



Sunday, 25 June

- 12pm **Registration**
Lonestar Pre-function A
- 1pm **Design and Modeling of Multi-TW Magnetically Insulated Transmission Lines**
Bowie B
- 2pm **PPS&T Committee Meeting**
Bowie C
- 6pm **Welcome Reception**
Exhibit Area (Lonestar Salon A,B,C)

Monday, 26 June

- 7am **Registration**
Lonestar Pre-function A
- 7am **Breakfast in the Exhibitor area**
Exhibit Area (Lonestar Salon A,B,C)
- 8am **Plenary 1**
Lonestar Salon D&E
Chaired by: Dr. Stephen Bayne and Dr. Susan Heidger
- 8:15am **Erwin Marx Award Speech**
Lonestar Salon D&E

Our Evolving Understanding of Self Magnetically Insulated Transmission Lines and its Applications to Future Drivers

» Prof. Rick B. Spielman

- 9:30am **Morning Break**
Exhibit Area (Lonestar Salon A,B,C)

- 10am **O1A - Oral 1A: Electromagnetic Launch and related topics**
Lonestar Salon D
Chaired by: Dr. Frank Hegeler

- 10am **Demonstration of a continuous XRAM generator operation mode for railgun shots with high rep-rate**
» [Dr. Oliver Liebfried](#), Mr. Volker Brommer

- 10:30am **Pulsed Power for Lunar Applications**
» [Prof. Ian McNab](#)

- 10:45am **OPTIMIZATING THE ENERGY STORAGE CONFIGURATION OF A SINGLE STAGE COILGUN TO MAXIMIZE EFFICIENCY**
» [Dr. James Camp](#)

- 11am **Launching Studies With a Four-Stage Induction Coilgun**
» [Mr. Ranashree Ram](#), Dr. JOY THOMAS M.

- 11:15am **ASELSAN Electromagnetic Launch Activities**
» [Mr. Mustafa Karagöz](#), Dr. Ali Erdem Eken, Mr. Ahmet Halis Sabirli, Mr. Ahmet Öruç, Dr. Baran Yıldırım, Mr. Burak Yurdakul, Dr. Fahri Erinc HIZIR, Dr. Evren Tan, Mr. Ferhat Yurdakonar, Mr. Ibrahim Kaya, Mr. Muhammed Calar, Mr. Ozgur Cavbozar, Mr. Rasih Hakan Demirkol, Mr. Serhat Ozkucuk, Ms. TUĞÇE ŞEVVAL Kaya, Dr. Tolga Kokturk, Mr. Ulas Gocmen, Ms. Zeynep COKLU

- 11:30am **On the Challenges of High-Voltage Switch Design for Pulsed Power Applications**
» [Ms. Aaesha Alali](#), Mr. Gideon Appiah, Mr. Hamad Deiban, Dr. Fernando Albarracin, Dr. Chaouki Kasmi



Continued from **Monday, 26 June**

- 10am **Oral 1B -
Oral 1B: Solid State Marx Generators**
Lonestar Salon E
Chaired by: Zak Drikas
- 10am **Development of Solid-state MARX-type Klystron modulator.**
» [Mr. Akira Tokuchi](#), Mr. KYOSUKE NAKAYAMA
- 10:30am **A combined all-solid-state MARX power supply for a magnetron and an electron gun**
» [Dr. Naoya Ikoma](#), Mr. Akira Tokuchi
- 10:45am **Marx Generator for Kicker Magnets Power Supply Based on SiC MOSFETs**
» Mr. Aleh Kandratsyeu, [Prof. Luis Redondo](#), Dr. Mike Barnes
- 11am **SiC MOSFETs Bipolar Marx generator Prototype for the Super MuSR Beamline Electrostatic Chopper at ISIS**
» Mr. Aleh Kandratsyeu, [Prof. Luis Redondo](#), Dr. Jonny Ranner
- 11:15am **Pulsed Streamer Discharge Generation With a 30-kV Solid-State Impedance-Matched Marx Generator**
» [Dr. Tom Huiskamp](#), Mr. Jeroen van Oorschot, Dr. Mahdi Azizi, Mr. Chiel Ton
- 11:30am **Impact of Impedance-Matching on Internal Reflections and Output Pulse Shape in Impedance-Matched Pulse Generators**
» [Mr. Jeroen Van Oorschot](#), Mr. Chiel Ton, Dr. Tom Huiskamp
- 11:45am **10kV and 500kHz Solid-State Switch Based on Series Connected SiC MOSFETs with Balancing Transformers**
» [Mr. Seong-Ho Son](#), Mr. Tae-Hyun Kim, Mr. chang-hyun Kwon, Dr. Sung-Roc Jang, Mr. Chan-Hun Yu, Dr. Hyoung-Suk Kim

- 10am **Oral 1C -
Oral 1C: Pulsed Power & Driver Component Technologies 1**
Lonestar Salon F
Chaired by: Ms. Heather OBrien
- 10am **A Metal-Oxide Varistor Model for Fast Transient High Voltage Pulses**
» [Mr. Robert Billette](#), [Prof. Jane Lehr](#)
- 10:15am **Plasma global model of Novec 4710/CO2 mixture for high voltage switches**
» [Mr. Andres Castillo](#), Dr. Amanda Lietz, Dr. Matthew Hopkins, Dr. Kentaro Hara
- 10:30am **Triggering a high-pressure, high-voltage, air switch with an off-axis laser**
» [Ms. Stacie Hernandez](#), Mr. Brian Stoltzfus, Mr. Joseph Felix, Mr. Kevin Benavidez, Mr. Owen Johns
- 10:45am **Low Voltage High Current Circuit Breaker**
» [Ms. Rebecca Simpson](#), Mr. Michael Kempkes, Dr. Marcel Gaudreau, Dr. Susie Eustis, Dr. David Cope, Mr. Bob Phillips
- 11am **Comparative Analysis of SCRs and Pseudospark Switches for High Pulsed Power Modulators**
» [Mr. Gideon Appiah](#), Ms. Aaisha Alali, Mr. Hamad Deiban, Dr. Fernando Albarracin, Dr. Chaouki Kasmi
- 11:15am **Reliability of 4H-SiC Devices Passivation Layer in High Humidity Environment for Power Electronic Applications**
» [Mr. Tsz \(Jim\) Tsoi](#), Dr. Stephen Bayne
- 11:30am **Characterization of a High Voltage Capacitor in a Single Discharge Test**
» [Ms. Kaviya Aranganadin](#), Prof. Po-Yu Chang, Prof. Hua-Yi Hsu, Prof. Ming-Chieh Lin
- 12pm **Lunch**



Continued from Monday, 26 June

1:30pm

Poster Session 1 -

Poster Session 1: Solid State Pulsed Power, Pulsed Power Topologies/ Electromagnetic Launch & High Voltage Insulation & Dielectrics/Surface Flashover

Lonestar Pre-function A

Chaired by: Zak Drikas and Dr. William White and Prof. Michael Lanagan

PS1001: Investigating Operation Modes in Gallium Nitride Photoconductive Switches.

