

CONTACT DETAILS

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PROFESSIONAL STATEMENT

My work takes a transdisciplinary approach to understanding and successfully navigating advanced technology transitions within society. I blend research and scholarship with teaching, public engagement and thought leadership, to better-understand the nexus of technology, society and the future, and to equip individuals, communities and organizations across sectors with the knowledge, insights and understanding necessary to ensure human flourishing under transformational technology-driven change at scale.

EDUCATION

PhD: University of Cambridge, U.K. 1989 – 1992
Cavendish Laboratory, Microstructural Physics Department. Ph.D. (Aerosol Physics).
Thesis: Ultrafine aerosol particle collection and analysis (1992)

BSc: University of Birmingham, U.K. 1984 - 1987
Physics. B.Sc. (Hons): Iii

ACADEMIC EMPLOYMENT AND POSITIONS

Arizona State University	8/3/15 - Present
Professor of Advanced Technology Transitions, School for the Future of Innovation in Society	8/3/15 – Present
Associate Dean of Curricula and Student Success, College of Global Futures	7/15/20 – 6/30/22
Associate Director of Faculty, School for the Future of Innovation in Society	8/1/19 – 7/14/20
Director, Future of being Human initiative	8/1/22 – Present
Director, Risk Innovation Nexus	8/1/18 - Present
Director, Risk Innovation Lab	8/3/15 – Present
University of Michigan	4/1/10 – 7/30/15
Professor, Environmental Health Sciences, School of Public Health	9/1/10 – 7/30/15
Director, University of Michigan Risk Science Center	4/1/10 – 7/30/15
Chair, Department of Environmental Health Sciences	6/1/12 – 11/30/14
NSF International Chair of Environmental Health Sciences	1/1/13 – 11/30/14
Charles and Rita Gelman Professor of Risk Science	9/1/10 - 12/31/12

NON-ACADEMIC EMPLOYMENT AND POSITIONS

Woodrow Wilson International Center for Scholars Chief Science Advisor, Project on Emerging Nanotechnologies Science Advisor, Synthetic Biology Project	8/15/05 – 3/31/10
National Institute for Occupational Safety and Health Team Leader – Aerosols Research Team (GS15) Senior Service Fellow (GS14). (2000 – 2004)	1/18/00 – 7/8/05 1/1/04 – 7/8/05 1/18/00 – 1/1/04
Health and Safety Executive, U.K. Head, Exposure Control Section, Health and Safety Laboratory Senior Scientific Officer (1994 – 1998) Higher Scientific Officer (1992 – 1994)	9/21/92 – 1/17/00 9/1/98 – 1/17/00 9/1/94 – 9/1/98 9/21/92 – 9/1/94
Severn Trent Water Ltd., U.K. Management Trainee.	1/10/87 – 1/10/89

ACADEMIC AFFILIATIONS

Mary Lou Fulton Teachers College, ASU Affiliate Faculty Member	2023 - Present
School of Sustainable Engineering and the Built Environment Ira A. Fulton Schools of Engineering, ASU Affiliate Faculty Member	2022 - Present
Interplanetary Initiative, ASU Affiliate Faculty Member	2022 - Present
Global Security Initiative Center for Human, Artificial Intelligence, and Robot Teaming (CHART), ASU Affiliate Faculty Member	2018 - Present
Center for Law, Science & Innovation, ASU Faculty Fellow	2015 - Present
Senior Global Futures Scholar Julie Ann Wrigley Global Institute of Sustainability and Innovation, ASU	2021 - Present
Global Sports Scholar Global Sports Institute, ASU	2020 - Present
Senior Sustainability Scholar Julie Ann Wrigley Global Institute of Sustainability, ASU	2016 - 2021

ACADEMIC LEADERSHIP POSITIONS OF NOTE NOT INCLUDED ABOVE

Chair, ASU Promotion and Tenure Committee	2024 – Present
Member, ASU Promotion and Tenure Committee	2023 – Present
Member, Space Strategy Committee, Arizona State University	2022 – Present
Chair, Master of Science & Technology Policy program, Arizona State University	2016 – 2020

EXECUTIVE & ADVISORY POSITIONS

National Science Foundation Member, 4th Gen ERC Societal Impacts Advisory Committee	2023 - Present
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Advanced Technologies for the Preservation of Biological Systems Engineering Research Center (ATP-Bio) Member, Ethics and Public Policy Panel	2020 - Present
Institute for Advancing Food and Nutrition Science IAFNS Board of Trustees (formerly ILSI NA) Co-chair of the Board of Trustees (2021-2023)	2021 - Present
Canadian Institute for Advanced Research Member of the President's Research Council	2017 - Present
Nature Nanotechnology Advisory Panel Advisory group to the editor on developing content on the relationship between technology and society	2017 - Present
World Economic Forum Committee on top ten emerging technologies (2012 – Present) Global Futures Council on Agile Governance (2017 – 2019) Council on the Future of Technology, Values and Policy (2016 – 2017) Global Agenda Council on Emerging Technologies. (2008 – 2014) Chair of the World Economic Forum Global Agenda Council on Emerging Technologies. (2010 – 2011) Co-chair, World Economic Forum Global Agenda Council on Nanotechnology (2014 – 2016). Metacouncil on Emerging Technologies (2014 – 2016) Advisory Committee, World Economic Forum Technology Pioneers (2012 – 2020)	2008 - Present
National Academies of Sciences Committees National Academies of Science, Engineering and Medicine Committee on Emerging Areas of Science, Engineering, and Medicine for the Courts: Identifying Chapters for a Fourth Edition of The Reference Manual on Scientific Evidence – A Workshop. (2020 – 2021) National Academies of Science Planning Committee on New Technologies and Engagement Approaches to Enhance Research on the Communication about Individual Environmental Health Data. (2016) National Academies of Science Committee on the Science of Science Communication (2015 – 2016) National Academies of Science Committee to develop a research strategy for environmental, health, and safety aspects of engineered nanomaterials (2010 – 2013) National Academies of Science review panel for the National Nanotechnology Initiative Strategy for Nanotechnology Environmental Health and Safety Research (2008)	2008 - 2021
International Life Science Institute North America ILSI North America Board of Trustees (2012 – 2021) Vice-chair of the Board of Trustees (2019-2021)	2012 - 2021
American Association for the Advancement of Science AAAS Early Career Award for Public Engagement with Science Selection Committee	2015 - 2020
RELATE (Science Communication) Faculty Advisor	2015 - 2019
Center for Policy on Emerging Technologies Senior Fellow	2012 – 2018
United Nations Expert Group on Exponential Technological Change New group addressing exponential technological change, automation, and policy implications for sustainable development	2016 - 2017

Keep on Questioning (I'm A Scientist USA) Board of Advisors	2015 - 2017
Dow Distinguished Faculty Fellows Member, University of Michigan Dow Distinguished Faculty Fellows	2013 - 2015
Center for Nanotechnology in Society, ASU Member, Board of Visitors	2012 - 2015
Graham Sustainability Institute, University of Michigan Member, Executive Committee	2012 - 2015
Center for the Environmental Implications of Nanotechnology Chair, External Advisory Board	2009 – 2016
Nanoscale Informal Science Education Network Advisory board member	2009 – 2015
Environmental Protection Agency Chair, External Peer Review of the U.S. Environmental Protection Agency Draft Nanomaterial Research Strategy	2008
Environmental Protection Agency Panel member, Public Meeting on Risk Management Practices for the U.S. Nanoscale Materials Stewardship Program	2008
Council of Canadian Academies Expert Panel on Nanotechnology Assessment	2007
President's Council of Advisors on Science and Technology Member of the Nanotechnology Working Group	2010 - 2012
Chemical & Engineering News Advisory Board member	2008 - 2011
International Council On Nanotechnology (ICON) Executive Committee member	2004 - 2011
International Life Sciences Institute Member of the ILSI Health and Environmental Sciences Institute Nanomaterial Safety Subcommittee Project Steering Team.	2004 – 2010
President's Council of Advisors on Science and Technology Member of the Nanotechnology Technical Advisory Group	2006 - 2009
Organization for Economic Cooperation and Development Working Party on Manufactured Nanomaterials. Project on Emerging Nanotechnologies representative.	2005 - 2007

EDITORIAL BOARDS

Nanotoxicology Member of the editorial board	2006 - Present
Journal of Responsible Innovation Member, Board of Editors	2013 - Present
Annals of Work Exposure and Health International Advisory Board	2017 - 2024
Annals of Occupational Hygiene International Advisory Board	2006 - 2016

Nano Today Member of the editorial board	2006 - 2009
Journal of Nanoparticle Research Member of the editorial board	2006 - 2012

COMMITTEES (NON-ACADEMIC)

NSET NIOSH representative on the Nanomaterial Science, Engineering and Technology (NSET) subcommittee of the National Science and Technology Council (NSTC).	2004 - 2005
NEHI Co-chair of the Nanotechnology Environmental and Health Impacts (NEHI) interagency working group.	2004 - 2005
International Standards Organization Convener of the International Standards Organization working group TC146/SC2/WG1: Size-selective aerosol sampling and analysis.	2001 - 2005

HONORS AND AWARDS

American Association for the Advancement of Science Lifetime Elected Fellow	2020
Society of Toxicology Public Communications Award	2015
National Institute for Occupational Safety and Health Alice Hamilton Award, Biological Sciences Category Winner (co-author)	2009
National Institute for Occupational Safety and Health Alice Hamilton Award, Biological Sciences Category Winner (co-author)	2006
National Institute for Occupational Safety and Health Alice Hamilton Award, Biological Sciences Honorable Mention (co-author)	2005
National Institute for Occupational Safety and Health Alice Hamilton Award, Engineering & Physical Sciences Honorable Mention (co-author)	2004
National Institute for Occupational Safety and Health Alice Hamilton Award, Engineering & Physical Sciences Honorable Mention (co-author)	2003

GOVERNMENT TESTIMONY AND BRIEFINGS

Formal testimony and briefings include:

President's Council on Science and Technology (PCAST) Private Meeting on Nanotechnology. Invited briefing. <i>November 1 2011.</i>	
Wisconsin Assembly Committee on Public Health Presentation at an information hearing on nanotechnology, potential impacts and regulation. <i>October 2009</i>	

National Organics Standards Board Materials Committee

Comments on Proposed Recommendations for Nanotechnology in Organic Production and Processing *May 2009*.

