

Scott Feister, Ph.D.

sfeister@gmail.com

- EDUCATION**
- Doctorate of Philosophy, Physics* May 2016
The Ohio State University, Columbus, Ohio
Concentration: High Energy Density Physics
- Masters of Science, Physics* December 2012
The Ohio State University, Columbus, Ohio
Concentration: High Energy Density Physics
- Bachelor of Science, Physics* May 2009
University of Notre Dame, Notre Dame, Indiana
Concentration: Physics
Minor: French
- AWARDS**
- Supercomputing Resource Allocation* 2020-2021
Title: “Magnetized Plasma Advection from Laser Interactions”
San Diego Supercomputer Center (via HPC@UC program)
- Supercomputing Resource Allocation* 2020-2021
Title: “Exploratory Scientific Computing Simulations: Laser Experiments and Environmental Sciences”
National Energy Research Scientific Computing Center
- Research, Scholarship and Creative Activities Mini-Grant* 2018-2019
Title: “Distributed Computing for Laser Laboratories”
California State University Channel Islands
- Best Postdoctoral Researcher Poster* February 2017
Title: “FLASH Simulations of Magnetic Turbulence Experiments at NIF”
National Ignition Facility and Jupiter Laser Facility User Group Meeting
- Best Graduate Student Poster* April 2016
Title: “Acquisition and analysis for high repetition rate HEDP (10 Hz to 1 kHz)”
Omega Laser Facility Users Group Workshop
- EXPERIENCE**
- Assistant Professor* August 2019 - present
Department of Computer Science, California State University Channel Islands, Camarillo, CA
- Leading research in scientific computing at a Latinx-serving, 60% first-generation-to-college four-year university
 - Simulating scientific phenomena with massively parallel computer codes
 - Developing microcontroller and linear-CCD sensor hardware for scientific applications
 - Collaborating with international teams on laboratory astrophysics, laser-plasma particle acceleration, and environmental sciences
 - Implementing innovative teaching methods in computer science
 - Mentoring undergraduate students and advocating for minorities (gender, ethnic, and socioeconomic) in STEM

Visiting Assistant Researcher August 2019 - present
Department of Physics & Astronomy, University of California at Los Angeles, Los Angeles, CA

- Modeling laser-generated Biermann Battery advection using the FLASH MHD code
- Mentoring graduate students in scientific computing and laboratory experiments

Assistant Researcher August 2018 - August 2019
Department of Physics & Astronomy, University of California at Los Angeles, Los Angeles, CA

- Developed computational models of the physical processes of plasma flows to guide experiments
- Mentored two graduate students in scientific computing and laboratory experiments

Postdoctoral Scholar August 2016 - August 2018
Flash Center for Computational Science
Department of Astronomy & Astrophysics, University of Chicago, Chicago, IL

- Utilized scientific computing methods to study laboratory astrophysics
- Designed and interpreted, through computer simulation and data analysis, scientific experiments at National Laboratories and international facilities
- Programmed and executed massively-parallel magnetohydrodynamic simulations of laser-driven magnetic turbulence (FLASH code) and Particle-in-cell simulations of plasma instabilities (OSIRIS code) using high performance computing resources, exhausting millions of CPU-hours at Argonne National Laboratory's 10-petaflop Mira supercomputer
- Contributed to the submission and defense of a multi-institution federal research proposal
- Cultivated multidisciplinary international collaborations
- Mentored two undergraduates and one second-year graduate student in scientific computing
- Led scientific computing educational sessions for undergraduates, graduate students, postdoctoral researchers and professional scientists from varied institutions

Research Scientist May 2014 - August 2016
Air Force Research Laboratory / Innovative Scientific Solutions, Inc., Dayton, OH

- Investigated laser-based acceleration of high-energy particles using scientific computing methods and laboratory experiment methods
- Invented laboratory data acquisition system, resulting in creation and analysis of gigabytes of experiment data per minute, and real-time user-interface feedback
- Designed and tested mechatronic systems, user interface software, and data analysis software
- Modeled the complex dynamics of laser-plasma interactions through scientific computing: 3D hydrodynamic FLASH simulations and 2D Particle-in-cell simulations
- Initiated a collaboration between the Air Force Research Laboratory and the University of Notre Dame Nuclear Physics Group
- Independently wrote our group's monthly and quarterly scientific reports for funding reviews

- Disseminated scientific research through journal publications, conference attendance and presentations
- Mentored first-year through fourth-year graduate students in experimental physics and scientific computing
- Mentored two undergraduates in experimental physics and scientific computing

