

Iain McLellan  
Senior Lecturer  
School of Computing, Engineering and Physical Sciences  
School of Computing, Engineering and Physical Sciences



## Area of academic expertise - outline

I am a Chartered Environmentalist (CEnv) and before starting in academia in 2015, I worked in 3<sup>rd</sup> Sector organisations and environmental regulators, and have 8 years environmental policy experience working with national and local government, regulators and the private sector in the fields of air quality, land quality and noise.

My primary area of interest is the impacts environmental pollution but in particular air pollution and soil contamination. In my research I use various analytical measurement techniques such as ICP-AES, ICP-MS, Graphite Furnace-AAS, Flame-AAS, HPLC and LC-MS. Recent projects I have been involved in are:

air pollution and links with chronic obstructive pulmonary disease

waste management within the food industry,

historical pollution within sediments,

metal toxicity to aquatic organisms

odour emissions from waste water treatment works,

the treatment of manganese contamination in water systems.

I regularly peer review manuscript submissions and have acted as PhD Viva External Examiner.

My teaching remit includes Undergraduate and Postgraduate teaching on the Physical Sciences programme (Chemistry and Forensic Science) and the Safety, Health and Environment programme. I am the Programme Leader for the MSc Waste and Resource Management. Modules I co-ordinate (and teach on) include Analytical Chemistry (Lvl 9), Safety, Health and Environmental Protection (Lvl 9), Principles of Sustainability (Lvl 11), Waste Management (Lvl 11), Pollution Control (Lvl 11) and Environmental Systems (Lvl 11).

In September 2018 I was made Programme Leader for the MSc Waste and Resource Management programme and promoted to Senior Lecturer in January 2020.

## Qualifications

Postgraduate Certificate

1 Sep 2015 → Feb 2017

Award Date: 6 Jul 2017

Doctor of Philosophy, University of the West of Scotland

Oct 2005 → Mar 2012

Award Date: 10 Jul 2012

Bachelor of Science (Hons.), University of Paisley

Sep 2001 → 7 Jul 2005

Award Date: 7 Jul 2005

2005 → 31 Oct 2018 Fellow of the Geological Society, FGS

2012 → 2017 Associate Member of the Royal Society of Chemistry, AMRSC

14 Sep 2020 → ... Chartered Environmentalist, CEnv

27 Jan 2017 → ... Fellow of the Higher Education Academy, FHEA

2017 → ... Member of the Royal Society of Chemistry, MRSC

2015 → ... Member of the Institute of Environmental Sciences, MIEEnvSc

## Research output

**Treatment of environmental contamination using sepiolite: current approaches and future potential**

Song, N., Hursthouse, A., McLellan, I. & Wang, Z., 11 Sep 2020, In: Environmental Geochemistry and Health. 19 p., 007050.

#### **Monitoring water quality changes and ornamental fish behaviour during commercial transport**

Vanderzwalmen, M., McNeill, J., Delieuvin, D., Senes, S., Sánchez Lacalle, D., Mullen, C., McLellan, I., Carey, P., Snellgrove, D., Foggo, A., Alexander, M. E., Henriquez, F. L. & Sloman, K. A., 30 Jan 2021, In: *Aquaculture*. 531, 15 p., 735860.

#### **The Society for Environmental Geochemistry and Health (SEGH): building for the future of early career researchers**

Humphrey, O. S., Middleton, D. R. S., Ahmad, S., Cocerva, T., Dowell, S. M., Garza-Galindo, R., Hamilton, E. M., Kafwamfwa, N., Kaninga, B., Kourgia, P., Ligowe, I. S., Macleod, H. A., Mafulul, S. G., Marriott, A. L., McLellan, I. S., Meso, D. N., Munthali, K., Niepsch, D., Rodgers, K. J., Song, N. & 2 others, Tait, A. J. & Woods, C., 1 Jul 2020, In: *Environmental Geochemistry and Health*. 4 p.

#### **The legacy of industrial pollution in estuarine sediments: spatial and temporal variability implications for ecosystem stress**

Rodgers, K., McLellan, I., Peshkur, T., Williams, R., Tonner, R., Knapp, C. W., Henriquez, F. L. & Hursthouse, A. S., 30 Apr 2020, In: *Environmental Geochemistry and Health*. 42, 4, p. 1057-1068 12 p.

