified Electromagnetic Induction Data Acquired at a Heterogeneous Test Site, General Assembly 2013, Vienna, Austria, 07-12 April, 2013
 81. M. Oberröhrmann*, J. Vanderborght, H. Vereecken, **J. van der Kruk**, Characterization of soil water content variability using time-lapse ground penetrating radar data measured in horizontal boreholes, International symposium on "Patterns in Soil-Vegetation-Atmosphere-Systems: Monitoring, Modelling and Data Assimilation" in Bonn, Germany, 11th-14th March, 2013
 82. D. Altdorff, C. von Hebel, **J. van der Kruk**, H. Vereecken, Comparison of Electromagnetic Induction Data with the Wireless Sensor Network at Wstebach: An approach for non-invasively Characterisation of Soil Moisture Pattern in Conifer Forests, International symposium on "Patterns in Soil-Vegetation-Atmosphere-Systems: Monitoring, Modelling and Data Assimilation" in Bonn, Germany, 11th-14th March, 2013
 83. C. von Hebel*, S. Rudolph, **J. van der Kruk**, H. Vereecken, 3D-Imaging of Calibrated Electromagnetic Induction Data acquired at the Selhausen test site, International symposium on "Patterns in Soil-Vegetation-Atmosphere-Systems: Monitoring, Modelling and Data Assimilation" in Bonn, Germany, 11th-14th March, 2013
 84. A. Mester*, E. Zimmermann, **J. van der Kruk**, H. Vereecken, S. van Waasen, Verbesserung und Bewertung der Datenqualitt von Elektromagnetischen Induktionsmessungen, 73th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Leipzig, Germany, March 4 - 7, 2013.
 85. A. Klotzsche*, **J. van der Kruk**, J. Bradford, H. Vereecken, Waveguide characterisation using crosshole GPR full-waveform inversion and novel amplitude analysis approach, 73th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Leipzig, Germany, March 4 - 7, 2013.
 86. S. Busch*, L. Weihermüller, J.A. Huisman, C.M. Steelman, A.L. Endres, H. Vereecken, **J. van der Kruk**, Joint inversion of time-lapse on-ground GPR data to estimate the hydraulic properties of a layered subsurface, 73th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Leipzig, Germany, March 4 - 7, 2013.
 87. D. Altdorff, **J. van der Kruk**, M. Honds, J. Botscheck, Noninvasively in situ 3D imaging of tree root systems, 73th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Leipzig, Germany, March 4 - 7, 2013.
 88. M. Oberröhrmann*, J. Vanderborght, H. Vereecken, **J. van der Kruk**, Mapping soil water

- content variability using time-lapse ground penetrating radar data from horizontal boreholes, 73th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Leipzig, Germany, March 4 - 7, 2013.
89. J.A. Huisman, **J. van der Kruk**, J. Vanderborght and H. Vereecken, Using geophysical measurements to improve hydrological models, 73th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Leipzig, Germany, March 4 - 7, 2013.
 90. C. von Hebel*, A. Mester, S. Huisman, J. Bikowski, S. Rudolph, H. Vereecken, **J. van der Kruk**, Towards Large Scale Multi-Layer-Conductivity Inversion of Quantitative Electromagnetic Induction Data, 73th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Leipzig, Germany, March 4 - 7, 2013.
 91. H. Vereecken, J.A. Huisman, **J. van der Kruk**, J. Vanderborght, Using hydrogeophysical methods to study hydrological processes from local to catchment scale, AGU Fall Meeting 2012, San Francisco, 03-07 December 2012.
 92. **J. van der Kruk**, C. von Hebel, S. Rudolph, A. Mester, L. Weihermüller, H. Vereecken, Quantitative 2-/3-layer inversion for multi-configuration electromagnetic induction data, SEG-AGU Hydrogeophysics workshop, 8-11 July, Boise, U.S.A., 2012.
 93. **J. van der Kruk**, A. Klotzsche*, S. Busch, X. Yang, J. Bikowski, and H. Vereecken Recent Developments in Full-waveform Inversion of GPR Data, SEG-AGU Hydrogeophysics workshop, 8-11 July, Boise, U.S.A., 2012.
 94. A. Klotzsche*, J. van der Kruk, J. Bradford, and H. Vereecken, High resolution imaging of crosshole GPR full-waveform inversion to characterize the aquifer of the Boise Hydrogeophysical Research Site, SEG-AGU Hydrogeophysics workshop, 8-11 July, Boise, U.S.A., 2012.
 95. A. Mangel*, S.M.J. Moysey, **Jan van der Kruk**, J.C. Ryan, J. Tarbutton, Time-lapse GPR WARR surveys during a lab-scale infiltration experiment, SEG-AGU Hydrogeophysics workshop, 8-11 July, Boise, U.S.A., 2012.