Graduate Research Assistant August 2010 - May 2014
Department of Physics, The Ohio State University, Columbus, OH

- Extensively planned and built the world-class Scarlet laser system at Ohio State
- Designed and tested mechatronic systems
- Wrote software for laser control and data analysis, including user interfaces
- Diagnosed, maintained, and aligned the entire laser system
- Conducted scientific research
- Delivered frequent summary presentations to the research group, and wrote scientific text for grant applications and reviews
- Disseminated scientific research through journal publications, conference attendance and presentations
- Mentored three Computer Science undergraduates in computational data analysis; mentored two Physics undergraduates in experimental physics

Graduate Teaching Assistant August 2010 - May 2011, Aug. 2012 - Dec. 2012
Department of Physics, The Ohio State University, Columbus, OH

- Instructed university undergraduates in introductory Classical Mechanics, Electromagnetism, and Modern Physics
- Led independent recitations and hands-on laboratories for multiple sections of thirty students

COMMUNITY

Instructor, High School Engineering Summer Bridge June 2019
Designed and led a two-week program designed to encourage university enrollment for high school students in the low-income Oxnard Union City School district. Taught students Arduino programming, project design, and public speaking. Recruited and mentored two undergraduate students as co-instructors, teaching them about humanizing the classroom and designing a technical course. Brought in eight guest speakers from my professional network.

Volunteer Instructor, DeAnza Academy of Technology and the Arts 2018 - present
Design a lesson plan in which children build their own laser harp. Teach middle schoolers about 3D printing, microcontrollers, Python programming, and circuits.

Volunteer Instructor, CSU Channel Islands Undergraduate Swarmathon 2017 - 2018
Led undergraduates at California State University (CSU) Channel Islands in formulating and executing outdoors robotics tests as they prepared for a NASA automation competition in Florida.

Presenter, CSU Channel Islands Science Carnival November 2017, 2018
Designed, built, and interactively presented a laser harp for PK-8 (preschool through eighth grade) science outreach event in Oxnard, CA.

Reviewer, NCWIT Collegiate Award March 2018
Judged projects for the National Center for Women & Information Technology showing outstanding computing accomplishments of undergraduate and graduate women.

Member, High Energy Density Science Association 2014 - present
Advocate for federal funding of university programs in High Energy Density Science.

Member, National Ignition Facility User Group 2014 - present
Advocate for astrophysical science at the National Ignition Facility, participate in discussions and share results at annual user group meeting.

Member, Omega Laser Facility Users Group 2014 - present
Participate in discussions guiding future upgrades and diagnostic capabilities of the Omega Laser Facility, share results at annual workshop. Served as member of the 2017 student and postdoctoral panel.

Member, American Physical Society (APS) 2010 - present
Participate in national APS Division of Plasma Physics meetings and Women in Plasma Physics discussions.

Teacher, Scientific Thinkers 2012
Engaged elementary school students in Columbus, OH by bringing hands-on scientific activities to their classrooms.

Member, Physics Graduate Student Council, Ohio State 2010 - 2012
Represented my physics graduate student cohort by meeting with administrators, led town hall style meetings, organized on-campus visits of prospective graduate students.

LANGUAGES

English, native. Taught English as a second language professionally.
French, business fluent. Lived and worked in a non-English speaking region of France throughout the academic year 2009-2010. Studied a university semester in 2007 in Angers, France.

SKILLS

Student Mentorship

- Mentored undergraduates and graduate students one-on-one and in groups
- Incorporated diversity education into everyday classroom experience
- Utilized innovative teaching methods, including zero-cost classes, computer code competitions, and classroom polling with digital cameras

Scientific Computing and Modeling

- Performed plasma fluid simulations (FLASH code), 2D/3D Particle-in-cell (LSP code, OSIRIS code) simulations, and liquid-gas fluid simulations (OpenFOAM)
- Accessed high performance computing resources at Argonne National Laboratory (10-petaflops Mira Supercomputer) and the Ohio Supercomputer Center for FLASH and LSP simulations
- Utilized the Monte Carlo software MCNP and *Geant4* to evaluate electron and x-ray propagation in complex material arrangements
- Computed 3D magnetic fields and charged particle deflection within yoked magnet using *Radia* in Mathematica
- Modeled wavefront aberrations and optical alignment techniques during laser design in FRED optical modeling software
- Programming languages of choice: LabVIEW, Python, MATLAB, C++, Fortran. Competent in or can quickly pick up other languages

Computer Analysis of Large Datasets

- Implemented real-time interferometric analysis of pre-plasma formation (a computationally expensive analysis) by adapting high-performance C++ libraries from an open-source project into LabVIEW