#### **Reliance on fossil fuels in the Scottish public sector**

Idundun, E., McLellan, I. & Hursthouse, A., 27 Nov 2019.

#### **Air pollutants in urban and semi-rural locations: cytotoxicity of particulate matter metals ions**

Woods, C., Litherland, G. J., Hursthouse, A., Lundy, F. T., Sergeant, G., Lockhart, J. C. & McLellan, I., 22 Nov 2019.

#### **Land contamination and development: guidance for assessing and addressing land contamination issues to meet the requirements of contaminated land regulators in Scotland**

McLellan, I., Ogilvie, K., Toal, L., Hamill, S. & McIntosh, R., 31 Aug 2019, 2.12 ed. *Environmental Protection Scotland*. 23 p.

#### **The potential of remedial techniques for hazard reduction of steel process by products: impact on steel processing, waste management, the environment and risk to human health**

Rodgers, K., McLellan, I., Cuthbert, S., Masaguer Torres, V. & Hursthouse, A., 13 Jun 2019, In: *International Journal of Environmental Research and Public Health*. 16, 12, 19 p., 2093.

#### **The toxicity of potentially toxic elements (Cu, Fe, Mn, Zn and Ni) to the cnidarian *Hydra attenuata* at environmentally relevant concentrations**

McKinley, K., McLellan, I., Gagne, F. & Quinn, B., 15 May 2019, In: *Science of the Total Environment*. 665, p. 848-854 7 p.

#### **Enhanced characterisation for the management of industrial steel processing by products: potential of sequential chemical extraction: potential of sequential chemical extraction**

Rodgers, K., McLellan, I. S., Cuthbert, S. J. & Hursthouse, A., 31 Mar 2019, In: *Environmental Monitoring and Assessment*. 191, 3, 19 p., 192.

#### **Geochemistry: inorganic**

Trueman, C., Rodgers, K., McLellan, I. & Hursthouse, A., 12 Mar 2019, *Encyclopedia of Analytical Science: Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*. Worsfold, P., Poole, C., Townshend, A. & Miró, M. (eds.). 3 ed. Elsevier Limited, p. 271-282 12 p.

#### **Carbon efficiency in the Scottish public sector**

Idundun, E., McLellan, I. & Hursthouse, A., 29 Oct 2018.

#### **Can the legacy of industrial pollution influence antimicrobial resistance in estuarine sediments?**

Rodgers, K., McLellan, I., Peshkur, T., Williams, R., Tonner, R., Hursthouse, A., Knapp, C. & Henriquez, F., 13 Oct 2018, In: *Environmental Chemistry Letters*. 17, 2, p. 595-607 13 p.

#### **Air pollution, health and government policies: the challenges in improving the air we breathe**

McLellan, I., Litherland, G., Crilly, A. & Lockhart, J., 2 Jul 2018, p. 28-28. 1 p.

**Can legacy pollution influence antimicrobial resistance in estuarine sediments? the geochemical role!**

Rodgers, K., McLellan, I., Peshkur, T., Williams, R., Tonner, R., Hursthouse, A. S., Knapp, C. W. & Henriquez, F. L., 2 Jul 2018, p. 96-96. 1 p.

**Genes of past, present and future: does legacy pollution contribute to antibiotic resistance in industrialised estuaries?**

Rodgers, K., McLellan, I., Hursthouse, A., Henriquez, F., Tonner, R., Peshkur, T., Knapp, C. & Williams, R., 26 Apr 2018.

**Genes of past, present and future: does legacy pollution contribute to antibiotic resistance in industrialised estuaries?**

Rodgers, K., Henriquez, F., McLellan, I., Hursthouse, A., Williams, R., Tonner, R., Peshkur, T. & Knapp, C., 12 Apr 2018.

**Genes of past, present and future: does legacy pollution contribute to antibiotic resistance in industrialised estuaries?**

Rodgers, K., Hursthouse, A., McLellan, I., Henriquez, F., Williams, R., Tonner, R., Peshkur, T. & Knapp, C., 24 Nov 2017.