 96. S. Rudolph*, C. Wonglecharoen, S. Garre, L. Weihermüller, **J. van der Kruk**, T. Kongkaew, H. Vereecken, Soil apparent conductivity as a measure of soil physical parameters and crop yield in a mixed cropping system in Western Thailand, Eurosoil 2-6 July, Bari, Italy, 2012.
 97. A. Mester*, E. Zimmerman, **J. van Der Kruk**, H. Vereecken, S. van Waasen, New Electromagnetic Induction System for Soil Conductivity Measurement with Improved Drift Correction, 8th IEEE International Symposium on Instrumentation and Control Technology ISICT, London, United Kingdom, 11-13 July, 2012.
 98. S. Busch*, **J. van der Kruk**, J. Bikowski, H. Vereecken, Characterization of lossy conductive soils using on-ground GPR full-waveform inversion, European Union, General Assembly 2012, Vienna, Austria, 22-27 April, 2012.
 99. M. Oberrohrmann*, A. Klotzsche, **J. van der Kruk**, H. Vereecken, Optimizing acquisition setup for full-waveform inversion of cross-hole GPR data using checkerboard test, European Union, General Assembly 2012, Vienna, Austria, 22-27 April, 2012.
 100. S. Rudolph*, A. Mester, **J. van der Kruk**, L. Weihermüller, E. Zimmermann, H. Vereecken, Calibration of EMI derived apparent electrical conductivity based on ERT measurements, European Union, General Assembly 2012, Vienna, Austria, 22-27 April, 2012.
 101. J. Bikowski, J. van der Kruk, A. Klotzsche, S. Busch, X. Yang, H. Vereecken, Full waveform inversion of ground penetrating radar data, Workshop on Inverse problems and numerical methods in applications, 8-9 March, Bremen, Germany, 2012.
 102. A. Klotzsche*, **J. van der Kruk**, G.A. Meles, H. Vereecken, Imaging of a low-velocity waveguide within a gravel aquifer using crosshole GPR Full-waveform inversion, 72th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hamburg, Germany, Mar. 5 - 8, 2012.
 103. M. Oberrohrmann*, A. Klotzsche, **J. van der Kruk**, H. Vereecken, Optimizing acquisition setup for of cross-hole GPR full-waveform inversion using checkerboard test, 72th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hamburg, Germany, Mar. 5 - 8, 2012.
 104. S. Busch*, **J. van der Kruk**, J. Bikowski, J. Hugenschmidt, Improved characterisation of silty soils using on-ground GPR Full-Waveform Inversion, 72th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hamburg, Germany, Mar. 5 - 8, 2012.
 105. A. Kalogeropoulos*, **J. van der Kruk**, J. Bikowski, J. Hugenschmidt, Chloride gradient

- determination in concrete using Full-waveform inversion of off-ground GPR data, 72th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hamburg, Germany, Mar. 5 - 8, 2012.
106. A. Mester*, **J. van der Kruk**, E. Zimmermann, H. Vereecken, Optimierung eines elektromagnetischen Induktionsmessgerätes für bodennahe und tiefenabhängige Leitfähigkeitsmessungen, 72th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Hamburg, Germany, Mar. 5 - 8, 2012.
 107. A. Klotzsche* **J. van der Kruk** and H. Vereecken, Imaging high contrast layers within a gravel aquifer using full-waveform cross-hole GPR inversion, American Geophysical Union, Fall meeting 2011, San Francisco, USA, 5-9 December, 2011.
 108. A. Mester* **J. van der Kruk** E. Zimmermann, and H. Vereecken, Two-layer inversion of multi-orientation, multi-offset, and multi-frequency electromagnetic induction measurements, American Geophysical Union, Fall meeting 2011, San Francisco, USA, 5-9 December, 2011.
 109. A.L. Endres, C.M. Steelman, J.P. Jones, S. Busch, **J. van der Kruk**, Evaluating Soil Moisture Dynamics using High Frequency Ground-Penetrating Radar, American Geophysical Union, Fall meeting 2011, San Francisco, USA, 5-9 December, 2011.
 110. S. Busch*, **J. van der Kruk** J. Bikowski, , and H. Vereecken, Quantitative permittivity and conductivity estimation using full-waveform inversion of on-ground GPR data, American Geophysical Union, Fall meeting 2011, San Francisco, USA, 5-9 December, 2011.
 111. H. Vereecken, H. Hendricks Franssen, C. Montzka, H.R. Bogena, U. Rosenbaum, J.A. Huisman, **J. Van Der Kruk**, Jan Vanderborght, Soil water content and hydrological fluxes in terrestrial systems: from measurement to prediction, American Geophysical Union, Fall meeting 2011, San Francisco, USA, 5-9 December, 2011.