Computational Automation and Data Acquisition

- Interfaced laser and plasma diagnostics with computer control and performed advanced real-time and post-analysis
- Programmed acquisition and analysis of large, multi-instrument datasets (thousands of interferometric images, optical spectra, etc.)
- Extensive automation of data acquisition in physics laboratories, including low-level driver development for triggered oscilloscopes, optical spectrometers, gamma spectrometers, cameras, deformable mirror, and in-vacuum target alignment motors

Digitized Sensor Development

- Designed and built unique digital sensors for use in scientific laboratories
- Interfaced novel sensors with computers

Optical Engineering

- Technically competent in the state of the art of high energy, short-pulse laser systems
- Performed routine maintenance and alignment of multiple state-of-the-art laser systems
- Diagnosed and repaired high voltage circuits, liquid cooling systems

Mechatronics and Mechanical Engineering

- Designed mechatronics control systems for physical components held within high vacuum systems
- Wrote genetic algorithm software to adjust physical membrane of a deformable laser mirror
- Automated motion of motorized linear and rotational translation stages, including low-level computer driver development
- Designed mechatronics mirror mounts and vacuum chambers with SolidWorks CAD software
- Built and modified mechatronics parts for laboratory experiments using mill, saws, and lathe in machine shop, then computer-interfaced mechanical movements in LabVIEW

PUBLICATIONS

K. M. George, J. T. Morrison, **S. Feister**, G. Ngirmang, J. R. Smith, A. J. Klim, J. Snyder, D. Austin, W. Erbsen, K. D. Frische, J. Nees, C. Orban, E. A. Chowdhury, and W. M. Roquemore. “High-repetition-rate (\geq kHz) targets and optics from liquid microjets for high-intensity laser-plasma interactions.” *High Power Laser Science and Engineering*, **7**, E50. (2019).

John T. Morrison, **Scott Feister**, Kyle D. Frische, Drake R. Austin, Gregory K. Ngirmang, Neil R. Murphy, Chris Orban, Enam A. Chowdhury, W. M. Roquemore. “MeV proton acceleration at kHz repetition rate from ultra-intense laser liquid interaction” *New J. Phys.*, **20** 022001 (2018).

Gregory K. Ngirmang, Chris Orban, **Scott Feister**, John T. Morrison, Enam A. Chowdhury, and W. M. Roquemore. “Particle-in-cell simulations of electron acceleration from relativistic interaction of mid-infrared laser interactions with near solid density matter” *Phys. Plasmas*, **24** 103112 (2017).

Scott Feister, Drake R. Austin, John T. Morrison, Kyle D. Frische, Chris Orban, Gregory Ngirmang, Abraham Handler, Joseph R. H. Smith, Mark Schillaci, Jay A.

LaVerne, Enam A. Chowdhury, R. R. Freeman, W. M. Roquemore. “Relativistic electron acceleration by mJ-class kHz lasers normally incident on liquid targets” *Opt. Express*, **25** 18736-18750 (2017).

P. L. Poole, C. Willis, R. W. Daskalova, K. George, **Scott Feister**, S. Jiang, J. Snyder, J. Marketon, D. W. Schumacher, K. Akli, L. van Woerkom, R. R. Freeman, and E. A. Chowdhury. “Experimental capabilities of 0.4 PW, 1 shot/min Scarlet laser facility for high energy density science” *Appl. Opt.*, **55** 4613-4719 (2016).

Gregory K. Ngirmang, Chris Orban, **Scott Feister**, John T. Morrison, Kyle D. Frische, Enam A. Chowdhury, W.M. Roquemore. “Three dimensional particle-in-cell simulations of electron beams created via reflection of intense laser light from a water target” *Phys. Plasmas*, **23** 043111 (2016).

J. T. Morrison, E. A. Chowdhury, K. D. Frische, **Scott Feister**, V. M. Ovchinnikov, J. A. Nees, C. Orban, R. R. Freeman and W. M. Roquemore “Backward-propagating MeV electrons from 10^{18} W/cm² laser interactions with water” *Phys. Plasmas*, **22** 043101 (2015).

C. Orban, J. T. Morrison, E. A. Chowdhury, J. A. Nees, K. Frische, **Scott Feister** and W. M. Roquemore. “Backward-propagating MeV electrons in ultra-intense laser interactions: Standing wave acceleration and coupling to the reflected laser pulse” *Phys. Plasmas*, **22** 023110 (2015).