**Odour Management and Monitoring in Scottish Waste Water Treatment Plants**

Quinn, B., McLellan, I., Broomfield, M., Gibson, N. & del Vento, S., 7 Apr 2017, CREW - Scotland's Centre of Expertise for Waters . 27 p.

**Water treatment: Potential of sepiolite mining by products application in Hunan, PRC**

Song, N., Liao, L., Ren, B., Wang, Z., McLellan, I. & Hursthouse, A., 2017, (Unpublished).

**Synergies and tensions between climate change and air quality actions: a report by the cleaner air for Scotland climate change sub-group**

Curran, J., Harris, B., Holmes, N., Low, R., McLellan, I., Milne, S., Pratt, E., Redshaw, J., Whyte, B., Wolstenholme, R. & Aitken, M., 1 Oct 2016, 58 p.

**Understanding fungal functional biodiversity during the mitigation of environmentally dispersed pentachlorophenol in cork oak forest soils**

Varela, A., Martins, C., Nunez, O., Martins, I., Houbraken, J. A. M. P., Martins, T. M., Leitao, M. C., McLellan, I., Vetter, W., Galceran, M. T., Samson, R. A., Hursthouse, A. & Pereira, C. S., Aug 2015, In: Environmental Microbiology. 17, 8, p. 2922-2934

**Development of a robust chromatographic method for the detection of chlorophenols in cork oak forest soils**

McLellan, I., Hursthouse, A., Morrison, C., Varela, A. & Pereira, C. S., Feb 2014, In: Environmental Monitoring and Assessment. 186, 2, p. 1281-1293

**Pedologic characteristics and fungi community in unmanaged cork oak forest soil of two Mediterranean regions: Sardinia and Tunisia**

Fumi, M. D., Mazzoleni, V., Novelli, E., Galli, R., Busconi, M., Blaghen, M., Hassen, A., Hursthouse, A., McLellan, I., Pintus, A., Ruiu, P. A., Pereira, C. S. & Varela, A., 2014, IOBC-WPRS Bulletin, 101, p. 31-38 8 p.

**Workshop on the Review of Local Air Quality Management in Scotland: Summary of Event and Associated Feedback September 2013**

McLellan, I., 1 Sep 2013, Environmental Protection Scotland. 14 p.

**Geochemical approach to assessing human impacts in Cork Oak forest soils of the MED region**

McLellan, I., Hursthouse, A., Varela, A. & Pereira, C. S., Sep 2013, In: Journal of Geochemical Exploration. 132, p. 34-40

**Harmonisation of physical and chemical methods for soil management in Cork Oak forests: Lessons from collaborative investigations**

McLellan, I., Varela, A., Blaghen, M., Fumi, M. D., Hassen, A., Hechminet, N., Jaouani, A., Khessairi, A., Lyamlouli, K., Ouzari, H-I., Mazzoleni, V., Novelli, E., Pintus, A., Rodrigues, C., Ruiu, P. A., Pereira, C. S. & Hursthouse, A., 2013, In: African Journal of Environmental Science and Technology. 7, 6

**Screening pentachlorophenol degradation ability by environmental fungal strains belonging to the phyla Ascomycota and Zygomycota**

Carvalho, M. B., Martins, I., Leitao, M. C., Garcia, H., Rodrigues, C., Romao, V. S., McLellan, I., Hursthouse, A. & Pereira, C. S., Oct 2009, In: Journal of Industrial Microbiology & Biotechnology. 36, 10, p. 1249-1256

**Pentachlorophenol in Quercus suber forests: An initial study in Tunisia**

McLellan, I., Rodrigues, C., Leitao, M. C., Varela, A., Carvalho, M. B., Martins, I., Garcia, H., Petkovic, M., Hassen, M., Hursthouse, A., Romao, V. S. & Pereira, C. S., 2008.

**The environmental behaviour of polychlorinated phenols and its relevance to cork forest ecosystems: a review**

McLellan, I., Carvalho, M., Pereira, C. S., Hursthouse, A., Morrison, C., Tatner, P., Martins, I., San Romao, M. V. & Leitao, M., 6 Jul 2007, In: Journal of Environmental Monitoring. 9, p. 1055-1063 9 p.

