Stanford

Paul N. Edwards

Senior Lecturer in the Program in Science, Technology and Society

Inter-Departmental Programs

📄 Curriculum Vitae available Online

Bio

BIO

I'm Director of the Program on Science, Technology & Society (STS) and a Senior Research Scholar at the Center for International Security and Cooperation at Stanford. I also co-direct the Stanford Existential Risks Initiative with Prof. Steve Luby.

I'm Professor of Information and History (Emeritus) at the University of Michigan, where I worked for almost 20 years in the School of Information, the Dept. of History, and the STS Program. I taught previously at Stanford from 1992-1998 in various capacities, mainly in the Science, Technology & Society Program that I now direct.

I study the history, politics, and culture of information infrastructures, especially climate knowledge systems. My books include A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming (MIT Press, 2010), The Closed World: Computers and the Politics of Discourse in Cold War America (MIT Press, 1996), and Changing the Atmosphere: Expert Knowledge and Environmental Governance (MIT Press, 2001, co-edited with Clark Miller). I'm academic editor of the MIT Press book series Infrastructures.

From 2018-2021, I served as one of 234 Lead Authors for the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Working Group I (Physical Sciences), released in August 2021.

ACADEMIC APPOINTMENTS

- Senior Lecturer, Inter-Departmental Programs
- Sr Research Scholar, Center for International Security and Cooperation

ADMINISTRATIVE APPOINTMENTS

- Director, Program in Science, Technology & Society, (2019- present)

HONORS AND AWARDS

- Distinguished Faculty Fellow in Sustainability, Graham Institute, University of Michigan (2016-17)
- Senior Fellow, Michigan Society of Fellows (2016-17)
- Resident Fellow, Institute for Advanced Study in Media Cultures of Computer Simulation, Leuphana University (2015)
- Louis J. Battan Author's Award, American Meteorological Society (2013)
- Computer History Museum Book Prize, Society for the History of Technology (2011)
- Carnegie Scholar, Carnegie Corporation of New York (2003-04)

- Guggenheim Fellow, John Simon Guggenheim Memorial Foundation (2003-04)

PROGRAM AFFILIATIONS

- Modern Thought and Literature

- Program in History & Philosophy of Science

- Science, Technology and Society

PROFESSIONAL EDUCATION

- PhD, University of California, Santa Cruz , History of Consciousness (1988)

- BA, Wesleyan University , Language and Mind (1980)

Teaching

COURSES

2023-24

- Climate Politics: Science and Global Governance: INTLPOL 271 (Aut)

- Curricular Practical Training: STS 199A (Aut, Win, Spr, Sum)

- Introduction to AI Alignment: STS 10SI (Aut, Win)

- Preventing Human Extinction: COLLEGE 107 (Spr)

- Technometabolism: Technology, Society, and the Anthropocene: STS 200J (Aut)

2022-23

- Advanced AI Alignment: STS 20SI (Win, Spr)

- Climate Politics: Science and Global Governance: HISTORY 202J, INTLPOL 271 (Win)

- Curricular Practical Training: STS 199A (Win, Spr, Sum)

- Introduction to AI Alignment: STS 10SI (Aut, Win, Spr)

- Preventing Human Extinction: COLLEGE 107 (Spr)

- Technometabolism: Technology, Society, and the Anthropocene: STS 200J (Win)

2021-22

- Climate Politics: Science and Global Governance: HISTORY 202J, INTLPOL 271 (Aut)

- Curricular Practical Training: STS 199A (Win, Spr, Sum)

- Preventing Human Extinction: THINK 65 (Spr)

2020-21

- Curricular Practical Training: STS 199A (Win, Spr, Sum)

- Politics of Data: Algorithmic Culture, Big Data, and Information Waste: INTLPOL 221 (Win)

- Preventing Human Extinction: THINK 65 (Spr)

- Race in Medicine: AFRICAAM 51C, BIOE 91C, CEE 151C, CSRE 51C, HUMBIO 71C, STS 51C (Spr)

- Race in Science: AFRICAAM 51A, CEE 151A, COMM 51A, CSRE 51A, HUMBIO 71A, STS 51A (Aut)

