

## Future Global Challenges for Soil Science - Conference schedule

All activities to take place in Main Conference Room unless otherwise stated

Monday 14 <sup>th</sup> January	
15.00 – 17.00	Check in; free time to walk in the local area, use hotel facilities, etc.
16.45 – 18.00	Registration (entrance to Lakes Suite) and poster mounting (Gallery)
18.00 – 19.15	<b>Official start to the meeting</b> Introduction to the meeting with Professor Steve McGrath and introduction to working with Global Challenges
19.45	Dinner (Windermere Restaurant)
Tuesday 15 <sup>th</sup> January	
8.00 - 9.00	Time for uploading presentation slides and checking AV
9.00 – 9.15	Welcome Note – Professor Phil Haygarth
9.15 – 10.00	<b>Opening Keynote:</b> Professor Steve Banwart <i>Chair: Professor Phil Haygarth</i>
Session 1: Soils and the delivery of ecosystem services	
10.00 – 10.45	<b>Keynote:</b> Professor Richard Bardgett <i>Chair: Paul George</i>
10.45 – 11.15	Coffee break (Gallery)
11.15 – 11.45	<b>Panel Discussion:</b> Professor Steve Banwart, Professor Richard Bardgett, Dr Emma Sayer, Dan Evans, Luke Hillary <i>Chair: Paul George</i>
11.45 – 12.00	<b>Oral Presentations</b> <i>Chair: Chris McCloskey</i> Andrew Tweedie: <i>Temporal changes in phosphorus forms in cultivated Scottish soils</i>
12.00 – 12.15	Anchen Kehler: <i>An investigation into low redox systems and the fate and behaviour of phosphorus forms within them</i>
12.15 – 12.30	Sam Reynolds: <i>Elucidating the role of cover crops on influencing organic phosphorus in arable soil</i>
12.30 – 12.45	Dan Evans: <i>Ground-making research: the first arable soil formation rates</i>
12.45 – 13.00	Beckie Draper: <i>Effects of different zinc nanoparticles on soil and ryegrass</i>
13.00 – 14.00	Lunch (Windermere Restaurant)

Tuesday 15 <sup>th</sup> January - Afternoon	
14.00 – 14.30	<b>Poster Pitches</b> <i>Chair: Hannah Cooper</i>
<b>Session 2: Modelling the soil ecosystem at different spatial and temporal scales</b>	
14.30 – 15.15	<b>Keynote:</b> Professor Hans-Jörg Vogel <i>Chair: Luke Hillary</i>
15.15 – 15.45	<b>Panel Discussion:</b> Professor Hans-Jörg Vogel, Professor Dave Chadwick, Fiona Seaton, Andrew Tweedie <i>Chair: Luke Hillary</i>
15.45 – 16.30	<b>Coffee break; poster picos from 15.55 (Gallery)</b> <i>Chair: Fiona Seaton</i> <b>Poster presenters:</b> Tom Bott: <i>Bio-monitoring: monitoring fugitive methane emission using microbiology</i> Mihai Cimpoiasu: <i>Combining X-ray and electrical resistivity tomography methods towards a new methodology of soil hydraulics properties assessment</i> James Edgerley: <i>Direct and indirect effects of drought and warming on nutrient availability in an upland grassland in the UK</i> Luke Hillary: <i>Viromics detects long-term persistence of faecally associated viruses in biosolid amended soils</i> Jack Lort: <i>Dermal bioavailability of PAH: the route forward</i> George Themistocleous: <i>Modelling variety dependant least limiting water range: assessing the limits to root elongation in field soil</i>
16.30 – 16.45	<b>Oral Presentations</b> <i>Chair: Andrew Tweedie</i> John Beale: <i>The significance of soil properties to the uncertainty in estimating soil moisture from Synthetic Aperture Radar</i>
16.45 – 17.00	Lewis Rose: <i>Variability of gas diffusion in soils</i>
17.00 – 17.15	Hannah Cooper: <i>Zero-tillage could offer a long term strategy to mitigate climate change</i>
17.15 – 17.30	Fiona Seaton: <i>The impact of soil and plant diversity upon soil microbial diversity</i>
17.30 – 19.30	Free time
19.30	Dinner (Windermere Restaurant)
Evening	Pub quiz (Buckley Room)

