

Aditi Verma

Position/Department/Division/Institution/Organization

Assistant Research Scientist **July 2021 – present**

(Incoming Assistant Professor September 2022 onwards)

Department of Nuclear Engineering and Radiological Sciences

University of Michigan

Visiting Scholar **July 2021 – present**

Project on Managing the Atom

Belfer Center for Science and International Affairs

Harvard Kennedy School of Government

Country

USA

Career history

Stanton Nuclear Security Postdoctoral Fellow **October 2020 – July 2021**

Project on Managing the Atom and International Security Program

Belfer Center for Science and International Affairs

Harvard Kennedy School

Post-Doctoral Associate and Junior Nuclear Analyst **December 2018 – September 2020**

Division of Nuclear Technology Development and Economics

OECD Nuclear Energy Agency

Education

Massachusetts Institute of Technology (MIT), Cambridge, MA

PhD, February 2019, Department of Nuclear Science and Engineering

PhD thesis : *Epistemologies of safety: A comparative study of contemporary French and American reactor design practices*

S.B., June 2012, Department of Nuclear Science and Engineering, with a humanities concentration in French

Undergraduate thesis: *Manpower Development for New Nuclear Energy Programs*

Languages : English, Hindi, French (working proficiency), German (intermediate) , Russian

(beginner)

Awards/Publications

Awards:

Stanton Nuclear Security Fellowship, Project on Managing the Atom and International Security Program, Belfer Center for Science and International Affairs, Harvard Kennedy School, 2020

Outstanding Student Service Award, MIT Department of Nuclear and Engineering, Spring 2015

Alpha Nu Sigma, Nuclear Engineering Academic Honor Society, inducted Spring 2011

Kelly-Douglas Fellowship, MIT School of Humanities Arts and Social Sciences— 2011 for the self-study of French

Kelly-Douglas Fellowship, MIT School of Humanities Arts and Social Sciences— 2010 for photographic documentation of architectural and cultural differences between Eastern and Western Europe

Burchard Scholar, MIT School of Humanities Arts and Social Sciences —2010 - 2011

Publications:

Aditi Verma. Guest-editor of special issue on “the Nuclear and Social Science Nexus: Challenges and Opportunities for Speaking Across the Disciplinary Divide” *Nuclear Technology*, September (2021) ([link](#))

Aditi Verma. “What can nuclear engineers learn from design studies? A review of the theory and evidence from contemporary American reactor design projects” *Nuclear Engineering and Design*, Volume 379, 111114.(2021) ([link](#))

Aditi Verma & Denia Djokic. “Reimagining Nuclear Engineering” *Issues in Science and Technology*. Volume 32, No. 3. (Spring 2021) ([link](#))

Aditi Verma, Ali Ahmad & Francesca Giovannini, “Nuclear Energy, ten years after Fukushima” *Nature*, Volume 591, March 5, (2021) ([link](#))

Refereed conference papers

* denotes equal authors

Madhurima Das*, Anastasia Ostrowski*, Shelly Ben-David*, Kimberley Kimura, Gillian Roeder, Catherine D'Ignazio, Cynthia Brezeal, Maria Yang, Aditi Verma. "Auditing Design Justice: The Impact of Social Movements on Design Pedagogy at a Technology Institution" *submitted* to the *Design Thinking Research Symposium 13*, Haifa Israel, (2022)

Katlyn Turner*, Aditi Verma* & Danielle Wood. "Intersectional Antiracism & Technology Design: Building Frameworks to Advance Justice and Equity in Complex Sociotechnical Systems" Accepted for the 72nd International Astronautical Congress. Dubai. October (2021)

Aditi Verma. "Origins of Design Principles : The Case of Nuclear Reactor Design Projects" Proceedings of the ASME International Design and Engineering Conferences, Design Theory and Methodology DETC 2017-67437 Cleveland (2017)

Aditi Verma. "Frugal innovation in complex systems: Evidence from Nuclear Reactor Design and Development in India", International Design Conference, Proceedings of DESIGN (2018)

Richard Lester & Aditi Verma "Managing Nuclear Technology: An Experiment in Applying the Science:Systems: Society Educational Triad", Transactions of the American Nuclear Society. Vol 109. Number 1. (2013)