U.K. House of Lords Select Committee on Science and Technology.

Written evidence to the Inquiry into the use of nanotechnology in the food sector. *March 2009*.

Food and Drug Administration.

Public meeting on FDA-regulated products that may contain nanoscale materials. *September 8 2008*.

U.S. House of Representatives Committee on Science and Technology.

Hearing on The National Nanotechnology Initiative Amendments Act of 2008. Invited testimony. *April 16 2008*.

U.S. House of Representatives Committee on Science and Technology, Subcommittee on Research and Science Education.

Hearing on Research on Environmental and Safety Impacts of Nanotechnology: Current Status of Planning and Implementation under the National nanotechnology Initiative. Invited testimony. *October 31 2007*.

U.S. House of Representatives Committee on Science.

Hearing on Research on Environmental and Safety Impacts of Nanotechnology: What Are the Federal Agencies Doing? Invited testimony. *September 21 2006*.

President's Council on Science and Technology (PCAST)

Public Meeting on Nanotechnology. Invited briefing. *June 25 2007*.

President's Council on Bioethics.

Nanotechnology. Invited briefing. *June 29 2007*.

Nanoscale Science, Engineering and Technology Subcommittee, National Science and Technology Council, Committee on Technology;

Research Needs and Priorities Related to the Environmental, Health, and Safety Aspects of Engineered Nanoscale Materials: Public Meeting. Submitted testimony. *January 4 2007*.

Food and Drug Administration (FDA)

Consideration of FDA-Regulated Products That May Contain Nanoscale Materials; Public Meeting. Submitted testimony. *September 9 2008*.

European Food Safety Authority

Written comments on nanomaterials and nanotechnology and food and feeds. *March 2008*.

Congressional Nanotechnology Caucus.

General Briefing on Nanotechnology. Chair. *March 3 2007*.

Congressional Nanotechnology Caucus.

Meeting on Nanotechnology and Environment, Health and Safety. Invited briefing. *November 19 2007*

THOUGHT LEADERSHIP

Much of my career over the past 20 years has focused on working through various networks, organizations, and platforms, to help guide and inform decision making around advanced technology transitions and socially responsible innovation. This includes testifying before congressional committees, working closely with organizations such as the World Economic Forum, OECD and others, contributing to National Academies studies, working widely with print and broadcast media, and writing extensively for a public audience – including through articles, blogs and newsletters.

My influence and impact as a thought leader, communicator, and public intellectual, are driven by a conviction that academics – especially academics at a public university – have a societal responsibility to ensure knowledge and the insights associated with it are made as accessible, meaningful, and impactful, to as many people as possible, whether these are business leaders, policy makers, civil society, educators, members of the public, or others. They are also

underpinned by a deeply transdisciplinary approach to exploring and addressing emerging challenges and opportunities. Through my work I intentionally and strategically leverage my expertise, networks, platforms, and skills, in numerous and often novel ways to mobilize knowledge, understanding, and insights, in the service of empowering others to be part of building a positive future together.

In this context I would highlight the following, although this is by no means an exhaustive list of domains I work across:

Responsible and beneficial development of nanotechnology: Through my work with government agencies, industry, civil society, and other organizations, I have had a global impact on research, policy, and decision making around the safe and beneficial development of nanotechnology over the past two plus decades. In the early 2000's I was responsible for co-leading the US federal government's strategic initiatives around nanotechnology safety. Between 2005 – 2010 I was one of the most influential thought leaders globally in the responsible development of nanotechnology in my role as Chief Science Advisor to the Woodrow Wilson International center for Scholars' Project on Emerging Nanotechnologies. I have testified before congressional committees, served on National Academies committees, worked with organizations that include OSTP, OECD, and the World Economic Forum, and become one of the go-to experts on nanotechnology safety for journalists and policy makers. Although my work now extends far beyond nanotechnology, I continue to contribute to thought leadership here.

Responsible innovation and emerging technologies: My work over the past 15 years has increasingly focused on supporting decision making around responsible innovation and emerging technologies. Since 2008 I have worked extensively with the World Economic Forum, including participating in and chairing Global Agenda Councils and Global Futures Councils, being an invited speaker at Davos and the Annual Meeting of New Champions in China (the "Summer Davos"), and participating since its inception in the working group behind the World Economic Forum's annual list of top ten emerging technologies. I was influential in informing the ideas that led to the concept of the Fourth Industrial Revolution, and continue to be a leading public thinker around responsible innovation and emerging technologies. My writing and academic publications continue to push the boundaries of thinking around socially responsible and beneficial innovation.

Advanced Technology Transitions: For over two decades my research and thought leadership have broadly encompassed what may be described as "advanced technology transitions." This is a field I have highlighted through my public-facing work, and one that represents a unique and broad framework for approaching the beneficial development and use of potentially disruptive new technologies. It is a framework that is becoming increasingly relevant in my thought leadership around advanced technologies such as artificial intelligence and quantum technologies. I founded and direct the ASU Future of Being Human initiative that is explicitly focused on catalyzing conversations around advanced technology transitions, and building thought leadership capacity around technology, society, and the future.

Risk Innovation: Much of my professional career has touched on risk, and has ranged from conventional risk assessment and management (especially within the context of occupational and public health), to grappling with novel risks and innovative ways of thinking about and addressing risk. The latter has led to the emergence of "risk innovation" as a unique approach to understanding and navigating complex social risks in particular that are not covered by existing risk frameworks, and yet are critical to advanced technology transitions. My work around risk innovation is reflected in my time as Director of the University of Michigan Risk Science Center and the Arizona State University Risk Innovation Lab, and has focused on engaging with multiple stakeholders. This includes one of the most successful YouTube learning channels on understanding risk – Risk Bites. The channel provides a unique and highly accessible source of content on understanding risk, and includes some of the top-ranked YouTube videos in areas such as nanotechnology, epidemiology, and the fourth industrial revolution.

Public Engagement: I am known internationally for my work as a highly effective communicator, convener, moderator, and facilitator of public engagement. As well as being a sought-after speaker, I am regularly invited to talk about emerging technologies and responsible innovation by journalists and media outlets. I am a regular

contributor to platforms such as Slate Future Tense, World Economic Forum Agenda, and The Conversation (where I am the most prolific and most-read contributor at Arizona State University), and have written for outlets that include the Washington Post, Discover Magazine, Salon, Scientific American, and The Guardian. In addition, I write extensively for my own public-facing platforms, including a highly successful Substack newsletter. I approach my public engagement activities as integral to my position as a tenured professor at a public university, and deeply integrated with my scholarship and teaching. I focus specifically on knowledge mobilization, and opening up pathways and opportunities for emerging knowledge and insights to have far-reaching public accessibility, relevance, and impact.

Popular (Trade) Books: I have written two popular books on technology, society, and the future, that are designed to facilitate knowledge mobilization at scale around future-building in a technologically complex world. These books – “Films from the Future” and “Future Rising” – uniquely bring complex ideas around emerging technologies, society, and the future, to a broad audience. They are written to be engaging and accessible to a broad audience, while taking readers on a transdisciplinary journey of discovery that opens their eyes to new possibilities and ways of thinking as transformative technologies become increasingly complex and influential. Importantly, this has become a transformative avenue for scaling the national and global reach of my thought leadership and work around knowledge mobilization.

