

George Andrew Davidson Briggs

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PERSONAL DETAILS

Home Address: 5 Northmoor Road, Oxford, OX2 6UW **Phone:** +44 7983 431010

Nationality: British; Married; 2 daughters.

EDUCATION

1976-1979 Queens' College Cambridge, Theology Tripos, Chase Prize for Greek
1973-1976 Physics and Chemistry of Solids Group, Cavendish Laboratory, Cambridge, Ph.D.
1968-1971 Clothworkers' Scholar, St Catherine's College, Oxford, Physics, B.A., M.A.

APPOINTMENTS

Current

2024 Nominating Committee, VinFuture Prize
2023 Senior Advisor, Serendipity Capital
2022 Advisory Council, QpiAI
2022 Co-Founder and Executive Chair, QuantrolOx Ltd
2022 Chief Innovation Officer, LocatorX
2022 Emeritus Professor of Nanomaterials, University of Oxford
2022 Senior Research Fellow, St Anne's College, Oxford
2018 Scientific Advisory Board, Evonetix
2003 Emeritus Fellow, Wolfson College, Oxford

Previous

2002-2021 Professor of Nanomaterials, University of Oxford (Statutory Professorship)
2002-2021 Professorial Fellow, St Anne's College, Oxford
2002-2009 Director, Quantum Information Processing Interdisciplinary Research Collaboration (QIP IRC)
2002-2009 EPSRC Professorial Research Fellow
1999-2002 Professor of Materials, University of Oxford
1996-1999 Reader in Materials, University of Oxford
1984-2002 Governing Body Fellow, Wolfson College, Oxford
1984-1996 Lecturer in Metallurgy and Science of Materials, University of Oxford
1983-1984 Royal Society Research Fellow in the Physical Sciences
1982-1984 Research Associate, St Catherine's College, Oxford
1981-1993 Lecturer in Physics, St Catherine's College, Oxford
1980-1982 University of Oxford, Department of Metallurgy, Research Fellow
1979 Cambridge University Engineering Department, Research Assistant
1971-1973 Canford School, Dorset (Physics and RE, House Tutor)
1968 Glanzstoff A.G., Germany (Praktikant)

PROFESSIONAL ACTIVITIES

Current

2021 Commissioner, Anglican Communion Science Commission
2020 Board of Visitors, Pitt Rivers Museum
2019 International Advisory Board, The Faraday Institute, Cambridge
2013 Fellow, International Society for Science and Religion
2011 Member, The Lambeth Partnership
2011 Member Academia Europaea
2008 Advisory Council, McDonald Centre for Theology, Ethics, and Public Life
2008 Engineering Panel, Newton International Fellowships
2006 Science & Engineering Fellowships Committee, Royal Commission for the Exhibition of 1851
2005 Liveryman, Clothworkers' Company
2004 Fellow, Institute of Physics
2002 Freeman, Clothworkers' Company and City of London
2001 Editorial Board, *Science & Christian Belief*
1999 Honorary Fellow, Royal Microscopical Society
1977 Fellow, Cambridge Philosophical Society

Previous

2019-21 Advisory Board, LocatorX

2010-20	Director, services to Templeton World Charity Foundation by University of Oxford
2009-12	Editorial Board, <i>Journal of Physics D: Applied Physics</i>
2007-9, 2011-13	International Board of Advisors, John Templeton Foundation
2006-9, 2010-14	EPSRC Peer Review College
2005	Guest Professor, State Key Laboratory, Wuhan University of Technology, China
2005-2006	Editorial Board, <i>Nanotechnology</i>
2002-2012	Editorial Board, <i>Current Opinion in Solid State and Materials Science</i>
2002	Visiting Professor, University of New South Wales
2001-2015	Board of Management, Ian Ramsey Centre, Faculty of Theology, University of Oxford
2000-2008	Founding Director and Vice-Chair, OxLoc Ltd
2000-2002	External Examiner, Cranfield University, BSc (Hons) in Applied Science
1999	Guest Editor, <i>Ultrasonics</i>
1997-1998	Visiting Scientist, Hewlett-Packard Laboratories, Palo Alto, California
1996-2006	Director, Oxford Toppan Centre
1993-1994	Special Lectureship, University of Oxford
1992-2002	Professeur invité, Ecole polytechnique fédérale de Lausanne
1991	Select Preacher, Trinity Term, University of Oxford
1990, 1993	Visiting Faculty, Centre for Quantized Electronic Structures (QUEST), University of California at Santa Barbara
1989-1992	Research Executive Committee, British Institute of Non-Destructive Testing
1989-1991	Honorary Treasurer, Royal Microscopical Society
1986-1991	Council, Royal Microscopical Society, Chair of Materials Section
1985	British Council Visitor, New Zealand Vice-Chancellors' Committee