- Race in Technology: AFRICAAM 51B, BIOE 91B, CEE 151B, COMM 51B, CSRE 51B, HUMBIO 71B, STS 51B (Win)

- The Public Life of Science and Technology: CSRE 1T, STS 1 (Win)

STANFORD ADVISEES

Master's Program Advisor

Rosie La Puma Lebel, Ibilola Owoyele

Doctoral Dissertation Co-Advisor (NonAC)

Meghan Shea

Publications

PUBLICATIONS

- **Peer Review** *CRITICAL ASSESSMENT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE*
  Edwards, P. N., DePryck, K., Hulme, M.
  2023: 96-104

- **Digitalization and the Anthropocene** *ANNUAL REVIEW OF ENVIRONMENT AND RESOURCES*
  Creutzig, F., Acemoglu, D., Bai, X., Edwards, P. N., Hintz, M., Kaack, L. H., Kilkis, S., Kunkel, S., Luers, A., Milojevic-Dupont, N., Rejeski, D., Renn, J., Rolnick, et al
  2022; 47: 479-509

- **Platforms are Infrastructures on Fire** *Your Computer is on Fire: The Politics of Computing and New Media*
  Philip, K.
  edited by Mullaney, T. S., Peters, B., Hicks, M.
  MIT Press.2021: 313–336

- **Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change**
  Masson-Delmotte, V., Zhai, P., et al
  Cambridge University Press.2021

- **Knowledge Infrastructures under Siege: Climate Data as Memory, Truce, and Target** *Data Politics: Worlds, Subjects, Rights*
  Edwards, P. N.
  Routledge.2019

- **We Have Been Assimilated: Some Principles for Thinking About Algorithmic Systems** *Living with Monsters? Social Implications of Algorithmic Phenomena, Hybrid Agency, and the Performativity of Technology*
  Edwards, P. N.
  Springer.2018: 19–27

- **Infrastructure studies meet platform studies in the age of Google and Facebook** *NEW MEDIA & SOCIETY*
  Plantin, J., Lagoze, C., Edwards, P. N., Sandvig, C.
  2018; 20 (1): 293–310

- **Producing "one vast index": Google Book Search as an algorithmic system** *BIG DATA & SOCIETY*
  Chalmers, M. K., Edwards, P. N.
  2017; 4 (2)

- **Knowledge infrastructures for the Anthropocene** *ANTHROPOCENE REVIEW*
  Edwards, P. N.
  2017; 4 (1): 34–43

- **Big Data Is the Answer ... But What Is the Question?** *OSIRIS*
  Strasser, B. J., Edwards, P. N.
  2017; 32 (1): 328–45

- **Downscaling From global to local in the climate knowledge infrastructure** *INFRASTRUCTURES AND SOCIAL COMPLEXITY: A COMPANION*
  Edwards, P. N., Harvey, P., Jensen, C. B., Morita, A.
  2017: 339–51

- **Entangled histories: Climate science and nuclear weapons research** *BULLETIN OF THE ATOMIC SCIENTISTS*
  Edwards, P. N.

2012; 68 (4): 28–40

- **AHR Conversation: Historical Perspectives on the Circulation of Information** *AMERICAN HISTORICAL REVIEW*
  Edwards, P. N., Gitelman, L., Hecht, G., Johns, A., Larkin, B., Safier, N.
  2011; 116 (5): 1392–1435

- **Science friction: Data, metadata, and collaboration** *SOCIAL STUDIES OF SCIENCE*
  Edwards, P. N., Mayernik, M. S., Batcheller, A. L., Bowker, G. C., Borgman, C. L.
  2011; 41 (5): 667–90

- **History and the Technopolitics of Identity: The Case of Apartheid South Africa** *JOURNAL OF SOUTHERN AFRICAN STUDIES*
  Edwards, P. N., Hecht, G.
  2010; 36 (3): 619-639

- **A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming**
  Edwards, P. N.
  MIT Press.2010

- **Meteorology as infrastructural globalism** *OSIRIS*
  Edwards, P. N.
  2006; 21: 229–50