10 MOST CITED PUBLICATIONS IN PEER REVIEW JOURNALS

Google Scholar metrics: Citations: 23,145. H-index: 53, i10-index: 111 (Updated 12/21/23)

1. Poland, C. A., R. Duffin, I. Kinloch, A. Maynard, W. A. H. Wallace, A. Seaton, V. Stone, S. Brown, W. MacNee and K. Donaldson (2008). "Carbon nanotubes introduced into the abdominal cavity of mice show asbestos-like pathogenicity in a pilot study." *Nature Nanotechnology* **3**: 423-428. (3051 citations)
2. Oberdörster, G., A. Maynard, K. Donaldson, V. Castranova, J. Fitzpatrick, K. Ausman, J. Carter, B. Karn, W. Kreyling, D. Lai, S. Olin, N. Monteiro-Riviere, D. Warheit and H. Yang (2005). "Principles for characterizing the potential human health effects from exposure to nanomaterials: elements of a screening strategy." *Part. Fiber Toxicol.* **2**(8): doi:10.1186/1743-8977-1182-1188. (2533 citations)
3. Maynard, A. D., R. J. Aitken, T. Butz, V. Colvin, K. Donaldson, G. Oberdörster, M. A. Philbert, J. Ryan, A. Seaton, V. Stone, S. S. Tinkle, L. Tran, N. J. Walker and D. B. Warheit (2006). "Safe handling of nanotechnology." *Nature* **444**(16): 267-269. (1841 citations)
4. Shvedova, A. A., E. R. Kisin, R. Mercer, A. R. Murray, V. J. Johnson, A. I. Potapovich, Y. Y. Tyurina, O. Gorelik, S. Arepalli, D. Schwegler-Berry, A. F. Hubbs, J. Antonini, D. E. Evans, B. K. Ku, D. Ramsey, A. Maynard, V. E. Kagan, V. Castranova and P. Baron (2005). "Unusual inflammatory and fibrogenic pulmonary responses to single-walled carbon nanotubes in mice." *Am. J. Physiol.-Lung Cell. Mol. Physiol.* **289**: 698-708. (1618)
5. Shvedova, A. A., E. R. Kisin, A. R. Murray, V. Z. Gandelsman, A. D. Maynard, P. A. Baron and V. Castranova (2003). "Exposure to carbon nanotube material: Assessment of the biological effects of nanotube materials using human keratinocyte cells." *J. Toxicol. Environ. Health* **66**(20): 1909-1926. (1609 citations)
6. Elder, A., R. Gelein, V. Silva, T. Feikert, L. Opanashuk, J. Carter, R. Potter, A. Maynard, J. Finkelstein and G. Oberdorster (2006). "Translocation of inhaled ultrafine manganese oxide particles to the central nervous system." *Environmental Health Perspectives* **114**(8): 1172-1178. (1361 citations)
7. Maynard, A. D., P. A. Baron, M. Foley, A. A. Shvedova, E. R. Kisin and V. Castranova (2004). "Exposure to Carbon Nanotube Material: Aerosol Release During the Handling of Unrefined Single Walled Carbon Nanotube Material." *J. Toxicol. Environ. Health* **67**(1): 87-107. (999 citations)
8. Shvedova, A. A., E. Kisin, A. R. Murray, V. J. Johnson, O. Gorelik, S. Arepalli, A. F. Hubbs, R. R. Mercer, P. Keohavong, N. Sussman, J. Jin, J. Yin, S. Stone, B. T. Chen, G. Deye, A. Maynard, V. Castranova, P. A. Baron and V. E. Kagan (2008). "Inhalation vs. aspiration of single-walled carbon nanotubes in C57BL/6 mice: inflammation, fibrosis, oxidative stress, and mutagenesis." *Am. J. Physiol.-Lung Cell. Mol. Physiol.* **295**: L552-L565. (737 citations)

9. Maynard, A. D. and E. D. Kuempel (2005). "Airborne nanostructured particles and occupational health." Journal Of Nanoparticle Research **7**(6): 587-614. (716 citations)
10. Tsuji, J. S., A. D. Maynard, P. C. Howard, J. T. James, C. W. Lam, D. B. Warheit and A. B. Santamaria (2006). "Research strategies for safety evaluation of nanomaterials, part IV: Risk assessment of nanoparticles." Toxicological Sciences **89**(1): 42-50. (622 citations)

PEER REVIEW PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?hl=en&user=b8NhWc4AAAAAJ>

1. Kidd, J., P. Westerhoff and A. Maynard (2021). "Survey of industrial perceptions for the use of nanomaterials for in-home drinking water purification devices." NanoImpact **22**: 100320.
2. Hadi, A. and Maynard, A. D. (2021) Design the Future Activities (DFA): A Pedagogical Content Knowledge Framework in Engineering Design Education. Virtual Conference, ASEE Conferences.
3. Maynard, A. D. (2021). "How to Succeed as an Academic on YouTube." Frontiers in Communication **5**(130).
4. Kidd, J., P. Westerhoff and A. Maynard (2020). "Public perceptions for the use of Nanomaterials for in-home drinking water purification devices." NanoImpact: 100220. DOI: 10.1016/j.impact.2020.100220
5. Guseva Canu, I., K. Batsungnoen, A. Maynard and N. B. Hopf (2020). "State of knowledge on the occupational exposure to carbon nanotube." International Journal of Hygiene and Environmental Health **225**: 113472.
6. Tournas, L., W. Johnson, A. Maynard and D. Bowman (2019). "Germline Doping for Heightened Performance in Sport." Australian and New Zealand Sports Law Journal **12**(1): 1-24.
7. Maynard, A. D. and M. Scragg (2019). "The Ethical and Responsible Development and Application of Advanced Brain Machine Interfaces." J Med Internet Res **21**(10): e16321.
8. Maynard, A. D. and J. Kidd (2018). "Are assumptions of consumer views impeding nano-based water treatment technologies?" Nature Nanotechnology **13**(8): 673-674.
9. Finkel, A. M., et al. (2018). "A "solution-focused" comparative risk assessment of conventional and synthetic biology approaches to control mosquitoes carrying the dengue fever virus." Environment Systems and Decisions **38**(2): 177-197.
10. Hansen, S. F., R. Hjorth, L. M. Skjolding, D. M. Bowman, A. Maynard and A. Baun (2017). "A critical analysis of the environmental dossiers from the OECD sponsorship programme for the testing of manufactured nanomaterials." Environmental Science: Nano: 4, 282-291.
11. Maynard, A. D., D. M. Bowman and J. G. Hodge Jr (2016). "Mitigating Risks to Pregnant Teens from Zika Virus." The Journal of Law, Medicine & Ethics **44**(4): 657-659.
12. Lewis, R. C., R. Hauser, A. D. Maynard, R. L. Neitzel, L. Wang, R. Kavet, P. Morey, J. B. Ford, J. D. Meeker and R. Dadd (2016). "Personal Measures Of Power-Frequency Magnetic Field Exposure Among Men From An Infertility Clinic: Distribution, Temporal Variability And Correlation With Their Female Partners' exposure." Radiation protection dosimetry **172**(4): 401-408.
13. Wilding, L. A., C. M. Bassis, K. Walacavage, S. Hashway, P. R. Leroueil, M. Morishita, A. D. Maynard, M. A. Philbert and I. L. Bergin (2016). "Repeated dose (28-day) administration of silver nanoparticles of varied size and coating does not significantly alter the indigenous murine gut microbiome." Nanotoxicology **10**(5): 513-520.
14. Lewis, R. C., R. Hauser, A. D. Maynard, R. L. Neitzel, L. Wang, R. Kavet and J. D. Meeker (2016). "Exposure to Power-Frequency Magnetic Fields and the Risk of Infertility and Adverse Pregnancy Outcomes: Update on the Human Evidence and Recommendations for Future Study Designs." Journal of Toxicology and Environmental Health - Part B: Critical Reviews **19**(1): 29-45.
15. Wilding, L. A., C. M. Bassis, K. Walacavage, S. Hashway, P. R. Leroueil, M. Morishita, A. D. Maynard, M. A. Philbert and I. L. Bergin (2016). "Repeated dose (28-day) administration of silver nanoparticles of varied size and coating does not significantly alter the indigenous murine gut microbiome." Nanotoxicology **10**(5): 513-520.

16. Ault, A. P., D. I. Stark, J. L. Axson, J. N. Keeney, A. D. Maynard, I. L. Bergin and M. A. Philbert (2016). "Protein corona-induced modification of silver nanoparticle aggregation in simulated gastric fluid." *Environmental Science: Nano* **3**(6): 1510-1520.
17. Bergin, I. L., L. A. Wilding, M. Morishita, K. Walacavage, A. P. Ault, J. L. Axson, D. I. Stark, S. A. Hashway, S. S. Capracotta, P. R. Leroueil, A. D. Maynard and M. A. Philbert (2016). "Effects of particle size and coating on toxicologic parameters, fecal elimination kinetics and tissue distribution of acutely ingested silver nanoparticles in a mouse model." *Nanotoxicology* **10**(3): 352-360.
18. Axson, J. L., D. I. Stark, A. L. Bondy, S. S. Capracotta, A. D. Maynard, M. A. Philbert, I. L. Bergin and A. P. Ault (2015). "Rapid Kinetics of Size and pH-Dependent Dissolution and Aggregation of Silver Nanoparticles in Simulated Gastric Fluid." *Journal of Physical Chemistry C* **119**(35): 20632-20641.
19. Harper, S., W. Wohlleben, M. Doa, B. Nowack, S. Clancy, R. Canady and A. Maynard (2015). "Measuring Nanomaterial Release from Carbon Nanotube Composites: Review of the State of the Science." *J Phys Conf Ser* **617**(1).
20. Scherer, L. D., A. Maynard, D. C. Dolinoy, A. Fagerlin and B. Zikmund-Fisher (2014). The psychology of 'regrettable substitutions': examining consumer judgments of Bisphenol A and its alternatives. *Health Risk & Society* **16**(7-8): 649-666.
21. Hodge, G. A., A. D. Maynard and D. M. Bowman (2014). "Nanotechnology: Rhetoric, risk and regulation." *Science and Public Policy* **41**(1): 1-14.
22. Ramachandran, G., J. Howard, A. Maynard and M. Philbert (2012). "Handling Worker and Third-Party Exposures to Nanotherapeutics During Clinical Trials." *Journal of Law Medicine & Ethics* **40**(4): 856-864.
23. Fatehi, L., S. M. Wolf, J. McCullough, R. Hall, F. Lawrenz, J. P. Kahn, C. Jones, S. A. Campbell, R. S. Dresser, A. G. Erdman, C. L. Haynes, R. A. Hoerr, L. F. Hogle, M. A. Keane, G. Khushf, N. M. P. King, E. Kokkoli, G. Marchant, A. D. Maynard, M. Philbert, G. Ramachandran, R. A. Siegel and S. Wickline (2012). "Recommendations for Nanomedicine Human Subjects Research Oversight: An Evolutionary Approach for an Emerging Field." *Journal of Law Medicine & Ethics* **40**(4): 716-750.
24. Ramachandran G, Ostraat M, Evans DE, Methner MM, O'Shaughnessy P, D'Arcy J, et al. (2011). A Strategy for Assessing Workplace Exposures to Nanomaterials. *JOEH* **8**(11): 673-685.
25. Kriegel, C., J. Koehne, S. Tinkle, A. D. Maynard and R. A. Hill (2011). "Challenges of Trainees in a Multidisciplinary Research Program: Nano-Biotechnology." *J. Chemical Edu*, **88**(1): 53-55.
26. Maynard AD, Warheit D, Philbert MA. (2011). The New Toxicology of Sophisticated Materials: Nanotoxicology and Beyond. *Tox Sci* **120** (Suppl 1): S109-S129.
27. Shatkin JA, Abbott LC, Bradley AE, Canady RA, Guidotti T, Kulinowski KM, et al. (2010). Nano Risk Analysis: Advancing the Science for Nanomaterials Risk Management. *Risk Analysis* **30**(11): 1680-1687.
28. Abbott L.C., Maynard A.D. (2010). Exposure Assessment Approaches for Engineered Nanomaterials. *Risk Analysis* **30**(11): 1634-1644.
29. Aitken, R. J., P. J. A. Borm, K. Donaldson, G. Ichihara, S. Loft, F. Marano, A. D. Maynard, G. Oberdörster, H. Stamm, V. Stone, L. Tran and H. Wallin (2009). "Nanoparticles: one word: a multiplicity of different hazards." *Nanotoxicology* **3**(4): 263-264.
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8. Maynard, A. D. (2008). United States House of Representatives Committee on Science & Technology Hearing on: The National Nanotechnology Initiative Amendments Act of 2008. Testimony of: Andrew D. Maynard, Ph.D. Chief Science Advisor, Project on Emerging Nanotechnologies, Woodrow Wilson

