

Professor Nicholas J. Higham, FRS—short resume (January 2021)

Department of Mathematics nick.higham@manchester.ac.uk,
University of Manchester https://nhigham.com
Manchester M13 9PL, UK Tel. +44 (0)161 275 5822, Fax +44 (0)161 275 5819

Ph.D. (Numerical Analysis), 1985, University of Manchester. M.Sc. (Numerical Analysis and Computing), 1983, University of Manchester.

Appointments: University of Manchester: Royal Society Research Professor and Richardson Professor of Applied Mathematics 1998–, Director of the Manchester Institute for Mathematical Sciences (MIMS) 2004–2010, Professor of Applied Mathematics 1996–1998, Reader, 1992–1996, Senior Lecturer, 1989–1992; Lecturer in Mathematics, 1985–1989. Senior visitor, Institute for Mathematics and its Applications, University of Minnesota, January–March 1992. Visiting Assistant Professor of Computer Science, Cornell University, 1988–1989.

Memberships: Association of Computing Machinery. Fellow of the Institute of Mathematics and Its Applications, International Linear Algebra Society, London Mathematical Society, American Mathematical Society, Association of Computing Machinery, Society for Industrial and Applied Mathematics (SIAM).

Prizes and Fellowships: Fellow of the Association of Computing Machinery, 2021. IMA Gold Medal, Institute of Mathematics and its Applications, 2020. Naylor Prize and Lecture-ship by the London Mathematical Society, 2019. Fellow of the Institution of Engineering and Technology (IET), 2018. Member of Academia Europaea, 2016. Fellow of SIAM, 2009. Fröhlich Prize, London Mathematical Society, 2008. Fellow of the Royal Society, 2007. Royal Society Wolfson Research Merit Award holder, 2003–2008. Royal Society Leverhulme Trust Senior Research Fellowship, 1999/2000. Junior Whitehead Prize, 1999, London Mathematical Society. Nuffield Foundation Science Research Fellow, 1991/1992. Leslie Fox Prize, 1988 (international prize for numerical analysis paper and presentation, age limit 31). Alston S. Householder Award VI, 1987 (international prize for best Ph.D. thesis in numerical algebra 1984–1987).

Publications: 164 refereed and 36 unrefereed publications. ORCID identifier 0000-0001-5956-4976.

Citations: Google Scholar: 24,306 citations, h-index 70. On ISI Web of Science 6,346 citations, h-index 45. Designated “Highly Cited Researcher” by Thomson/ISI, 2006.

Books: N. J. Higham, *Handbook of Writing for the Mathematical Sciences*, Third edition, SIAM, 2020, xxi+353 pp. D. J. Higham and N. J. Higham, *MATLAB Guide* Third edition, SIAM, 2017, xxvi+476 pp. N. J. Higham, editor (and author of about 100 pages), with associate editors M. R. Dennis, P. Glendinning, P. A. Martin, F. Santosa and J. Tanner, *The Princeton Companion to Applied Mathematics*, Princeton University Press, xvii + 994 + 16 color plates, 2015. N. J. Higham, *Functions of Matrices: Theory and Computation*. SIAM, 2008, xx+425 pp. N. J. Higham, *Accuracy and Stability of Numerical Algorithms*, Second edition, SIAM, 2002, xxx+680 pp.

Impact: Numerous Algorithms implemented in MATLAB, the NAG Library, and in various open source packages.

Selected Research Grants in Last 10 Years: PI, Royal Society Research Professor award (£1.3M), 2018–2023. PI, Knowledge Transfer Partnership between The University of Manchester and The Numerical Algorithms Group (NAG) Limited (£250k), 2018–2021. CoI on EPSRC Programme Grant EP/P020720/1 “Inference, COmputation and Numerics for Insights

into Cities (ICONIC)", 2017–2022, 2,964,066 across four partners. PI, ERC Advanced Grant "Functions of Matrices: Theory and Computation" (€2M), 2011–2016. PI, EPSRC, Novel Asynchronous Algorithms and Software for Large Sparse Systems, (£321k), 2010–2015.

Supervision of Research Students: 21 PhD students and 30 MSc students completed.

Editing: Member of editorial boards of Acta Numerica, 2012–, Forum of Mathematics, 2012–, Foundations of Computational Mathematics, 1999–; IMA Journal of Numerical Analysis, 1994–; Linear Algebra and its Applications, 1997–, senior editor from 2009; PeerJ Computer Science, 2015–. (Founding) Editor-in-Chief of SIAM Fundamentals of Algorithms book series, 2003–.

Professional Service: Member of various Royal Society committees. Member of Physical Sciences Panel of the Research Grants Council of Hong Kong, 2020–2022. President of SIAM, 2017–2018. Vice President at Large of SIAM, 2010–2013. Member of the CERFACS Scientific Council (Toulouse), 2015–2020. Member of Research Excellence Framework (REF) 2014 Subpanel 10 (Mathematical Sciences). Member of Research Assessment Exercise (RAE) 2008 subpanel 21 (Applied Mathematics). Member of Royal Society International Conference Grants and Short Visits (Panel 1: Pure and Applied Mathematics, Computer Science), 2006–2008 and chair 2009. Member of SIAM Board of Trustees, 2006–2008, 2009–2011. Member of Board of Directors of International Linear Algebra Society, 1999–2001. Member of SIAM Council, 1996–2001. Chair of the SIAM Activity Group on Linear Algebra, 2001–2003.