Scott Feister, J. A. Nees, J. T. Morrison, K. D. Frische, C. Orban, E. A. Chowdhury, and W. M. Roquemore “A Novel Femtosecond-Gated, High-Resolution, Frequency-Shifted Shearing Interferometry Technique for Probing Pre-Plasma Expansion in Ultra-Intense Laser Experiments” *Rev. Sci. Instrum.*, **85** 11D602 (2014).

P. L. Poole, C. D. Andereck, D. W. Schumacher, R. L. Daskalova, **Scott Feister**, K. M. George, C. Willis, K. U. Akli and E. A. Chowdhury “Liquid crystal films as on-demand, variable thickness (50 - 5000 nm) targets for intense lasers” *Phys. Plasmas*, **21** 063109 (2014).

Scott Feister, Petros Tzeferacos, Jena Meinecke, Archie Bott, Damiano Caprioli, JT Laune, Tony Bell, Alexis Casner, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Bruce Remington, Brian Reville, J. Steven Ross, Dongsu Ryu, Dmitri Ryutov, Hong Sio, David Turnbull, Alex Zylstra, Alexander Schekochihin, Dustin Froula, Hye-Sook Park, Don Lamb, Gianluca Gregori. “Numerical design of a magnetized turbulence experiment at the National Ignition Facility” (**in prep.**)

J. Snyder, J. Morrison, K. Frische, M. Le, **S. Feister**, K. George, E. Chowdhury, C. Orban, and W. M. Roquemore. “Background pressure effects of ions accelerated during the relativistic laser plasma interaction” (**in prep.**)

Scott Feister, Carlo Graziani, Petros Tzeferacos, and Donald Q. Lamb. “Electric and Magnetic Field Reconstruction from Multi-Energy Proton Imaging” (**in prep.**)

Scott Feister, John T. Morrison, Kyle D. Frische, Drake R. Austin, Chris Orban, Gregory Ngirmang, Enam A. Chowdhury, and W. M. Roquemore. “Acquisition and analysis for high-repetition-rate HEDP (10 Hz to 1 kHz)” (**in prep.**)

Scott Feister, Chris Orban, Gregory K. Ngirmang, Joseph R. H. Smith, Mark Schillaci, John T. Morrison, Kyle D. Frische, Enam A. Chowdhury, and W. M. Roquemore. “Escape of laser-accelerated MeV electrons through an extended low-density pre-plasma” (**in prep.**)

PRESENTATIONS *Computer Science Seminar at California State University Channel Islands, 18 February 2020, Camarillo, CA.* “Sand and Supercomputers” (Oral), Scott Feister.

Computer Science Advisory Board Meeting at California State University Channel Islands, 9 December 2019, Camarillo, CA. “Scientific Computing at CI: Research & Student Opportunities” (Oral), Scott Feister.

61st Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 21 - 25 October 2019, Fort Lauderdale, FL. “Development Considerations for High-Repetition-Rate HEDP” (Oral), Scott Feister, Patrick L. Poole, Peter V. Heuer, Kevin M. George, Chris Orban, and John T. Morrison. Presented by Scott Feister.

Graduate Math Seminar at California State University Channel Islands, 7 October 2019, Camarillo, CA. “A Guided Safari Tour of Programming Languages for Math” (Invited, Oral), Scott Feister. Presented by Scott Feister.

Omega Laser Facility Users Group Workshop, 24 - 26 April 2019, Rochester, NY. “Experimental 3D Measurements of Laser-Produced Biermann Battery Fields and Comparison with FLASH Simulations” (Poster), Scott Feister, Peter V. Heuer, Robert S. Dorst, Derek B. Schaeffer, Carmen G. Constantin, and Christoph Niemann. Presented by Scott Feister.

Omega Laser Facility Users Group Workshop, 24 - 26 April 2019, Rochester, NY. “Synchronizing Data Acquisition Between Multiple Detectors For High-Repetition-Rate Proton Acceleration Experiments” (Poster), Elliot C. Brown, Maximilian Seligman, John T. Morrison, Kevin M. George, W. Melvyn Roquemore, and Scott Feister. Presented by Elliot Brown.

Omega Laser Facility Users Group Workshop, 24 - 26 April 2019, Rochester, NY. “Smaller, Faster Data Acquisition in High-Repetition-Rate Laser-Plasma Experiments” (Poster), Maximilian Seligman, Elliot C. Brown, John T. Morrison, Kevin M. George, W. Melvyn Roquemore, and Scott Feister. Presented by Maximilian Seligman.

First Community Workshop for High Energy Density Physics, 16 - 17 July 2019, Washington, D.C. “Advancing HEDP with High Repetition-Rate (HRR) Experiments” (Invited, Oral), Scott Feister and Chris Orban. Presented by Scott Feister and Chris Orban.