## Wednesday 16<sup>th</sup> January

8.00 – 9.00	Time for uploading presentation slides and checking AV
<b>Session 3: Understanding the soil-root interface</b>	
9.00 – 9.45	<b>Keynote:</b> Dr Saoirse Tracy <i>Chair: Emily Dowdeswell-Downey</i>
9.45 – 10.15	<b>Panel Discussion:</b> Dr Saoirse Tracy, Dr Eric Paterson, Chris McCloskey, Malika Mezeli <i>Chair: Emily Dowdeswell-Downey</i>
10.15 – 10.45	Coffee break (Gallery)
	<b>Oral Presentations</b> <i>Chair: Dan Evans</i>
10.45 – 11.00	Emma Burak: <i>Does root architecture influence the formation of rhizosheath?</i>
11.00 – 11.15	Jasmine Burr-Hersey: <i>Can roots influence soil structure via reorganisation of the rhizosphere?</i>
11.15 – 11.30	Lucy Greenfield: <i>Protein breakdown in soil along a grassland altitudinal gradient</i>
11.30 – 11.45	Chris McCloskey: <i>Measuring plant-driven soil carbon dynamics in field conditions</i>
11.45 – 12.00	Heather Ruscoe: <i>The impacts of land management on beneficial Pseudomonad communities</i>
12.00 – 12.15	Malika Mezeli: <i>In-soil trophic interactions between plants, rhizosphere bacteria and nematodes: Improving availability of soil organic phosphorus</i>
12.15 – 13.15	Lunch (Windermere Restaurant)
13.15 – 14.15	Workshops in parallel: <b>Careers Workshop</b> <i>Convenor: Heather Ruscoe</i> <b>Integrating Soil Science in Policy</b> <i>Convenor: Paul George</i>
14.15 – 15.00	<b>Coffee break; poster picos from 14.25 (Gallery)</b> <i>Chair: Jack Lort</i> <b>Poster presenters:</b> Marta Cattin: <i>Estimation of carbon use efficiency (CUE) and CO<sub>2</sub> production after application of digestate on grassland</i> Rose Durcan: <i>Drivers of soil carbon changes in subtropical and tropical grasslands: a review</i> David Fidler: <i>Comparative metagenomics and GeoChip analysis reveals functional shifts in microbial community with soil carbon depletion</i> Harry Harvey: <i>The impact of soil structure on microbial response to environmental change</i> Katy Wiltshire: <i>Tracing the origin of sediments and C across the terrestrial-aquatic continuum: A holistic approach to assess climate change and water quality threats</i>
15.00 – 16.00	Workshop in parallel: <b>Our Role as Scientists</b> <i>Convenor: Harry Barrat</i>
16.00 – 17.30	Management Board meeting (Buttermere Room) (MB only)
19.00	Drinks reception (Gallery) Followed by Conference Dinner (main conference room)
19.30	Conference Dinner (main conference room)

Thursday 17 <sup>th</sup> January	
8.00 - 9.00	Time for uploading presentation slides and checking AV
<b>Session 4: Resilience and response of soil functions and global changes</b>	
9.00 – 9.45	<b>Keynote:</b> Dr Kate Buckeridge <i>Chair: John Beale</i>
9.45 – 10.15	<b>Panel Discussion:</b> Dr Kate Buckeridge, Dr Federica Tamburini, Emily Dowdeswell-Downey, Alex Williams <i>Chair: John Beale</i>
10.15 – 11.00	<b>Coffee break; poster picos from 10.25 (Gallery)</b> <i>Chair: Heather Ruscoe</i> <b>Poster presenters:</b> Leigh-Anne Kemp: <i>The role of soil fertility in the function of mycorrhizal associations</i> Corina Lees: <i>Which grass species or mixture will stand the test of time with regards to soil erosion mitigation?</i> Samuel Musarika: <i>Fresh organic matter effects on carbon dioxide, methane and nitrous oxide emissions on cultivated peat</i> Francis Parry Roberts: <i>Infiltrating agriculture: hydrological implications of land use and management across the UK</i> Jessica Potts: <i>Acetamiprid transport and mobility within UK agricultural soils - A comparison of commercial mixtures under different soil organic matter treatments</i>
11.00 – 11.15	<b>Oral Presentations</b> <i>Chair: Jasmine Burr-Hersey</i> Alex Williams: <i>Characterising shifts in the resistome and microbial community structure of cattle slurry fertilised agricultural soil</i>
11.15 – 11.30	Paul George: <i>Diverging trends of belowground richness but not beta diversity revealed within temperate ecosystems</i>
11.30 – 11.45	Emily Dowdeswell-Downey: <i>The effects of climatic conditions on (de)stabilising processes in aggregate microcosms</i>
11.45 – 12.00	Rosanne Broyd: <i>High and dry: are oceanic-alpine ecosystems resilient to summer drought?</i>
12.00 – 12.15	Martha Ledger: <i>Determining regional-scale carbon losses from tropical peatlands using InSAR</i>
12.15 – 12.30	Harry Barrat: <i>Of moisture and microbes</i>
12.30 – 13.30	Legacy review and final remarks from Professor Davey Jones; Prizes and Acknowledgements
13.30 – 14.30	Lunch (Windermere Restaurant)
14.30	Departure