

## PHILIP SHAPIRA

Professor of Innovation Management and Policy, Manchester Institute of Innovation Research, Alliance Manchester Business School, University of Manchester, Manchester M15 6PB, UK |

Professor of Public Policy (Part-Time), School of Public Policy, Georgia Institute of Technology, Atlanta, GA 30332-0345, USA;

### Education and Qualifications

PGCert (Higher Education), University of Manchester, UK, 2015

Ph.D. City Planning, University of California, Berkeley, CA, USA, 1986

M.A. Economics, University of California, Berkeley, CA, USA, 1982

M.C.P. City Planning, Massachusetts Institute of Technology, Cambridge, MA, USA, 1979

Dip. TP. (Distinction) in Town Planning, Gloucestershire College of Art & Design, UK, 1977

### Academic and Professional Appointments

- 2008-        Professor of Innovation, Management and Policy, Manchester Institute of Innovation Research Alliance Manchester Business School, University of Manchester, UK (P/T 09/07-12/07)
- 1991-        Professor of Public Policy (P/T), Georgia Institute of Technology, Atlanta, GA. [F/T Assistant Professor 1991; Associate Professor 1993; Professor 2000. From 1/2008-present: reduced (P/T) time, research only]
- 1988-90     Research Assistant Professor, Regional Research Institute, West Virginia University, Morgantown, WV
- 1986-88     Office of Technology Assessment, United States Congress, Washington, DC, Congressional Fellow/Analyst

### Fellowships and Associations

- Director (Management Team), Manchester Institute of Innovation Research, Alliance Manchester Business School, University of Manchester, UK (2011-2021); Director, Innovation Co-Lab, U Manchester, Georgia Tech, Beijing Inst of Technology (2010- ); Director, Georgia Tech Program in Science, Technology and Innovation Policy (2008- )
- Visiting Professor: Sant'Anna School of Advanced Studies, Pisa (2022); Beijing Institute of Technology (2012-); Victoria Management School, Victoria University of Wellington, New Zealand, 2007; Université Louis Pasteur, Strasbourg, France, 2001–2007; Visiting Researcher: Engineering Biology Research Consortium, Emeryville, CA, USA, 2018 (Sept-Oct); Fraunhofer Institute for Systems and Innovations Research, Karlsruhe, Germany (1998-2000; 2001-2008); Japan Institute of Labor (1993-1994).
- Chair, US National Academies Panel, 21st Century Manufacturing (Manufacturing Extension Partnership); (2011-2013); Commissioner, Northern Economic Futures Commission, UK, IPPR (2011-2013); Advisory Boards: Foresight Centre, Higher School of Economics, Moscow (2011-22); BILAT 4.0 USA (2016-2019); Redistributed Manufacturing Networks (EPSRC-ESRC, UK, 2015-2017); GoNano (DBT Foundation, Denmark, 2017-2019); Center for Organizational Innovation and Design, Arizona State University, USA (2018-); Center for Technological Innovation, Tsinghua University (2019-); BSI PAS 440 Steering Group (2019)
- Fellow, Royal Society of Arts (2009-present); Fellow, American Association for the Advancement of Science (elected 2015); Electorate Nominating Committee, AAAS Section on Industrial Science and Technology (2019-2022).

### Publications

Over 120 refereed journal articles, 40 book chapters, 7 edited books, 11 edited proceedings, 40 short articles or reviews, and more than 100 professional policy reports. Google Scholar citations: > 9700

#### *Recent selected publications (N=15)*

Ribeiro B, Meckin R, Balmer A, **Shapira P**. The digitalisation paradox of everyday scientific labour: How mundane knowledge work is amplified and diversified in the biosciences. *Research Policy*, 2023, 52, 1.

<https://doi.org/10.1016/j.respol.2022.104607>

**Shapira, P.**, Matthews, N.E., Cizauskas, C.A., Aurand, E.R., Friedman, D.C., Layton, D.S., Maxon, M.E., Palmer, M.J., and Stamford, L. Building a Bottom-Up Bioeconomy. *Issues in Science and Technology*, 2022 (Spring), 38, 3: 78–83.

Liu, N., **Shapira, P.**, and Yue, X. Tracking developments in artificial intelligence research: Constructing and applying a new search strategy. *Scientometrics*, 2021, 126(4), 3153-3192. <https://doi.org/10.1007/s11192-021-03868-4>

**Shapira, P**. Scientific publications and COVID-19 "research pivots" during the pandemic: An initial bibliometric analysis. *bioRxiv* (December 7, 2020); <https://doi.org/10.1101/2020.12.06.413682>

Ribeiro, B, **Shapira, P**. The private and public values of innovation: a patent analysis of synthetic biology. *Research Policy*, 2020, 49,1. <https://doi.org/10.1016/j.respol.2019.103875>

Kemp L, Adam L, Boehm CR, Breitling R, Casagrande R, Dando M, Djikeng A, Evans NG, Hammond R, Hills K, Holt LA, Kuiken T, Markotić A, Millett P, Napier JA, Nelson C, ÓhÉigeartaigh SS, Osbourn A, Palmer MJ, Patron NJ, Perello E, Piyawattanametha W, Restrepo-Schild V, Rios-Rojas C, Rhodes C, Roessing A, Scott D, **Shapira P**, Simuntala C, Smith

