



Michigan Institute for Plasma Science and Engineering (MIPSE)
University of Michigan
Michigan State University
Western Michigan University

8th ANNUAL GRADUATE STUDENT SYMPOSIUM

October 18, 2017
1005 EECS, 1301 Beal Avenue, Ann Arbor, MI 48109

Schedule

2:30 – 3:10	Registration, poster set-up	EECS atrium
3:10 – 3:30	Refreshments (box lunch + coffee, tea)	1005 EECS
3:30 – 3:40	Prof. Mark J. Kushner, Director of MIPSE <i>Opening remarks</i>	1005 EECS
3:40 – 4:40	Special MIPSE Seminar: Dr. J. Tiberius Moran-Lopez National Nuclear Security Administration <i>Bridging HED Plasma Sciences to Stockpile Stewardship</i> <i>and Defense Applications</i>	1005 EECS
4:45 – 5:30	Poster session I	EECS atrium
5:30 – 6:15	Poster session II	EECS atrium
6:15 – 7:00	Poster session III	EECS atrium
7:00 – 7:15	Poster removal	EECS atrium
7:15 – 7:20	<i>Best Presentation Award ceremony</i>	EECS atrium

Poster Session I

1-01	Adrianna Angulo	University of Michigan	<i>Kelvin-Helmholtz Evolution in Subsonic Cold Streams Feeding Galaxies</i>
1-02	Alexander Vazsonyi	University of Michigan	<i>Implementation of an Implicit 2V Rosenbluth-Fokker-Planck Operator</i>
1-03	Amanda Lietz	University of Michigan	<i>Molecular Admixtures in Helium Atmospheric Pressure Plasma Jets</i>
1-04	Andrew LaJoie	Michigan State University	<i>Status of a DC Plasma Window for Sustained Gas Flow Reduction through a Narrow Channel</i>
1-05	Heath LeFevre	University of Michigan	<i>A Platform for X-Ray Thomson Scattering Measurements of Radiation Hydrodynamic Experiments on the NIF</i>
1-06	Joshua Woods	University of Michigan	<i>Scaling Laws of Rotating Magnetic Field Field-Reversed Configuration Thrusters</i>
1-07	Jeff Woolstrum	University of Michigan	<i>3D MHD Simulations of Auto-Magnetizing Imploding Liners for ICF</i>
1-08	Kenneth Engeling	University of Michigan	<i>The Effect of Pressure Variations on Micro-Discharge Formation in a 2-D Packed Bed Reactor</i>
1-09	Marcel Georgin	University of Michigan	<i>Experimental and Analytical Investigation of the Hollow Cathode Plume Mode</i>
1-10	Omar Leon	University of Michigan	<i>Effect of Langmuir Probe Measurements on the Spacecraft Potential of Small Spacecraft</i>
1-11	Patrick Wong	University of Michigan	<i>An Exact Hot-Tube Solution for Thin Tape Helix Traveling-Wave Tube</i>
1-12	Steven Lanham	University of Michigan	<i>Instability of Power on Dynamics in Inductively Coupled Plasmas</i>
1-13	Timothy Collard	University of Michigan	<i>Plasma Detachment in a Miniature Magnetic Nozzle Source</i>

Poster Session II

2-01	Abhijit Jassem	University of Michigan	<i>Backward Wave Oscillation Thresholds in a Traveling-Wave Tube</i>
2-02	Abigail Azari	University of Michigan	<i>Statistical Analysis of Interchange Injection Events from Over a Decade of Cassini Data at Saturn</i>
2-03	Amina Hussein	University of Michigan	<i>Influence of Plasma Density on the Generation of 100's MeV Electrons via Direct Laser Acceleration</i>
2-04	Astrid Raisanen	University of Michigan	<i>The Near-Anode Region in a Hybrid-Direct Kinetic Hall Thruster Simulation</i>
2-05	Grant Miars	University of Michigan	<i>Laboratory Experiments Enabling Electron Beam Use in Tenuous Space Plasmas</i>
2-06	Sarah Cusson	University of Michigan	<i>Simple Model for Cathode Coupling Voltage Versus Background Pressure in a Hall Thruster</i>
2-07	Joseph Levesque	University of Michigan	<i>Evidence of Magnetized Shocks on OMEGA with Imaging Thomson Scattering</i>
2-08	Juliusz Kruszelnicki	University of Michigan	<i>Interactions Between Plasmas and Microscopic Metal Particles in Packed Bed Reactors</i>
2-09	Laura Elgin	University of Michigan	<i>High-Energy-Density Physics Experiments at OMEGA 60: Evolution of the Rayleigh-Taylor Instability to the Highly Non-linear Regime</i>
2-10	Kevin Ma	University of Michigan	<i>Modeling and Design of Radiative Hydrodynamic Experiments with X-ray Thomson Scattering Measurements on NIF</i>
2-11	Ramon Diaz	Michigan State University	<i>Measuring Plasma Discharge Volumes and Surface Areas of Microwave Plasma CVD Grown Single Crystal Diamond by Time-Lapse Photography</i>
2-12	Janis Lai	University of Michigan	<i>Simulation of Marangoni Convection Surrounding a 2-D Bubble in Liquid Induced by Plasma-driven Interfacial Forces</i>
2-13	Scott Hall	University of Michigan	<i>High-Power Performance of a Nested Hall Thruster</i>
2-14	Shuo Huang	University of Michigan	<i>Selective Radical Production in Remote Plasma Sources with Multiple Inlets</i>

Poster Session III

3-01	Chenhui Qu	University of Michigan	<i>Electron Energy Distributions in Triple-Frequency Powered Capacitively Coupled Plasmas</i>
3-02	Ethan Dale	University of Michigan	<i>Zero-dimensional Modeling Limitations for the Hall Thruster Breathing Mode</i>
3-03	Foivos Antoulinakos	University of Michigan	<i>Absolute Instability Near Band Edges in a Traveling Wave Tube</i>
3-04	Janez Krek	Michigan State University	<i>Self-adapting EEDF Evaluation Frequency in KGMf</i>
3-05	Jinpu Lin	University of Michigan	<i>High Order Harmonic Generation with Femtosecond Mid-infrared Laser</i>
3-06	Jungmoo Hah	University of Michigan	<i>Laser Based Neutron Source from Free-flowing D₂O Target</i>
3-07	Selman Mujovic	University of Michigan	<i>High Throughput Plasma Water Reactor</i>
3-08	Patrick Wong	University of Michigan	<i>Origin of Second Harmonic Signals in Octave Bandwidth Traveling-Wave Tubes</i>
3-09	Robert VanDervort	University of Michigan	<i>First Experiments to Understand the Interaction of Stellar Radiation with Molecular Clouds</i>
3-10	Shadrach Hepner	University of Michigan	<i>Turbulence Measurement in Magnetic Nozzle Plasma Sources</i>
3-11	Ryan Dewey	University of Michigan	<i>Energetic Electron Acceleration and Injection During Dipolarization Events in Mercury's Magnetotail</i>
3-12	Stephanie Miller	University of Michigan	<i>Pulsed Laser Gate Experiment for Reduction of Fuel-Contaminant Mixing in Magnetized Liner Inertial Fusion (MagLIF)</i>
3-13	Yao Kovach	University of Michigan	<i>Self-organization and Electrolyte Ion Mass Transport Processes with Chemistry in 1 ATM DC Glows</i>
3-14	Zachariah Brown	University of Michigan	<i>Dispersion Relation Measurements of Ion-acoustic-like Waves in the Near-field Plume of a 9-kW Magnetically Shielded Thruster</i>