

PROFESSIONAL CAREER

2011-Now	Professor of Mathematical Geoscience <i>The University of Edinburgh, Scotland</i>
2017-2019	Guest Professor [50% position, 2 years] <i>ETH Zurich, Switzerland</i>
2005-2011	Reader of Exploration Geophysics <i>The University of Edinburgh, Scotland</i>
1997-2005	Senior Research Scientist then Principal Research Scientist <i>Schlumberger Cambridge Research, England (Grade A, "Outstanding", 5 years)</i>
2000-2001	Global Corporate Business Venturing Champion <i>Schlumberger plc.: Architect and Co-Manager of global entrepreneurial venturing unit</i>
1994-1997	Postdoctoral Research Fellow <i>Dept. of Theoretical Geophysics, The University of Utrecht, The Netherlands.</i>

EXTERNAL APPOINTMENTS

2025-2028	Governing Council Member , Royal Astronomical Society
2024-2025	Equality, Diversity & Inclusion Officer , British Geophysical Association
2022-2025	President , British Geophysical Association
2022-2024	Vice President (Geophysics) , Royal Astronomical Society
2013-2015	President , Sci. Advisory Committee, RESIF (French Seismic Network Expansion)
2007-2013	Honorary Fellow , Heriot-Watt University, United Kingdom
2007-2011	Director, Edinburgh Seismic Research (ESR) <i>Then the UK's largest academic centre of Exploration Geophysics research</i>
2011-2011	Visiting Professor , University of Victoria, Wellington, New Zealand
2011-2011	Visiting Scientist , Institute of Geological and Nuclear Sciences, New Zealand
2006-2006	Invited Visiting Professorship , l'Université de Paris, Orsay, France
2001-2002	Co-Founder, UK Corporate Innovation & Venturing Society (15 corporations)

SELECTED INTERNAL APPOINTMENTS

2023-2026	Director of Industrial Engagement , School of Geosciences, Univ. of Edinburgh
2011-2013	Head, Institute of Earth & Planetary Science , University of Edinburgh
2001-2004	Co-Founder and Leader, Schlumberger Mathematics Technical Community <i>International Professional Society (>1500 members by 2004)</i>

UNIVERSITY EDUCATION

1990-1994:	D. Phil. in Geophysics – University of Oxford, England Supervisors: Prof. P. England, FRS; Prof. J. H. Woodhouse, FRS
1986-1990:	B. Sc. Honours in Mathematics (First Class) – University of Edinburgh, Scotland

PRIZES & AWARDS

2017	Reginald Fessenden Award from the Society of Exploration Geophysics (SEG)
2014	Edinburgh University Students Union Prize for teaching of transferable skills
1992 & 1993	Texas Instruments Computing Scholar – Green College Oxford

PRIZES FOR CURTIS'S PH.D. STUDENTS' THESES

Dirk-Jan van Manen won EAGE's 2007 **Van Weelden Award** for best thesis, SEG's 2008 **J. Clarence Karcher Award** for best contribution to science, and runner up in the Royal Astronomical Society's 2008 **Keith Runkorn Ph. D. Thesis Prize**

David Halliday won EAGE's 2010 **Van Weelden Award** for best thesis, SEG's 2013 **J. Clarence Karcher Award**, and the Royal Astronomical Society's 2010 **Keith Runkorn Ph. D. Thesis Prize**

Matteo Ravasi and Atif Nawaz won the Royal Astronomical Society's **Keith Runkorn PhD Thesis Prize** in 2015 and 2020, and Matteo won Italy's **Gustavo Sclocchi PhD thesis prize** in 2015

Robbert van Vossen & Ueli Meier both awarded **Cum Laude** (Top 5% of all Dutch PhD theses)

OTHER PROFESSIONAL SERVICE

Editorial Boards

2024-Now	Member, Editorial Board, <i>Edinburgh Student Journal of Science</i>
2021-2023	Guest Editor, <i>Comptes Rendus, Special Issue on Imaging and Monitoring</i>
2021-2023	Guest Editor, <i>J. Geophys. Research, Special Issue on Machine Learning</i>
2007-2011	Member, Editorial Board, <i>Petroleum Geoscience</i>
2004-2011	Editor, <i>Geophysical Journal International</i>
2002-2004	Editor, <i>Geol. Soc. London Special Pub., Geological Prior Information</i>

