

Sam Illingworth PhD

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Summary

An [Associate Professor](#) and award-winning researcher in science communication and interdisciplinary studies. My research involves using poetry and games to engender meaningful dialogue between scientists and society, and I have secured over £450,000 in funding from a range of external funding bodies. I have an MA in Higher Education and am a Principal Fellow of the Higher Education Academy, with over 70 publications and a h-index of 20. I am also a poet, game designer, Chief Executive Editor of [Geoscience Communication](#) and founder of the poetry journal [Consilience](#).

Employment History

Associate Professor, Edinburgh Napier University, UK

(February 2021 – Present)

My responsibilities include researching pedagogic practice, co-leading the Centre for Higher Education research, and helping to embed innovative teaching and learning strategies across the University.

Senior Lecturer in Science Communication, The University of Western Australia, Australia

(April 2020 – February 2021)

Programme Leader for the undergraduate and postgraduate Science Communication courses, I was also responsible for integrating science communication provisions throughout the University's teaching portfolio.

Lecturer & Senior Lecturer in Science Communication, Manchester Metropolitan University, UK

(May 2014 – April 2020)

Programme Leader for the BSc in Environmental Science and the MSc in Science Communication, where I embedded interdisciplinary pedagogy into the course design and course management.

Postdoctoral Research Assistant, University of Manchester, UK

(October 2012 – May 2014)

My research was primarily concerned with using satellites, aircraft and drones to make measurements of greenhouse gases. I also devised and delivered an interdisciplinary, undergraduate unit that taught students how to communicate effectively using theatrical technique.

Daiwa Scholar, Daiwa Anglo-Japanese Foundation

(September 2010 – April 2012)

I was selected as a 2010 Daiwa Scholar, and lived and worked in Tokyo, Japan. As part of the scholarship I devised a course at the Tokyo Institute of Technology (which was centred on the need for effective communication in scientific research) and was an invited lecturer at Tsinghua University in Beijing, China.

Education

MA in Higher Education (Merit), Manchester Metropolitan University, UK

(September 2015 – July 2016)

My dissertation was a piece of action research which involved working with undergraduate and postgraduate students from across Manchester Metropolitan University to determine how collaborative writing groups could be used to counteract student disengagement.

Postgraduate Certificate in Academic Practice (Distinction), Manchester Metropolitan University, UK

(September 2014 – July 2015)

A nationally recognised qualification for teaching and academic practice in Higher Education.

PhD: ‘The Suitability of the IASI instrument for Observing CO from Space’, University of Leicester, UK
(October 2007 – September 2010; graduated July 2011)

In my thesis, I investigated the capability of the Infrared Atmospheric Sounding Interferometer (IASI) satellite to measure atmospheric concentrations of carbon monoxide. In my second year, I was awarded the prize for the best communication skills of any postgraduate student in the University.

MPhys (four-year degree) in Physics with Space Science and Technology (First Class Honours degree – 87%), University of Leicester, UK
(September 2002 – July 2006)

In my second year, I was awarded the Phillips Prize, in recognition of achieving the highest mark in my year. Furthermore, in my final year I was awarded the Departmental Prize, in appreciation of having achieved the highest overall degree mark in my graduating class.

Key Skills

Communication:

In 2023 I was awarded the [Katia and Maurice Krafft Award](#) from the European Geosciences Union for my work in developing innovative and inclusive methods for engagement. As well as my research in this field, I have also run many different public engagement activities, and over the last four years I have directly engaged with over 20,000 people, developing and delivering a variety of different initiatives ranging from science fairs and classroom visits to poetry performances and science and art exhibitions. My blog, [The Poetry of Science](#) was shortlisted for the Best Science Blog in the UK 2018 by the Association of British Science Writers and has an annual readership of 100,000+. The accompanying [podcast](#) has over 150,000 listens. In addition to this I am very active on X ([@samillingworth](#)), where I post about interdisciplinary research and practice to my 7,800+ followers. Furthermore, over the past two years I have run innovative and interdisciplinary science communication training workshops for over 2,000 scientists for, amongst others: the Royal Society, the British Science Association, the National Coordinating Centre for Public Engagement, and the Science and Technology Facilities Council.

Media

My research has generated a significant amount of local, national, and international media coverage. For example, I have written and presented [several programmes for the BBC](#), and have had my work featured by [Scientific American](#), [Buzzfeed](#), and the [Times Higher Education](#). I have written articles for [Nature](#), [The Public Library of Science](#), and [The Conversation](#) that argue for an interdisciplinary relationship between Arts and Sciences. Over the past two years my research has generated a reach of over 400 million people via different media outlets (source: Edinburgh Napier University Press Office).

