

List of publications in 2022 due to GEF equipment loans

Journal Articles

1. Ahmed, A., Doubre, C., Leroy, S., Keir, D., Pagli, C., Hammond, J.O., Ayele, A., Be de Berc, M., Grunberg, M., Vergne, J., Pestourie, R., Mamo, D., Kibret, B., Cubas, N., Lavayssière, A., Janowski, M., Lengliné, O., La Rosa, A., Chambers, E.L. and Illsley-Kemp, F., **2022**, Across and along-strike crustal structure variations of the western Afar margin and adjacent plateau: Insights from receiver functions analysis, *Journal of African Earth Sciences*, 192, p104570, doi: 10.1016/j.jafrearsci.2022.104570, (GEF Loan 1054)
2. Allen, R.W., Collier, J.S., Henstock, T.J. and The VoiLA Consortium, **2022**, The Role of Crustal Accretion Variations in Determining Slab Hydration at an Atlantic Subduction Zone, *Journal of Geophysical Research: Solid Earth*, 127(8), doi: 10.1029/2022JB024349, (OBIF)
3. Bacon, C.A., Johnson, J.H., White, R.S. and Rawlinson, N., **2022**, On the Origin of Seismic Anisotropy in the Shallow Crust of the Northern Volcanic Zone, Iceland, *Journal of Geophysical Research: Solid Earth*, 127(1), doi: 10.1029/2021JB022655, (GEF Loans 857, 914, 968, 980, 1022, 1115)
4. Bacon, C.A., Rawlinson, N., Pilia, S., Gilligan, A., Wehner, D., Cornwell, D.G. and Tongkul, F., **2022**, The Signature of Lithospheric Anisotropy at Post-Subduction Continental Margins: New Insight From XKS Splitting Analysis in Northern Borneo, *Geochemistry, Geophysics, Geosystems*, 23(11), doi: 10.1029/2022GC010564, (GEF Loan 1038)
5. Bagherpur Mojaver, O. and Darbyshire, F., **2022**, Directional and seasonal variations of seismic ambient noise in southeastern Canada and the NE USA, *Geophysical Journal International*, 232(1), p398-412, doi: 10.1093/gji/ggac342, (GEF Loan 986)
6. Bisset, R.R., Nienow, P.W., Goldberg, D.N., Wigmore, O., Loayza-Muro, R.A., Wadham, J.L., Macdonald, M.L. and Bingham, R.G., **2022**, Using thermal UAV imagery to model distributed debris thicknesses and sub-debris melt rates on debris-covered glaciers, *Journal of Glaciology*, p1-16, doi: 10.1017/jog.2022.116, (GEF Loan 1122)
7. Boyle, J.S., Angers-Blondin, S., Assmann, J.J. and Myers-Smith, I.H., **2022**, Summer temperature—but not growing season length—influences radial growth of *Salix arctica* in coastal Arctic tundra, *Polar Biology*, 45(7), p1257-1270, doi: 10.1007/s00300-022-03074-9, (GEF Loan 1063)
8. Chambers, E.L., Harmon, N., Rychert, C.A., Gallacher, R.J. and Keir, D., **2022**, Imaging the seismic velocity structure of the crust and upper mantle in the northern East African Rift using Rayleigh wave tomography, *Geophysical Journal International*, 230(3), p2036-2055, doi: 10.1093/gji/ggac156, (GEF Loan 1054)
9. Chiaraluce, L., Michele, M., Waldhauser, F., Tan, Y.J., Herrmann, M., Spallarossa, D., Beroza, G.C., Cattaneo, M., Chiarabba, C., De Gori, P., Di Stefano, R., Ellsworth, W., Main, I., Mancini, S., Margheriti, L., Marzocchi, W., Meier, M., Scafidi, D., Schaff, D. and Segou, M., **2022**, A comprehensive suite of earthquake catalogues for the 2016-2017 Central Italy seismic sequence, *Scientific Data*, 9(1), doi: 10.1038/s41597-022-01827-z, (GEF Loans 1067, 1077)
10. Delf, R., Bingham, R.G., Curtis, A., Singh, S., Giannopoulos, A., Schwarz, B. and Borstad, C.P., **2022**, Reanalysis of Polythermal Glacier Thermal Structure Using Radar Diffraction Focusing, *Journal of Geophysical Research: Earth Surface*, 127(2), doi: 10.1029/2021JF006382, (GEF Loan 1094)
11. Glastonbury-Southern, E., Winder, T., White, R.S. and Brandsdottir, B., **2022**, Ring Fault Slip Reversal at Bardarbunga Volcano, Iceland: Seismicity During Caldera Collapse and Re-Inflation 2014–2018, *Geophysical Research Letters*, 49(21), doi: 10.1029/2021GL097613, (GEF Loans 968, 1022)
12. Gottsmann, J., Eiden, E. and Pritchard, M.E., **2022**, Transcrustal Compressible Fluid Flow Explains the Altiplano-Puna Gravity and Deformation Anomalies, *Geophysical Research Letters*, 49(16), doi: 10.1029/2022GL099487, (GEF Loans 910, 928)
13. Greenfield, T., Gilligan, A., Pilia, S., Cornwell, D.G., Tongkul, F., Widiyantoro, S. and Rawlinson, N., **2022**, Post-Subduction Tectonics of Sabah, Northern Borneo, Inferred From Surface Wave Tomography, *Geophysical Research Letters*, 49(3), doi: 10.1029/2021GL096117, (GEF Loan 1038)
14. Hart, J.K., Young, D.S., Baurley, N.R., Robson, B.A. and Martinez, K., **2022**, The seasonal evolution of subglacial drainage pathways beneath a soft-bedded glacier, *Communications Earth and Environment*, 3(1), doi: 10.1038/s43247-022-00484-9, (GEF Loans 935, 961, 983)
15. Kibret, B.A., Ayele, A. and Keir, D., **2022**, Modelling S-Wave Velocity Structure Beneath the Central Main Ethiopian Rift Using Receiver Functions, *Frontiers in Earth Science*, 10, doi: 10.3389/feart.2022.773783, (GEF Loan 956)