AWARDS

2023	ISSR Book Prize , <i>Human Flourishing: Scientific Insight and Spiritual Wisdom in Uncertain Times</i> . 'Briggs and Reiss have provided an excellent and much-needed conceptual framework for understanding "human flourishing", and how scientific developments and spiritual wisdom contribute to it. They take us through the different dimensions of human flourishing (material, relational and transcendent); the pillars of human flourishing (truth, meaning, and purpose), and discuss how all this is working itself out in different aspects of the contemporary world. Their writing is accessible and gripping, full of striking anecdotes and pithy summaries of scientific research.'
2019	Areté Literature Prize in the category of Apologetics, <i>The Penultimate Curiosity</i> .
2019	Vatican Foundation Joseph Ratzinger – Benedict XVI; Honorable Mention, Expanded Reason Awards.
2007	Oxfordshire Science Writing Competition Prize: ' <i>Molecules are Real</i> .'
1999	Honorary Fellow, Royal Microscopical Society. ' <i>This award is in recognition of your many outstanding achievements in various scanned probe microscopy techniques and their applications to the study of the mechanical and structural properties of surfaces over a very wide dimensional scale. Your recent development of the ultrasonic force microscope is an example of your innovative achievements.</i> '
1999	Metrology for World Class Manufacturing Awards: Winner (with Dr O.V. Kolosov), Category 1, Frontier Science and Measurement. "Ultrasonic Force Microscopy (UFM)", ' <i>Kolosov and Briggs have demonstrated the effect on various materials and shown that UFM is capable of both high resolution and quantitative measurement.</i> '
1994	Buehler Technical Paper Merit Award for Excellence. "Depth measurements of short cracks in perspex with the scanning acoustic microscope." <i>Materials Characterization</i> 31 , 115-126 (1993), reprinted in <i>Materials Characterization</i> 39 , 653-644 (1997).
1986	Holliday Prize, Institute of Metals, ' <i>for his outstanding research and development in the field of scanning acoustic microscopy and for the application of this novel technique to the solution of materials problems.</i> '

PAPERS, PATENTS & BOOKS

I have published over 650 books and articles, the majority in internationally peer reviewed journals. Many are listed at <https://scholar.google.com/citations?user=hQLefQ8AAAJ&hl=en>; total citations = 30,576; h-index = 83. Preprints are available at <https://arxiv.org/search/quant-ph?searchtype=author&query=Briggs%2C+G+A+D>. **Active patents** (priority; published): Atomic clock (G.A.D. Briggs, A. Ardavan. 29/6/07; 14/10/10); Method for forming nano-gaps in graphene (G.A.D. Briggs, J.A. Mol, 11/7/14; 25/5/17); Coupled quantum dot memristor (Y. Li, S.C. Benjamin, J.A. Mol, G.A.D. Briggs. 22/4/16; 21/2/19); Oscillation device (G.A.D. Briggs, E.A. Laird, K. Porfyrikis, 16/3/20; 23/9/21). **Selected books:** [Acoustic Microscopy](#), Andrew Briggs (Oxford: Clarendon Press 1992; 2nd Edn with Oleg Kolosov 2010). [Human Flourishing: scientific insight and spiritual wisdom in uncertain times](#), Andrew Briggs and Michael. J. Reiss (Oxford University Press 2021). '*The theme of this highly readable and enlightening book is broad and ambitious. It's the product of the authors' deep engagement with science, ethics and religion, and analyses the requisites for a fulfilled life, highlighting those that too often elude politicians and economists. The text is enlivened with historical allusions and*