» [Mr. Nicolas E. Gonzalez](#), Mr. Seth Miller, Mrs. Emily Schrock, Mr. Greg Pickrell, Mr. Robert J. Kaplar, Dr. Harry Hjalmarson, Dr. Alan Mar

PS1002: Sub-millisecond Pulse Power Evaluation of High-Voltage Silicon Carbide (SiC) Metal-Oxide-Semiconductor Field-Effect Transistor (MOSFET) and High-Voltage SiC Insulated Gate Bipolar Transistor (IGBT)

» [Dr. Aderinto Ogunniyi](#), Ms. Heather OBrien, Dr. Miguel Hinojosa

PS1003: Solid-State Modulator Driving S-Band Magnetron for Anti-Drone System

» [Mr. Min-Kyu Choi](#), Ms. Joo-Young Lee, Mr. Jae-Beom Ahn, Mr. Hyun-Bin Jo, Mr. Seung-Ho Song, Prof. Hong-Je Ryoo

PS1004: Comparative Study on the Filament Power Supply for a High-Power S-Band Magnetron

» [Ms. Joo-Young Lee](#), Mr. Min-Kyu Choi, Mr. Hyun-Bin Jo, Mr. Seung-Ho Song, Prof. Hong-Je Ryoo

PS1005: Experimental demonstration of a compact, high average power, pulsed power driver for printed-circuit board nonlinear transmission lines

» [Mr. David Saheb](#), Dr. Jacob Stephens, Dr. Andreas Neuber, Dr. John Mankowski, Dr. James Dickens, Dr. James Schrock

PS1006: Modeling of a SiC Drift Step Recovery Diode Stack in Silvaco Atlas

» [Mr. David Graves](#), Dr. Argenis Bilbao, Dr. Stephen Bayne, Mrs. Emily Schrock, Mr. Seth Miller

PS1007: Implementation of RF Pulse Amplifier with Artificial Intelligence Based Control Architecture

» [Prof. Abdullah Eroglu](#), Dr. Mahmoud Mahmoud, Mr. Thisara Walpita

PS1008: Study of the DARHT-II Kicker Solid-State Pulser

» [Mr. Lee Merrill](#), Dr. J. Martin Taccetti, Mr. Nicholas Kallas, Mr. Brian Marquez

PS1009: Rapid Capacitor Charger with Digital Current Mode Control and Industrial Control Interface

» [Dr. Michael Giesselmann](#), Dr. Jon Mayes

PS1010: Design of a 30kA pulsed current generator for a new eddy current septum in the CERN PS extraction

» [Mr. Gregor Gräwer](#), Mr. Laurent Ducimetiere

PS1011: Compact solid state switched spiral generators as triggers for pulsed power accelerators

» [Dr. Simon Bland](#), Ms. Susan Parker, Dr. Jiaqi Yan, Dr. Simon Bott-Suzuki, Dr. Jacob Banasek, Dr. Samuel Cordaro, Dr. Anton Gusev, Dr. Ivan Lavrinovich

PS1012: Minimizing Solid-State Switch Transition Times for Compact Spiral Generators

» [Mr. Alex Vellozzi](#), Dr. Kenneth Miller, Mr. Alex Henson, Dr. James Prager, Mr. Davii Zarshenas, Mr. Derek Smith, Dr. Isaac J. Cohen, Dr. Jonathan Walker, Dr. Aaron King, Mr. Dan Harthan, Mr. Evan Glynn

PS1013: Controlled impedance Marx topology to preserve the rise-time of the individual stages

» [Dr. Martin Paraliiev](#), Dr. Sladana Dordevic



Continued from **Monday, 26 June**

PS1014: Design of a Solid-State High-Current Pulse Generator for Inductive Load Operation

» [Mr. Wilfried BOHEZ](#), Mr. Alexandre GOEURY, Dr. Anton Gusev, Mr. Xavier HEBERT, Mr. Olivier JAMES, Mr. Stephane Petitjean, Prof. Laurent Pecastaing

PS1015: Impedance matched 20kV solid state switch for fast direct switching

» [Mr. Michael Osemann](#)

PS1101: Frequency Domain Calibration Technique of Derivative Sensors Through Reference Traceable CVR Measurements

» [Dr. Bektas Colak](#)

PS1102: Ferrite versus Nanocrystalline Magnetic Core Characteristics Measurements for Inductive Voltage Adders

» [Mr. Matthew Kim](#), Dr. Todd Clancy, Dr. Timothy Houck, Dr. Nathaniel Pogue

PS1103: Identification of Breakdown Types from RF Emission Frequency Components

» [Mr. Torin Sammeth](#), Prof. Jane Lehr, Dr. Julia Tilles

PS1104: Study on Pulse Discharge Performance and Modeling of High Power Battery for Electromagnetic Launch

» [Mr. Songheng Yang](#), Prof. Xinjie Yu, Mr. Hao Sun, Mr. Zhen Li, Mr. Hongyuan Lu

PS1105: Analysis of the Crosstalk of Asynchronous Discharge in Multi-module System of Inductive Pulsed Power Supplies

» [Mr. Zhizhen Liu](#), Prof. Xinjie Yu, Mr. Hao Sun, Mr. Zhen Li, Mr. Bei Li

PS1106: Pulsed power flyer acceleration using water insulation

» Dr. Kobi Cohen, [Dr. David Rahkmilevich](#), [Mr. Maler Daniel](#), Dr. Sergey Efimov, Dr. Oleg Belozarov, Prof. Ya. E. Krasik

PS1107: HV PFN-Marx Development with 3D-Printed Spark Gaps for Extended Modulator System Operation†

» [Dr. Kyle Hendricks](#), [Mr. Joshua Gilbrech](#), Mr. Robert Richter-Sand, Mr. Thomas Cavazos, Mr. Jason Ralph

PS1108: Coilgun Electromagnetic Piston

» [Dr. Peter Stone](#)

PS1109: Multi-stage Parallel RLC Circuit as Pulse Power Supply for Electromagnetic Railgun

» Mr. Zhiming Qiao, [Dr. Qing-ao Lv](#), Dr. Hongjun Xiang, Dr. Xichao Yuan, Mr. Genrong Cao, Mr. Zhichao Guan

PS1110: Improved design of the pulse compression network for Excimer lasers

» [Dr. Claus Strowitzki](#)

PS1111: The Road to Short Pulses at 50 kV: Inductive Adder for High-Energy Beam Kickers

» [Dr. James Prager](#), Dr. Kenneth Miller, Ms. Megan Miyasaki, Mr. Kevin Muggli, Mr. Caleb Schmidt

PS1112: Impedance Characterization of a Spiral Generator with a Frequency Response Analyzer

» [Mr. Dan Harthan](#), Dr. Isaac J. Cohen, Mr. William Hooper, Dr. Jonathan Walker, Dr. Aaron King, Mr. Tim Smidt, Mr. Jeff Strouse

PS1113: Pulse Compression and Energy Extraction Techniques of Highly Polarized Materials for Pulsed Power Devices

» [Dr. Jonathan Walker](#), Dr. Isaac J. Cohen, Mr. Logan Caskey, Mr. Evan Glynn, Dr. Aaron King, Mr. Zack Roberts, Dr. T. J. Spence, Mr. Adam Lands

PS1114: Study of a new topology circuit for coil guns

» [Dr. 思源 季](#), Prof. 涛涛 秦, Dr. 铭洋 刘, Mr. 定国 蔡

PS1115: Ramp Generator for Electron Scanner in SNS Beam Profile Measurements System

» [Mr. Vladimir Peplov](#), Mr. Alexander Aleksandrov, Mr. Willem Blokland



Continued from Monday, 26 June

Electromagnetic piston of coilgun

» [Dr. Peter Stone](#)

PS1116: High-Voltage Generators for Nano- and Pico-second Pulsed Electric Fields Generation with Flexible Inter-polarity Delays

» [Dr. Delia Arnaud-Cormos](#), Dr. Rosa Orlacchio, Ms. Nour Tabcheh, Dr. Vincent Couderc, Dr. Philippe Leveque

PS1201: High Voltage Characteristics of Stereolithography and Selective Laser Sintered Printed Polymers for Radome Applications

» [Dr. Johnny Nguyen](#), Dr. Andrew Fairbanks, Dr. Mark Culbertson, Dr. Yeong-jeer Chen, Dr. John Shannon

PS1202: Breakdown Analysis of 3M Novec 4710 Gas

» [Dr. Johnny Nguyen](#), Dr. Andrew Fairbanks, Dr. Laura Wessels, Dr. James Meadows, Dr. Mark Culbertson, Dr. Yeong-jeer Chen

PS1203: Effect of Polymer Coatings on High-Field Breakdown Behavior of Glass

» [Dr. Mengxue Yuan](#), Mr. Cesar Nieves, Mrs. Emily Schrock, Dr. Eugene Furman, Prof. Michael Lanagan