Teaching:

In my current role I lead on embedding innovative and engaging pedagogy across the University, as part of the [Department of Learning and Teaching Enhancement](#) and the [Centre for Higher Education Research](#). I have been Programme Leader for several undergraduate and postgraduate provisions in higher educational institutes across the world, and I provide bespoke training to undergraduates, postgraduates, and members of staff on how to develop dialogues about their research with the wider society. I have a Postgraduate Certificate in Academic Practice, an MA in Higher Education, and am a Principal Fellow of the Higher Education Academy. I have three PhD completions.

Teamwork and Leadership:

I am the founder of the interdisciplinary journal [Consilience](#), an organisation with 90 volunteers working across six continents. From 2013 to 2015 I was the representative for early career researchers at the European Geosciences Union (EGU), a role that involved the representation of over 7,000 postgraduate and early career scientists. I am currently a Fellow of the Young Academy of Scotland, and I have also been a member of the EGU Programme Committee, an elected member of the Institute of Physics’ Communicators Group, and the President of Leicester University Theatre.

Writing:

I am the Chief Executive Editor of [Geoscience Communication](#), and serve as Associate Editor for several other peer-reviewed, interdisciplinary journals. As well as writing scholarly papers, books, and scientific, I also run [Consilience](#), a peer-reviewed poetry journal. Outside of research, I have run several successful writing workshops

and have also written for the radio and stage. Several of my theatrical works have been performed in the UK, including by the Royal Shakespeare Company, and I have performed my poetry across the world at numerous spoken word events, including the Edinburgh Festival Fringe and the Green Man music festival.

Selected Funding

I have secured over £450,000 in funding from a range of external funding bodies. Listed below is a selection of the funding that I have secured from external funding bodies, and my role in these projects.

Leverhulme Trust, 2023, *Investigating the Experiences of ChatGPT and AI by Students in UK Universities*, 24 months, £142,762.

I am the PI for this project, which involves a mixed methods approach to better understanding how students are using AI in their learning and teaching journeys across UK universities.

HCI Skills Gateway, 2022, *SMOG*, 6 months, £4,950.

I was the PI for this project, which involved creating a card game to develop dialogue around indoor air quality with schoolchildren across the UK.

Arts Council England, 2021, *Experimental Words 2*, 6 months, £14,750.

I was the PI for this project, which pairs scientists and poets together to create a spoken word album that explores the liminal spaces between the two disciplines.

Kickstarter, 2020, *Carbon City Zero: World Edition*, 3 months, £20,620.

I was the PI for this project, which was successful in raising funds to create a card game about the race to become the world's first carbon zero city.

Arts and Humanities Research Council, 2018, *The Imitation Game: Artificial Intelligence in Analogue and Digital Games*, 36 months, £56,000.

I was a supervisor for the PhD that this funding is attached to, which will cover the tuition fees and student stipend for the duration of the project.

Natural Environmental Research Council, 2017, *Climate Consortium*, 12 months, £119,000.

I was a co-investigator for this project, which aimed to coordinate and enhance the significant existing expertise and knowledgebase in the UK on public engagement with climate change. I oversaw managing Work Package 2: developing methods of co-production through an interdisciplinary approach, plus identifying audiences and networks.

Selected Publications

Total publications: 72; h-index: 20; i10-index: 39; citations: 1779 (source: Google Scholar)

1. Illingworth, S. and Radhakrishnan, M. (2023) "I am here because I wanted to shine": how poetry can be used to better understand undergraduate students' first-year chemistry or related course experiences', *Chemistry Education research and Practice*. doi:[10.1039/D2RP00276K](https://doi.org/10.1039/D2RP00276K)
2. Illingworth, S. (2022) *Science Communication through Poetry*. London: Springer Nature.
3. Illingworth, S. and Wake, P. (2021) 'Ten simple rules for designing analogue science games', *PLoS Computational Biology*, 17(6), e1009009. doi:[10.1371/journal.pcbi.1009009](https://doi.org/10.1371/journal.pcbi.1009009)
4. Illingworth, S. and Allen, G. (2020) *Effective Science Communication: A Practical Guide to Engaging as a Scientist*, 2nd ed. Bristol: IOP Publishing Ltd.
5. Illingworth, S. (2019) *A sonnet to science: scientists and their poetry*. Manchester: Manchester University Press.

A full list of my publications can be found via my [ORCID](#) profile.