

Griffin D. Glenn

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Education

- 2019– **Stanford University** Stanford, CA
PH.D. APPLIED PHYSICS
Advisor: Prof. Siegfried Glenzer
- 2015–2019 **The University of Texas at Austin** Austin, TX
B.S. PHYSICS (DEAN'S SCHOLARS HONORS), B.A. PLAN II HONORS
Highest Honors
Advisor: Prof. Todd Ditmire

Research Experience

- Sept. 2019– **Graduate Research Assistant** Menlo Park, CA
PROF. SIEGFRIED GLENZER, SLAC NATIONAL ACCELERATOR LABORATORY HEDS DIVISION
Developed high repetition rate laser-driven ion and neutron sources based on ambient-temperature liquid sheet jet targets
- May 2022– **Practicum Fellow: DOE NNSA Stewardship Science Grad. Fellowship** Albuquerque, NM
Jul. 2022 DR. JOHN PORTER, SANDIA NATIONAL LABORATORIES ORG. 1682
Measured spatiotemporal couplings in nanosecond pulses using novel fast electronics; developed platform for computed tomography with nanosecond temporal resolution
- Oct. 2015– **Undergraduate Research Assistant** Austin, TX
Aug. 2019 PROF. TODD DITMIRE, UT AUSTIN CENTER FOR HIGH ENERGY DENSITY SCIENCE
Designed and fabricated an electron/positron magnetic spectrometer, supported by a UT Austin Undergraduate Research Fellowship

Peer-Reviewed Publications

14 publications indexed in Web of Science. WoS Sum of Times Cited: 114; WoS h-index: 7.

M. J. V. Streeter, **G. D. Glenn** et al., "Stable laser-acceleration of high-flux proton beams with plasma collimation," *Nature Communications* **16**, 1004 (2025)

B. Heuser et al., "Release dynamics of nanodiamonds created by laser-driven shock-compression of polyethylene terephthalate," *Scientific Reports* **14**, 12239 (2024)

B. Loughran et al., "Automated control and optimisation of laser driven ion acceleration," *High Power Laser Science and Engineering* **11** e35 (2023)

N. Xu et al., "Versatile tape-drive target for high-repetition rate laser-driven proton acceleration," *High Power Laser Science and Engineering* **11** e23 (2023)

X. Jiao et al., "High deuteron and neutron yields from the interaction of a petawatt laser with a cryogenic deuterium jet," *Frontiers in Physics* **10** 964696 (2023)

F. Treffert* and **G. D. Glenn*** et al., "Ambient-temperature liquid jet targets for high-repetition-rate HED discovery science," *Physics of Plasmas* **29** 123105 (2022)

*These authors contributed equally

- Z. He et al., “Diamond formation kinetics in shock-compressed C-H-O samples recorded by small angle X-ray scattering and X-ray diffraction,” *Science Advances* **8** (2022)
- F. Treffert et al., “High-repetition-rate, multi-MeV deuteron acceleration from converging heavy water microjets at laser intensities of 10^{21} W/cm²,” *Applied Physics Letters* **121** 074104 (2022);
- L. B. Fletcher et al., “Investigation of hard x-ray emissions from terawatt laser-irradiated foils at the Matter in Extreme Conditions instrument of the Linac Coherent Light Source,” *JINST* **17** T04004 (2022)
- F. Treffert et al., “Towards High-Repetition-Rate Fast Neutron Sources Using Novel Enabling Technologies,” *Instruments* **5** 38 (2021)
- H. Sawada et al., “2D monochromatic x-ray imaging for beam monitoring of an x-ray free electron laser and a high-power femtosecond laser,” *Review of Scientific Instruments* **92** 013510 (2021)
- C. B. Curry et al., “Optimization of radiochromic film stacks to diagnose high-flux laser-accelerated proton beams,” *Review of Scientific Instruments* **91** 093303 (2020)
- G. D. Glenn** et al., “Improved large-energy-range magnetic electron-positron spectrometer for experiments with the Texas Petawatt Laser,” *JINST* **14** P03012 (2019)
- G. Tiwari et al., “Beam distortion effects upon focusing an ultrashort petawatt laser pulse to greater than 10^{22} W/cm²,” *Optics Letters* **44** 2764-2767 (2019)