 112. **J. van der Kruk**, A. Kalogeropoulos, J. Hugenschmidt, S. Busch, and K. Merz Full-waveform inversion of ground penetrating radar data to assess chloride and moisture content in concrete, European Union, General Assembly 2011, Vienna, Austria, 03-08 April, 2011
 113. J. G. Bakker*, J. van der Kruk, J. Bikowski, C. M. Steelman, A. L. Endres, H. Vereecken, Multi-layer inversion of freezing induced dispersive Ground Penetrating Radar data, European Union, General Assembly 2011, Vienna, Austria, 03-08 April, 2011
 114. A. Klotzsche*, **J. van der Kruk**, G. A. Meles, J. Doetsch, N. Linde, H. Maurer, A. G. Green, and H. Vereecken, High resolution imaging of the saturated and unsaturated zone of a gravel aquifer using full-waveform borehole GPR inversion, European Union, General Assembly 2011, Vienna, Austria, 03-08 April, 2011
 115. J.G. Bakker*, **J. van der Kruk**, C.M. Steelman, A.L. Endres, H. Vereecken. Multi-layer inversion of dispersive Ground Penetrating Radar data due to freezing induced waveguides, 71th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Köln, Germany, Feb. 21 - 24, 2011.
 116. J. Bikowski, **J. van der Kruk**, J.A. Huisman, J.A. Vrugt, H. Vereecken, Uncertainty analysis of GPR waveguide dispersion inversion using Markov Chain Monte Carlo simulation, 71th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Köln, Germany, Feb. 21 - 24, 2011.
 117. A. Klotzsche*, **J. van der Kruk**, G.A. Meles, J. Doetsch, N. Linde, H. Vereecken, Full-waveform inversion of the unsaturated and saturated zone of a gravel aquifer, 71th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Köln, Germany, Feb. 21 - 24, 2011.
 118. A. Mester*, **J. van der Kruk**, E. Zimmermann, H. Vereecken, Joint quantitative inversion of multi-configuration electromagnetic induction data, 71th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Köln, Germany, Feb. 21 - 24, 2011.
 119. X. Yang*, A. Klotzsche, G.A. Meles, J. Ernst **J. van der Kruk**, H. Maurer, A.G. Green, H. Vereecken, Full-waveform inversion of borehole GPR data measured at the Boise Hydrogeophysics Research Site, 71th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Köln, Germany, Feb. 21 - 24, 2011.
 120. N. Kettridge, X. Comas, A. Binley, N. Cassidy, **J. van der Kruk**, M. Waddington, Sub-surface Patterning in Peat Physical Properties Identified from Geophysical Methods, Annual meeting of the Canadian Geophysical Union, May 11-14, Banff, Canada, 2010
 121. G.A. Meles*, S. Greenhalgh, **J. van der Kruk**, A.G. Green, H. Maurer, A New Approach to Improve the Stability and Reliability of Full-Waveform Crosshole GPR Inversion, European

- Union, General Assembly 2010, Vienna, Austria, 02-07 May, 2010
122. A. Klotzsche*, **J. van der Kruk**, G.A. Meles, J.A. Doetsch, H. Maurer, N. Linde, Characterizing a Gravel Aquifer by Full-Waveform Inversion of Crosshole Ground Penetrating Radar Data, European Union, General Assembly 2010, Vienna, Austria, 02-07 May, 2010
 123. **J. van der Kruk**, R. Jacob, C. Steelman, A.L. Endres, and H. Vereecken, Identifying Dispersive GPR Signals and Inverting for Surface Waveguide Properties, European Union, General Assembly 2010, Vienna, Austria, 02-07 May, 2010
 124. A. Klotzsche*, **J. van der Kruk**, G.A. Meles, J.A. Doetsch, H. Maurer, N. Linde, Full-Waveform Inversion of Crosshole Ground Penetrating Radar Data to Characterize a Gravel Aquifer, 70th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Bochum, Germany, March 15 - 17, 2010.
 125. H. Vereecken, **J. van der Kruk**, H. Bogena, A. Pohlmeier, J. Kostel, S. Lambot, S. Huisman and J. Vanderborght, Terrestrial Hydrological Research and Geophysics: Quo Vadis, European Union, General Assembly 2009, Vienna, Austria, 19-24 April, 2009
 126. **J. van der Kruk**, C. M. Steelman, A.L. Endres, H. Vereecken, Dispersion Inversion of GPR Data Recorded Across Freezing and Thawing Induced Waveguides, European Union, General Assembly 2009, Vienna, Austria, 19-24 April, 2009
 127. C. M. Steelman*, A.L. Endres, and **J. van der Kruk**, Monitoring Seasonal Thaw Processes Using High-Frequency Ground Penetrating Radar, Eastern Snow Conference, Hancock, MA, USA, 8-10 June, 2009
 128. **J. van der Kruk**, R. Jacob, C.S. Steelman, A.L. Endres, Inversion of Dispersive GPR Data Recorded Across Precipitation Induced Waveguides, AGU Joint Assembly, Toronto, 24-27 May, 2009.