60th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 5 - 9 November 2018, Portland, OR. “High repetition rate liquid targets and optics for the study of high intensity laser-plasma interactions” (Poster), Kevin George, John Morrison, Scott Feister, John Nees, Joseph Smith, Adam Klim, Gregory Ngirmang, Joseph Snyder, Kyle Frische, Chris Orban, Enam Chowdhury, William

Roquemore. Presented by Kevin George.

60th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 5 - 9 November 2018, Portland, OR. “Effects of background pressure on high repetition rate, relativistic laser-driven MeV ion and electron acceleration” (Oral), Joseph Snyder, John Morrison, Kevin George, Gregory Ngirmang, Scott Feister, Joseph Smith, Matt Le, Kyle Frische, Enam Chowdhury, Chris Orban, William Roquemore. Presented by Joseph Snyder.

60th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 5 - 9 November 2018, Portland, OR. “Tera-FLOP particle-in-cell simulations of rapid ionization front expansion on a target due to a short-pulse ultra intense laser” (Oral), Gregory Ngirmang, John Morrison, Scott Feister, Kevin George, Adam Klim, Joseph Snyder, Joseph Smither, Kyle Frische, Chris Orban, Enam Chowdhury, William Roquemore. Presented by Gregory Ngirmang.

60th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 5 - 9 November 2018, Portland, OR. “Observation of Weibel-like radial filamentation from the time resolved dynamics of a kHz relativistic laser interaction with a sub-micron transparent sheet” (Oral), John Morrison, Gregory Ngirmang, Scott Feister, Kevin George, Adam Klim, Joseph Snyder, Joseph Smith, Kyle Frische, Chris Orban, Enam Chowdhury, William Roquemore. Presented by John Morrison.

Math and Physics Graduate Seminar at California State University Channel Islands, 2 April 2018, Camarillo, CA. “Physics Research with Giant Lasers, Wannabe Stars, and Supercomputers” (Invited, Oral), Scott Feister. Presented by Scott Feister.

Optical Society of America (OSA) High-brightness Sources and Light-driven Interactions Congress, 26 - 28 March 2018, Strasbourg, France. “Time resolved dynamics of sub-micron liquid sheet interaction with a relativistic intensity kHz laser” (Oral), Enam A. Chowdhury, John T. Morrison, Kyle Frische, Scott Feister, Joseph Smith, Chris Orban, and W. M. Roquemore. Presented by Enam A. Chowdhury.

Los Alamos National Laboratory Seminar, 13 March 2018, Los Alamos, NM. “Numerical Design and Interpretation of Magnetic Turbulence Experiments at NIF” (Oral), Scott Feister. Presented by Scott Feister.

California State University Channel Islands Swarmathon Class, 1 February 2018, Camarillo, CA. “Computer Programming in Physics Research” (Guest Lecture), Scott Feister. Presented by Scott Feister.

Stewardship Science Academic Programs (SSAP) Symposium, 21 - 22 February 2018, Rockville, MD. “FLASH Simulations for the Design and Interpretation of NIF TDYNO Experiments” (Poster), Scott Feister, Petros Tzeferacos, Jena Meinecke, Archie Bott, Farhat Beg, Tony Bell, Roger Blandford, Frederico Fiuza, Dustin Froula, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Brian Reville, Dongsu Ryu, Dmitri Ryutov, Subir Sarkar, Qian Xia, Steven Ross, Alexander Schekochihin, Hye-Sook Park, Don Lamb, and Gianluca Gregori. Presented by Scott Feister.

National Ignition Facility and Jupiter Laser Facility User Group Meeting, 4 - 7 February 2018, Livermore, CA. “FLASH Simulations for the Design and Interpretation of NIF TDYNO Experiments” (Poster), Scott Feister, Petros Tzeferacos, Jena Meinecke, Archie Bott, Farhat Beg, Tony Bell, Roger Blandford, Frederico Fiuza, Dustin Froula, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Brian Re-

ville, Dongsu Ryu, Dmitri Ryutov, Subir Sarkar, Qian Xia, Steven Ross, Alexander Schekochihin, Hye-Sook Park, Don Lamb, and Gianluca Gregori. Presented by Scott Feister.

High Energy Density Physics Seminar at The Ohio State University, 4 January 2018, Columbus, OH. “FLASH Code Talk and Tutorial for High Energy Density Physics” (Oral), Scott Feister. Presented by Scott Feister.