## Activities

**Clean Air Day and the Triple Win**

Iain McLellan (Chair)

8 Oct 2020

**Environmental Clerk of Works: foundation programme**

Andrew Hursthouse (Speaker), Iain McLellan (Speaker), Ashwini Konanahalli (Speaker), Jan Miller (Speaker), Phillip Cowie (Speaker), Ross Deuchar (Speaker), Robin Ion (Speaker) & Simon Knott (Speaker)

Oct 2020 → Nov 2020

**Sustainability (Journal)**

Iain McLellan (Peer reviewer)

1 Sep 2020 → ...

**Applied Sciences (Journal)**

Iain McLellan (Peer reviewer)

1 Jul 2020 → ...

**Energies (Journal)**

Iain McLellan (Peer reviewer)

Jun 2020 → ...

**Environmental Clerk of Works: foundation programme**

Andrew Hursthouse (Speaker), Iain McLellan (Speaker), Milan Radosavljevic (Speaker), Jan Miller (Speaker), Phillip Cowie (Speaker), Ross Deuchar (Speaker), Robin Ion (Speaker) & Simon Knott (Speaker)

May 2020 → Jun 2020

**Water quality and discharge monitoring**

Iain McLellan (Speaker)

19 Dec 2019

**PhD viva examination**

Iain McLellan (Examiner)

13 Dec 2019

**Water quality and discharge monitoring**

Iain McLellan (Speaker)

22 Oct 2019

### **Environmental Pollution (Journal)**

Iain McLellan (Peer reviewer)

Oct 2019 → ...

### **The Clyde's Industrial History and its Impact on Antimicrobial Resistance**

Kiri Rodgers (Speaker), Iain McLellan (Speaker), Tatyana Peshkur (Speaker), Roderick Williams (Speaker), Rebecca Tonner (Speaker), Charles Knapp (Speaker), Andrew Hursthouse (Speaker) & Fiona Henriquez (Speaker)

4 Sep 2019

### **Environmental Monitoring and Assessment (Journal)**

Iain McLellan (Peer reviewer)

Sep 2019 → ...

### **Resource Exploitation And Environmental Impact: Addressing Rebound Effects From China's Rapid Industrial Expansion**

Andrew Hursthouse (Speaker), Zhenghua Wang (Speaker), Bozhi Ren (Speaker), Iain McLellan (Speaker), Simon Cuthbert (Speaker) & Na Song (Speaker)

3 Jul 2019

### **BREATH Annual Conference**

John Lockhart (Member of programme committee), Gary Litherland (Invited speaker), Anne Crilly (Invited speaker), Carl Goodyear (Invited speaker), Iain McLellan (Invited speaker), Craig Williams (Invited speaker), William MacKay (Invited speaker), Andrew MacKenzie (Invited speaker), Joanna Brzeszczynska (Invited speaker), Lynette Dunning (Invited speaker), Mari Bailo (Invited speaker), Mark Thomas (Invited speaker), Kirsty McCallum (Invited speaker), Kimberly Black (Invited speaker), Fawziye Tarhini (Invited speaker), Carly Woods (Invited speaker) & Bryn Short (Invited speaker)

19 Jun 2019 → 21 Jun 2019

### **Brownfield Land Scotland 2019**

Iain McLellan (Chair)

6 Feb 2019

### **STEM Day**

Iain McLellan (Participant)

22 Nov 2018

### **Coastal ecological protection and the construction of ecological cities**

Iain McLellan (Speaker)

12 Nov 2018

### **Coastal ecological protection and the construction of ecological cities**

Andrew Hursthouse (Organiser) & Iain McLellan (Organiser)

5 Nov 2018 → 16 Nov 2018

### **How to use environmental data responsibly**

Iain McLellan (Chair) & Andrew Hursthouse (Chair)

8 Oct 2018

### **Cross Parliamentary Group Lung Health, Scottish Parliament**

Iain McLellan (Participant)