16. Leah, H., Fagereng, A., Bastow, I., Bell, R., Lane, V., Henrys, S., Jacobs, K. and Fry, B., **2022**, The northern Hikurangi margin three-dimensional plate interface in New Zealand remains rough 100 km from the trench, *Geology*, 50(11), p1256-1260, doi: 10.1130/G50272.1, (GEF Loan 1039)
17. Linang, H.T., Pilia, S., Rawlinson, N., Bacon, C.A., Gilligan, A., Cornwell, D.G. and Tongkul, F., **2022**, Collision-Induced Subduction Polarity Reversal Explains the Crustal Structure of Northern Borneo: New Results From Virtual Deep Seismic Sounding (VDSS), *Geophysical Research Letters*, 49(19), doi: 10.1029/2022GL099123, (GEF Loan 1038)
18. Lucas, E.M., Nyblade, A.A., Accardo, N.J., Lloyd, A.J., Wiens, D.A., Aster, R.C., Wilson, T.J., Dalziel, I.W., Stuart, G.W., O'Donnell, J.P., Winberry, J.P. and Huerta, A.D., **2022**, Shear Wave Splitting Across Antarctica: Implications for Upper Mantle Seismic Anisotropy, *Journal of Geophysical Research: Solid Earth*, 127(4), doi: 10.1029/2021JB023325, (GEF Loan 1002)
19. Masafu, C., Williams, R., Shi, X., Yuan, Q. and Trigg, M., **2022**, Unpiloted Aerial Vehicle (UAV) image velocimetry for validation of two-dimensional hydraulic model simulations, *Journal of Hydrology*, 612, p128217, doi: 10.1016/j.jhydrol.2022.128217, (GEF Loan 1118)
20. Mauerberger, A., Sadeghisorkhani, H., Maupin, V., Gudmundsson, O. and Tilmann, F., **2022**, A shear-wave velocity model for the Scandinavian lithosphere from Rayleigh waves and ambient noise - Implications for the origin of the topography of the Scandes mountain range, *Tectonophysics*, 838, p229507, doi: 10.1016/j.tecto.2022.229507, (GEF Loan 959)
21. Murray, J.B. and van Wyk de Vries, B., **2022**, Basement sliding and the formation of fault systems on Mt. Etna volcano, *Journal of Volcanology and Geothermal Research*, 428, p107573, doi: 10.1016/j.jvolgeores.2022.107573, (GEF Loans 727, 776, 799, 825, 869, 898, 929)
22. Ogden, C.S. and Bastow, I.D., **2022**, The crustal structure of the Anatolian Plate from receiver functions and implications for the uplift of the central and eastern Anatolian plateaus, *Geophysical Journal International*, 229(2), p1041-1062, doi: 10.1093/gji/ggab513, (GEF Loan 947)
23. Peirce, C., Funnell, M.J., Reston, T.J. and MacLeod, C.J., **2022**, Three-dimensional S-wave velocity structure of oceanic core complexes at 13°N on the Mid-Atlantic Ridge, *Geophysical Journal International*, doi: 10.1093/gji/ggac350, (OBIF)
24. Peirce, C., Grevemeyer, I., Hayman, N.W. and Van Avendonk, H.J.A., **2022**, Active ocean-continent transform margins: seismic investigation of the Cayman Trough-Swan Island ridge-transform intersection, *Geophysical Journal International*, doi: 10.1093/gji/ggac019, (OBIF)
25. Priestley, A., Kulesa, B., Essery, R., Lejeune, Y., Le Gac, E. and Blackford, J., **2022**, Towards the development of an automated electrical self-potential sensor of melt and rainwater flow in snow, *Journal of Glaciology*, p1-13, doi: 10.1017/jog.2021.128, (GEF Loan)
26. Robinson, A.H., Bayrakci, G., Macdonald, C., Minshull, T.A., Bull, J.M., Chapman, M., Henstock, T.J. and Callow, B., **2022**, Constraints on fluid flow pathways from shear wave splitting in and around an active fluid-escape structure: Scanner Pockmark, North Sea, *Geophysical Journal International*, 231(2), p1164-1195, doi: 10.1093/gji/ggac197, (OBIF)
27. Saccorotti, G., Bruni, R., Bonini, M., Corti, G., Keir, D. and Sani, F., **2022**, Recent Seismic Sequences and Activation of Normal Fault Systems in the Mugello Basin and Surrounding Areas (Northern Apennines, Italy), *Frontiers in Earth Science*, 10, doi: 10.3389/feart.2022.879160, (GEF Loan 1092)
28. Shiddiqi, H.A., Ottemoller, L., Rondenay, S., Halpaap, F., Gradmann, S. and Michalek, J., **2022**, Crustal structure and intraplate seismicity in Nordland, Northern Norway: insight from seismic tomography, *Geophysical Journal International*, 230(2), p813-830, doi: 10.1093/gji/ggac086, (GEF Loan 959)
29. Southern, E.O., Winder, T., White, R.S. and Brandsdottir, B., **2022**, Ring Fault Slip Reversal at Bardarbunga Volcano, Iceland: Seismicity during Caldera Collapse and Re-Inflation 2014-2018, *Earth and Space Science Open Archive*, doi: 10.1002/essoar.10510097.3, (GEF Loans 980, 1022, 1071)
30. Szenicer, A., Reinwald, M., Moseley, B., Nissen-Meyer, T., Mutinda Muteti, Z., Oduor, S., McDermott-Roberts, A., Baydin, A.G. and Mortimer, B., **2022**, Seismic savanna: machine learning for classifying wildlife and behaviours using ground-based vibration field recordings, *Remote Sensing in Ecology and Conservation*, 8(2), p236-250, doi: 10.1002/rse2.242, (GEF Loan 1106)

