

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
Honors Thesis Supervisor: Prof. Todd Ditmire

Research Experience

- Sept. 2019– **Graduate Research Assistant** Menlo Park, CA
PROF. SIEGFRIED GLENZER, SLAC NATIONAL ACCELERATOR LABORATORY HEDS DIVISION
Developed an ambient-temperature liquid jet target for high repetition rate laser-driven ion acceleration and neutron generation
- May 2022– **DOE NNSA SSGF Practicum Fellow** Albuquerque, NM
Jul. 2022 DR. JOHN PORTER, SANDIA NATIONAL LABORATORIES ORG. 1682
Measured spatiotemporal couplings in nanosecond pulses using novel fast electronics
- 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

12 publications indexed in Web of Science. WoS Sum of Times Cited: 59; WoS h-index: 4.

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 small5 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

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| 2020–2024 | Department of Energy National Nuclear Security Agency Stewardship Science Graduate Fellowship (DOE NNSA SSGF, >\$300k award) |
| 2019–2020 | National Science Foundation Graduate Research Fellowship Program (NSF GRFP) |
| 2019 | University Co-op Mitchell Award for Undergraduate Academic Excellence (\$2.5k award) |
| 2018 | Barry M. Goldwater Scholarship |

Additional Honors

- | | |
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| 2019 | UT Austin College of Natural Sciences Dean’s Honored Graduate |
| 2019 | UT Austin Physics Department Highest Academic Achievement Award |
| 2018 | Phi Beta Kappa |

Conference Presentations

Oral Presentations

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|------------|---|--------------------------|
| Oct. 2023 | APS Division of Plasma Physics, 65th Annual Meeting | Denver, CO |
| | “High flux directional laser driven neutron sources for static radiography applications” | |
| Jun. 2023 | 51st Anomalous Absorption Conference | Mammoth Lakes, CA |
| | “Demonstration of a high repetition rate laser-driven neutron source in a pitcher-catcher scheme” | |
| Oct. 2022 | APS Division of Plasma Physics, 64rd Annual Meeting | Spokane, WA |
| | “High repetition rate ion acceleration platform using ambient-temperature liquid jets” | |
| Sept. 2022 | 9th International Conference on Ultrahigh Intensity Lasers | Jeju Island, South Korea |
| | “Spatiotemporal characterization of nanosecond laser pulses using an ultrafast diode array” | |
| Aug. 2022 | 2022 LaserNetUS Users’ Meeting | Ft. Collins, CO |
| | “Ambient-temperature liquid jets for HED science applications” | |

Poster Presentations

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