PS1204: Pulse Generator with an Individual Power Supply per Stage

» [Dr. Martin Sack](#), Mr. Dennis Herzog, Dr. Martin Hochberg, Prof. Georg Mueller

PS1205: Solid-state pulsed-power system developed for inductively coupled plasma light source

» [Mr. Fred Niell](#), Dr. David Reisman, Dr. Daniel Arcaro, Mr. Wolfram Neff, Mr. Michael Roderick, Mr. Bob Grzybinski, Mr. Scott Moore, Dr. Chris Lee

PS1206: Evolution towards a complete set of C4F7N cross sections

» [Mr. Max Flynn](#), Mr. John Agan, Dr. Andreas Neuber, Dr. Jacob Stephens

PS1207: Multi-Frame Imaging of Vacuum-Insulator Flashover Plasmas

» [Dr. Adam Steiner](#), Dr. Matthew Burnette, Mr. Pablo Reyes, Ms. Karin Fulford, Mr. William Brooks

PS1208: CALCULATION OF ELECTRON COLLISION CROSS SECTIONS FOR C4F7N AND ITS DISSOCIATION FRAGMENTS

» [Mr. John Agan](#), Mr. Max Flynn, Dr. Jacob Stephens, Dr. Andreas Neuber

PS1209: Pulsed Dielectric Breakdown of Altered Solid Dielectric Insulation Materials

» Mr. Tyler Scoggin, Mr. Hayden Atchison, Mr. Nicolaus Jennings, [Dr. David Wetz](#)

PS1210: Study of Solid Dielectric Insulator Materials using Finite Element Modeling

» Mr. Hayden Atchison, Mr. Tyler Scoggin, Mr. Nicolaus Jennings, [Dr. David Wetz](#)

PS1211: Comparing 10-ns and 200-ns Guided Streamer Breakdown

» [Mr. Md Ziaur Rahman](#), Mr. Edwin A. Oshin, Prof. Chunqi Jiang

3pm

Afternoon Break

Exhibit Area (Lonestar Salon A,B,C)

3:30pm

Oral 1D -

Oral 1D: High Energy Density Physics and related Applications 1

Lonestar Salon D

Chaired by: Dr. Peter Turchi

3:30pm

A diagnostically accessible scaling platform for observing electrode plasma formation in >1 MA/cm MITLs

» [Mr. Derek Lamppa](#), Dr. David Rose, Dr. Brian Hutssel, Dr. Jens Schwarz, Dr. Michael Cuneo

4pm

Power Flow Studies with the Hairpin Experiment

» [Mr. Thomas Mundy](#)



Continued from **Monday, 26 June**

- 4:15pm **Vacuum Feedthrough for a 3.5MA 10kJ Pulsed Power Driver**
 » [Dr. Luis Sebastian Caballero Bendixsen](#), Dr. Nicolas Niasse, Mr. Lewis Paxton-Fear, Dr. Cristian Dobranszki, Dr. Guy Burdiak, Mr. Joshua Read
- 4:30pm **Magnetized Target Design and Development for Cryogenic ICF Targets at the National Ignition Facility**
 » [Dr. Alex Povilus](#), Mr. Chris Provencher, Dr. Jay Javedani, Mr. Alex Lombard, Mr. Johnny Bautista Rodriguez, Mr. Eric Mertens, Mr. Mario Razo, Mr. John Borgman
- 4:45pm **Upgrades To Lawrence Livermore National Laboratory (LLNL) Megajoule Neutron Imaging Radiography (MJOLNIR) Dense Plasma Focus (DPF)**
 » [Mr. James \(Kurt\) Walters](#), Mr. Luis Frausto, Dr. Michael Anderson, Dr. Paul Campbell, Dr. Christopher Cooper, Dr. Andrea Schmidt
- 5pm **MAGNETO-RAYLEIGH-TAYLOR INSTABILITY MITIGATION USING MULTIPLE SHELLS AND EXTERNAL MAGNETIC FIELD IN GAS PUFF Z-PINCHES***
 » [Prof. Farhat N. Beg](#), Ms. Apsara Williams, Dr. Fabio Conti, Ms. Kalpani Werellapatha, Dr. E. Sander Levine, Dr. David A. Hammer
- 5:15pm **120 MHz Transmitter Development for Fusion Plasmas**
 » Ms. Kathleen Quinlan, Mr. James Ridzon, Mr. Mohamed Mohamed, Mr. Ivan Garcia, Mr. Michael Vaughan, Mr. Alan Binus, Mr. Christopher Brunkhorst, Dr. Marcel Gaudreau, Mr. Steve Wukitch, [Mr. Michael Kempkes](#), Ms. Rebecca Simpson

3:30pm **Oral 1E -
 Oral 1E: Medical Applications of Pulsed Power 1**
Lonestar Salon E
 Chaired by: Dr. Allen Garner

3:30pm **Pulsed Electric Field Assisted Processing of Microbial Biomass**
 » [Dr. Wolfgang Frey](#), Dr. Aude Silve, Prof. Georg Mueller

4pm **Subnanosecond Pulsed Electric Fields For Biological Cell Electropermeabilization**
 » [Dr. Njomza IBRAHIMI](#), Ms. Leslie VALLET, Mr. Laurent ARIZTIA, Dr. Franck Andre, Dr. Marc RIVALETTO, Dr. Antoine Silvestre de Ferron, Dr. Anthony RANCHOU-PEYRUSE, Prof. Bucur M. NOVAC, Dr. Lluís MIR, Prof. Laurent Pecastaing

4:15pm **Influence of Pulsed Electric Fields on Photosynthesis in Lettuce**
 » [Mr. Kazuki Era](#), Mr. Kenta Nakahara, Mr. Yuya Higashi, Mr. Tetsuya Arita, Prof. Takao Namihira, Dr. Douyan Wang

4:30pm **Radiofrequency (RF) Based Selectivity in Electroporation for Treatment of Tumor Cells**
 » [Mr. Cody Baker](#), Mr. William Milestone, Dr. Allen Garner, Dr. Ravi Joshi

4:45pm **Scaling of Electropermeabilization with Electric Pulse Parameters: A Simulation Study**
 » [Mr. Sam Wyss](#), Mr. William Milestone, Ms. Sophia Evers, Dr. Amanda Loveless, Dr. Stylianos Chatzidakis, Dr. Ravi Joshi, Dr. Allen Garner

5pm **SEMI-EMPIRICAL MODEL FOR TRANSMEMBRANE POTENTIAL INCORPORATING ELECTROPORATION**
 » [Dr. Amanda Loveless](#), Mr. Sam Wyss, Mr. William Milestone, Dr. Ravi Joshi, Dr. Allen Garner

5:15pm **Bioelectric effects of damage to subcellular structures by high voltage ultra- short pulsed electric fields**
 » [Mr. Yancheng Wang](#), Dr. Xin Ma, Prof. Shoulong Dong, Prof. Liang Yu, Mr. Chenguo Yao

3:30pm **Oral 1F -
 Oral 1F: High Voltage Solid State Pulsed Power Technologies & related Topics**
Lonestar Salon F
 Chaired by: Dr. James Schrock