quotations. It offers a wise perspective that's much needed as individuals and societies contend with the anxieties of the present era.' – **Lord Martin Rees FRS**. 'The struggle for human beings to integrate a thoughtful understanding of the world as described by science and an ambitious hope of human flourishing as described by philosophy or faith is one at which humans have largely failed over the last three hundred years. This book is a major step in the right direction. It is very serious about science and very serious about human beings and their hopes and fears. I warmly commend it for a careful and thoughtful provocation towards a deeper commitment to the flourishing of human beings and of the creation.' – **Justin Welby, Archbishop of Canterbury**. 'In a world where human flourishing seems somewhat more elusive and abstract than ever, Professors Briggs and Reiss capture the many dimensions of human flourishing in the 21st century. In doing so, they give us reason to hope and to work toward a world where all people flourish. This is a delightful and uplifting treatise on what it means to be human.' – **Heather Templeton Dill, President, John Templeton Foundation**. [It Keeps Me Seeking: The Invitation from Science, Philosophy and Religion](#). Andrew Briggs, Hans Halvorson, and Andrew Steane (Oxford University Press 2018). [The Curious Science Quest](#) series (6 books for children). Julia Golding, Andrew Briggs and Roger Wagner (Lion Hudson 2018-2019). [The Penultimate Curiosity: How science swims in the slipstream of ultimate questions](#). Roger Wagner and Andrew Briggs (Oxford University Press 2016; paperback 2019, translated into Portuguese, Spanish, and Chinese; two part [documentary film](#) available for streaming).

RESEARCH SUPERVISION

81 doctoral students have graduated under my supervision. Many are in positions of leadership and responsibility in industry, commerce, teaching, and government. 13 members of my laboratory have won Royal Society University Research Fellowships: Martin Castell, Simon Benjamin, David Bowler, Andrei Khlobystov, Brendon Lovett, Rachel Oliver, Gavin Morley, John Morton, Jamie Warner, Lapo Bogani, Alex Robertson, Natalia Ares, and Junjie Liu; 2 have won RAEng fellowships, Edward Laird and Jan Mol. They have between them won 10 ERC grants, 5 EPSRC Fellowships, a UKRI Future Leaders Fellowship, 6 Oxford College Junior Research Fellowships, 3 Glasstone Fellowships, 3 Science & Engineering Fellowships of the Royal Commission for the Exhibition of 1851, 4 Marie Skłodowska-Curie Fellowships, a Royal Society Newton Fellowship and a Templeton Independent Research Fellowship. At least 37 former members of my laboratory have been appointed to tenured academic posts: Mike Somekh FEng (Nottingham, HKPU), John Weaver (Glasgow), Alfred Huan (NUS), Richard Tew (Nottingham), Martin Castell (Oxford), Ilan Goldfarb (Tel Aviv), Oleg Kolosov (Lancaster), Tchavdar Todorov (QUB), David Bowler (UCL), Rachel Oliver FEng (Cambridge), Simon Benjamin (Oxford), John Morton (UCL), Erik Gauger (Heriot-Watt), Gavin Morley (Warwick), Stephanie Simmons (SFU), Bryan Huey (Connecticut), Andrei Khlobystov (Nottingham), Andrew Watt (Oxford), Dan Browne (UCL), Pieter Kok (Sheffield), Géraldine Dantelle (CNRS), Brendon Lovett (St Andrews), Haoli Zhang (Lanzhou), Erik Gauger (Heriot-Watt), Yasuo Ito (Argonne NL), Jun Luo (Tsinghua, Tianjin UT), Peter Rohde (UT Sydney), Guzman Gil-Ramirez (Lincoln), Ying Li (GSCAEP Beijing), Fabien Silly (CNRS), Ahsan Nazir (Manchester), Jamie Warner (Oxford, UT Austin), Edward Laird (Lancaster), Jan Mol (QMUL), Kyriakos Porfyarakis (Greenwich), Natalia Ares (Oxford), James Thomas (QMUL).