31. Talling, P.J., Baker, M.L., Pope, E.L., Ruffell, S.C., Jacinto, R.S., Heijnen, M.S., Hage, S., Simmons, S.M., Hasenhündl, M., Heerema, C.J., McGhee, C., Apprioual, R., Ferrant, A., Cartigny, M.J.B., Parsons, D.R., Clare, M.A., Tshimanga, R.M., Trigg, M.A., Cula, C.A., Faria, R., Gaillot, A., Bola, G., Wallance, D., Griffiths, A., Nunny, R., Urlaub, M., Peirce, C., Burnett, R., Neasham, J. and Hilton, R.J., **2022**, Longest sediment flows yet measured show how major rivers connect efficiently to deep sea, *Nature Communications*, 13(1), doi: 10.1038/s41467-022-31689-3, (OBIF)
32. Vestin, P., Molder, M., Kljun, N., Cai, Z., Hasan, A., Holst, J., Klemetsson, L. and Lindroth, A., **2022**, Impacts of stump harvesting on carbon dioxide, methane and nitrous oxide fluxes, *iForest - Biogeosciences and Forestry*, 15(3), p148-162, doi: 10.3832/ifer4086-015, (GEF Loan 933)
33. Zhou, W., Butcher, A., Brisbourne, A.M., Kufner, S., Kendall, J. and Stork, A.L., **2022**, Seismic Noise Interferometry and Distributed Acoustic Sensing (DAS): Inverting for the Firn Layer S-Velocity Structure on Rutford Ice Stream, Antarctica, *Journal of Geophysical Research: Earth Surface*, 127(12), doi: 10.1029/2022JF006917, (GEF Loan 1111)