Continued from **Monday, 26 June**

- 3:30pm **METHODOLOGY FOR ABSORBING OVERVOLTAGES DUE TO LOAD MISMATCH OVER TIME**
 » Mr. Eric Brune, Dr. Charly Sigogne, Dr. Baptiste Cadilhon, Dr. Bruno Cassany, Dr. Laurent COURTOIS, Mr. Alexandre GOEURY, Prof. Laurent Pecastaing, Dr. Antoine Silvestre de Ferron, Mr. Jeroen Van Oorschot, Mr. Chiel Ton, Dr. Tom Huiskamp
- 3:45pm **Demonstration of a High Repetition Rate Solid-State Switched Spiral Generator**
 » Dr. Isaac J. Cohen, Mr. Dan Harthan, Dr. Jonathan Walker, Dr. Aaron King, Mr. Evan Glynn, Mr. William Hooper, Mr. Tim Smidt, Dr. Kenneth Miller, Dr. James Prager, Mr. Alex Vellozzi, Mr. Alex Henson, Mr. Davii Zarshenas, Mr. Derek Smith
- 4pm **Development of All Solid-State Spiker-Sustainer Circuit for MW-class Glow Discharge**
 » Dr. Taichi Sugai, Ms. Yang He, Mr. Taisei Ishiyama, Dr. Xiaojing Ren, Dr. Kazuki Nagao, Dr. Keisuke Kusaka, Dr. Weihua Jiang
- 4:30pm **DESIGN OF A HIGH VOLTAGE CIRCUIT TO GENERATE A SQUARE WAVE SIGNAL WITH OVERLAPPING REFLECTIONS.**
 » Mr. Eric Brune, Dr. Charly Sigogne, Dr. Antoine Silvestre de Ferron, Prof. Laurent Pecastaing, Mr. Jeroen Van Oorschot, Dr. Tom Huiskamp, Mr. Chiel Ton, Mr. Alexandre GOEURY, Dr. Bruno Cassany, Dr. Laurent COURTOIS, Dr. Baptiste Cadilhon
- 4:45pm **Design and Development of Compact High Repetition Rate kW-Class Capacitor Charger**
 » Mr. Jacob Dyer, Dr. Isaac J. Cohen, Mrs. Alex Lamberson, Mr. Walker Thames, Mr. Jeff Strouse
- 5pm **Implementation of the Impulse Generator for Lightning Induced Transient Susceptibility Test**
 » Mr. Woo-Cheol Jeong, Dr. Su-Mi Park, Prof. Hong-Je Ryoo
- 5:15pm **A New Modular Structure for High Voltage Pulse Generation**
 » Mr. Devesh Malviya

6pm **Night Out**
Hard Rock Cafe Riverwalk

Tuesday, 27 June

- 7am **Registration**
Lonestar Pre-function A
- 7am **Breakfast in Exhibitor area**
Exhibit Area (Lonestar Salon A,B,C)
- 8am **Plenary 2**
Lonestar Salon D&E
 Chaired by: Dr. Susan Heidger and Dr. Stephen Bayne
- 8:15am **Peter Haas Award Plenary Speech**
Lonestar Salon D&E
- Pulsed Power: The Enabler for Radiation, Electrical and High Energy Density Science**
 » Dr. Bryan Oliver
- 9:30am **Morning Break**
Exhibit Area (Lonestar Salon A,B,C)
- 10am **Oral 2A:: Medical & Industrial Pulsed Power Applications**
Lonestar Salon D
 Chaired by: Dr. Wolfgang Frey
- 10am **EVALUATING THE EFFECTS OF PULSE WIDTH ON THE PLASMA-INDUCED CANCER CELL INACTIVATION IN VITRO**
 » Mr. Edwin A. Oshin, Mrs. Zobia Minhas, Mr. Ruben Colunga Biancatelli, Dr. John D. Catravas, Dr. Siqi Guo, Prof. Chunqi Jiang



Continued from **Tuesday, 27 June**

- 10:15am **Design of the prototype device to kill anisakis using pulsed power technology**
» [Ms. Chinari Onitsuka](#), Mr. Kengo Nakamura, Dr. Douyan Wang, Mr. Mikiya Matsuda, Dr. Akihiko Ogasawara, Mr. Ritsuo Tanaka, Mr. Yoichi Inoue, Mr. Masayoshi Kouduma, Mr. Kenji Negoro, Mr. Takayasu Negoro, Prof. Takao Namihira
- 10:30am **Fundamental Research on Inactivation of Anisakis by Pulsed Current**
» [Mr. Yudai Ishibashi](#), Mr. Astuya Yamada, Ms. Chinari Onitsuka, Dr. Masayoshi Matsui, Dr. Takanori Tanino, Prof. Takayuki Ohshima, Dr. Douyan Wang, Prof. Takao Namihira
- 10:45am **Machine Learning-Accelerated Exploration in Medicinal Pulsed Plasma using Bayesian Optimization**
» [Mr. Jeremy Marquardt](#), Dr. Allen Garner, Dr. James Prager, Dr. Leonard Lucas, Dr. Stylianos Chatzidakis
- 11am **Pulsed streamer discharges driven by a 500-kV, nanosecond, compact Marx generator**
» [Mr. Chiel Ton](#), Mr. Jeroen Van Oorschot, Mr. Dennis Niemark, Mr. Stefan Molenschot, Dr. Tom Huiskamp
- 11:15am **Pulsed power system corona discharge reaction for eliminating industrial processing gases**
» [Mr. Jae-Beom Ahn](#), Mr. Seung-Jae Jeong, Mr. Hyun-Bin Jo, Prof. Hong-Je Ryoo
- 11:30am **Universal Uniform Pressure tooling coil - A dual mode pulse forming tool coil for metallic sheets**
» [Mr. Deepak Kaushik](#), Dr. JOY THOMAS M.
- 11:45am **Experimental investigation of the impact of I-shape coil width on multi-layered Al-Cu joint fabricated by electromagnetic pulse welding for lithium-ion battery**
» [Dr. Yan Zhou](#), [Dr. Dan Chen](#), Ms. Ting Shen, Dr. Xianmin Wang, Mr. Zhaoxiao Wu, Prof. Chengxiang Li

- 10am **Oral 2C - Oral 2C: High Energy Density Physics & related Applications 2**
Lonestar Salon F
Chaired by: Dr. Jamie Darling
- 10am **FLEXO: Next Generation Capabilities for Pulsed Power Experimental Design**
» [Dr. Kris Beckwith](#), Dr. Thomas Voth, Dr. Stephen Bond, Dr. Alan Stagg, Dr. Brian Granzow, Dr. Nathaniel Hamlin, Dr. Matthew Martin, Dr. Thomas Gardiner, Dr. Marissa Adams, Dr. Matthew Weis, Dr. Jeffrey Woolstrum
- 10:15am **Revisiting the Physics of High-Current, Foil Opening Switches with Modern Codes**
» [Mr. Christopher Rousculp](#)
- 10:30am **Extension the applicability of weak field diagnostics in plasma, based on LIF-Dip spectroscopy, to measure non-uniform electric fields, distributed with axial symmetry.**
» [Mr. Luis Orellana](#), Mr. Wladimir An, Dr. Alfons Weisenburger, Prof. Georg Mueller
- 10:45am **Portable X-pinch Driver Development for Dense Plasma Measurements**
» [Dr. Simon Bland](#), Mr. Jergus Strucka, Mr. Yifan Yao, Ms. Susan Parker
- 11am **Status of the pulsed power refurbishment of Saturn at Sandia National Laboratories†**
» [Dr. Mark Savage](#), Dr. Peggy Christenson, Mr. Sean Coffey, Dr. Jonathan Douglass, Mr. Shannon Feathers, Mr. Michael Fromer, Dr. Chris Grabowski, Dr. Brian Hutsel, Dr. Michael Mazarakis, Dr. Timothy Renk, Dr. David Sirajuddin, Mr. Talbot Smith, Ms. Debra Tabor, Mr. Jeff Tunell, Dr. Ben Ulmen
- 11:15am **A study of radial transmission-line impedance transformer behaviour in multi-megavolt pulsed-power systems using a system design code**
» [Dr. Gwilym Jones](#), Dr. Nicolas Niasse, Dr. Luis Sebastian Caballero Bendixsen