RESEARCH FUNDING

QuantrolOx, of which I am Executive Chair, has been awarded funding of £30k from NQCC, £182k from UKRI ISCF, €252k from Business Finland, and €10.5M from the European Innovation Council (€2.5M as grant and €8M as equity) "The company is of strategic importance for EU sovereignty in quantum computing."

A list of research council funding since 1987 is at <https://gow.epsrc.ukri.org/NGBOViewPerson.aspx?PersonId=77862>; total 15 grants to a value over £40 million, of which I am PI on 12 grants to a value of nearly £27 million.

Major EPSRC grants as PI since 2000 include: IRC in Quantum Information Processing, 2004-09, £10,081,417; Platform Grant, Molecular Quantum Devices, 2013-18, £1,207,705; Quantum Technology Capital, 2016-19, £1,445,889; Programme Grant, Quantum Effects in Electronic Nanodevices (QuEEN), 2016-22, £5,296,044; Platform Grant, From Nanoscale Structure to Nanoscale Function (NS2NF), 2018-24, £1,530,594.

Major grants from international philanthropies since 2010 amount to nearly £17 million, mostly as PI. Over that period I have received 9 donations from private individuals and philanthropies to a value over £700k.

From 2010-20, I directed the services provided by University of Oxford for Templeton World Charity Foundation. Over 100 grants developed at Oxford were approved for funding by the trustees to a total value of nearly \$110 million.

RECENT INVITED LECTURES & ENGAGEMENT (SELECTION)

I have given over 750 invited papers and lectures at national and international conferences, workshops and seminars. The following is a varied selection of lectures and other engagement activities since 2015.

Fully autonomous tuning of a spin qubit. Technology and Humanity (DFGI-10); Austrian Embassy London, 18-19 September 2024.

Accelerating quantum progress through machine learning. 10th International Conference on Quantum Information and Quantum Control (CQIQ-X); The Fields Institute, Toronto, 26 – 30 August 2024,

Transdisciplinary research for AI in science. Machine Learning and Quantum Physics; Universitätszentrum Obergurgl, Austria, 24 March – 1 April 2024.

From clocks to qubits. Institute for Quantum Studies, Chapman University, California, 14-18 August 2023.

Accelerating quantum technologies through machine learning. Inaugural Workshop on the Trends in Quantum Matter; University of Notre Dame, Indiana, 18-19 May 2023.

Five possibilities and three challenges for quantum computing, Technology and Humanity (DFGI-8); Japan House, London, 5-6 October 2022.

AI, Democracy and Human Flourishing. Svenska kyrkan Vetenskapsfestivalen, Gothenberg, 17 April 2021.

Policy Report: *Citizenship in a Networked Age*. 1 May 2020; associated videos, podcasts, and blogs also available.

Broadcast: *Questioning*. BBC Radio 4, 17 February 2019. <https://www.bbc.co.uk/programmes/m00026gf>

Schoolchildren: *The Curious Science Quest*. The Royal Institution of Great Britain, London, 29 January 2019.

Office of Net Assessment: *Future Humans*, Rockefeller University, New York, 19-21 November 2019.

Measuring and Tuning Quantum Devices by Machine Learning. Quantum Networks, Erwin Schrödinger Institute for Mathematics and Physics, Vienna, 2019.

Quantum foundations on the nanoscale. Quantum Gates, Jumps, and Machines; Brisbane, Queensland, 2018.

Is reality there when nobody looks? Challenges in Quantum Foundations, Condensed Matter Physics and Beyond; University of Illinois, 2018.