Large Scale Plasma (LSP) Teleconference Meeting, 11 December 2017, Web. “Utilizing FLASH for High Energy Density Physics” (Oral), Scott Feister. Presented by Scott Feister.

59th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 23 - 27 October 2017, Milwaukee, WI. “Numerical design of a magnetized turbulence experiment at the National Ignition Facility” (Oral), Scott Feister, Petros Tzeferacos, Jena Meinecke, Archie Bott, Damiano Caprioli, JT Laune, Tony Bell, Alexis Casner, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Bruce Remington, Brian Reville, J. Steven Ross, Dongsu Ryu, Dmitri Ryutov, Hong Sio, David Turnbull, Alex Zylstra, Alexander Schekochihin, Dustin Froula, Hye-Sook Park, Don Lamb, Gianluca Gregori. Presented by Scott Feister.

General Plasma Physics Seminar at the University of Wisconsin-Madison, 2 October 2017, Madison, WI. “FLASH simulations of a magnetized turbulence experiment at the National Ignition Facility” (Invited), Scott Feister, Petros Tzeferacos, Jena Meinecke, Archie Bott, Damiano Caprioli, JT Laune, Tony Bell, Alexis Casner, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Bruce Remington, Brian Reville, J. Steven Ross, Dongsu Ryu, Dmitri Ryutov, Hong Sio, David Turnbull, Alex Zylstra, Alexander Schekochihin, Dustin Froula, Hye-Sook Park, Don Lamb, Gianluca Gregori. Presented by Scott Feister.

OSIRIS Users and Developers Workshop, 18-20 September 2017, Los Angeles, CA. “Numerical Challenges in Efficient Modeling of Colliding Flows” (Oral), Scott Feister. Presented by Scott Feister.

Omega Laser Facility Users Group Workshop, 26 - 28 April 2017, Rochester, NY. “FLASH Simulations of Particle Transport through Magnetic Turbulence at Omega and NIF” (Poster), Scott Feister, Petros Tzeferacos, Jena Meinecke, Laura Chen, Alexandra Rigby, Archie Bott, Norbert Flock, Carlo Graziani, Damiano Caprioli, Klaus Weide, Farhat Beg, Tony Bell, Alexis Casner, Eugene Churazov, Tilo Doeppner, Frederico Fiuza, Cary Forest, John Foster, Daniel Haberberger, Joseph Katz, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Sean Regan, Bruce Remington, Brian Reville, J. Steven Ross, Dongsu Ryu, Dmitri Ryutov, Youchi Sakawa, Subir Sarkar, Hong Sio, Anatoly Spitkovsky, David Turnbull, Thomas White, Alex Zylstra, Alexander Schekochihin, Dustin Froula, Hye-Sook Park, Don Lamb, and Gianluca Gregori. Presented by Scott Feister.

2017 Stewardship Science Academic Programs Symposium, 12 - 13 April 2017, Naperville, IL. “FLASH Simulations of Magnetic Turbulence Experiments at NIF” (Poster), Scott Feister, Petros Tzeferacos, Jena Meinecke, Farhat Beg, Tony Bell, Roger Blandford, Archie Bott, Frederico Fiuza, Dustin Froula, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Brian Reville, Steven Ross, Dongsu Ryu, Dmitri Ryutov, Subir Sarkar, Alexander Schekochihin, Qian Xia, Hye-Sook Park, Don Lamb, and Gianluca Gregori. Presented by Scott Feister.

National Ignition Facility and Jupiter Laser Facility User Group Meeting, 5 - 8 February 2017, Livermore, CA. “FLASH Simulations of Magnetic Turbulence Experiments at NIF” (Poster), Scott Feister, Petros Tzeferacos, Jena Meinecke, Farhat Beg, Tony Bell, Roger Blandford, Archie Bott, Frederico Fiuza, Dustin Froula, Michel Koenig, Chikang Li, Francesco Miniati, Richard Petrasso, Brian Reville, Steven Ross, Dongsu Ryu, Dmitri Ryutov, Subir Sarkar, Alexander Schekochihin, Qian Xia, Hye-Sook Park, Don Lamb, and Gianluca Gregori. Presented by Scott Feister. **Awarded “Best Postdoctoral Researcher Poster”**.

Department of Astronomy and Astrophysics Chalk Talk Series, 17 January 2017, Chicago, IL. “Laser laboratory astrophysics: Diffusion and acceleration of charged particles in turbulent magnetized plasma” (Oral), Scott Feister. Presented by Scott Feister.