Continued from **Tuesday, 27 June**

11:30am	<p>Current Status of a 750-kJ Dense Plasma Focus for Radiation Test Applications</p> <p>» Dr. Michael Butcher, Dr. Melissa Showers, Mr. Carl Willis, Ms. Tiffany Berntsen, Mr. Tyler Werne</p>
10:15am	<p>Oral 2B - Oral 2B: Opening switches, PCSS & related technologies</p> <p><i>Lonestar Salon E</i> Chaired by: Dr. Joseph Croman</p>
10:15am	<p>A Comparative Study of Rectifier Diodes in Opening Switch Mode for High-Voltage Nanosecond Pulsed Power Systems</p> <p>» Mr. Mawuena Rémi DEGNON, Dr. Anton Gusev, Dr. Antoine Silvestre de Ferron, Prof. Laurent Pecastaing, Mr. Aleksandr Baranov, Mr. Christophe Mielot, Mr. Sebastien Boisne, Prof. Bucur M. NOVAC</p>
10:45am	<p>Characterization of Semiconductor Opening Switches for Predictive Design</p> <p>» Mr. David Smith, Prof. Jane Lehr</p>
11am	<p>Testing of Vertical Mn-doped GaN PCSS's</p> <p>» Mr. Austin Gregory, Dr. Mathew Gaddy, Dr. Tadao Hashimoto, Dr. Edward Letts, Dr. Daryl Key, Dr. John Mankowski, Dr. Andreas Neuber, Dr. James Dickens</p>
11:15am	<p>Material and System Design Considerations for Nonlinear Transmission Lines used as Combined Pulse Forming Lines and High-Power Microwave Sources</p> <p>» Mr. Travis Crawford, Dr. Allen Garner</p>
11:30am	<p>Pulse power using Gallium oxide devices</p> <p>» Mr. Yash Mirchandani</p>

11:45am	<p>Experiments to Quantify the Shielding Efficacy of Materials to be Implemented for Portable Shielding Enclosures that Adequately Mitigate EMI from Lighting Attachment Events</p> <p>» Mr. Jake Slattery, Mr. Austin Hewitt, Mr. Brandon Bywater, Dr. John Mankowski, Dr. James Dickens, Dr. Andreas Neuber, Mr. Donald Friesen, Mr. David Hattz, Mr. Neil Koone, Ms. Crystal Nelson, Dr. Jacob Stephens</p>
12pm	Lunch
12pm	Job Fair
1:30pm	<p>Poster Session 2 - Poster Session 2: Solid State Pulsed Power, High Power Microwave, RF Sources & Antennas & Industrial & Medical Pulsed Power Applications</p> <p><i>Lonestar Pre-function A</i> Chaired by: Dr. Aderinto Ogunniyi and Dr. Nick Jordan and Prof. Chunqi Jiang</p>
	<p>PS2001: Characterization of 18-kV, 20-A SiC Half-Bridge Modules</p> <p>» Dr. Miguel Hinojosa, Dr. Aderinto Ogunniyi, Ms. Heather OBrien</p>
	<p>PS2002: BH Characterization of Magnetic Materials in the Sub-Microsecond Switching Regime</p> <p>» Mrs. Emily Schrock, Mr. Seth Miller, Mr. Jerald Parker, Mr. Joshua Gilbrech, Dr. James Schrock, Mr. Matthew LaCour</p>
	<p>PS2003: Emulation of a High Power Electrical and Thermal Load</p> <p>» Mr. Brent Oksanen, Mr. Andrew Kozelsky, Dr. David Wetz, Dr. John Heinzl</p>
	<p>PS2004: H-Bridge Optimization for Continuous Bipolar Pulsing</p> <p>» Mr. Austin Champion, Dr. Katherine Velas, Mr. Francisco Barbosa, Mr. Leslie Gan</p>



Continued from **Tuesday, 27 June**

PS2005: Measuring thermal response in 21700 lithium-ion cells from high current pulses using constant flux calorimetry

» [Mr. Elias Lallo](#), Mr. Wilhelm Sahlén

PS2006: Parametric Comparison of Additive Manufactured Rogowski Coil Diagnostics for Fast Nanosecond Pulses

» [Dr. Justin Smith](#), Mr. Charles Rose, Dr. Randy Curry

PS2007: High Voltage Coaxial Cable Pulse Capabilities

» [Mr. Ken Le](#), [Mr. Joshua Gilbrech](#), Mr. Michael Joyce, Dr. Jacob Sanchez-Roddy, Mr. Tyler Talbot, Dr. James Schrock, Dr. Susan Heidger

PS2008: 2022 Magnet Mapping Modernization Project

» [Mr. Evan Loftin](#), Mr. Henry Gaus III, Mr. Heny Patel, Mr. Gaberiel Cordero-Rivera, Mr. Fernando Carrasco, Mr. Jacob Sandoval

PS2010: Pulsed Discharge Testing of High Voltage Energy Storage Devices

» [Mr. Logan Caskey](#), Dr. Isaac J. Cohen, Mrs. Alex Lamberson, Dr. Jonathan Walker

PS2011: The Use of “Back Termination” and With Passive Integration to Simplify Measurement Technique

» [Dr. Richard Adler](#)

PS2012: Dielectric strength characterization to BSZT ceramic capacitors

» [Dr. Lauro Paulo Silva Neto](#), Mr. Rangel Aredes, Dr. Jose Osvaldo Rossi, Dr. Eduardo Antonelli, Mr. Gustavo Nicolau, Prof. Edl Schamiloglu, Prof. Joaquim Barroso

PS2013: An Equivalent Circuit Model for High Voltage Spark Gaps: Toward Field-Circuit Integrated Analysis

» [Dr. Kern Lee](#), Dr. Sunghoon Hong

PS2014: All-Solid-State 100 kV SOS Generator Based on Spiral Strip Line for Pulsed Power Applications

» Dr. Ivan Lavrinovich, Dr. Anton Gusev, Dr. Simon Bland, Ms. Susan Parker, Mr. Jergus Strucka, Dr. Antoine Silvestre de Ferron, [Prof. Laurent Pecastaing](#)

PS2102: Analysis of RF generation process in a bench compact gyromagnetic line

» [Dr. Jose Osvaldo Rossi](#), Dr. Lauro Paulo Silva Neto, Prof. Joaquim Barroso, Dr. Fernanda Yamasaki, Prof. Edl Schamiloglu

PS2103: Design and study of compact gyrotron for start-up scenario in KSTAR ECH system

» [Dr. SUNGGUG Kim](#)

PS2104: Exploring the dispersive characteristics of nonlinear transmission lines for high power microwave generation

» [Mr. Travis Wright](#), Dr. John Mankowski, Dr. James Dickens, Dr. Andreas Neuber, Dr. James Schrock, Dr. Jacob Stephens

PS2105: Influence of Anode Mesh Wire Aspect Ratio on the Output of Virtual Cathode Oscillator

» [Prof. Shen Shou Max Chung](#)

PS2106: AN INTENSE THz SMITH-PURCELL SOURCE

» [Mr. Alexandre GOEURY](#), Dr. Jacques Gardelle, Mr. Olivier JAMES, Mr. Xavier HEBERT

PS2107: Development of a Relativistic Magnetron with TE11 Output Mode for High Power Microwave Applications

» [Mr. Frans Nyberg](#), Dr. Pablo Vallejos Olivares, Mr. Wilhelm Thunberg, Mr. Mattias Elfsberg, Mr. Alan Aliyali, Dr. Tomas Hurtig

PS2108: Operation Status of 80 MW Klystron and 200 MW Modulator for PAL-XFEL#

» [Mr. Soung-Soo Park](#), Mr. Sang-Hee Kim, Mr. Kwang-Hoon Kim, Mr. Yong-Jung Park, Dr. Chagn-Ki Min

PS2109: Influence of Input High Voltage Waveform on the Output of Magnetron with Diffraction Output

» [Prof. Shen Shou Max Chung](#)



Continued from Tuesday, 27 June

PS2110: Ku-band Relativistic Backward Wave Oscillator

» [Dr. Jean-Christophe DIOT](#), Mr. Yannick Delvert, Dr. Antoine Chauloux, Mr. Jeremy POTHEE, Mr. Benoit ROUDEIX, Mr. Thierry Chanconie, Dr. Nicolas RIBIERE-THARAUD

PS2201: Design and Development of a Pulsed Electric Field-Based Liquid Food Sterilization System

» Mr. Tanmaya Pradhan, [Mr. Ranashree Ram](#), Dr. JOY THOMAS M.