Blog: [Why artificial intelligence will enable new scientific discoveries](#), 17 November 2017.

The unreasonable effectiveness of curiosity. Eugene Wigner Distinguished Lecture; Oak Ridge National Laboratory, Tennessee, 8 March 2016. <https://www.ornl.gov/content/wigner-distinguished-lecture-series>; video of lecture available at <https://www.youtube.com/watch?v=fqlx0FLTW10>.

Greatest achievements in quantum information technologies. AAAS 2015 Annual Meeting; San Jose, California, 2015.

WEB SITES

<http://andrewbriggs.org>

www.materials.ox.ac.uk/peoplepages/briggs.html

<http://www.ukwhoswho.com/view/article/oupww/whoswho/U10000304/BRIGGS> Prof. George Andrew Davidson

George Andrew Davidson Briggs

Publications

	All	Since 2019
Citations	30576	6298
h-index	83	41
i10-index	374	140

Citations of publications by G A D Briggs measured by Google Scholar; h-index is the largest number h such that h publications have at least h citations; i10-index is the number of publications with at least 10 citations. The third column gives the value for new citations in the last 5 years. (<https://scholar.google.com/citations?user=hOLefO8AAAAJ&hl=en>)

Publications for a non-specialist readership are indicated §; patents by ¶.

Books

1. *An Introduction to Scanning Acoustic Microscopy*. Royal Microscopical Society Handbook 12, Oxford University Press (1985). Andrew Briggs.
Reviews: *Proceedings RMS* **22** (2) 79, by Professor A. Howie FRS; *IEEE Trans UFFC* **34** (1) 116, by Professor H.L. Bertoni.
2. *Acoustic Microscopy*. Oxford: Clarendon Press (1992). Andrew Briggs.
Reviews: *Proceedings RMS* **27** (4) 280 and *Journal of Microscopy* **169** (1) 91, by Professor A. Howie FRS; *Contemporary Physics* **33** (4) 296, by Professor L.M. Brown FRS; *Ultrasonics* **32** (2) 157, by Dr A.J. Kulik.
3. *The Science of New Materials*. Oxford: Blackwell (1992). Ed Andrew Briggs. §
4. *Advances in Acoustic Microscopy* **1**. New York: Plenum Press (1995). Ed Andrew Briggs.
Reviews: *Proceedings RMS* **32** (3) 182-4, by Professor M.G. Somekh; *Ultramicroscopy* **62**, 283-303, by P.W. Hawkes.
5. *Advances in Acoustic Microscopy* **2**. New York: Plenum Press (1996). Eds Andrew Briggs and Walter Arnold.
Reviews: *Proceedings RMS* **32** (3) 182-4, by Professor M.G. Somekh; *Scanning* **20** (1) 61, by Professor A. Meunier.
6. *Acoustic Microscopy, 2nd Edition*. Oxford: Clarendon Press (2010). G.A.D. Briggs and O.V. Kolosov.
7. *The Penultimate Curiosity: How Science Swims in the Slipstream of Ultimate Questions*. Oxford University Press (2016). Roger Wagner and Andrew Briggs. §
Reviews: *Financial Times*, January 29, 2016, by John Cornwell; *Times Higher Education*, March 17, 2016, by Richard Joyner; over 20 other printed and on-line reviews (nationally and internationally) and numerous blogs.
Reprinted 2016 (twice), 2017 (with corrections), 2018 (5th impression), 2019 (paperback). Spanish edition: *La Curiosidad Penúltima*, Editorial Sal Terrae (2017); Portuguese edition: *A Penúltima Curiosidade*, Ultimato (2018); Chinese edition: Truth and Wisdom Press, Shanghai (2020); <https://thepenultimatecuriosity.com/>.
8. *Cave Discovery: When did we start asking questions?* Julia Golding, Andrew Briggs and Roger Wagner (Lion Hudson, 2018). §
9. *Greek Adventure: Who were the first scientists?* Julia Golding, Andrew Briggs and Roger Wagner (Lion Hudson, 2018). §
10. *It Keeps Me Seeking: The Invitation from Science, Philosophy and Religion*. Oxford University Press (2018). Andrew Briggs, Hans Halvorson and Andrew Steane. §
Reviews: *Catholic Herald*, 12 September 2018, by John Cornwell; *Times Higher Education*, January 3, 2019, by Simon Oliver; *Church Times*, 11 January 2019, by John Saxbee.
11. *Rocky Road to Galileo: What is Our Place in the Solar System?* Julia Golding, Andrew Briggs and Roger Wagner (Lion Hudson, 2018). §
12. *Hunt with Newton: What are the Secrets of the Universe?* Julia Golding, Andrew Briggs and Roger Wagner (Lion Hudson, 2018). §
13. *Victorian Voyages: Where did we come from?* Julia Golding, Andrew Briggs and Roger Wagner (Lion Hudson, 2019). §
14. *Modern Flights: Where next?* Julia Golding, Andrew Briggs and Roger Wagner (Lion Hudson, 2019). §
15. *Human Flourishing: Scientific insight and spiritual wisdom in uncertain times*. Andrew Briggs and Michael J. Reiss. Oxford University Press (2021). §