Awards and Fellowships

Scholarships and Prizes

2025–2026	LaserNetUS Student Ambassador Program (\$8k)
2020–2024	Department of Energy National Nuclear Security Agency Stewardship Science Graduate Fellowship (DOE NNSA SSGF, >\$300k)
2019–2020	National Science Foundation Graduate Research Fellowship Program (NSF GRFP, \$138k)
2019	University Co-op Mitchell Award for Undergraduate Academic Excellence (\$2.5k)
2018	Barry M. Goldwater Scholarship (\$7.5k)
2018	Alan Kaylor Cline Dean’s Scholars Scholarship (\$3k)
2016–2018	J. David Gavenda Scholarship in Plan II (\$7.9k)
2017	Eva Stevenson Woods Endowed Presidential Scholarship (\$2.5k)
2017	Undergraduate Research Fellowship (\$985)
2016, 2017	Abel Family Scholarship in Physics (\$5k)

Additional Honors

2019	UT Austin College of Natural Sciences Dean’s Honored Graduate
2019	UT Austin Physics Department Highest Academic Achievement Award
2018	Phi Beta Kappa
2018	SLAC SULI Program Ernest Coleman Memorial Award for Scholarship and Citizenship
2017–2019	Distinguished College Scholar

Conference Presentations

Oral Presentations

Oct. 2024	APS Division of Plasma Physics, 66th Annual Meeting “High stability 10 Hz proton source based on converging liquid microjets”	Atlanta, GA
Jul. 2024	LaserNetUS User Meeting 2024 “High-stability 10 Hz proton acceleration from liquid water microjets” (Student travel grant)	Austin, TX
Jun. 2024	2024 DOE NNSA SSGF & LRGF Annual Program Review “Advances in High Repetition Rate LaserDriven Particle Sources Based on Ambient-Temperature Liquid Jet Targets”	Las Vegas, NV
Oct. 2023	APS Division of Plasma Physics, 65th Annual Meeting “High flux directional laser driven neutron sources for static radiography applications”	Denver, CO
Jun. 2023	51st Anomalous Absorption Conference “Demonstration of a high repetition rate laser-driven neutron source in a pitcher-catcher scheme”	Mammoth Lakes, CA
Oct. 2022	APS Division of Plasma Physics, 64rd Annual Meeting “High repetition rate ion acceleration platform using ambient-temperature liquid jets”	Spokane, WA
Sept. 2022	9th International Conference on Ultrahigh Intensity Lasers “Spatiotemporal characterization of nanosecond laser pulses using an ultrafast diode array” (Student travel grant)	Jeju Island, Republic of Korea
Aug. 2022	LaserNetUS User Meeting 2022 “Ambient-temperature liquid jets for HED science applications” (Student travel grant)	Ft. Collins, CO

Poster Presentations

Feb. 2024	NIF & JLF User Group Meeting 2024 “Demonstration of a high repetition rate directional MeV laser-driven neutron source”	Livermore, CA
Jun. 2023	2023 DOE NNSA SSGF & LRGF Annual Program Review “Ambient-temperature liquid jet targets for in-situ monitoring and tuning of laser-driven ion beam parameters”	San Francisco, CA
Jun. 2022	2022 DOE NNSA SSGF & LRGF Annual Program Review “Ambient-temperature liquid microjets for online optimization of laser-driven ion acceleration”	Santa Fe, NM
Feb. 2022	NIF & JLF User Group Meeting 2022 “Assessing data-reduced vs. scientific parameters for online optimization of laser-driven ion acceleration”	Virtual
Nov. 2021	APS Division of Plasma Physics, 63rd Annual Meeting “Micron-scale ambient-temperature liquid jets for high repetition rate laser-matter interactions”	Virtual
Aug. 2021	2021 LaserNetUS Users’ Meeting “Self-generated proton radiography of magnetic field topology in ultra-high intensity laser-plasma interactions”	Virtual
Nov. 2020	APS Division of Plasma Physics, 62nd Annual Meeting “First demonstration of the Global Spectrometer for Positron and Electron Characterization (GSPEC)”	Virtual

Service

Summer 2024	Mentored Science Undergraduate Laboratory Internship (SULI) student	SLAC
2019–2025	Letter-writer and letter exchange leader for Stanford Science Penpals	Stanford University

Peer Review

Journal of Instrumentation (JINST)