PS2202: OPTICAL STUDIES OF A SUPERSONIC UNDERWATER PLASMA DISCHARGE PRESSURE SOURCE

» Dr. Jessica Stobbs, [Prof. Bucur M. NOVAC](#), Mr. Thanasi Frost, Mr. Peter Senior

PS2203: Explosive electric power for mining applications

» [Dr. Bert van Heesch](#), Dr. Robert Plat, Dr. Tom Huiskamp, Mr. Tom Willenbroek, Mr. Mohammed Azimi, Mr. Thomas Udo, Prof. Guus Pemen

PS2204: A REPETITIVE PRESSURE SOURCE BASED ON UNDERWATER EXPLODING WIRES

» Mr. Thanasi Frost, [Prof. Bucur M. NOVAC](#), Dr. Marcos Pereira, Mr. Peter Senior, Prof. Luis Redondo

PS2205: ELECTRO-CHEMICAL TO KINETIC ENERGY TRANSFER FROM UNDERWATER ALUMINUM EXPLODING WIRES

» Mr. Thanasi Frost, [Prof. Bucur M. NOVAC](#), Mr. Peter Senior

PS2206: Development and Characterization of Cold Atmospheric Pressure Plasma Jet Source for Skin Wound Healing Application

» Mr. Navin Kumar Sharma, Ms. Priti Pal, Ms. Vishali Singh, Mr. Ravindra Kumar, Dr. Mahendra Singh, Mr. Alok Mishra, Dr. Ram Prakash Lamba, Mr. Sumit Kumar Mandal, Ms. Sonakshi Puri, Prof. P. R. Deepa, Prof. Yaduvendra Choyal, [Dr. Udit Narayan Pal](#)

PS2207: Discharge Characterization of Kr/Cl₂ based 222 nm Far UV-C Excimer Radiation Source

» Ms. Surbhi Bidawat, Mr. Navin Kumar Sharma, Ms. Priti Pal, Dr. Ram Prakash Lamba, Dr. Niraj Kumar, Dr. Mahendra Singh, Mr. Alok Mishra, Prof. Yaduvendra Choyal, [Dr. Udit Narayan Pal](#)

PS2208: Difference of Treatment Efficiency by Pulse Applying Interval in Pulsed Electric Field Sterilization of Vegetable Drink

» [Dr. Koki Saito](#), Prof. Minamitani Yasushi, Dr. Hideki Fukata

PS2209: Discharge Analysis and Characterization of Cold Atmospheric Pressure Plasma Jet Sources based Plasma Activated Water for Agriculture Applications

» Ms. Priti Pal, Ms. Vishali Singh, Mr. Navin Kumar Sharma, Dr. Mahendra Singh, Mr. Alok Mishra, Dr. Shivendra Maurya, Dr. Ram Prakash Lamba, [Dr. Udit Narayan Pal](#)

PS2210: INVESTIGATION OF APPROPRIATE CONDITIONS FOR NANOSECOND PULSED ELECTRIC FIELD APPLICATION ON CANCER CELLS FOR INTRODUCTION OF THE EMBRYONIC CHICK ASSAY

» [Mr. Hiroki Morita](#), Mr. Yudai Kobayashi, Prof. Naoyuki Shimomura

PS2211: STUDY OF APPROPRIATE CONDITION OF NANOSECOND PULSED ELECTRIC FIELDS FOR INDUCTION OF UNFOLDED PROTEIN RESPONSE USING GFP-EXPRESSING CELL

» [Mr. Masahiro Hirata](#), Mr. Shogo Tanioka, Dr. Yoshimasa Hamada, Prof. Seiichi Oyadomari, Prof. Naoyuki Shimomura

PS2212: Proton Radiography of Underwater Electrical Wire Explosion

» [Dr. Marcus Iberler](#), Dr. Alexander Mueller-muenster, Prof. Joachim Jacoby, Dr. Paul Neumayer, Dr. Dmitry Varentsov, Mr. Marius Dehmer

3pm

Afternoon Break

Exhibit Area (Lonestar Salon A,B,C)



Continued from Tuesday, 27 June

- 3:30pm **Oral 2D -
Oral 2D: High Power Microwave Sources**
Lonestar Salon D
Chaired by: Dr. Jacob Stephens
- 3:30pm **A HIGH-POWER ELECTROMAGNETIC SOURCE FOR DISABLING IMPROVISED EXPLOSIVE DEVICES**
» Mr. Laurent ARIZTIA, Dr. Njomza IBRAHIMI, Dr. Alexey ZHABIN, Dr. Marc RIVALETTO, Dr. Antoine Silvestre de Ferron, Prof. Bucur M. NOVAC, Dr. Edson MARTINOD, Prof. Laurent Pecastaing
- 4pm **Experiments on A6 Relativistic Magnetron Fed by a Solid Cylindrical Cathode: ~350 MW of High-Power Microwaves at ~4.675 GHz (2 π -mode) during ~25 ns for Directed Energy (DE) and non-DE applications**
» Dr. Andrey Andreev, Mr. Christopher Rodriguez, Mr. Michail Felix, Prof. Edl Schamiloglu
- 4:30pm **COBRA DANE Radar Transmitter Group Replacement**
» Ms. Rebecca Simpson, Mr. Michael Kempkes, Mr. Timothy Hawkey, Mr. Luan Jashari, Mr. Kevin Vaughan, Mr. Ynnesh Francis, Dr. Marcel Gaudreau
- 4:45pm **Direct Cavity Combiner**
» Dr. Marcel Gaudreau, Ms. Kathleen Quinlan, Mr. Alexei Rigaud, Mr. Slade Lewis, Mr. Brad Pothier, Dr. David Cope, Ms. Rebecca Simpson, Mr. Michael Kempkes
- 5pm **Compact Efficient and Frequency Tunable Relativistic Magnetron with Coaxial Cone-Shaped Waveguide and Tilted Plungers**
» Mr. Yannick Delvert, Dr. Antoine Chauloux, Dr. Jean-Christophe DIOT, Dr. Nicolas RIBIERE-THARAUD, Mr. Thierry Chanconie, Dr. Philippe Leveque

- 5:15pm **The diocotron mode developing in a smooth bore coaxial diode and the electromagnetic modes in a six-vane magnetron fed by a split cathode**
» Dr. John Leopold, Dr. Y. Bliokh, Prof. Ya. E. Krasik, Dr. A. Kuskov, Prof. Edl Schamiloglu
- 3:30pm **Oral 2E -
Oral 2E: Dielectric Phenomena at Interfaces**
Lonestar Salon E
Chaired by: Mr. Cesar Nieves
- 3:30pm **Design and commissioning of Vulcan – A testbed for fast Marx generator and vacuum insulator development**
» Dr. Brian Hutsel, Mr. Brian Stoltzfus, Dr. Mark Savage, Mr. Owen Johns, Mr. Eric Breden, Mr. Michael Sullivan
- 4pm **Composite Insulator Materials for Improved Impulse Vacuum Flashover Holdoff**
» Dr. Adam Steiner, Dr. Matthew Burnette, Dr. Erica Redline, Dr. Ronald Goeke, Mr. William Brooks, Mrs. Amanda Peretti, Dr. Gregory Frye-Mason, Mrs. Kimberly Faris, Mr. Torin Sammeth, Mr. Ian Kern, Prof. Mark Gilmore, Prof. Jane Lehr, Mr. Shuaib Balogun, Prof. Mark Losego
- 4:15pm **UV-VIS Spectroscopy of Anode-Initiated Vacuum Flashover Plasmas**
» Ms. Raimi Clark, Mr. Michael Mounho, Mr. William Brooks, Dr. Matthew Hopkins, Dr. Jacob Stephens, Dr. Andreas Neuber
- 4:30pm **Effect of Approach Speed and Electrode Geometry on Electrostatic Discharge Characteristics**
» Dr. Benedikt Esser, Dr. Jacob Stephens, Dr. James Dickens, Dr. John Mankowski, Mr. Donald Friesen, Mr. David Hattz, Ms. Crystal Nelson, Dr. Andreas Neuber
- 4:45pm **Effect of Humidity and Enclosure Volume on Surface Charge Decay of Charged Dielectrics**
» Mr. Zach Cardenas, Dr. Benedikt Esser, Dr. Matthew Abide, Dr. James Dickens, Dr. John Mankowski, Dr. Jacob Stephens, Mr. Donald Friesen, Mr. Neil Koone, Mr. David Hattz, Ms. Crystal Nelson, Dr. Andreas Neuber