Papers and articles

16. The dissipation of energy in the friction of rubber. *Wear* **35**, 357-364 (1975). G.A.D. Briggs and B.J. Briscoe.
17. Effect of surface roughness on rolling friction and adhesion between elastic solids. *Nature* **260**, 313-315 (1976). G.A.D. Briggs and B.J. Briscoe (summarized in *Physics Bulletin* June 1976).
18. Effect of roughness on rubber friction when waves of detachment are present. *Nature* **262**, 381-382 (1976). G.A.D. Briggs and B.J. Briscoe.

19. How rubber sticks and slides — the adhesion and traction of viscoelastomers. *Ph.D. Thesis*, Cambridge. (Submitted September 1976; Ph.D. awarded February 1977.)
20. The effect of tangential force on the contact of elastic solids in adhesion. *Proc. R. Soc. Lond. A* **356**, 103-114 (1977). A.R. Savkoor and G.A.D. Briggs.
21. The effect of surface topography on the adhesion of elastic solids. *J. Phys D: Appl. Phys* **10**, 2453-2466 (1977). G.A.D. Briggs and B.J. Briscoe.
22. How rubber grips and slips: Schallamach waves and the friction of elastomers. *Phil. Mag. A* **38**, 387-399 (1978). G.A.D. Briggs and B.J. Briscoe.
23. Surface roughness and the friction and adhesion of elastomers. *Wear* **57**, 269-280 (1979). G.A.D. Briggs and B.J. Briscoe.
24. Stress intensity factor calculation of a mixed mode crack growth problem. *Numerical methods in fracture mechanics* (eds D.R.J. Owen, A.R. Luxmore), 135-144. Pineridge Press (1980). G.A.D. Briggs and R.A. Smith.
25. Crack growth monitoring. UK Patent No: 8041561, Specification No: GB2066964A (1981). G.A.D. Briggs. ¶
26. Fatigue crack growth under controlled *K*. In *Advances in fracture research* (ed D. Francois), 2005-2011. Oxford: Pergamon Press (1982). G.A.D. Briggs and R.A. Smith.
27. Acoustic microscopy of ferroelectric ceramics. *J. Mater. Sci.* **17**, 2449-2452 (1982). Q.R. Yin, C. Ilett and G.A.D. Briggs.
28. Acoustic microscopy for materials studies. In *Acoustical Imaging* **12** (eds E.A. Ash, C.R. Hill), 89-99. New York and London: Plenum Press (1982). G.A.D. Briggs, C. Ilett and M.G. Somekh.
29. *K* control for fatigue crack growth. In *Advances in crack length measurement* (ed C.J. Beevers), 395-409. EMAS, Birmingham (1982). G.A.D. Briggs, N.A. Fleck and R.A. Smith.
30. Acoustic microscopy — a prospectus. In *Advances in crack length measurement* (ed C.J. Beevers), 447-472. EMAS, Birmingham (1982). G.A.D. Briggs.
31. Acoustic microscopy in materials science. In *Microscopy — techniques and capabilities*. SPIE **368**, 74-80 (1982). G.A.D. Briggs, M.G. Somekh and C. Ilett.
32. Elastic and viscoelastic adhesion. In *Physicochemical aspects of polymer surfaces* (ed K.L. Mittal), 669-687. New York and London: Plenum Press (1983). G.A.D. Briggs.