4 Sep 2018

### **BREATH Ayrshire Stakeholder Event**

John Lockhart (Speaker), Gary Litherland (Speaker), Anur Guhan (Speaker), Lorcan McGarvey (Speaker), Keith Thornbury (Speaker) & Iain McLellan (Speaker)

22 Aug 2018

**Exploring research and teaching synergies between UWS and China: the Hunan Provincial Key Laboratory of Shale Gas Resource Exploitation & Centre for Environmental Research, UWS**

Andrew Hursthouse (Speaker), Zhenghua Wang (Speaker), Bozhi Ren (Speaker), Simon Cuthbert (Speaker), Iain McLellan (Speaker) & Na Song (Speaker)

27 Jun 2018

**BREATH Annual Conference**

John Lockhart (Invited speaker), Gary Litherland (Invited speaker), Anne Crilly (Invited speaker), Andrew MacKenzie (Invited speaker), Iain McLellan (Invited speaker), Andisheh Bakhshi (Invited speaker), Mark Thomas (Invited speaker), Mariarca Bailo (Invited speaker), Kimberly Black (Invited speaker) & Kirsty McCallum (Invited speaker)

19 Jun 2018 → 20 Jun 2018

**Mission Discovery 2018**

Iain McLellan (Examiner), Fiona Menzies (Examiner) & Catriona Tedford (Examiner)

9 Jun 2018

**Science in the Spotlight**

Iain McLellan (Participant)

7 Jun 2018

**Belmont Forum - BiodivERsA International Joint Call**

Iain McLellan (Reviewer)

4 Jun 2018

**Making your Research Matter Workshop**

Iain McLellan (Participant) & Kiri Rodgers (Participant)

1 Jun 2018

**Antimicrobial Resistance in the Real World**

Iain McLellan (Participant), Kiri Rodgers (Organiser) & Fiona Henriquez (Chair)

16 Apr 2018 → 17 Apr 2018

**Understanding the Environmental and Social Impact of Waste**

Iain McLellan (Organiser) & Jan Miller (Member of programme committee)

24 Mar 2018

**Royal College of Physicians of Edinburgh: Respiratory Medicine**

Iain McLellan (Invited speaker)

7 Mar 2018

**Meeting with BREATH partners for Queen's University Belfast**

John Lockhart (Host), Anne Crilly (Participant), Gary Litherland (Participant), Andrew MacKenzie (Participant), Lorraine Martin (Visitor), Iain McLellan (Participant) & Andisheh Bakhshi (Participant)

27 Feb 2018

**COST ReCrew Workshop**

Andrew Hursthouse (Chair), Iain McLellan (Organiser) & Jan Miller (Organiser)

22 Feb 2018

**Brownfield Land Scotland 2018**

Iain McLellan (Chair)

7 Feb 2018

**UWS COPD Minisymposium**

John Lockhart (Host), Gary Litherland (Speaker), Anne Crilly (Participant), Marija Stankovic (Speaker), Andrew MacKenzie (Participant), Andisheh Bakhshi (Participant), William R. Ferrell (Participant), Charles McSharry (Participant), Caroline Sime (Participant), Iain McLellan (Participant), Kevin Rooney (Participant), Kirsty McCallum (Speaker), Kimberly Black

(Speaker), Mark Thomas (Speaker), Mariarca Bailo (Speaker) & Fawziye Tarhini (Speaker)  
26 Jan 2018

**Scottish Government Air Quality Seminar 2018**

Iain McLellan (Participant)  
22 Jan 2018

**Meeting with Finlay Carson (MSP) in Scottish Parliament**

John Lockhart (Visitor), Gary Litherland (Visitor), Anne Crilly (Visitor), Iain McLellan (Visitor) & Finlay Carson (Host)  
10 Jan 2018

**Meeting with Ricardo plc on Air Quality (BREATH)**

John Lockhart (Participant), Iain McLellan (Participant), Nicola Masey (Host), Stuart Sneddon (Host) & Scott Hamilton (Host)  
23 Nov 2017