Committee and Panel Membership

2024-2025	Member, Royal Astron. Society, Diversity in Astronomy & Geophysics Com.
2022-2024	Member, Royal Astron. Society, Awards Committee
2022-Now	Member, Society of Exploration Geophysics, and EAGE CO ₂ Sub-Committees
2017-2022	Member, European Assoc. Geoscientists & Engineers (EAGE), Awards Committee
2014-2015	Member, University of Edinburgh's Divestment Review Group
2012-2018	Member, Directorate of the Scottish Centre for Carbon Capture and Storage
2010-2013	Chair, Board of Examiners, Earth & Planetary Science, Univ. Edinburgh
2009-2013	Deputy Director, ECOSSE Joint Research Institute
2008-2010	Program Director, Geophysics degrees, University of Edinburgh
2007-Now	Member, Society of Exploration Geophysics Research Committee
2000-2000	Member, 'Workplace 21': International project designing workplaces of the future

Assessment and Advisory Committees

2025-2015:	Member, external review panel, Earth Science research, Aarhus University, Denmark
2019-2019:	Member, external review panel, Centre for Data Assimilation, University of Potsdam
2016-2016	Advisor to Scottish Government, risks from unconventional energy
2010-2010	Member, HEFCE pilot panel for R.E.F. in Earth Systems & Environ. Sci.
2003-2004	Member of Industrial Advisory Board, Alan Turing Institute of Mathematics, University of Manchester

RESEARCH, PATENTS & PUBLICATIONS SUMMARY

My research spans multiple disciplines, applications & professional sectors, exploring boundaries of academic and applied science. I develop & mentor an excellent team of scientists – vital to maintaining this breadth.

- 16 previous/current Post-doctoral Researchers exploring fields of imaging & monitoring, artificial intelligence, experimental design, uncertainty & risk, expert elicitation, and seismic interferometry
- 42 previous PhD students, 27 as 1st supervisor. Also 8 current PhD students (4 as 1st supervisor)
- 200+ Publications in internationally peer-reviewed journals
- 11,000+ Citations (July 2021) – Google Scholar (*ScholarOne* does not measure some industrial journals)
- 6 Patents granted; 60+ confidential industrial reports
- **Up-to-date publications and further details listed at:** <https://blogs.ed.ac.uk/curtis/>

KNOWLEDGE TRANSFER OUT OF ACADEMIA

- Codes, reports & training released annually to industry from research consortium (since 2010)
- Our research fed into WesternGeco's revolutionary Over-Under Recording technology for seismic imaging – the first outsourcing of strategic research by that company (2007-2010)
- Survey design methods transferred to Total in Knowledge Transfer Partnership (2007-2010)
- Ph. D. students feed research directly into industrial partners R&D through annual placements

In Schlumberger plc.: Co-created global corporate venturing unit for which \$50M was reserved.

PRINCIPAL RESEARCH GRANTS (only my personal components of total funding are listed)

University of Edinburgh: >£7M, of which ~50% is Industrial, ~50% Research Council

- Co-PI, SPIN EU Innovative Training Network (3.8M euros overall) £485K
- PI, Edinburgh Interferometry Project, Multiple industrial sponsors £2.5M
- PI, Industrially sponsored postdoc and PhD on Geological Prior Information £400K
- Co-PI, WAVES EU Innovative Training Network (3.5M euros overall) £450K
- PI, Industrially sponsored Post-doctoral Research Fellow on Seismic Processing £315K
- Co-PI, CASSEM (£2.2M overall, incl. 2 postdoc's = £460K to me) £460K
- PI, Knowledge Transfer Partnership on experimental and survey design £180K
- PI, Sponsorship of Chair of Mathematical Geoscience £266K
- PI, 5 NERC Industrial/Open CASE Ph. D.'s + Industrial Costs £382K
- PI, Total plc. Ph. D. studentship £96K

TEACHING & SCHOLARSHIP

- In 2014 I re-designed the concept of the 3 Geophysics degrees taught at University of Edinburgh: all Geophysics staff agree that the changes have improved the degree across the board
- Designed & taught undergrad. courses: "Exploration Geophysics", "Exploration Seismology", "International Geophysics Field Trip", "Geology Field Trip (Spain)", "Wave Theory", "Ethics"
- Designed & taught postgraduate course: "Exploration Geophysics"
- Designed & taught parts of professional development course: "Subsurface waste & CO₂ Storage"
- Supervised ~twice as many undergraduate research projects as other staff due to student demand
- Nominated 4 times for Edinburgh University Students Union teaching awards (won it in 2014)

INVITED LECTURES AND KEYNOTES

2026: Keynote, British Seismology Meeting, Leeds

2026: AIMS Conference on dynamical systems, differential equations and applications, Athens.