Conference Papers / Proceedings

1. Winder, T. and Bacon, C.A., **2022**, QuakeMigrate: an open-source software package for automatic earthquake detection and location (short-course), *EGU, Vienna, EGU General Assembly*, EGU22-SC5.16, (GEF Loans 914, 968, 980, 1022, 1038, 1071, 1115, 1133)
2. Winder, T., Rawlinson, N., Brandsdóttir, B., Jonsdóttir, K., White, R.S. and Volk, O., **2022**, Microseismicity reveals the fault geometry and internal structure of the re-inflating Bárðarbunga caldera, *EGU, Vienna, EGU General Assembly*, EGU22-6071, (GEF Loans 1115, 1133)
3. Zhou, W., Butcher, A., Kendall, J. and Stork, A., **2022**, Enhancing Ambient Noise Interferometry for Das: Selective Stacking and Hybrid Seismic Receivers, *GeoTech 2022 Third EAGE Workshop on Distributed Fibre Optic Sensing, EAGE*, doi: 10.3997/2214-4609.20224027, (GEF Loan 1111)

PhD Theses

1. Bisset, R., **2022**, Satellite and UAV remote sensing of debris-covered glaciers, *University of Edinburgh*, doi: 10.7488/era/2340, (GEF Loan 1122)
2. Carver, D., **2022**, Predicting hydromorphological responses to dam removal, *University of Newcastle*, (GEF Loan 1081)
3. Hammock, C.P., **2022**, Integrated Geophysical Investigations of a Methane Releasing Pingo in a Changing Permafrost Environment, Svalbard, *Swansea University*, (GEF Loans 1116, 1126)
4. Langsdale, M., **2022**, Land surface temperature and emissivity derivation from hyperspectral instruments operating in the laboratory, field, and on aircraft, *King's College London*, (GEF Loan 1086)
5. Moseley, B., **2022**, Physics-informed machine learning: from concepts to real-world applications, *University of Oxford*, (GEF Loan 1106)
6. Quick, L., **2022**, The sediment dynamics of the Himalayan foreland basin from the Neogene to present times, *University of Edinburgh*, doi: 10.7488/era/1865, (GEF Loan 1096)
7. Walsh, E., **2022**, Late Quaternary hydrological change from fluvial archives in southwestern Africa and the palaeoclimate implications, *University of Oxford*, (GEF Loan 1099)
8. Wehner, D., **2022**, Seismic structure beneath Southeast Asia from adjoint waveform tomography, *University of Cambridge*, (GEF Loan 1038)
9. Whiteley, J., **2022**, Geophysical indicators of slope stability : towards improved early warning of moisture-induced landslide hazards, *University of Bristol*, (GEF Loan 1127)