- **Infrastructure and Modernity: Force, Time, and Social Organization in the History of Sociotechnical Systems**
  Edwards, P. N., Misa, T. J., Brey, P., Feenberg, A.
  M I T PRESS.2003: 185–225

- **Changing the Atmosphere: Expert Knowledge and Environmental Governance**
  edited by Miller, C. A., Edwards, P. N.
  MIT Press.2001

- **The Closed World: Computers and the Politics of Discourse in Cold War America**
  Edwards, P. N.
  MIT Press.1996

- **Three institutional pathways to envision the future of the IPCC** *NATURE CLIMATE CHANGE*
  Asayama, S., De Pryck, K., Beck, S., Cointe, B., Edwards, P. N., Guillemot, H., Gustafsson, K. M., Hartz, F., Hughes, H., Lahn, B., Leclerc, O., Lidskog, R., Livingston, et al
  2023

- **Systematic review of marine environmental DNA metabarcoding studies: toward best practices for data usability and accessibility.** *PeerJ*
  Shea, M. M., Kuppermann, J., Rogers, M. P., Smith, D. S., Edwards, P., Boehm, A. B.
  2023; 11: e14993

- **Institutions, Infrastructures, and Innovation** *COMPUTER*
  Edwards, P. N., King, J.
  2021; 54 (1): 103–9

- **Infrastructuration: On Habits, Norms, and Routines as Elements of Infrastructure** *Thinking Infrastructures*
  Edwards, P. N.
  Emerald Publishing.2019: 355–66

- **Re-integrating scholarly infrastructure: The ambiguous role of data sharing platforms** *BIG DATA & SOCIETY*
  Plantin, J., Lagoze, C., Edwards, P. N.
  2018; 5 (1)

- **Scientific Babel: How Science Was Done before and after Global English (Book Review)** *AMERICAN HISTORICAL REVIEW*
  Book Review Authored by: Edwards, P. N.
  2016; 121 (5): 1636–37

- **An Archive for the Future: Paul N. Edwards on Technology, Historiography, Self, and World** *INTERNATIONAL JOURNAL OF COMMUNICATION*
  Monea, A., Edwards, P. N.

2016; 10: 3174–85

- **Should I Stay or Should I Go? Alternative Infrastructures in Scholarly Publishing** *INTERNATIONAL JOURNAL OF COMMUNICATION*
  Lagoze, C., Edwards, P., Sandvig, C., Plantin, J.
  2015; 9: 1052–71

- **Climate Change: Science and Software Introduction** *IEEE SOFTWARE*
  Easterbrook, S. M., Edwards, P. N., Balaji, V., Budich, R.
  2011; 28 (6): 32–35

- **History of climate modeling** *WILEY INTERDISCIPLINARY REVIEWS-CLIMATE CHANGE*
  Edwards, P. N.
  2011; 2 (1): 128–39

- **The Technopolitics of Cold War Toward a Transregional Perspective** *ESSAYS ON TWENTIETH-CENTURY HISTORY*
  Hecht, G., Edwards, P. N., Adas, M.
  2010: 271–314

- **Introduction: An Agenda for Infrastructure Studies** *JOURNAL OF THE ASSOCIATION FOR INFORMATION SYSTEMS*
  Edwards, P. N., Bowker, G. C., Jackson, S. J., Williams, R.
  2009; 10 (5): 364–74

- **Revolutionary secrets - Technology's role in the South African anti-apartheid movement** *SOCIAL SCIENCE COMPUTER REVIEW*
  Garrett, R., Edwards, P. N.
  2007; 25 (1): 13–26

- **"A vast machine": Standards as social technology** *SCIENCE*
  Edwards, P. N.
  2004; 304 (5672): 827–28

- **HYPERTEXT AND HYPERTENSION - POSTSTRUCTURALIST CRITICAL-THEORY, SOCIAL-STUDIES OF SCIENCE AND SOFTWARE** *SOCIAL STUDIES OF SCIENCE*
  EDWARDS, P. N.
  1994; 24 (2): 229–78