2026: MARUM Research Seminars, University of Bremen

2025: Keynote, Society of Exploration Geophysics Workshop, Uncertainty Quantification in FWI, Houston

2025: Society of Exploration Geophysics Workshop, Recent advances in Applied Math and potential applications in Seismic Imaging and Analysis, Houston

2025: BISCA Conference, Sustainable Futures UK: Harnessing AI Today, Preparing for Tomorrow's Intelligence, Birmingham

2025: AI 4 Seismology, University of Leipzig

2025: 15th International Conference on Monte Carlo Methods and Applications (MCM), Chicago

2025: RockTalks, University of Aachen

2025: Workshop on Uncertainty Quantification for Dynamical Modelling, Edinburgh;

2024: Keynote, EAGE Annual Meeting Workshop, 4D Full Waveform Inversion, Oslo

2024: Keynote, Anglo-French Physical Acoustics Conference, Luss

2024: Seminar in ERC TECTONIC Series on "The Physics of Earthquake Faulting"

2024: AAPG Geological Process-Based Forward Modeling, Abu Dhabi

2024: EAGE Workshop on the Role of Artificial Intelligence in Full Waveform Inversion, Colombia

2024: EAGE Annual Meeting Workshop, Compressive Sensing, Oslo

2024: International Centre for Mathematical Sciences Workshop, Imaging inverse problems and generating models: sparsity and robustness versus expressivity, Edinburgh

2024: Machine Learning in Solid Earth Geoscience, Santa Fe

2023: Cambridge Geophysics Seminar, University of Cambridge

2023: Geophysics Seminar, University of Oxford

2023: NATO Sensors and Electronics Technology Panel Specialists Meeting, New Mathematical Frontiers for Multidimensional Radar Systems, Edinburgh

2023: Shearwater Seminar, London

2023: Keynote, EAGE/SBGf Workshop on Reservoir Monitoring and its Role in the Energy Transition, Rio de Janeiro

2022: Departmental Seminar, University of Namibia, Keetmanshoop

2022: Society of Exploration Geophysics Workshop, Subsurface Uncertainty Description and Estimation, Houston

2022: Virtual workshop on mathematical modelling and inversion, Nanyang Technological University (NTU), Singapore

2022: Webinar Series: Imaging & Interrogating the Earth's Subsurface, Indian Institute of Technology, Dhanbad, India

2021: Guest Speaker, AI/Machine Learning in Physical Acoustics, Institute of Physics

2021: Society of Exploration Geophysics Workshop, Seismic Interpretation and Artificial Intelligence, Abu Dhabi

2021: Machine Learning Workshop, Total plc. Research and Development

2021: Machine Learning in Solid Earth Geoscience, Los Alamos National Laboratory

2021: Passive seismology summer school, Passive imaging and monitoring in wave physics: from seismology to ultrasound, Institut d'Études Scientifiques de Cargèse, Corsica

2020: EGU General Assembly, Advances in theoretical and computational seismology session

2020: Earth Science Seminars, KAUST, Saudi Arabia

2020: GeoScience and GeoEnergy Webinar Series, Heriot-Watt University and Delft University of Technology

2020: SIAM Imaging Science meeting, Advances in Uncertainty Quantification for Subsurface Inverse Problems, Toronto

2019: Keynote in EAGE Workshop "Uncertainty quantification in seismic modelling and inversion"

2019: Earth Science Seminar, University of Wellington, New Zealand

2019: Talk in Summer School "Passive Seismology Summer School" Cargese, Corsica (Sept)

2019: Seminar, Institute Colloquium, University of Lausanne, Switzerland (May)

2018: Seminar in Skience Winter School on Machine Learning

2018: Seminar, Institute Colloquium, ETH Zurich, Switzerland

2018: Seminar in Skience Winter School on Rotational Seismology

2018: Talk in SPE workshop on Upstream Data Analytics and Machine Learning

2017: Keynote in Workshop: Velocity Uncertainties Derived from Seismic Depth Imaging and their Use in Risk Analysis, EAGE Conference & Exhibition, Paris

2017: Seminar, "Computational Challenges in Image Processing", Isaac Newton Institute, Cambridge

2017: Two invited seminars broadcast to Schlumberger's worldwide Technical Community

2017: Acoustical Society of America Spring Meeting on "Passive Acoustic Inversion using Sources of Opportunity".

2017: Talk in Lofoten Seminaret, Lofoten Islands, Norway

2017: Talk in TIDES Summer School on Seismic Tomography: Theory, Inversion, Uncertainties", Oxford University

2017: Talk in New mathematics for a safer world, International Centre for Mathematical Sciences, Edinburgh

2017: Talk in Summer School "Ambient Noise Imaging and Monitoring" Cargese, Corsica.

2017: Seminar, Departmental Series, University of Utrecht, The Netherlands

2016: Seminar, Departmental Series, DIAS, Dublin, Ireland

2016: Public Lecture for the Institute for Mathematics and its Application (IMA), Glasgow

2016: Talk in Total Research Open Event

2016: Seminar, University of Edinburgh School of Medicine & Veterinary Science

2016: Talk in Royal Society of Edinburgh, RSE-NSFC (China) Joint Project Workshop