

Alexander Glaser

📍 Princeton University ✉ alx@princeton.edu 🌐 sgs.princeton.edu/team/alex-glaser 📞 +1 (609) 258-5692

Professional Experience

Associate Professor

Princeton University

Princeton, NJ

July 2016 – Present

- Co-director of the Program on Science and Global Security, leading a team of postdoctoral researchers and graduate students in the Department of Mechanical and Aerospace Engineering and in the School of Public and International Affairs
- Principal Investigator on several grants awarded by the U.S. Department of State, the U.S. Department of Energy, and private foundations to support work on nuclear arms control, verification, and security

Assistant Professor

Princeton University

Princeton, NJ

Sept. 2009 – June 2016

- Establishing a new university laboratory for computational and experimental work on nuclear verification, nuclear-fuel cycle assessments, and neutronics calculations to assess advanced nuclear systems

Associate Research Scholar

Princeton University

Princeton, NJ

April 2005 – August 2009

- Member of the Program on Science and Global Security

Research Fellow

Massachusetts Institute of Technology

Cambridge, MA

Sept. 2001 – August 2003

- Member of the Security Studies Program, MIT Center for International Studies
- Member of the Core Physics Group, Department of Nuclear Science and Engineering

Education

Technische Universität Darmstadt, Germany

PhD, Physics

April 2005

- *Magna cum laude*
- Thesis: *Neutronics Calculations Relevant to the Conversion of Research Reactors to Low-Enriched Fuel*

Technische Universität Darmstadt, Germany

German degree: *Diplom Physiker*

May 1998

- *Sehr gut* (very good, highest mark on the German scale)
- Thesis: *Burnup Calculations for a System Dedicated to the Elimination of Weapons Plutonium*

Selected Publications

- P. Park and **A. Glaser**, “Estimating Potential Tritium and Plutonium Production in North Korea’s Experimental Light Water Reactor,” *Science & Global Security*, 2025.
- J. Tobisch, S. Philippe, B. Barak, G. Kaplun, C. Zenger, **A. Glaser**, C. Paar, and U. Rührmair, “Remote Inspection of Adversary-Controlled Environments,” *Nature Communications*, 14 (6566), 2023.
- E. Lepowsky, M. Kütt, S. Aslam, H. Fetsch, S. Snell, **A. Glaser**, and R. J. Goldston, “Experimental Demonstration and Modeling of a Robotic Neutron Detector with Spectral and Directional Sensitivity for Treaty Verification,” *Nuclear Instruments and Methods in Physics Research A*, August 2022.
- J. de Troullioud de Lanversin, M. Kütt, and **A. Glaser**, “ONIX: An Open-source Depletion Code,” *Annals of Nuclear Energy*, 151, February 2021.
- D. Turnbull, **A. Glaser**, R. J. Goldston, “Investigating the Value of Fusion Energy Using the Global Change Assessment Model,” *Energy Economics*, 51, September 2015.
- A. Ahmad, E. B. McClamrock, **A. Glaser**, “Neutronics Calculations for Denatured Molten Salt Reactors:

- Assessing Resource Requirements and Proliferation-Risk Attributes,” *Annals of Nuclear Energy*, 75, 2015.
- M. Schöppner and **A. Glaser**, “Present and Future Potential of Krypton-85 for the Detection of Clandestine Reprocessing Plants for Treaty Verification,” *Journal of Environmental Radioactivity*, 162–163, 2016.
 - K. Mayer and **A. Glaser**, “Nuclear Forensics,” in N. E. Busch and J. F. Pilat (eds.), *The Routledge Handbook of Nuclear Proliferation and Policy* Routledge, May 2015.
 - H. Feiveson, **A. Glaser**, Z. Mian, and F. von Hippel, *Unmaking the Bomb: A Fissile Material Approach to Nuclear Disarmament and Nonproliferation*, MIT Press, Cambridge, MA, September 2014.
 - M. Englert, G. Franceschini, **A. Glaser**, M. Glugla, R. Goldston, J. How, S. Konishi, W. Liebert, and R. Wallace, *Report of the Consultancy Meeting on Non-Proliferation Challenges in Connection with Magnetic Fusion Power Plants*, International Atomic Energy Agency, Vienna, June 2013.
 - **A. Glaser** and R. J. Goldston, “Proliferation Risks of Fusion Energy: Clandestine Production, Covert Production, and Breakout,” *Nuclear Fusion*, 52 (4), 2012.
 - **A. Glaser**, “Isotopic Signatures of Weapon-Grade Plutonium from Dedicated Natural Uranium-Fueled Production Reactors and Their Relevance for Nuclear Forensic Analysis,” *Nuclear Science & Engineering*, 163, September 2009.

Awards and Honors

Leo Szilard Lectureship Award

2025

- Awarded for “seminal scientific contributions and innovations to advance nuclear arms control, nonproliferation, and disarmament verification, and for leading the Princeton Program on Science and Global Security and mentoring many students and young researchers over the years”

Winner, Jury Award, Best XR Experience

March 2022

- Executive Producer, “On the Morning You Wake,” SXSW Film Festival, Austin, TX

Fellow, American Physical Society

September 2020

- Awarded for “major contributions to advancing the scientific and technical basis for nuclear arms control, nonproliferation, and disarmament verification”

100 Leading Global Thinkers of 2014

November 2014

- Awarded for “verifying that which can’t be seen” by Foreign Policy Magazine, Washington, DC

Howard B. Wentz Award

May 2014

- Recognizing “excellence in teaching and scholarship,” School of Engineering and Applied Science, Princeton University, Princeton, NJ

Synergistic Activities

Principal Investigator, NNSA/DOE University Consortia. Since 2014, participants of our team have been members of two university consortia led by the University of Michigan: Consortium for Verification Technology (CVT, 2014–2019) and Consortium for Monitoring, Technology, and Verification (MTV, 2020–2024/2025). As part of these initiatives, we have developed close collaborations and partnerships with researchers at many U.S. universities and most national laboratories.

Co-director, Princeton University’s Program on Science and Global Security. Founded in 1974, the program conducts scientific, technical and policy research, analysis and outreach. Throughout its history, SGS has worked on projects to reduce the dangers from nuclear weapons and ensure the safety and security of nuclear power. It is one of the oldest and most highly regarded academic programs focused on technical and policy studies on nuclear issues in the world.

Co-editor, Science & Global Security. Widely considered the leading international peer-reviewed academic journal that publishes research to strengthen the technical basis for nuclear arms control, nonproliferation, and disarmament initiatives. The journal has been published continuously since its first issue in 1989.

Co-Chair, International Panel on Fissile Materials. Founded in 2006, the panel brings together independent arms-control and nonproliferation experts from seventeen countries, including both nuclear weapon and non-nuclear weapon states. The mission of the IPFM is to analyze the technical basis for practical and achievable policy initiatives to secure, consolidate, and reduce stockpiles of highly enriched uranium and plutonium.