Continued from **Tuesday, 27 June**

5pm **Method for Mapping of Surface Charge Density on Arbitrary Dielectric Objects**
 » [Mr. John Mockert](#), Dr. Benedikt Esser, Dr. James Dickens, Dr. John Mankowski, Dr. Jacob Stephens, Mr. Donald Friesen, Mr. Neil Koone, Mr. David Hattz, Ms. Crystal Nelson, Dr. Andreas Neuber

5:15pm **Modelling of Transient Discharges Along a Sub-mm Air-Solid Dielectric Interface and Under Fast-rising Ramp Voltages**
 » [Mr. Timothy Wong](#), Dr. Igor Timoshkin, Prof. Scott MacGregor, Dr. Mark Wilson, Dr. Martin Given

3:30pm **Oral 2F -
Oral 2F: High Energy Machines**
Lonestar Salon F
 Chaired by: Dr. Yeong-jeer Chen

3:30pm **HPM, Pulsed Power, and High Energy-Density Physics Research at the University of Michigan**
 » [Dr. Nick Jordan](#), Mr. Adam N. Brusstar, Mr. Joseph Chen, Mr. George V. Dowhan, Ms. Emma N. Guerin, Dr. Stephen V. Langellotti, Mr. Dion Li, Mr. Ryan A. Revolinsky, Dr. Akash P. Shah, Dr. Roman Shapovalov, Mr. Trevor Smith, Mr. Brendan J. Sporer, Mr. Christopher J. Swenson, Mr. Landon Tafoya, Mr. Levi I. Welch, Mr. Donovan White, Prof. Y.Y. Lau, Prof. Ronald M. Gilgenbach, Prof. Ryan D. McBride

3:45pm **Cinco: A Compact Pulsed Power Driver Update**
 » [Mr. Travis Bejines](#)

4pm **Single-Pulse Polycapillary-Coupled X-ray Diffraction Using Direct-Coupled and Cable-Coupled Rod-Pinch Diodes**
 » [Dr. Dane Morgan](#), Dr. Tommy Ao, Mr. Rafael Sanchez

4:15pm **The Meatgrinder Circuit: A Historical Perspective**
 » [Mr. Oved Zucker](#)

4:30pm **Sirius I Prototype: A Prime-Power Source for Future 1 – 10 GJ Fusion-Yield Experiments**
 » [Dr. Michael Anderson](#), Dr. Keith LeChien, Dr. William Stygar, Mr. Donald Max, Mr. Enrique Anaya, Mr. Cuyler Beatty, Dr. Adam White, Mr. Jacob Trueblood, Mr. Andrew Benson, Mr. Robert Beverly, Mr. Ron Chaffee, Mr. John Cortes Gutierrez, Mr. William Drews, Mr. Randy Hicks, Mr. Fred Howland, Mr. David Norton, Mr. Ronnie Speer

4:45pm **VöR EGUN Driver Long Pulse Option**
 » [Dr. Christopher Yeckel](#)

6pm **Women in Engineering (WIE) Symposium**
Bowie A, B & Balcony

7:30pm **Young Professionals Symposium**
Lonestar Salon D&E

Wednesday, 28 June

7am **Registration**
Lonestar Pre-function A

7am **Breakfast in Exhibitor area**
Exhibit Area (Lonestar Salon A,B,C)

8am **General Announcements**
Lonestar Salon D

8am **General Announcements**
Lonestar Salon E

8am **General Announcements**
Lonestar Salon F



Continued from **Wednesday, 28 June**

8:15am	<p>Oral 3A - Oral 3A: Particle Beam & Accelerator related Technologies <i>Lonestar Salon D</i> Chaired by: Daniel Enderich</p>
8:15am	<p>Cygnus Performance on Ten Subcritical Experiments » Dr. John Smith, Mr. Alex Augustine, Mr. Keith Hogge, Mr. Charles Spillers, Mr. Jeffrey Taylor, Mr. Tam Truong, Mr. John Vargas, Dr. Dana Duke, Mr. Michael Garcia, Mr. Eugene Ormond, Mr. Martin Parrales</p>
8:30am	<p>Cygnus X-Ray Pinhole Camera Diagnostics » Mr. Tam Truong, Mr. Alex Augustine, Mr. Keith Hogge, Dr. John Smith, Mr. Jeffrey Taylor, Mr. John Vargas, Dr. Dana Duke, Mr. Michael Garcia, Mr. Martin Parrales, Mr. Charles Spillers, Mr. Eugene Ormond</p>
8:45am	<p>Cygnus X-ray Performance Using High-Z and Low-Z Anode Rods » Mr. John Vargas, Mr. Alex Augustine, Mr. Keith Hogge, Dr. John Smith, Mr. Charles Spillers, Mr. Jeffrey Taylor, Mr. Tam Truong, Dr. Dana Duke, Mr. Michael Garcia, Mr. Eugene Ormond, Mr. Martin Parrales, Mr. Jacob Zier</p>
9am	<p>Laser diode drivers for rep-rated DELPHI laser system » Dr. Katherine Velas, Mr. Cristopher Barillas, Mr. Alex Chemali, Mr. E. Stephen Fulkerson, Mr. Anthony Gonzales, Mr. Edward Koh, Mr. Willie Lew, Mr. Steve Telford</p>
9:15am	<p>Performance Comparison of Three Models of Thyatron in LINAC Coherent Light Source » Dr. Xupeng Chen, Dr. Andrew Benwell, Dr. Anatoly Krasnykh, Dr. William Colocho, Dr. Franz-Josef Decker, Mr. Jeffrey de Lamare</p>
8:15am	<p>Oral 3B - Oral 3B: Pulsed Power Components and related Applications <i>Lonestar Salon E</i> Chaired by: Dr. James Schrock</p>

8:15am	<p>DESIGN OF A COMPLETE SOURCE AND VICTIM 3D ELECTROMAGNETIC MODEL FOR MULTILAYER SHIELDING EVALUATION » Dr. Roman Leduc, Dr. Njomza IBRAHIMI, Prof. Jean-Marc Dienot, Dr. Veronika Gavrilenko, Dr. Robert Ruscassié</p>
8:30am	<p>Study of DC Arc Flash Phenomena » Mr. Nicolaus Jennings, Mr. Rick Langley, Dr. David Wetz, Dr. John Heinzl, Mr. Benjamin Schmitz</p>
8:45am	<p>Reaction dynamics in high voltage gaseous breakdown* » Dr. Deqi Wen, Dr. John Verboncoeur</p>
9am	<p>Investigating SF6-Replacement Gases for High Voltage Gas Switches » Dr. Matthew Burnette, Mr. Max Flynn, Mr. Joseph Felix, Dr. Jacob Stephens, Dr. Marc Mitchell, Dr. Adam Steiner</p>
9:15am	<p>A Sensitivity Analysis of the Self-Break Distribution of a 100 kV Gas Switch » Mr. Joseph Felix, Mr. Brian Stoltzfus, Dr. Mark Savage, Dr. Adam Steiner, Dr. Brian Hutsel, Dr. Jonathan Douglass</p>
8:15am	<p>Oral 3C - Oral 3C: Best Student Paper Competition Finalists <i>Lonestar Salon F</i> Chaired by: Ms. Heather OBrien</p>
8:15am	<p>Investigations of Ion Beam Properties from a Planar Pulsed Power Pinched-Beam Diode Using Particle-In-Cell Simulations » Mr. Jesse Foster, Dr. John McClory, Dr. Stephen Swanekamp, Dr. Paul Ottinger</p>
8:30am	<p>Benchmarking the suitability of Novec 4710 for application in flux compression generators+ » Mr. Nathan Fryar, Mr. Luke Silvestre, Mr. Jakob Matthies, Dr. Jacob Stephens, Dr. James Dickens, Dr. Andreas Neuber, Dr. Andrew Young</p>