58th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 31 October - 4 November 2016, San Jose, CA. “Escape of laser-accelerated MeV electrons through an extended low-density pre-plasma” (Oral), S. Feister, C. Orban, J.T. Morrison, G.K. Ngirmang, J. Smith, K.D. Frische, A.C. Peterson, A.J. Klim, E.A. Chowdhury, R.R. Freeman, and W.M. Roquemore. Presented by Scott Feister.

58th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 31 October - 4 November 2016, San Jose, CA. “kHz Ion Acceleration Under Variable Background Pressure” (Oral), J.T. Morrison, S. Feister, K.D. Frische, D.R. Austin, G.K. Ngirmang, A.C. Peterson, J. Smith, A. Klim, C. Orban, E.A. Chowdhury, and W.M. Roquemore. Presented by John Morrison.

58th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 31 October - 4 November 2016, San Jose, CA. “Wavelength and Intensity Dependence of the Standing Wave Mechanism in the Near-IR Regime in Producing High Energy Backwards Electron Beams” (Oral), G.K. Ngirmang, C. Orban, S. Feister, J.T. Morrison, E.A. Chowdhury, and W.M. Roquemore. Presented by Gregory Ngirmang.

58th Annual Meeting of the American Physical Society (APS) Division of Plasma Physics, 31 October - 4 November 2016, San Jose, CA. “Thin liquid sheet target capabilities for ultra-intense laser acceleration of ions at a kHz repetition rate” (Poster), A. Klim, J.T. Morrison, C. Orban, S. Feister, G.K. Ngirmang, J. Smith, K. Frische, A.C. Peterson, E.A. Chowdhury, R.R. Freeman, and W.M. Roquemore. Presented by Adam Klim.

7th Conference of the International Committee on Ultrahigh Intensity Lasers, 11 - 16 September 2016, Montebello, Québec, Canada. “Acceleration of particles by intense lasers, at 1 kHz” (Oral), J.T. Morrison, S. Feister, K. Frische, D.R. Austin, G.K. Ngirmang, C. Orban, E.A. Chowdhury, R.R. Freeman, W.M. Roquemore. Presented by John Morrison.

DoD High Performance Computing Internship Program Review, 13 July 2016, Dayton, OH. “Leveraging thousands of processors to understand wildly-intense and (near) speed-of-light electrons” (Oral), S. Feister. Presented by Scott Feister.

Omega Laser Facility Users Group Workshop, 27 - 29 April 2016, Rochester, NY. “Acquisition and analysis for high repetition rate HEDP (10 Hz to 1 kHz)” (Poster), S. Feister, J.T. Morrison, K. Frische, D.R. Austin, C. Orban, G.K. Ngirmang, E.A.

Chowdhury, R.R. Freeman, and W.M. Roquemore. Presented by Scott Feister. **Awarded “Best Graduate Student Poster”**.

Edward F. Hayes Graduate Research Forum, 26 February 2016, Columbus, OH. “Relativistic acceleration of electrons with kHz-pulsed lasers” (Oral), S. Feister. Presented by Scott Feister.

National Ignition Facility and Jupiter Laser Facility User Group Meeting, 31 January - 3 February 2016, Livermore, CA. “Acceleration of ions at 1 kHz to >MeV” (Poster), Scott Feister, J.T. Morrison, E.A. Chowdhury, K. Frische, C. Orban, R.R. Freeman, and W.M. Roquemore. Presented by Scott Feister.

International Conference on Extreme Light, 23 - 27 November 2015, Bucharest, Romania. “Precision liquid target development for kHz particle acceleration studies in The Air Force Research Laboratory, USA” (Oral), E.A. Chowdhury, J.T. Morrison, K. Frische, S. Feister, D.R. Austin, C. Orban, R. R. Freeman and W.M. Roquemore. Presented by Enam Chowdhury.

3rd High-Power Laser Workshop, 5 - 6 October 2015, Menlo Park, CA. “Relativistic electron spectra from normal incidence, kHz laser interactions” (Poster), Scott Feister, Drake R. Austin, John T. Morrison, Kyle D. Frische, Chris Orban, Gregory Ngirmang, Abraham Handler, Mark Schillaci, Enam A. Chowdhury, R.R. Freeman, and W.M. Roquemore. Presented by Scott Feister.

3rd High-Power Laser Workshop, 5 - 6 October 2015, Menlo Park, CA. “A compact, high-acquisition rate electron spectrometer” (Poster), Drake R. Austin, Scott Feister, John T. Morrison, Kyle D. Frische, Chris Orban, R. R. Freeman, Enam A. Chowdhury, and W. M. Roquemore. Presented by Drake Austin.

