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

6th ANNUAL GRADUATE STUDENT SYMPOSIUM

October 7, 2015
1005 EECS, 1301 Beal Avenue, Ann Arbor, MI 48109

Schedule

2:15 – 3:00 Registration, poster set-up EECS atrium
3:00 – 3:20 Refreshments (box lunch + coffee, tea) 1005 EECS
3:20 – 3:25 Prof. Mark J. Kushner, Director of MIPSE Opening remarks 1005 EECS
3:25 – 3:30 IEEE NPSS South-East Michigan Chapter presentation 1005 EECS
3:30 – 4:30 Special MIPSE Seminar:
Dr. Edmund Synakowski, U.S. Department of Energy
Transformative Passages in the Fusion and Plasma Sciences 1005 EECS
4:30 – 5:15 Poster session I EECS atrium
5:15 – 6:00 Poster session II EECS atrium
6:00 – 6:45 Poster session III EECS atrium
6:45 – 7:00 Light refreshments EECS atrium
7:00 – 7:05 Best Presentation Award ceremony EECS atrium
Poster Session I

1-01  Xiao Feng, Michigan State University  
*A Positivity-Preserving Single-Stage Single-Step High-Order Constrained Transport Method for Magnetohydrodynamic Equations*

1-02  Lois Smith, University of Michigan  
*Wave Activity Connected to Plasmaspheric 1-10 eV Post-Midnight Ion Loss seen by Van Allen Probes*

1-03  Joshua Davis, University of Michigan  
*Measurements of Laser Generated Soft X-ray Emission from Irradiated Gold Foils*

1-04  Shuo Huang, University of Michigan  
*Dry Etching of Si$_3$N$_4$ Using Remote Plasma Sources Sustained in NF$_3$ Mixtures*

1-05  Jinpu Lin, University of Michigan  
*Field Distribution in a Vacuum-nano Diode*

1-06  Greg Meece, Michigan State University  
*Self Regulating AGN Feedback in Cool-Core Galaxy Clusters*

1-07  Neil Arthur, University of Michigan  
*Increasing Extracted Beam Current Density in Ion Thrusters through Plasma Potential Modification*

1-08  Patrick Tracy, University of Michigan  
*Relative Heating of Heavy Ions Observed at 1 AU with ACE/SWICS*

1-09  Alexander Rasmus, University of Michigan  
*Interaction of a Plasma Jet with a Magnetized Planar Obstacle*

1-10  Janis Lai, University of Michigan  
*Active Interrogation of Plasma-liquid Boundary Using 2D Plasma-in-liquid Apparatus*

1-11  Scott Rice, Michigan State University  
*Simulation of Multipactor Initiation in FRIB Halfwave Cavities*

1-12  Frans Ebersohn, University of Michigan  
*Simulation of Magnetic Nozzle Thruster Plasma Expansion*

1-13  Willow Wan, University of Michigan  
*Observations of Vortex Merger and Growth Reduction in a Dual-mode, Supersonic Kelvin-Helmholtz Instability Experiment*

1-14  Peng Tian and Chenhui Qu, University of Michigan  
*Properties of Bipolar and Unipolar DC-Pulsed Microplasma Arrays at Intermediate Pressures*

1-15  Rachel Young, University of Michigan  
*Using the OMEGA Laser to Study Accretion Shocks on Forming Stars*
Poster Session II

2-01 Wei Guo, Michigan State University  
*Asymptotic Preserving Maxwell Solver Resulting in the Darwin Limit of Electrodynamics*

2-02 Gang Kai Poh, University of Michigan  
*MESSENGER Observation on Reconnection and Structure of Mercury’s Magnetotail Lobes and Plasma Sheet*

2-03 Keegan Behm, University of Michigan  
*Measurements of the Betatron Spectrum Around the K-edge of Thin Foils*

2-04 Chad Huard, University of Michigan  
*Stochastic Defect Detection for Monte-Carlo Feature Profile Model*

2-05 C. F. Dong, University of Michigan  
*Harmonic Generation in the Beam Current in a Traveling Wave Tube*

2-06 Derek Neben, Michigan State University  
*Bremsstrahlung Measurement on the Superconducting Source for Ions (SuSI)*

2-07 Timothy Collard, University of Michigan  
*Ion Energetics of the Modes of the CubeSat Ambipolar Thruster*

2-08 Jeffrey Fein, University of Michigan  
*Experiments on the Scaling of Growth and Saturation of Multi-beam Two-plasmon Decay with Plasma Conditions*

2-09 Amanda Lietz, University of Michigan  
*DBD on Liquid Covered Tissue: Modeling Long-Timescale Chemistry*

2-10 Adrian Lopez, University of Michigan  
*Effects of Secondary Electron Emissions from a Plasma Immersed Graphite Substrate*

2-11 Stephen Zajac, Michigan State University  
*Microwave Plasma Assisted Chemical Vapor Deposition of Boron Doped Diamond for Vertical Schottky Barrier Diode Fabrication*

2-12 Horatiu Dragnea, University of Michigan  
*Development of a 2D Axial-radial Fluid Electron Model*

2-13 Adam Steiner, University of Michigan  
*Characterization of a MA-Class Linear Transformer Driver for Foil Ablation and Z-Pinch Experiments*

2-14 Thomas Batson and Anthony Raymond, University of Michigan  
*High Energy Electron Acceleration from Underdense Plasmas with the OMEGA EP Laser*

2-15 Patrick Wong, University of Michigan  
*Spatial Amplification in a Disk-on-Rod Traveling-Wave Amplifier*
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