



Jonathan DAWES — Curriculum Vitae

Links to: [personal web page](#) [Google Scholar](#)

Jonathan Dawes is a collaborative and strategic scientific leader with a very broad range of experience across disciplines, developing and delivering projects with external partners in industry and with non-profit and voluntary organisations. His research in applied mathematics spans dynamical systems, mathematical biology, fluid and solid mechanics, and network science.

In 2015 he founded and led Bath's [Institute for Mathematical Innovation](#), a University-wide Research Institute linking with natural and social sciences, engineering, business and industrial partners.

EMPLOYMENT / LEADERSHIP ROLES

- 2023 – EPSRC Deputy Executive Chair, UKRI (on secondment)
- 2021 – 2023 Head of Group: Pure and Applied Mathematics, University of Bath
- 2014 – Professor of Applied Mathematics, University of Bath
- 2015 – 2020 Director and co-founder, Institute for Mathematical Innovation, University of Bath
- 2013 – 2022 Deputy Director, Centre for Networks and Collective Behaviour, University of Bath
- 2009 – 2014 Reader in Applied Mathematics, University of Bath
- 2004 – 2008 Lecturer and Director of Studies in Mathematics, Newnham College, Cambridge

EDUCATION

- 1997 – 2001 PhD. Dept of Applied Mathematics and Theoretical Physics, University of Cambridge
- 1996 – 1997 Certificate of Advanced Study in Mathematics, University of Cambridge (Distinction)
- 1993 – 1996 BA Mathematics, University of Cambridge (First Class)

FELLOWSHIPS AND AWARDS

- 2019 – Fellow of the Institute of Mathematics and its Applications (FIMA), by invitation
- 2007 – 2015 University Research Fellowship Royal Society
- 2000 – 2005 Junior Research Fellowship Trinity College, Cambridge
- 1994 – 2000 Junior, Senior and Research Scholarships Trinity College, Cambridge

RESEARCH FUNDING (RECENT, SUMMARY)

- PI: Daphne Jackson Fellowship for Dr Jennifer Tweedy, Daphne Jackson Trust, 2022 - 2025: £147k.
- PI: EPSRC New Horizons Scheme. EP/V046829/1. *Understanding Neural Networks through Dynamics*, 2021 - 2024: £197k.
- Co-I: BBSRC Responsive Mode. BB/S015906/1. *Rethinking the neural crest - a novel dynamic hypothesis of neural crest fate restriction*. 2019 - 2023: £973k.
- Co-I: EPSRC CDT in Water Informatics: Science and Engineering. EP/L016214/1. 2013–23: £5.29m.
- PI: Royal Society. University Research Fellowship and Extension. 2007 – 2015: £790k.
- PI: Research funding from the British Council, EPSRC, Leverhulme Trust, London Mathematical Society, Nuffield Foundation, Royal Society, UK FCO, US ONRG, total £354k.
- Consultancy and industry-funded work (UNICEF, UN Women, BT plc, local SMEs), total £286k.

WORKSHOP / CONFERENCE ORGANISATION (RECENT, SELECTED)

- Chair, British Applied Mathematics Colloquium (BAMC) 2019, University of Bath, April 2019.
- Workshop co-organiser, Tsinghua Int'l Mathematical Forum, Sanya, China, January 2017.

PROFESSIONAL SERVICE AND COMMISSIONS OF TRUST (SELECTED):

- Member, EPSRC Strategic Advisory Network, 2021 – 23
- Chair, EPSRC Strategic Advisory Team, Mathematical Sciences Theme, 2020–21 & Member 2018–19
- Member, Advisory Board, [UK Academy for the Mathematical Sciences](#), 2023 –
- Adviser, G20–S20 Engagement Group. Taskforce 4: Connecting the Dots, 2020
- Member, Overarching Technical Advisory Group for the Royal Academy of Engineering *Safer Complex Systems Programme*, 2020
- Academic Adviser, Commonwealth Scholarship Commission, 2019 –
- Chair, ETEC-NCAAA Accreditation Panels, Saudi Arabia, 2020, 2021, 2022, 2024
- Editor, *SIAM Journal on Applied Mathematics*, 2021 –
- Editor, *Physica D: Nonlinear Phenomena*, 2011 – 2021; Advisory Board member, 2022 –
- Peer reviewer for 50 academic journals in mathematics, physics, engineering and environmental science
- Peer reviewer for CNRS (MATH-AMSUD), IIASA Young Scientists Summer Programme, Marsden Fund, EPSRC, HK Research Grants Council, the Nuffield Foundation, London Math Society, NWO, RAEng, and the Royal Society.
- Director, [Bath Royal Literary and Scientific Institution](#) (a historic Philosophical Society), 2013 – 22

CONFERENCE PARTICIPATION / SEMINARS / EXECUTIVE EDUCATION (RECENT, SELECTED)

- Portia / GiSTER, Invitation-only webinar on gendered innovations, 15 December 2023.
- SIAM Conf on Apps of Dynamical Syst (DS23), Portland, OR, 14-18 May 2023. Invited MS speaker.
- World Science Forum, Cape Town, South Africa, 6-9 December 2022. Invited participant.
- Symposium *50 years of the Limits to Growth*, U of Clermont Auvergne, Clermont–Ferrand, Dec 2022.
- Oberseminar in Mathematical Modelling, TU Munich, 6 July 2022 [Online].
- *Unpublished Patterns of Thought: Alan Turing's last work on morphogenesis*, London Mathematical Society, Friday 4 March 2022.
- Centre for Development and the Environment, University of Bern, 27 Sept 2021 [Online].
- International Conference on Sustainable Development 2021, 20-21 September 2021. Speaker [Online].
- Workshop *Dynamics of Waves and Patterns*, MFO, Oberwolfach, Germany, 8-14 August 2021.
- Gender Summit 21, invited speaker and Panel Member for training course, 14 April 2021 [Online].
- Course leader, UAE Government Youth Leadership Programme, 2 days, October 2020 [Online].

PUBLICATIONS (RECENT, SELECTED)

60 peer-reviewed journal publications and international reports, including recently:

F.R. Waters, C.A. Yates and J.H.P. Dawes, Minimal reaction schemes for pattern formation. *J. Roy. Soc. Interface*. To appear (2024)

T. Subkhankulova, K. Camargo Sosa et al, Zebrafish pigment cells develop directly from persistent highly multipotent progenitors. *Nature Communications* **14**:1258 (2023)

J.H.P. Dawes, SDG interlinkage networks: analysis, robustness, sensitivities, and hierarchies. *World Development* **149**, 105693. (2022)

A.G. Hart, J.L. Hook and J.H.P. Dawes, Echo state networks trained by Tikhonov least squares are L^2 approximators of ergodic dynamical systems. *Physica D* **421**:132882 (2021)

J.H.P. Dawes, Are the Sustainable Development Goals self-consistent and mutually achievable? *Sustainable Development* **28**, 101–117 (2020)

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