- International Center for Scholars, Washington, DC. April 16 2008. Washington DC, Project on Emerging Nanotechnologies.
9. Maynard, A. D. (2006). Nanotechnology: A research strategy for addressing risk. Washington DC, Woodrow Wilson International Center for Scholars, Project on Emerging Nanotechnologies.
 10. Maynard, A. D. (2005). Inventory of Research on the Environmental, Health and Safety Implications of Nanotechnology Washington DC, Woodrow Wilson International Center for Scholars, Project on Emerging Nanotechnologies.
 11. Baron, P. A., A. D. Maynard and M. Foley (2003). Evaluation of aerosol release during the handling of unrefined carbon nanotube material. Cincinnati, OH, NIOSH.
 12. Kenny, L. C., A. D. Maynard, R. C. Brown, B. Crook, A. Curran and D. J. Swan (1999). A scoping study into ultrafine aerosol research and HSL's ability to respond to current and future research needs, health and Safety Laboratory, UK.

COURSES TAUGHT

Pizza and a Slice of Future (FIS 394) 1 Credit Hour Arizona State University School for the Future of Innovation in Society	2023 – Present
Basic Prompt Engineering with ChatGPT: Introduction (FIS 394) 1 Credit Hour Arizona State University School for the Future of Innovation in Society	2023 – Present
Antarctica: The Frozen Continent (FIS 494/HSD 598) 3 Credit Hours (Study Abroad) Arizona State University School for the Future of Innovation in Society	2022
Antarctica: Humans and the Environment (FIS 494/HSD 598) 3 Credit Hours. Arizona State University School for the Future of Innovation in Society	2022
The Moviegoer's Guide to the Future (FIS 394/FIS 338) 3 Credit Hours. Arizona State University School for the Future of Innovation in Society	2018 – Present
Intro to Western Theory & Response (HSD 591) 2 Credit Hours. Co-taught Arizona State University School for the Future of Innovation in Society	2019 – 2020
From Reanimation to Robots: Making Sense of Emerging Technologies OLLI 4-session course Arizona State University Osha Life Long Learning Institute	2019 – 2020
Research & Development Administration (HSD 598) 3 Credit Hours. Co-taught. Arizona State University School for the Future of Innovation in Society	2017
Risk and the Future (FIS 332) 3 Credit Hours Arizona State University School for the Future of Innovation in Society	2016 – 2018
Advanced Science and Technology Policy (HSD 502) 3 Credit Hours Arizona State University School for the Future of Innovation in Society	2015 – 2021

Introduction to Risk Innovation (HSD 598) 3 Credit Hours Arizona State University School for the Future of Innovation in Society	2015 – 2016
Entrepreneurial Ethics 1.5 Credit Hours University of Michigan College of Engineering	2013 – 2015
Principles of Risk Assessment 2 Credit Hours University of Michigan School of Public Health	2011 - 2015
Professional Perspectives in Environmental Health 2 Credit Hours University of Michigan School of Public Health	2011 - 2014
Environmental Health Policy 2 Credit Hours University of Michigan School of Public Health	2012 - 2014
Communicating Science through Social Media 2 Credit Hours University of Michigan School of Public Health	2012 - 2013
Aerosol Dynamics 3 Credit Hours University of Cincinnati, Department of Environmental Health	2002 - 2004

PHD COMMITTEES

Chris Brandt (chair), ASU. Focus: Military innovation.	Current
Kevin Johnson (chair), ASU. Focus: Education in rural environments	Current
Jonathan Klane (chair), ASU. Focus: Narrative and laboratory safety.	Current
Josh Massad (Co-chair), ASU. Focus: Future-casting	Current
Anna Muldoon (co-chair), ASU. Focus: Infectious diseases and conspiracy theories	Current
Chantal Sathi (chair), ASU. Focus: Entrepreneurship and space data usage	Current
Mel Sellick (Chair), ASI. Focus: technology transitions	Current
Dania Wright (chair), ASU. Focus: Online science communication	Current
Sean Dudley (member), ASU. Focus: Life extension technologies	Current
Amy Pate (member), ASU. Focus: Learning design leadership	Current
Rizwan Virk (member) ASU. Focus: Science fiction and the Metaverse	Current
Amy Pate (member) ASU. Developing Ethnorelative Worldviews in Instructional Design Teams: A Case Study	2024
Jared Byrne (chair), ASU. Contesting Entrepreneurial Imperialism: Reimagining Popular Narratives Towards Inclusive Entrepreneurialism	2024
Jeishu Wang (chair), ASU. Focus: AI and invention	2023
Jamie Winterton (chair). Focus: Cyber security	2023
Shivam Zaveri (member) ASU. Aligning Decisions with Mission: Using Socio-Technical Integration for Workers in Industrial Organizations	2023
Nicole Mayberry (co-chair), ASU. Shrouded Cartographies of Subordination: How Science Fiction Stories Build Anti-Black Futures	2022

Kevin Dwyer , ASU. Assessing the Resilience of Dams to Unexpected Events and Emerging Threats	2022
Jason Brown (chair), ASU. Thinking Like a Futurist: Investigating the Theories and Processes of Threatcasting Post-Analysis	2021
Robert Sickler (chair), ASU. The Technology Triad: Reimagining the Relationship Between Technology and Military Innovation	2021
Justin Kidd , ASU. An Interdisciplinary Approach to Identifying the Potential Environmental, Human Health, and Societal Impacts of Engineered Metallic and Carbon Nanomaterials	2020
Changdeok Gim , ASU. Institutional Management for Infrastructure Resilience	2019
Elizabeth Garbee (chair), ASU. The Value of a STEM PhD	2018
Ryan Lewis , University of Michigan. Exposure Science Issues Concerning 60 Hz Magnetic Fields.	2015
Dingsheng Li , University of Michigan,.A Physiologically Based Pharmacokinetic Model Study of the Biological Fate, Transport, and Behavior of Engineered Nanoparticles	2014
Ei-Wen Lo , University of Michigan. A Model to Predict Driver Performance When Interacting with In-Vehicle Speech Interfaces for Destination Entry and Music Selection	2012
Kristen Russ , University of Michigan. Cellular Toxicity of C60 Fullerenes in RAW 264.7 Immortalized Macrophages	2012
Sebastien Bau , INRS, France. Surface area measurement of nanoscale aerosols.	2008
Shu An Lee , University of Cincinnati. Laboratory and field evaluation of N95 respirators using a new method	2004

RESEARCH SUPPORT (Post 2010)

Future of Being Human initiative

Funding: ASU, 2022 - 2027

Role: Director

Direct Costs: \$750,000

Risk Innovation Accelerator

Funding: ASU, 2017 – 2019

Role: Principle Investigator

Direct Costs: \$250,000

Nanosystems Engineering Research Center for Off-Grid Nanotechnology Enabled Water Treatment (NEWT).