 129. G.A. Meles*, **J. van der Kruk**, J.R. Ernst, H. Maurer, A.G. Green, Full-waveform Simultaneous Inversion of Permittivity and Conductivity from Georadar Radar Data, 69th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Kiel, Germany, March 23 - 26, 2009.
 130. **J. van der Kruk**, C.S. Steelman, A.L. Endres, Dispersion Inversion of GPR Data Recorded Across Freezing and Thawing Induced Waveguides, 69th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Kiel, Germany, March 23 - 26, 2009.
 131. G. Meles*, **J. van der Kruk**, J. Ernst, A. Green, and H. Maurer, Simultaneous Full-Waveform Inversion of Permittivity and Conductivity from Georadar Data, American Geophysical Union, Fall meeting 2008, San Francisco, USA, 15-19 December, 2008.
 132. **J. van der Kruk**, C. Steelman and A.L. Endres, Inversion of Dispersive GPR Data Recorded Across Freezing and Thawing Induced Waveguides, American Geophysical Union, Fall meeting 2008, San Francisco, USA, 15-19 December, 2008.
 133. **J. van der Kruk**, R.W. Jacob, Inversion of Dispersive GPR Data Recorded Across Multilayer Waveguides, IEEE International Geoscience & Remote Sensing Symposium Boston, U.S.A., 6-11 July, 2008.
 134. R. Streich*, **J. van der Kruk**, M. Grasmueck, Polarization Effects of Buried Pipes in Vector-Migrated 3-D Ground-Penetrating Radar Data, IEEE International Geoscience & Remote Sensing Symposium Boston, U.S.A., 6-11 July, 2008.
 135. G. Meles*, J.R. Ernst, **J. van der Kruk**, A. Green, H. Maurer, and K. Holliger, Recent Developments in Full-Waveform Inversion of Georadar Data, European Geosciences Union, General Assembly 2008, Vienna, Austria, 13-18 April, 2008, submitted.
 136. M. Hertrich, J. Waldecker, and **J. van der Kruk**, Water Content Determination on the Rhone Glacier (Valais, Switzerland) Using Sample-Scale-NMR, Surface-NMR and GPR Methods, 68th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Freiberg, Germany, March 3 - 6, 2008, submitted.
 137. **J. van der Kruk**, and R.W. Jacob, Inversion of Dispersive GPR Data Recorded Across Precipitation-Induced Waveguides, 67th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Aachen, Germany, March 26 - 29, 2007, RD.79
 138. R. Streich* and **J. van der Kruk**, Characterizing a GPR-antenna System Using Near-Field Electric Field Measurements, 67th Annual Meeting of the Deutsche Geophysikalische Gesellschaft in Aachen, Germany, March 26 - 29, 2007, RD.100
 139. **J. van der Kruk**, R. Streich, and A.G. Green, Separate and Joint Inversion of TE and

- TM Georadar Data for Properties of Thin Surface Waveguides, AGU Joint Assembly, New Orleans, USA, 23-27 May 2005, NS11A-02.
140. R. Streich*, **J. van der Kruk** and A.G. Green, New Developments in High-Resolution Multicomponent Georadar Imaging, AGU Joint Assembly, New Orleans, USA, 23-27 May 2005, NS34A-04.
 141. **J. van der Kruk**, C.P.A. Wapenaar, J.T. Fokkema and P.M. van den Berg, Three-dimensional Imaging of multi-component Ground-Penetrating Radar Data, *Proceedings Progress in Electromagnetics Research Symposium, July 1-5, 2002 Cambridge, Massachusetts, USA*.
 142. **J. van der Kruk** and Evert C. Slob, The Origin of Reflections from Above Surface Objects in Ground Penetrating Radar Data, *Proceedings 5th meeting Environmental & Engineering Geophysical Society, Budapest, Hungary, September 6-9, 1999, GR2, 2pp*.
 143. **J. van der Kruk** and E.C. Slob, Comparison Tests Between Shielded and Unshielded Antenna Systems, *GPR Workshop, Karlsruhe, Germany, 14 and 15 July, 1997*.

University related publications

- **J. van der Kruk**, Three-dimensional Imaging of Multicomponent Ground-Penetrating Radar Data Ph.D. Thesis, Delft University of Technology, 2001, ISBN 90-9014706-3, 242 p.
- **J. van der Kruk**, The Determination of the Apparent Resistivity of the Earth From Electromagnetic Sounding with Magnetic Dipoles, M.Sc. Thesis, Delft University of Technology, 1995, Internal report, ET/EM 1995-17, 90 p.