46th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, 8 - 12 June 2015, Columbus, OH. “Backward-going MeV electrons and gamma rays from 10^{18} W/cm² laser interactions with water” (Oral), S. Feister, J. T. Morrison, K. D. Frische, C. Orban, V. M. Ovchinnikov, J. A. Nees, D. R. Austin, E. A. Chowdhury, R. R. Freeman, and W. M. Roquemore. Presented by Scott Feister.

Omega Laser Facility Users Group Workshop, 22 - 24 April 2015, Rochester, NY. “Backward-Propagating MeV Electrons from 10^{18} W/cm² Laser Interactions with Water” (Poster), S. Feister, J. T. Morrison, E. A. Chowdhury, K. D. Frische, V. M. Ovchinnikov, J. A. Nees, C. Orban, R. R. Freeman, and W. M. Roquemore. Presented by Scott Feister.

Laser Plasma Targetry Workshop, 20 - 22 April 2015, Paris, France. “Precision liquid target development for kHz relativistic laser matter interaction studies in The Air Force Research Laboratory, USA” (Oral), E.A. Chowdhury, J.T. Morrison, K. Frische, S. Feister, D.R. Austin, J.A. Nees, C. Orban, and W.M. Roquemore. Presented by Enam Chowdhury.

National Ignition Facility and Jupiter Laser Facility User Group Meeting, 8 - 11 February 2015, Livermore, CA. “Backward-Propagating MeV Electrons from 10^{18} W/cm² Laser Interactions with Water” (Poster), S. Feister, J. T. Morrison, E. A. Chowdhury, K. D. Frische, V. M. Ovchinnikov, J. A. Nees, C. Orban, R. R. Freeman, and W. M. Roquemore. Presented by Scott Feister.

56th Annual Meeting of the American Physical Society (APS) Division of Plasma

Physics, 27 - 31 October 2014, New Orleans, LA. “Experimental Generation of Backward-Propagating MeV Electrons in Ultra-Intense Laser Interactions” (Oral), S. Feister, J. T. Morrison, V. M. Ovchinnikov, K. D. Frische, J. A. Nees, C. Orban, E. A. Chowdhury, and W. M. Roquemore. Presented by Scott Feister.

DoD High Performance Computing Internship Program Review, 21 August 2014, Dayton, OH. “High Performance Computing for High Intensity Laser Laboratory Science” (Oral), S. Feister. Presented by Scott Feister.

The Ohio State University Poster Competition, 18 August 2014, Columbus, OH. “A Novel Femtosecond-Gated, High-Resolution, Frequency-Shifted Shearing Interferometry Technique for Probing Pre-Plasma Expansion in Ultra-Intense Laser Experiments” (Poster), S. Feister, J.A. Nees, J.T. Morrison, K. Frische, C. Orban, E.A. Chowdhury, and W.M. Roquemore. Presented by Scott Feister.

Topical Conference on High Temperature Plasma Diagnostics, 1 - 5 June 2014, Atlanta, GA. “A Novel Femtosecond-Gated, High-Resolution, Frequency-Shifted Shearing Interferometry Technique for Probing Pre-Plasma Expansion in Ultra-Intense Laser Experiments” (Poster), S. Feister, J.A. Nees, J.T. Morrison, K. Frische, C. Orban, E.A. Chowdhury, and W.M. Roquemore. Presented by Scott Feister.

Omega Laser Facility Users Group Workshop, 23 - 25 April 2014, Rochester, NY. “The Ohio State University 400 TW Scarlet Laser” (Poster), S. Feister, C. Willis, P. Poole, K. George, F. Aymond, S. Jiang, R. Daskalova, J. Marketon, E. Chowdhury, K. U. Akli, D. Schumacher, R. R. Freeman. Presented by Scott Feister.

Stewardship Science Academic Programs Symposium, 19 - 20 February 2014, North Bethesda, MD. “The Ohio State University 400 TW Scarlet Laser” (Poster), S. Feister, C. Willis, P. Poole, K. George, F. Aymond, S. Jiang, R. Daskalova, J. Marketon, E. Chowdhury, K. U. Akli, D. Schumacher, R. R. Freeman. Presented by Scott Feister.

National Ignition Facility and Jupiter Laser Facility User Group Meeting, 9 - 12 February 2014, Livermore, CA. “The Ohio State University 400 TW Scarlet Laser” (Poster), S. Feister, C. Willis, P. Poole, K. George, F. Aymond, S. Jiang, R. Daskalova, J. Marketon, E. Chowdhury, K. U. Akli, D. Schumacher, R. R. Freeman. Presented by Scott Feister.