Funding: NSF 2015 – 2025

Role: Investigator

Center for Ingredient Safety and Risk Assessment-Risk Communications Subcontract

Funding: Michigan State University 2014 – 2017

Role: Principle Investigator

Direct costs: \$370,149

Designing a "Solution-Focused" Governance Paradigm for SynBio: Case Studies of Improved Risk Assessment and Creative Regulatory Design

Funding: Alfred P Sloan Foundation (via University of Pennsylvania subcontract) 2013 - 2014

Role: Participating Investigator

Direct costs (personal): \$7,964

Seminar series: Information Communication through Data Visualization

Funding: University of Michigan OPR. 2012 – 2013

Role: Principle Investigator

Direct costs: \$7,500

Workshop: A roadmap for developing and implementing minimum nanomaterial characterization reporting requirements within regulatory and development communities

Funding: NSF CBET-1239092. 2012 – 2013

Role: Principle Investigator

Direct costs: \$29,500

Modulation of immune-GI function by nanoAg. The goal is to better understand the mechanisms by which ingested engineered nanomaterials interact with the GI tract and the microbiome, and impact on further organs and systems.

Funding: NIEHS, U01. 2010 - 2015

Role: Co-Investigator

Direct costs: \$387,276.00

Support for 2011 Risk Science Symposium. 2011

Funding: Sloan Foundation (B2011-23) 2011

Role: Principle Investigator

Direct costs: \$20,000

University of Michigan Risk Science Center

Funding: Private Donation

Role: Director (2010 – 2015)

Direct costs: ~\$5M

INVITED LECTURES AND ADDRESSES - SELECTED

A small selection from several hundred invited lectures, talks and presentations:

1. Think Forward: AI Learning Forum, Center on Reinventing Public Education. Invited panelist on Bridging to Broader AI Reality. (4/1/24)
2. Gartner Research Board. Invited talk and discussion on AI. (3/20/24)
3. Future Tense. Invited Talk: Has AI Changed Everything? (Mexico City). 2/27/24
4. Women Corporate Directors (Paradise Valley chapter). Invited dinner talk on artificial intelligence. (1/23/24)
5. Consortium for Science Policy Outcomes. Invited lecture: Responsible Artificial Intelligence: Policy Pathways to a Positive AI Future. (12/15/23)
6. Peoria Chamber of Commerce. Invited lecture: The Future of AI and its Impact on Business (10/18/23)
7. Institute for Advanced Food and Nutrition Science. Invited lecture: The Promise and Hype of Artificial Intelligence. (10/17/23)
8. ASU Mirabella community. Invited lecture: Will AI Kill Us or Save Us? Making sense of the risks, benefits, and hype, of advanced artificial intelligence. (10/12/23)
9. ASU Research Computing Expo. Keynote: Will AI Kill Us or Save Us? Navigating the risk, benefits, and hype, of advanced artificial intelligence. (10/3/23)

10. Arizona Academic Decathlon. Technology and Humanity: Technology, Innovation, and the Economy. (9/15/23)
11. Western University. Invited lecture: Achieving Research with Impact. (4/14/23)
12. Geography 2050. Invited talk at the 2022 Geography 2050 conference: Past is Prologue: What Soylent Green Got Wrong. (11/17/22)
13. National Science Foundation. Gen-4 workshop invited presentation: How can the Gen-4 ERCs map and engage non-industry stakeholders to secure societal benefit? (5/18/22)
14. Global Futures Laboratory. Hosted panel discussion: The Future in 2022 (4/21/22)
15. Global Futures Laboratory. Hosted four Firestarter Chats as part of the opening of the Rob and Melani Walton Center for Planetary Health (4/18-22/22)
16. American Bar Association Toxic Torts and Environmental Law conference. Invited presentation: Rethinking Risk in a COVID-Normal Future (4/8/22)
17. India Science Festival: Fireside chat on innovation and the future. Virtual (1/12/22)
18. The Matrix: Public film showing and panel discussion moderated by Andrew Maynard, at the Majestic Cinema, Tempe (12/10/21)
19. El Paso Space Festival: Nerd Night showing of Contact, with introduction and commentary by Andrew Maynard. (9/22/21)
20. National Academies of Science and Los Alamos National Laboratory Harnessing Transformational Technologies Symposia Series: AI and the Art of Manipulation – How We Need to Think Differently About AI as We Develop Socially Responsible Applications (7/20/21)
21. ATP Bio invited lecture (University of Minnesota): Creating Value in a Complex World (6/29/21)
22. 2021 FRANKx Lecture, ASU: Bounded Infinities, Quantum Tunneling, and the Future of Education (3/19/21)
23. Invited presentation at ISTAS20: Living on the Edge of Tomorrow: A Moviegoer's Guide to Public Interest Technology (11/12/20)
24. Security and Sustainability Forum, moderator for panel discussion" Prove I Made a Low Carbon Choice – Can smart systems do this? (10/28/20)
25. Invited comments to the National Academies of Science, Engineering and Medicine Committee on Science, Technology, and Law (10/2/20)
26. Arizona MedTech Summit, keynote address: Living on the Edge of Tomorrow: A Moviegoer's Guide to MedTech? (8/26/20)
27. ANSI Nanotechnology Standards Panel, invited remarks on advanced materials (8/20/20)
28. ILSI NA Annual Meeting: Panel Discussion on Trust in Science (moderator) (7/23/20)
29. Phoenix Arts, Science & Culture Salon (Spirit of the Senses): Future Rising (5/21/20)
30. AZ Tech Council Med Tech Roundtable – presenter (5/19/20)
31. Preparing Future Minority Faculty 2020 Symposium, North Carolina Agricultural and Technical State University: Rethinking the "Pipeline" – Thoughts on Thriving as a STEM PhD (with Elizabeth Garbee) (5/14/20)
32. AME Digital Culture series (ASU): Future Rising: A Journey from the Past to the Edge of Tomorrow (2/27/20)
33. KEEN National Conference: Thin Different: New Tools for Creating Value in an Uncertain World (1/4/20)
34. Arizona Biosecurity Workshop: Innovative ways of thinking about risk in emerging technologies (12/5/19)
35. Phoenix Arts, Science & Culture Salon (Spirit of the Senses): Films from the Future (12/4/19)
36. Waymo: Fireside chat with Governor Doug Ducey (9/19/19)
37. Arizona STEM & Innovation Summit: Pardon my science! (9/17/19)
38. Marsh Digital: Thinking Differently About Risk (7/15/19)
39. ILSI North America: A Moviegoer's Guide to Responsible and beneficial Innovation (6/24/19)
40. Phoenix Fan Fusion: Multiple panels (5/24/19)

41. Governance of Emerging Technology and Science: Films from the Future (5/22/19)
42. CSPO 20th anniversary: Sci-Fi Snug (5/9/19)
43. Film Bar: Introduction to Planet of the Apes (4/25/19)
44. Let's Talk Self-Driving: A Fireside Conversation with Waymo's Tekedra Mawakana (4/11/19)
45. Emerge 2019: Engines of Desire (3/30/19)
46. ASU Law & Society Salon: The Future: Insights from Sci-Fi Films. 1/31/19
47. CES panel *Balancing the speed of innovation and regulation*. Las Vegas 1/9/19
48. Sparks & Honey Daily Briefing—Films from the Future and Cultural Trends. New York City, NY. 12/13/18
49. Films from the Future: What Sci-Fi Movies Can Teach Tech Companies About Socially Responsible Innovation. Tech 2025, Brooklyn NY, 12/13/18
50. Films from the Future: Can science fiction movies really teach us anything about technology innovation? NEXT Conference, San Francisco. 12/5/18
51. The Moviegoer's Guide to the Future. Alamo Draft House Cinema, Tempe AZ. 11/27/18
52. Base Code: How convergent technologies are transforming the future of sustainable materials, and the challenges and opportunities they in turn present. McGill's Sustainability Sciences Initiative Annual Symposium, Montreal, Canada. (10/23/18)
53. Humility is not a four-letter word. ASU Grad College Knowledge Impact Awards Keynote. 4/26/18
54. Risk Innovation: The roles of creativity, imagination, and rigor, in exploring future pathways around existential risk. Cambridge Conference on Existential Risk, Cambridge UK, 4/18/18
55. Presentation to a meeting of the National Academies of Science Board of Lifesciences Annual Meeting, on risk, 11/30/17
56. Workshop leader, workshop on agile governance at the World Economic Forum Annual Meeting of the Global Future Councils, Dubai, 11/9/17
57. Workshop on Agile Governance, World Economic Forum Annual Center for the Fourth Industrial Revolution, 9/25/17
58. Presentation to the National Academies of Science Meeting of Experts: Planetary Protection and Terrestrial Contamination Requirements Associated with Sample Caching and Return. 7/31/17
59. Interdisciplinary Perspectives on Complex Risk Analysis Relevant to Emerging Technologies. Presentation to the National Academies of Science Committee to Review Planetary Protection Policy Development Processes, 6/27/17
60. Swiss National Science Foundation: Invited keynote on the culmination of the NRP 64 program on Opportunities and Risks of Nanotechnology. 6/2/17
61. Planetary Protection: Assessing the Risks. A Community Conversation. Plenary at the 2017 Astrobiology Science Conference 4/24/17
62. Risk Communication & Talking to the Public About Chemicals. Panel at GlobalChem 2017, 2/24/17
63. Emerging technologies and their applications – a presentation to the United Nations Expert Meeting on Exponential Technological Change, automation, and their policy implications for sustainable development, 12/6/16
64. Innovating for Social and Economic Success. NEWT Science Seminar, 11/28/16
65. The Future of Zika. Event hosted by the School for the Future of Innovation in Society, 11/9/16
66. American Industrial Hygiene Association Fall Conference. Risk Innovation and the Workplace of the Future. 10/25/16
67. Responsible Industry workshop, Berlin: Responsible Research and Innovation^[1]A US Perspective. 6/22/16
68. Future Tense: Engineering Away Disease (panel discussion). 2/23/16
69. AAAS 2016 Annual Meeting. Moderating panel on Public Engagement and Risk Communication: Case Study of Synthetic Biology. 2/11/16