Aditi Verma and Charles Forsberg. "Continental Seabed Disposal of Low-Level Waste: The Barge Waste Package". Transactions of the American Nuclear Society. Vol 109. Number 1. (2013)

"Production of Biodiesel and Biogasoline via Coupling a LBE-cooled Reactor to Hydrogen and Biofuels Plants" with R.R. Macdonald, A. Salazar, D.Sutherland, M.P. Short. Transactions of the American Nuclear Society. Vol.107. (2012)

Unrefereed conference papers

Aditi Verma. "The role of tacit knowledge in the design of complex, dual-use technologies" submitted to the *Annual Conference of the Society of the History of Technology*. New Orleans. November (2021).

Aditi Verma. “What can nuclear engineers learn from design studies: A review of the theory and evidence from contemporary American and French reactor design projects” OECD Nuclear Energy Agency, International Workshop on the Nuclear and Social Science Nexus (2019)

Aditi Verma. “The invention-regulation gap: Nuclear reactor design strategies in the absence of codified regulations” AGORAS conference, IMT Atlantique, Nantes (2019)

Aditi Verma. “The Fukushima Daiichi accident and epistemologies of nuclear safety” AGORAS conference, Sciences Po, Paris (2018)

Aditi Verma. “Ontologies of Nuclear Safety” Society for the Social Studies of Science, Annual Conference, Boston (2017)

Aditi Verma. “Technology Transfer, Control and the Indigenization of the Indian Pressurized Heavy Water Reactor” Society for the History of Technology, Annual Meeting, Dearborn Michigan (2014)

Policy Documents and Reports

Antonio Vaya Soler, Michel ´ Berthélemy, **Aditi Verma**, Vladislav Sozoniuk, Andrew White, Kimberly Nick. “Small Modular Reactors: Challenges and Opportunities”. OECD Nuclear Energy Agency. NEA No. 7560. April (2021). ([link](#))

Verma, A. Diffusion of Light Water Reactor Technologies in Europe and Beyond: A retrospective analysis and lessons learned for future nuclear deployment. Prepared for Idaho National Laboratory as part of SOW-14452, August (2020)

Hansen, J., Dixon B. , **Verma, A.**, Cuadra, A. , Todosow, M.. Retrospective analysis of US LWR technology commercialization: Lesson’s learned for today’s nuclear industry. Prepared for US Department of Energy. INL/EXT-20-58211. May 15 (2020)

Rindzevičiūtė, E., ed. (2019) Nuclear Cultural Heritage: Position Statement. AHRC Research Networking Project, AH/SO01301/1. Kingston: Kingston University

Verma, A. Background note for a policy briefing on Small Modular Reactors (SMRs). Prepared for the Steering Committee of the OECD Nuclear Energy Agency (2019)

Verma, A. Discussion paper for an exploratory meeting aimed at establishing the Global Council of Universities on Nuclear Energy Technology, Policy and Education (2019)

Verma, A. In depth review (IDR) of the energy policy of the Slovak Republic. Chapter on nuclear energy. International Energy Agency (2018)

Verma, A. & Rajagopal, S. “An assessment of the expansion of the Indian Nuclear Energy Program” Center for Study of Science, Technology and Policy, Bangalore, India (2013)

Perspectives and Analysis

Aditi Verma. “Accidents, Paradoxes and the Epistemic Future of Nuclear Policy” Inkstick Media. March 11, (2021) ([link](#))

Ali Ahmad, Aditi Verma* & Francesca Giovannini. “Ten years after Fukushima: The experts examine lessons learned and forgotten” Guest-editors of a collection of expert commentaries. Bulletin of the Atomic Scientists. March 11 (2021) ([link](#))

Katlyn M. Turner, Lauren J. Borja, Denia Djokić, Madicken Munk and Aditi Verma. “A Call for Antiracist Action and Accountability in the US Nuclear Community.” Bulletin of the Atomic Scientists, August 24, (2020) ([link](#))

Aditi Verma. “Institutional Requirements for the Growth of Nuclear Energy in India” India in Transition Series. Center for the Advanced Study of India. University of Pennsylvania. February (2016) ([link](#))

Areas of expertise

Nuclear engineering

Energy policy

Sociology of technology

Design research

Energy equity and environmental justice