**Royal Society of Chemistry; Early Career Workshop on Diagnostics for Antimicrobial Resistance**

Kiri Rodgers (Participant) & Iain McLellan (Invited speaker)  
20 Nov 2017

**Public Engagement: Planning meeting with D&G Council Managers**

John Lockhart (Participant), Anne Crilly (Participant), Gary Litherland (Participant), Iain McLellan (Participant), Lesley Sloan (Host), Karen Chryton (Participant) & Keith Walker (Participant)  
2 Oct 2017

**Bozhi Ren**

Andrew Hursthouse (Host), Iain McLellan (Host) & Kiri Rodgers (Host)  
25 Sep 2017 → 27 Sep 2017

**Inside Out Science @UWS**

Iain McLellan (Contributor)  
8 Jun 2017

**Mission Discovery**

Anne Crilly (Examiner) & Iain McLellan (Examiner)  
Jun 2017

**UWS Crucible 2017**

Iain McLellan (Participant)  
19 Apr 2017 → 6 Jun 2017

**Air Quality Impact Assessment Reports**

Iain McLellan (Organiser)  
15 Feb 2017

**Scottish Air Quality Seminar 2017**

Iain McLellan (Participant)  
24 Jan 2017

**Heliyon**

Iain McLellan (Reviewer)  
5 Oct 2016

**Social Media for Research Impact**

Iain McLellan (Participant)

10 May 2016

**I'm a Scientist...**

Iain McLellan (Contributor)  
7 Mar 2016 → 18 Mar 2016

**Creating a more Resilient Scotland Conference**

Iain McLellan (Speaker)  
24 Feb 2016

**Environmental Protection Scotland (External organisation)**

Iain McLellan (Member)  
1 Aug 2015

**Scottish Air Quality Website and Database Annual Conference**

Iain McLellan (Participant)  
26 Mar 2015

**Understanding the state of the environment**

Iain McLellan (Participant)  
13 Mar 2015

**BS4142: What do the changes mean for me?**

Iain McLellan (Organiser)  
12 Mar 2015

**An Introduction to the Contaminated Land Regime**

Iain McLellan (Organiser)  
13 Feb 2015

**E-cosse: The Future of Electric Mobility**

Iain McLellan (Participant)  
17 Dec 2014

**Cleaner Air for Scotland**

Iain McLellan (Organiser)  
1 Dec 2014

**STEP Conference 2014 - Cleaner air, Healthier places**

Iain McLellan (Participant)  
18 Nov 2014

**UK Green Investment**

Iain McLellan (Participant)  
27 Oct 2014

**SEIG Seminar - A Smarter Way to Lower Emissions**

Iain McLellan (Participant)  
21 Oct 2014

**Environmental Protection UK - Annual Conference**

Iain McLellan (Participant)  
16 Oct 2014



**Risk Communication**

Iain McLellan (Organiser)  
9 Oct 2014

**Living With Environmental Change Health Conference**

Iain McLellan (Participant)  
25 Sep 2014

**Review of the antisocial behaviour noise provisions**

Iain McLellan (Organiser)  
22 May 2014

**Scottish Air Quality Website and Database Annual Seminar**

Iain McLellan (Participant)  
26 Mar 2014

**The Science and Regulation behind fracking**

Iain McLellan (Organiser)  
24 Mar 2014

**Noise and Statutory Nuisance**

Iain McLellan (Organiser)  
16 Jan 2014

**Particulate Matter: Impacts, Challenges and Solutions**

Iain McLellan (Participant)  
10 Dec 2013

**Noise and Statutory Nuisance**

Iain McLellan (Organiser)  
5 Dec 2013

**STEP 1 Conference**

Iain McLellan (Participant)  
13 Nov 2013

**Detailed Human Health Risk Assessment: nuts and bolts**

Iain McLellan (Organiser)  
8 Nov 2013

**Review of Local Air Quality Management workshop**

Iain McLellan (Organiser)  
15 Aug 2013

**Scottish Air Quality Website and Database Annual Conference**

Iain McLellan (Participant)  
28 Mar 2012

**Society for Environmental Geochemistry & Health. International Meeting**

Iain McLellan (Speaker)  
29 Jun 2010

**Society for Environmental Geochemistry and Health**

Iain McLellan (Speaker)

29 Aug 2009