70. World Economic Forum Summit on the Global Agenda. Panel discussion on the Fourth Industrial evolution. 10/26/15. <https://www.youtube.com/watch?v=Oj3a7O-73bY>
71. NanOEh conference, South Africa. Plenary Presentation “Responsible Innovation and Nanotechnology”. 10/18/15
72. Notre Dame University. Invited lecture “Is responsible nanotechnology doomed to failure?” 10/27/14
73. Royal Society of London meeting on bio-nano interactions: new tools, insights and impacts. Invited lecture: “Innovative approaches to emergent risks”. 5/1/14
74. National Academy of Sciences Forum on Synthetic Biology invited presentation: “Innovative approaches to emergent risks” 3/13/14
75. World Economic Forum Annual Meeting of the New Champions, Dalian China. Panelist “Building the 21st century regulatory system” 9/12/13
76. Argentinean Foundation of Nanotechnology. “Thinking critically and imaginatively about the challenges of sophisticated materials” 10/30/12
77. 2012 Arnold Small Lecture, Human Factors and Ergonomics Society Annual Meeting. “From the nanoscale to the human scale: Connecting nanotechnology and human factors” 10/24/12
78. Harvard University. “The new science of sophisticated materials: Nanomaterials and beyond” 4/13/12
79. Swiss National Science Foundation. “The new science of sophisticated materials: Nanomaterials and beyond” 3/3/11
80. World Economic Forum Annual Meeting, Davos. Challenge to the panel. “The science agenda in 2011” 1/26/11
81. Cincinnati Contemporary Arts Center. “Small Gods... and the art of technology innovation” 12/11/10
82. University of Cambridge Center for Research in the Arts, Social Sciences and Humanities (CRAASH). 6/1/10 “Governing emerging technologies under conditions of uncertainty”
83. Johnson & Johnson. “Effective evidence-based communication strategies. Lessons from nanotechnology” 5/19/10
84. Wisconsin Assembly Committee on Public Health. “Nanotechnology. Opportunities and challenges.” 10/6/09
85. Brookings Institution. “Controlling wayward science: Dangers of unanticipated consequences.” 6/19/09
86. Transatlantic Consumer Dialogue. “Nanomaterials and consumer products. A perspective from the US.” 6/10/08
87. International Joint Commission. “Nanotechnology in perspective. New technologies, new challenges?” 3/30/09
88. Oxford University. “Rethinking science and technology innovation for the 21st century: A nanoscale perspective.” 3/12/09
89. Royal Society. Briefing on Synthetic Biology 10/17/08
90. European Aerosol Conference. “Developing Responsible Nanotechnologies. An Aerosol Perspective.” 8/28/08
91. Gothenburg University, Gothenburg, Sweden. “Managing the Small Stuff. Ensuring the success of safe nanotechnologies.” 5/13/08
92. Swedish Academies of Science. “Smart Science. Challenges and opportunities in the race to develop safe nanotechnologies.” 5/12/08
93. New York Academy of Sciences. “Nanotechnology. Science, society and policy.” 5/14/07
94. Nanoscience Centre, University of Cambridge, UK. “Nanotechnology and potential risk. Challenges to measuring exposure to engineered nanomaterials.” 05/05/07
95. Johns Hopkins University. “The science of nanotechnology and public health” 4/10/07
96. Health Effects Institute annual conference. “Nanoparticles from manufacturing.” 4/16/07
97. CalEPA. “Nanotechnology. Maximizing the benefits. Minimizing the risks.” 3/8/07
98. Senior Management at the Hong Kong Department of Labor. “Nanotechnology benefits and challenges.” 2/8/07

99. Rabobank North American Agribusiness Advisory Board. "Nanotechnology. Why should you care?" 1/30/07
100. University of Virginia. Invited comments on the Opening ceremony for Wilsdorf Hall. 11/10/06
101. NATO ARW, Bulgaria. "Nanotechnology: Overview and issues." 8/13/06
102. The Conference Board. "Nanotechnology. An introduction to the technology, and its EH&S implications." 06/08/06
103. Warner Lecture, British Occupational Hygiene Society. "Nanotechnology: The next big thing, or much ado about nothing?" 04/25/06
104. Robert and Floretta Austin Distinguished Lecture in Science. University of Idaho, Moscow. "Nanotechnology: The next big thing, or much ado about nothing?" 04/17/06
105. Institute of Occupational Safety and Health (IOSH), Taiwan. "Working at the Nanoscale. Nanotechnology and Potential Occupational Health Risk" 01/05/06
106. Academia Sinica, Taiwan. "Nanotechnology: Environment, Safety and Health." 01/04/06
107. Asia Nanotechnology Forum. "Assessing the environmental safety and human health risk of emerging nanotechnologies" 12/9/05
108. Australian Institute for Occupational Hygiene. "Engineered Nanomaterials and Occupational Health" 12/4/05
109. Society Of Toxicology. "Engineered Nanomaterials and Occupational Health" 11/2/05
110. NASA. "Nanotechnology: Overview and relevance to Occupational Health" 10/21/05
111. National Academies of Science, Chemical Sciences Round Table. "Nanotechnology: Opportunities and Challenges in a Changing World." 09/21/05
112. American Industrial Hygiene Association "Nanotechnology: Overview and Relevance to Occupational Health. 09/14/05
113. EPA. "Nanotechnology and Occupational Health." 6/13/05
114. Korean Society of Toxicology. "Nanotechnology and occupational health – addressing potential health risks." 5/13/05
115. American Association for the Advancement of Science. "Nanoparticle exposure. Generating and characterizing airborne nanoparticles." 2/20/05
116. American Chemistry Council. Nanotechnology and Occupational Health. "Ensuring a safe and healthful workforce in a changing environment." 10/24/04
117. NIOSH Board of Scientific Councilors. "The NIOSH Nanotechnology Initiative. Ensuring a safe and healthful workforce in a changing environment." 10/21/04
118. California Department of Health Services". Perspectives on a 'small' problem. Nanotechnology and Occupational Health." 3/25/04
119. Scandinavian Electron Microscopy Conference. "From Nuisance dusts to Nanoparticles. The Role of Electron Microscopy in Occupational and Environmental Health." 6/13/03
120. Royal Society. "Overview of methods for analyzing single ultrafine particles." 3/15/00

CONFERENCE & WORKSHOP LEADERSHIP

Seventh International Symposium on Nanotechnology and Occupational Health
South Africa (2015). Advisor, and member of the International Advisory Board

2015 Michigan Meeting: Academic engagement in public and political discourse
Ann Arbor (2015). Meeting organizing committee

2013 Bernstein Symposium: Why Is It Hard to Pivot Based on Science?
Ann Arbor (2013). Symposium Chair

Sixth International Symposium on Nanotechnology and Occupational Health
Japan (2013). Advisor, and member of the International Advisory Board

2011 Risk Science Symposium: Risk, Uncertainty and Sustainable Innovation
Ann Arbor MI (2011). Symposium Chair

Fifth International Symposium on Nanotechnology and Occupational Health
Boston (2011). Advisor, and member of the International Advisory Board

Fourth International Symposium on Nanotechnology and Occupational Health
Helsinki (2009). Advisor, and member of the International Advisory Board

Third International Symposium on Nanotechnology and Occupational Health
Taiwan (2007). Co-chair

Second International Symposium on Nanotechnology and Occupational Health
Minneapolis, USA (2005). Co-chair

Materials Research Society
Symposium: Nanomaterials and the Environment (2005). Co-chair

First International Symposium: Nanotoxicology: Biomedical Aspects
Miami (2005). Organizing committee

Developing Experimental Approaches for Evaluation of Toxicological Interactions of Nanoscale
Materials
Gainesville Florida (2004) Steering Committee member

First International Symposium on Nanotechnology and Occupational Health
Buxton, UK (2004). Co-chair

Emerging Issues in Nanoaerosol Science and Technology
Workshop sponsored by the National Science Foundation and the Environmental Protection Agency (2003).
Panel Member

Royal Society (London)
“Ultrafine Particles in the Atmosphere” (London, 2000). Co-chair

PUBLIC WRITING (SELECTED)

Contributor to:

- [The Washington Post](#)
- [Substack](#)
- [The Conversation](#)
- [Slate Future Tense](#)
- [World Economic Forum Agenda](#)
- [Scientific American](#)
- [Edge of Innovation](#)

Selected articles include:

1. Maynard (2023) “Quantum dots are part of a revolution in engineering atoms in useful ways – Nobel Prize for chemistry recognizes the power of nanotechnology” The Conversation, <https://theconversation.com/quantum-dots-are-part-of-a-revolution-in-engineering-atoms-in-useful-ways-nobel-prize-for-chemistry-recognizes-the-power-of-nanotechnology-215015>
2. Maynard (2023) “Navigating the risks and benefits of AI: Lessons from nanotechnology on ensuring emerging technologies are safe as well as successful.” The Conversation, <https://theconversation.com/navigating-the-risks-and-benefits-of-ai-lessons-from-nanotechnology-on-ensuring-emerging-technologies-are-safe-as-well-as-successful-210872>