33. Non-destructive testing and acoustic microscopy of diffusion bonds. *J. Mater. Sci.* **18**, 2345-2353 (1983). B. Derby, G.A.D. Briggs and E.R. Wallach.
34. The potential drop across an imperfect diffusion bond. *J. Mater. Sci.* **18**, 2354-2360 (1983). K.W. Lodge and G.A.D. Briggs.
35. Enhanced nuclear acoustic resonance in HoVO₄. *Proc. R. Soc. Lond. A* **388**, 479-486 (1983). B. Bleaney, G.A.D. Briggs, J.F. Gregg, G.H. Swallow and J.M.R. Weaver.
36. Examination of cracks and other defects in sodium β- and β"-alumina using acoustic, optical and electron microscopy. *Solid State Ionics* **9/10**, 173-176 (1983). A.K. Petford, R. Hull, C.J. Humphreys, G.A.D. Briggs and C. Ilett.
37. Acoustic microscopy of ultrasonic attenuation. *J. Physique* **12** C9, 371-376 (1984). J.M.R. Weaver, G.A.D. Briggs and M.G. Somekh.
38. The effect of anisotropy on contrast in the scanning acoustic microscope. *Phil. Mag. A* **49**, 179-204 (1984). M.G. Somekh, G.A.D. Briggs and C. Ilett.
39. Acoustic microscopy of elastic discontinuities. *Proc. R. Soc. Lond. A* **393**, 171-183 (1984). C. Ilett, M.G. Somekh and G.A.D. Briggs.
40. The origin of grain contrast in the scanning acoustic microscope. In *Acoustical Imaging* (eds M. Kaveh, R.K. Mueller) **13**, 107-118. New York and London: Plenum Press (1984). M.G. Somekh, G.A.D. Briggs and C. Ilett.
41. Detection of surface breaking cracks with acoustic microscope. In *Acoustical Imaging* (eds M. Kaveh, R.K. Mueller) **13**, 119. New York and London: Plenum Press (1984). M.G. Somekh, C. Ilett and G.A.D. Briggs.
42. Scanning electron acoustic microscopy and scanning acoustic microscopy: a favourable comparison. *Scanning Electron Microsc.* **3**, 1041-1052 (1984). G.A.D. Briggs.
43. Enhanced nuclear acoustic resonance in HoVO₄. *22nd Congress Ampere on Magnetic Resonance and Related Phenomena* **312**, 273-274 (1984). B. Bleaney, G.A.D. Briggs, J.F. Gregg, G.H. Swallow and J.M.R. Weaver.
44. Applications of a two-dimensional Green's function model to image interpretation in SAM. *Proc. 1984 IEEE Ultrasonics Symposium* 588-592 (1984). M.G. Somekh, H.L. Bertoni and G.A.D. Briggs.
45. Acoustic microscopy of solid materials. *Metallography* **18**, 3-34 (1985). G.A.D. Briggs, J.M.R. Weaver, C. Ilett and M.G. Somekh.
46. Applications of the scanning reflection acoustic microscope to the study of Materials Science. *IEEE Trans SU-32*, 302-312 (1985). J.M.R. Weaver, M.G. Somekh, G.A.D. Briggs, S.D. Peck and C. Ilett.
47. A two-dimensional imaging theory of surface discontinuities with the scanning acoustic microscope. *Proc. R. Soc. Lond. A* **401**, 29-51 (1985). M.G. Somekh, H.L. Bertoni, G.A.D. Briggs and N.J. Burton. Reprinted in *Selected*