- RDJ, Sundaram LS, Takano E, Uttmark G, Wintle BC, Zahra NB, & Sutherland WJ. Bioengineering Horizon Scan 2020. *eLife*, 2020, 9:e54489 <https://elifesciences.org/articles/54489>
- Zaki M, Theodoulidis C, **Shapira P**, Neely A, Tepel M, & Wyman O. Redistributed Manufacturing and the Impact of Big Data: A Consumer Goods Perspective, *Production Planning & Control*, 2019, 30:7, 568-581. <https://doi.org/10.1080/09537287.2018.1540068>
- Li Y, Arora SK, Youtie J, **Shapira P**. Using web mining to explore Triple Helix influences on growth in small and mid-size firms. *Technovation*, 2018. <https://doi.org/10.1016/j.technovation.2016.01.002>
- Shapira P**, Kwon S, Youtie J. Tracking the Emergence of Synthetic Biology, *Scientometrics*, 2017. 112: 1439–1469 <http://dx.doi.org/10.1007/s11192-017-2452-5>
- Shapira P**, Youtie J. Institutions for Technology Diffusion and the Next Production Revolution. In: OECD, *The Next Production Revolution: Implications for Governments and Business*, Paris, 2017. <http://dx.doi.org/10.1787/9789264271036-en>, pp 243-275.
- Youtie J, Li Y, Rogers J, **Shapira P**. Institutionalization of University Research Ventures, *Research Policy*, 2017, 46, 9, 1692-1705. <https://doi.org/10.1016/j.respol.2017.08.006>
- Edler J, Cunningham P, Gök A, **Shapira P**. (eds). *Handbook of Innovation Policy Impact*. Edward Elgar Publishing, Cheltenham UK, 2016. (Chinese edition, BIT Press, Beijing, CN, 2020)
- Shapira P**, Gök A, Salehi-Yazdi F. Graphene Enterprise: Mapping Innovation and Business Development in a Strategic Emerging Technology, *J Nanoparticle Research*, 2016, 18; 269, 1-24. <http://dx.doi.org/10.1007/s11051-016-3572-1>
- Uyarra E, **Shapira P**, Harding A. Low carbon innovation and enterprise growth in the UK: Challenges of a place-blind policy mix, *Tech Forecasting & Social Change*, 2016, 103. <http://dx.doi.org/10.1016/j.techfore.2015.10.008>.
- Shapira P**, Gök A, Klochikhin E, Sensier M. Probing “green” industry enterprises in the UK: A new identification approach, *Tech Forecasting & Social Change*, 2014, 85. <http://dx.doi.org/10.1016/j.techfore.2013.10.023>

### Synergistic Activities

- Directed (PI), Co-I or senior researcher on 50+ externally-sponsored research and policy projects, including (current & recent projects): PI AI Transformation UK & Canada (4POINT0 19-22); Co-I & Lead for Responsible Research & Innovation, Manchester Synthetic Biology Research Centre for Fine and Speciality Chemicals (EPSRC-BBSRC 14-22); and Future BioManufacturing Research Hub (EPSRC 19-26). Co-I EPSRC CDT in BioDesign Engineering (Imperial, Manchester, UCL); Co-I BBSRC 21EBTA: EB-AI Consortium for Bioengineered Cells & Systems (22-24); BBSRC 21EBTA: EBSynerGy Engineering Biology with Synthetic Genomes (22-24); Co-I Rutherford Fund (UUKI/BEIS 18-19); KNOWMAK (Knowledge in the making in the European society, EC-H2020-SC6-CO-CREATION, 16-19); PI Next Production Revolution: Institutions for Technology Diffusion (OECD 16); PI Emerging Technologies, Trajectories and Implications of Next Generation Innovation Systems Development in China and Russia (ESRC 12-16); I Consumer Goods, Big Data and Re-Distributed Manufacturing (ESRC-EPSRC, RECODE 14-16); Co-I Indicators of Technological Emergence (NSF 18-21); Co-I International University Research Ventures: Implications for US Economic Competitiveness and National Security (US ARO 15-18); PI Institutions for Technology Diffusion (IADB 13-14); PI Sustaining Innovation in New Enterprises (ESRC 12-15); Program Leader, Nanotechnology Research & Innovation Systems Assessment at Georgia Tech, Center for Nanotechnology and Society (CNS-ASU) 05-15; PI Innovation Co-Lab: UK-US New Partnership (British Council, 11-12); PI International Assessment of SME Upgrading (World Bank 10); Creativity Capabilities and the Promotion of Highly Innovative Research in Europe and the US (EU NEST 04-06 Co-I; US NSF 08-10 PI)
- Development of new measurement and assessment systems of knowledge capability, technology diffusion and innovation (structured and unstructured data) through projects sponsored by UNDP; NIST; NSF; Georgia Manufacturing Survey; ESRC; and Nesta. Includes datamining, surveying, social media analysis, development of bibliometric, patent, and other science and technology indicators and knowledge flow measures.
- International experience in science, technology, innovation and development studies, programs, policies and evaluations at national and regional levels, including projects sponsored by the US Office of Technology Assessment, National Institute of Standards and Technology, National Academy of Sciences and Engineering, Georgia and other US states, Ministry of Economy, Trade and Industry (Japan), Forfás (Ireland's Advisory Board for Science and Technology); UKRI; European Commission; OECD; World Bank; Inter-American Development Bank.
- Co-Chair, International Scientific Committee, and Local Organizing Committee, XVI International Triple Helix Conference, Manchester (9/2018); Program Committees: Tech Transfer (Toronto 19); S&I Conference (Atlanta 19, 23); 4POINT0 (online, 4/21; 5/22).
- Associate Editor, International Journal of Foresight and Innovation Policy; Editorial Boards: European Planning Studies, International Journal of Public Policy, Journal of Technology Transfer; Research Policy; Journal of the Knowledge Economy; Asian Research Policy; Chinese Management Studies; Global Transitions.
- Supervisions: 23 PhD (completed); 3 PhD (in progress); 73 MSc/MS (theses UoM & GT); BSc advising (29, 2021-22).