3. Fink and Maynard (2023) “Top 10 Emerging technologies of 2023: Sustainable Computing” World Economic Forum <https://www.weforum.org/publications/top-10-emerging-technologies-of-2023/in-full/flexible-batteries/#9-sustainable-computing>
4. Maynard (2023) “I Asked ChatGPT to Develop a College Class About Itself. Now, it’s teaching it.” Slate Future Tense, <https://slate.com/technology/2023/07/chatgpt-class-prompt-engineering.html>
5. Maynard (2023) “What’s a Luddite? An expert on technology and society explains” The Conversation, <https://theconversation.com/whats-a-luddite-an-expert-on-technology-and-society-explains-203653>
6. Maynard (2022) “Five Robot Movies That Will Make You Cry” Medium, <https://medium.com/edge-of-innovation/five-robot-movies-that-will-make-you-cry-47848fb79ef3>
7. Maynard (2022) “I asked Open AI’s ChatGPT about responsible innovation. This is what I got” Medium <https://medium.com/edge-of-innovation/i-asked-open-ais-chatgpt-about-responsible-innovation-this-is-what-i-got-c0f4bfe14776>
8. Maynard (2022) “56 Stunning AI-Generated Images Inspired By The Future of Being Human” Medium <https://medium.com/edge-of-innovation/56-stunning-ai-generated-images-inspired-by-the-future-of-being-human-6d3ef5cd6674>
9. Maynard (2022) “Why Soylent Green Got 2022 So Wrong” Slate Future Tense. <https://slate.com/technology/2022/08/soylent-green-2022.html>
10. Maynard (2022) “‘Jurassic World’ scientists still haven’t learned that just because you can doesn’t mean you should – real-world genetic engineers can learn from the cautionary tale” The Conversation <https://theconversation.com/jurassic-world-scientists-still-havent-learned-that-just-because-you-can-doesnt-mean-you-should-real-world-genetic-engineers-can-learn-from-the-cautionary-tale-184369>
11. Maynard (2022) “Scarlett Johansson’s Amazon Alexa Super Bowl Ad May Be Fun, But It Also Raises Serious Questions” Medium <https://medium.com/edge-of-innovation/scarlett-johanssons-amazon-alexa-super-bowl-ad-may-be-fun-but-it-s-also-scary-cc11d2913707>
12. Maynard (2021) “Artificial intelligence: Friend or foe for building a better future?” Global Futures | Futurecast Volume 1. https://issuu.com/asuoked/docs/asugflfuturecast_fall2021/s/14160187
13. Maynard (2021) “Why we should take Elon Musk’s Tesla Bot seriously” FastCompany <https://www.fastcompany.com/90673676/elon-musk-tesla-bot>
14. Maynard (2020) “10 ways we can build a better relationship with the future” World Economic Forum <https://www.weforum.org/agenda/2020/12/10-ways-we-can-build-a-better-relationship-with-the-future/>
15. Johnson, Bowman, Tournas and Maynard (2019) “We Are Not Ready to Deal With Gene-Edited Athletes” Future Tense <https://slate.com/technology/2019/12/crispr-prime-editing-gene-doping-athletes.html>
16. Maynard (2019) “The Many Ways Elon Musk’s Neuralink Could Go Wrong” OneZero <https://onezero.medium.com/how-to-build-a-better-brain-machine-interface-while-not-falling-at-the-first-hurdle-cc238836a2b7>
17. Maynard (2019) “How to Ensure Our Digital Legacy Isn’t Lost to the Future” OneZero <https://onezero.medium.com/how-to-ensure-our-digital-legacy-isnt-lost-to-the-future-f6a226bc6792>
18. Maynard (2019) “Neuralink’s Technology Is Impressive. Is It Ethical?” OneZero <https://onezero.medium.com/neuralinks-technology-is-impressive-is-it-ethical-812afb38b19e>
19. Maynard (2019) “Ethics Boards Won’t Save Big Tech” OneZero <https://onezero.medium.com/tech-companies-need-an-ethics-reset-4d936a27960e>
20. Lathan and Maynard (2019) “Collaborative Telepresence Could Render Distance (Relatively) Meaningless” Scientific American <https://www.scientificamerican.com/article/collaborative-telepresence-could-render-distance-relatively-meaningless/>
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ONLINE CONTENT (SELECTED)

Future of Being Human Substack (<https://futureofbeinghuman.com>)

Regular articles on technology, society, and the future of being human

Ten recent articles:

1. We have a technology problem – and it probably isn't what you think. (March 31, 2024) <https://futureofbeinghuman.com/p/we-have-a-technology-problem-and>
2. Are we putting our undergrads in playpens when they need playgrounds? (March 17) <https://futureofbeinghuman.com/p/undergraduate-playgrounds-not-playpens>
3. Does the key to AI superalignment lie in the science of cooperation? (December 20, 2023) <https://futureofbeinghuman.com/p/ai-superalignment-and-cooperation-science>
4. Why everything you've ever heard about AI risk is wrong (November 26, 2023)

- <https://futureofbeinghuman.com/p/everything-youve-heard-about-ai-risk-is-wrong>
5. Regulating Frontier AI: To Open Source or Not? (July 12, 2023)
<https://andrewmaynard.substack.com/p/regulating-frontier-ai-models>
 6. What does EU Artificial Intelligence regulation mean for AI in education? (July 10, 2023)
<https://andrewmaynard.substack.com/p/eu-ai-act-and-education>
 7. Is biological computing the future of AI? (May 30, 2023)
<https://andrewmaynard.substack.com/p/organoid-intelligence-ai>
 8. Can large language models be used for predictive policing? And if so, should we be worried? (May 22, 2023)
<https://andrewmaynard.substack.com/p/can-large-language-models-be-used>
 9. Tipping Points and Broken Symmetries (May 4, 2023)
<https://andrewmaynard.substack.com/p/tipping-points-and-broken-symmetries>
 10. In Bill Joy's "Why The Future Doesn't Need us" AI is nowhere, and everywhere (April 26, 2023)
<https://andrewmaynard.substack.com/p/in-bill-joys-why-the-future-doesnt>

Risk Bites (<https://www.youtube.com/user/riskbites>)

Risk Bites is a YouTube channel produced by and featuring content created by Andrew Maynard. Risk Bites uses white board videos to explore risk for a broad audience. Launched July 2012.

Analytics as of 7/13/23: Subscribers: 23,700. Views: 4,385,045. Watch Time: 156,000 hours.

Selected videos (limited to 10 out of over 100):

11. Ten AI Dangers You Can't Ignore. (April 3, 2023) https://youtu.be/y_gEw_KDnMI
12. How Effective are Face Masks Against COVID Infection? (August 29, 2022)
<https://youtu.be/9siVaVqUAoM>
13. Five Ethical Challenges of Advanced Brain Computer Interfaces (November 23, 2020)
<https://youtu.be/514agonyu7c>
14. A Practical Guide to Responsible Innovation (October 12, 2020) <https://youtu.be/qFYG9ZnQjHs>
15. The Risks and Ethics of Facial Recognition Technology (June 25, 2020) <https://youtu.be/2SdpzTZTznw>
16. Can sci-fi movies lead to more ethical technologies? (January 20, 2019)
https://www.youtube.com/watch?v=pMuO7zJa5_Q
17. How dangerous is radon to your health? (May 2 2018). <https://www.youtube.com/watch?v=SIRVdKdTBFE>
18. What is the Fourth Industrial Revolution? And why should you care? (Jan 16 2018).
<https://www.youtube.com/watch?v=qhLvYFLoWE>
19. What is nanotechnology? (July 2016). <https://www.youtube.com/watch?v=DAOFpgocfrg>
20. What are gene drives? A Risk Bites guide (November 2015)
<https://www.youtube.com/watch?v=KgvhUPiDdq8>

Mission: Interplanetary podcast (<https://podcasts.apple.com/us/podcast/mission-interplanetary/id1557978522>)

A podcast co-hosted with former astronaut Cady Coleman, and produced through the ASU Interplanetary Initiative. Series one was hosted by Slate.

Launched April 2021.