- Papers on Scanning Acoustic Microscopy* (eds B.T. Khuri-Yakub, C.F. Quate), *SPIE Milestone Series MS 53*, 104-123 (1992).
48. Phase contrast imaging of tissue in the scanning acoustic microscope. *J. Microsc.* **139**, RP3-4 (1985). Reprinted in *Selected Papers on Scanning Acoustic Microscopy* (eds B.T. Khuri-Yakub, C.F. Quate), *SPIE Milestone Series MS 53*, 270-271 (1992). C.M.W. Daft, J.M.R. Weaver and G.A.D. Briggs.
 49. Acoustic microscopy techniques for observing dislocation damping. *J. Physique* **12** C10, 743-750 (1985). J.M.R. Weaver and G.A.D. Briggs.
 50. The elastic properties of ion-implanted silicon. *J. Mater. Sci.* **21**, 1828-1836 (1986). P.J. Burnett and G.A.D. Briggs.
 51. A scanning acoustic microscope study of the small caries lesion in human enamel. *Caries Res.* **20**, 356-360 (1986). S.D. Peck and G.A.D. Briggs.
 52. Acoustic microscopy of surface cracks. *Phil. Trans. R. Soc. Lond.* **A 320**, 201-214 (1986). J.M. Rowe, J. Kushibiki, M.G. Somekh and G.A.D. Briggs.
 53. Magnetoacoustic and Barkhausen emission in ferromagnetic materials. *Phil. Trans. R. Soc. Lond.* **A 320**, 363-378 (1986). D.J. Buttle, G.A.D. Briggs, J.P. Jakubovics, E.A. Little and C.B. Scruby.
 54. How to observe short surface cracks by acoustic microscopy. *The Behaviour of Short Fatigue Cracks*, EGF Pub. **1** (eds K.J. Miller, E.R. de los Rios), 529-536. Mechanical Engineering Publications, London (1986). G.A.D. Briggs, E.R. de los Rios and K.J. Miller.
 55. Acoustic properties of proton-exchanged LiNbO₃ studied using the acoustic microscopy $V(z)$ technique. *J. Appl. Phys* **60**, 2517-2522 (1986). P.J. Burnett, G.A.D. Briggs, S.M. Al-Shukri, J.F. Duffy and R.M. De La Rue.
 56. Techniques for the characterization of film adhesion. *Proc. 1986 IEEE Ultrasonics Symposium* (ed B.R. McAvoy) 775-782 (1986). Reprinted in *Selected Papers on Scanning Acoustic Microscopy* (eds B.T. Khuri-Yakub, C.F. Quate), *SPIE Milestone Series MS 53*, 299-306 (1992). R.C. Addison, M.G. Somekh and G.A.D. Briggs.
 57. Tissue characterization with microscopic resolution. *Proc. 1986 IEEE Ultrasonics Symposium* (ed B.R. McAvoy), 945-948 (1986). C.M.W. Daft, J.M.R. Weaver and G.A.D. Briggs.
 58. Acoustic microscopy of surface cracks: Theory and practice. *Solid Mechanics Research for Quantitative Non-Destructive Evaluation* (eds J.D. Achenbach, Y. Rajapakse) 155-169. Martinus Nijhoff, Dordrecht (1987). G.A.D. Briggs and M.G. Somekh.
 59. Characterization of thin-film adhesion with the scanning acoustic microscope. *Proc. International Symposium on Pattern Recognition and Acoustical Imaging*, 275-284. SPIE (1987). R.C. Addison, M.G. Somekh, G.A.D. Briggs and J.M. Rowe.
 60. Biomorph-driven x-y-z translation stage for scanned image microscopy. *Rev. Sci. Instrum.* **58**, 567-570 (1987). J.R. Matey, R.S. Crandall, B. Brycki and G.A.D. Briggs.
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