Recent episodes:

1. How will we govern the moon? (Nov 15, 2022) <https://podcasts.apple.com/us/podcast/how-will-we-govern-the-moon/id1557978522?i=1000586235889>
2. What are we learning from the JWST? (Nov 8, 2022) <https://podcasts.apple.com/us/podcast/what-are-we-learning-from-the-jwst/id1557978522?i=1000585457362>
3. What is the future of food in space? (Nov 1, 2022) <https://podcasts.apple.com/us/podcast/what-is-the-future-of-food-in-space/id1557978522?i=1000584635756>

4. What can building spaceships teach us about teams? (Oct 18, 2022) <https://podcasts.apple.com/us/podcast/what-can-building-spaceships-teach-us-about-teams/id1557978522?i=1000582997573>
5. What will we do on the moon? (Oct 11, 2022) <https://podcasts.apple.com/us/podcast/what-will-we-do-on-the-moon/id1557978522?i=1000582254547>
6. What can we do about space debris? (Oct 4, 2022) <https://podcasts.apple.com/us/podcast/what-can-we-do-about-space-debris/id1557978522?i=1000581540359>
7. Are We Done Searching for Intelligent Life? (May 10, 2022) <https://podcasts.apple.com/us/podcast/are-we-done-searching-for-intelligent-life/id1557978522?i=1000560236245>
8. What Will People Do on a Private Space Station? (May 3, 2022) <https://podcasts.apple.com/us/podcast/what-will-people-do-on-a-private-space-station/id1557978522?i=1000559440170>
9. Making Space Accessible Part 2 (April 26, 2022) <https://podcasts.apple.com/us/podcast/making-space-accessible-pt-2/id1557978522?i=1000558714851>
10. Making Space Accessible Part 1 (April 19, 2022) <https://podcasts.apple.com/us/podcast/making-space-accessible-pt-1/id1557978522?i=1000558010513>
11. Mars vs Venus (April 12, 2022) <https://podcasts.apple.com/us/podcast/mars-vs-venus/id1557978522?i=1000557210454>
12. Space and Climate Change (April 5, 2022) <https://podcasts.apple.com/us/podcast/space-and-climate-change/id1557978522?i=1000556279947>
13. The Dangers of a Crewed Mission to Mars (March 29, 2022) <https://podcasts.apple.com/us/podcast/the-dangers-of-a-crewed-mission-to-mars/id1557978522?i=1000555561265>
14. Is Space Mining Really Viable? (March 22, 2022) <https://podcasts.apple.com/us/podcast/is-space-mining-really-viable/id1557978522?i=1000554825289>
15. Sharing Space (May 11, 2021) <https://podcasts.apple.com/us/podcast/sharing-space/id1557978522?i=1000521276726>
16. Trash at 17,000 mph (May 4, 2021) <https://podcasts.apple.com/us/podcast/trash-at-17-000-mph/id1557978522?i=1000520014287>
17. Murder in Space (April 27, 2021) <https://podcasts.apple.com/us/podcast/murder-in-space/id1557978522?i=1000518803810>
18. Closing Time (April 20, 2021) <https://podcasts.apple.com/us/podcast/closing-time/id1557978522?i=1000517873681>
19. No Space for Columbus (April 13, 2021) <https://podcasts.apple.com/us/podcast/no-space-for-columbus/id1557978522?i=1000516925309>
20. Our Mars Fixation (April 6, 2021) <https://podcasts.apple.com/us/podcast/our-mars-fixation/id1557978522?i=1000515961646>
21. A Space of One's Own (March 30, 2021) <https://podcasts.apple.com/us/podcast/a-space-of-ones-own/id1557978522?i=1000514997016>
22. Our Celestial Bodies, Ourselves (March 23, 2021) <https://podcasts.apple.com/us/podcast/our-celestial-bodies-ourselves/id1557978522?i=1000514085254>

Future Out Loud Podcast (<https://soundcloud.com/user-723097380>)

Future Out Loud is a podcast conceived and produced by Heather Ross, and co-hosted by Andrew Maynard. It explores the intersection between science, technology and society.

Launched November 2016.

Recent episodes (selection from over 50 episodes):

1. Estonian Election Security (June 2019) <https://soundcloud.com/user-723097380/estonian-election-security>
2. Elections for the Next Generation (June 2019) <https://soundcloud.com/user-723097380/elections-for-the->

[next-generation](#)

3. Ranked Choice Voting (April 2019) <https://soundcloud.com/user-723097380/ranked-choice-voting>
4. Election Security with Maricopa County Recorder Adrian Fontes (April 2019) <https://soundcloud.com/user-723097380/election-security-adrian-fontes>
5. AZ Secretary of State Katie Hobbs (April 2019) <https://soundcloud.com/user-723097380/az-secretary-of-state-katie-hobbs>
6. Elections (April 2019) <https://soundcloud.com/user-723097380/elections>
7. Films from the Future (2018) <https://soundcloud.com/user-723097380/films-from-the-future>
8. Should technology solve humanity's problems? (2018) <https://soundcloud.com/user-723097380/google-ceo>
9. 3D printed guns (2018) <https://soundcloud.com/user-723097380/3d-guns>
10. Global innovation in human rights, with Erica Kochi (May 2018) <https://soundcloud.com/user-723097380/human-rights>
11. How to govern emerging technologies, with Gillian Hadfield (May 2018) <https://soundcloud.com/user-723097380/hadfield>
12. DIY Biohacking, with Todd Kuiken (May 2018) <https://soundcloud.com/user-723097380/diy-biohacking>
13. Autonomous Vehicle Fatality Number 1 (2018) <https://soundcloud.com/user-723097380/av-fatality>
14. Future of Energy Systems (2018) <https://soundcloud.com/user-723097380/future-energy-systems>
15. EpiFinder (2018) <https://soundcloud.com/user-723097380/epifinder>
16. GeneSports (February 2018) <https://soundcloud.com/user-723097380/genesports>
17. Can My Tech Feel Me? (February 2018) <https://soundcloud.com/user-723097380/can-my-tech-feel-me>
18. Sci Fi Grounded in Space (January 2018) <https://soundcloud.com/user-723097380/sci-fi-grounded-in-space>
19. Net Neutrality (January 2018) <https://soundcloud.com/user-723097380/net-neutrality>
20. Greg Benford (December 2017) <https://soundcloud.com/user-723097380/greg-benford>

Edge of Innovation (<https://theconversation.com/columns/andrew-maynard-128048>)

Edge of Innovation was a column written for The Conversation between 2015 – 2016 (when column writers were incorporated into mainstream articles on the website). A full list of articles on The Conversation can be found here: <https://theconversation.com/profiles/andrew-maynard-128048/articles>

Selection of articles (also listed elsewhere in CV):

1. Will driving your own car become the socially unacceptable public health risk smoking is today? (September 2016) <https://theconversation.com/will-driving-your-own-car-become-the-socially-unacceptable-public-health-risk-smoking-is-today-65891>
2. Considering ethics now before radically new brain technologies get away from us (September 2016) <https://theconversation.com/considering-ethics-now-before-radically-new-brain-technologies-get-away-from-us-65215>
3. It'll take more than tech for Elon Musk to pull off audacious new Tesla master plan (July 2016) <https://theconversation.com/itll-take-more-than-tech-for-elon-musk-to-pull-off-audacious-new-tesla-master-plan-62884>
4. How risky are the World Economic Forum's top 10 emerging technologies for 2016? (June 2016) <https://theconversation.com/how-risky-are-the-world-economic-forums-top-10-emerging-technologies-for-2016-61349>
5. Nanoparticles in baby formula: should parents be worried? (May 2016) <https://theconversation.com/nanoparticles-in-baby-formula-should-parents-be-worried-59246>
6. We don't talk much about nanotechnology risks anymore, but that doesn't mean they're gone (March 2016) <https://theconversation.com/we-dont-talk-much-about-nanotechnology-risks-anymore-but-that-doesnt-mean-theyre-gone-56889>

7. Public universities must do more: the public needs our help and expertise (March 2016)
<https://theconversation.com/public-universities-must-do-more-the-public-needs-our-help-and-expertise-56016>
8. Three ways synthetic biology could annihilate Zika and other mosquito-borne diseases (February 2016)
<https://theconversation.com/three-ways-synthetic-biology-could-annihilate-zika-and-other-mosquito-borne-diseases-54087>
9. Can citizen science empower disenfranchised communities? (January 2016)
<https://theconversation.com/can-citizen-science-empower-disenfranchised-communities-53625>
10. The fourth industrial revolution: what does WEF's Klaus Schwab leave out? (January 2016)
<https://theconversation.com/the-fourth-industrial-revolution-what-does-webs-klaus-schwab-leave-out-53049>

Science Showcase (<http://scienceshowcase.org>)

Science Showcase is a YouTube platform that was established by Andrew Maynard. It provides a forum for researchers to showcase highly accessible videos on the “what” and “how” of science, technology and engineering.

Miscellaneous Media

Select online content featuring Andrew Maynard. Please see <https://andrewmaynard.net/in-the-media/> for an up to date list:

1. The Relentless Pursuit Podcast: "Into the Metaverse" - an Interview with Professor Andrew Maynard (November 1, 2022) <https://podcasts.apple.com/us/podcast/into-the-metaverse-an-interview-with/id1514156204?i=1000584740117>
2. Center for Responsible Innovation podcast: RISK INNOVATION and the power of WONDER & AWE in innovation success (October 10, 2022) <https://www.youtube.com/watch?v=go1NDNJ2QBQ>
3. 'Full Self-Driving' clips show owners of Teslas fighting for control, and experts see deep flaws Washington Post. (February 10, 2022) (extensively interviewed and quoted).
<https://www.washingtonpost.com/technology/2022/02/10/video-tesla-full-self-driving-beta/>
4. Horizon, Arizona PBS: The metaverse could become a reality in the next few years (December 16, 2021)
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Interplanetary Community in a Box Project (Medium – <https://medium.com/interplanetary-community-in-a-box-initiative>)

The Interplanetary Community in a Box Project is a multi-author Medium publication with Maynard as Editor-in-Chief, that is designed to kick-start conversations around off-world community building.

Medium (<https://2020science.medium.com/>)

Since 2014 Maynard has published over 100 thought pieces on the platform Medium.

2020 Science (2007 – 2019) (<http://2020science.org>)

2020 Science was a personal blog exploring emerging technologies and responsible innovation. It was archived in 2019 as Maynard focused increasingly on other communication platforms.

Mind the Science Gap (<http://mindthesciencegap.org>)

Mind the Science Gap was launched in 2012 as a unique approach to helping public health graduate students at the University of Michigan hone their science communication skills, and ran until 2014. While active, it had nearly 400 posts, over 4000 comments, and half a million page views.