Continued from **Wednesday, 28 June**

8:45am **Modelling The Impulsive Breakdown Characteristics of Sub-mm Spheroidal Voids**

» [Mr. Timothy Wong](#), Dr. Igor Timoshkin, Prof. Scott MacGregor, Dr. Mark Wilson, Dr. Martin Given

9am **Analysis of dielectric breakdown failure and electric field distribution in polymer-coated boroaluminosilicate glass through simulation and experimental measurements**

» [Mr. Cesar Nieves](#), Ms. Mengxue Yuan, Dr. Eugene Furman, Mrs. Emily Schrock, Prof. Michael Lanagan

9:15am **Parallel Connection of Standard Thyristors in Impact Ionization Mode: Experiment and Simulation**

» [Mr. Ejlal Shahriari](#), Dr. Anton Gusev, Dr. Thomas Maysonnave, Dr. Antoine Silvestre de Ferron, Prof. Laurent Pecastaing

9:30am **Morning Break**

Exhibit Area (Lonestar Salon A,B,C)

10am **Oral 3D -**

Oral 3D: Particle Beam & Accelerator related Technologies 2

Lonestar Salon D

Chaired by: Mr. David Housley

10am **Circuit Optimization of Pulsed Power for the Scorpius Accelerator**

» [Dr. Zach Shaw](#), Mr. Ivan Aponte, Dr. Evan Scott, Dr. Piotr Wiewior, Dr. Trevor Burris-Mog, Dr. Raymond Allen, Dr. David Hinshelwood, Dr. Samuel Brockington, Dr. Brent McHale, Dr. Saeed Assadi

10:15am **Cathode side-emission mitigation for linear induction accelerators**

» [Dr. Charles Melton](#), Dr. Yu-Juan Chen, Dr. Stephen Clark, Dr. Jennifer Ellsworth, Dr. Timothy Houck, Dr. Nathaniel Pogue

10:30am **Status of the GSI-SIS100 Extraction and Emergency Kicker System**

» [Mr. Michael Osemann](#)

10:45am **Transfer function identification and cross-calibration of E-dot sensors via Bayesian inference in a linear induction accelerator**

» [Dr. Michael Jaworski](#), Mr. Nicholas Kallas, Dr. Trent McCuistian, Dr. Dave Moir, Dr. J. Martin Taccetti

11am **USE OF THE CASTLE TRANSMISSION LINE CODE TO CHARACTERIZE SATURN BREMSSTRAHLUNG DIODE PERFORMANCE IN SUPPORT OF THE SATURN RECAP PROGRAM***

» [Dr. Timothy Renk](#), Dr. Bruce Weber, Dr. Raymond Allen

11:15am **Bipolar Pulsed Power for Active Reset of Induction Cells**

» [Dr. Katherine Velas](#), Dr. Jennifer Ellsworth, Mr. Steven Falabella, Dr. Nathaniel Pogue, Mr. Gilbert Renteria

11:30am **Large Area Electron Beam Source on the Saturn Accelerator**

» [Dr. Ben Ulmen](#), Mr. Andrew McCourt

11:45am **Neutron radiography using electron accelerator based photo-neutron source**

» [Dr. RISHI VERMA](#), Dr. Tushar Roy, Dr. Mayank Shukla, Mr. M Srihari, Mr. D P Chakravarthy, Dr. R Shukla, Mr. J N Rao, Mr. A K Dubey, Mr. P Dey, Mr. D B Majumder, Mr. J B Naik, Dr. B K Das, Ms. Renu Sharma, Ms. Shobhna Mishra, Mr. Manraj Meena, Mr. Lakshman Rongali, Mr. Vivek Yadav, Mr. D Bhattacharjee, Mr. A R Tillu, Mr. S Chandan, Mr. S R Ghodke, Mr. R I Bakhtsingh, Mr. P Saroj, Dr. Archana Sharma

10am **Oral 3E -**

Oral 3E: Pulsed Power Technologies

Lonestar Salon E

Chaired by: Dr. Matthew Mcquage



Continued from **Wednesday, 28 June**

- 10am **Experimental Demonstration of a Capacitor Switch Assembly for High Current Applications**
» [Dr. Charlie Anderson](#), Dr. Hugh Kirbie, Dr. Matt Wisher, Dr. Nico Rotunda, Dr. Jonathon Parsons
- 10:15am **Hybrid Metalized Polymer Core Hardware Design & Initial Results for Prototype Mass Optimized Pulsed Power Hardware**
» [Mr. Charles Rose](#), Mr. Shaun Whetten, Dr. Michael Kracum, Dr. Jacob Mahaffey, Mr. David Saiz, Mr. Joseph Padilla, Mr. John Cochrane, Mr. Raymond Puckett, Dr. Brian Hutsel
- 10:30am **Gamble III Oil Transfer and Filtration System**
» [Mr. Richard Cairns](#)
- 10:45am **Trigger Generator Optimization for an Impact-Ionization Thyristor Switch**
» [Dr. Thomas Maysonnave](#), Dr. Anton Gusev, Mr. Ejlal Shahriari, Dr. Antoine Silvestre de Ferron, Prof. Laurent Pecastaing
- 11am **Empirical Based Vector Inversion Generator Model**
» [Mr. Robert Miller](#), Mr. Zach Shotts, Dr. Frank Rose
- 11:15am **Invention and Proof of Principle Testing of a Novel Geometry Vector Inversion Generator**
» [Mr. Robert Miller](#)
- 11:30am **Research on the Working Temperature Rise of Inductor in Inductive Pulsed Power Supply**
» [Mr. Bei Li](#), Prof. Xinjie Yu, Dr. Pengcheng Zhang, Mr. Hao Sun, Mr. Zhen Li
- 11:45am **Design of High-Energy Density Tesla Transformers: Challenges and Opportunities**
» [Mr. Gideon Appiah](#), Ms. Aasha Alali, Dr. Felix Vega, Dr. Chaouki Kasmi

- 10am **Oral 3F - Oral 3F: Special Virtual Pulsed Power Session**
Lonestar Salon F
Chaired by: Dr. Susan Heidger and Dr. Frank Hegeler
- 10am **Transient Voltage Suppressor Diodes as a High-Voltage Nanosecond Opening Switch Pumped by a Spiral Generator**
» [Dr. Anton Gusev](#), Dr. Ivan Lavrinovich, Dr. Simon Bland, Ms. Susan Parker, Dr. Antoine Silvestre de Ferron, Prof. Laurent Pecastaing
- 10:15am **Scaling Laws for Electromagnetic Launchers Considering an Existing Pulse Power Supply**
» [Mr. Gökem Gülletutan](#), Mr. Nail Tosun, Mr. Mustafa Karagöz, [Mr. Ferhat Yurdakonar](#), Dr. Baran Yıldırım, Ms. Zeynep COKLU, Dr. Ozan Keysan
- 10:30am **Dual Marx circuit and pulse transformer based Cascade type solid state modulator development**
» [Mr. Zongqing Bo](#), Mr. Sizhe Xiang, Ms. Mingquan Jin, Prof. Shoulong Dong, Mr. Chenguo Yao
- 10:45am **Upgrade of the Frascati LINAC Modulator**
» [Dr. CLAUDIO Di Giulio](#), Mr. Bruno Buonomo, Mr. Luca Gennaro Foggetta, Mr. Renato Clementi, Mr. Riccardo Ceccarelli, Mr. Luis Antonio Rossi, Mr. Matteo Ceccarelli, Dr. Fabio Cardelli, Ms. Serena Strabioli, Mr. Raffaele Zarlenga, Mr. Alberto Cecchinelli, Mr. Maurizio Belli
- 11am **An energy-saving pulsed magnetic field generator with multi-stage adjustable magnetic field change rate**
» [Dr. Yuan Lei](#), Mr. Runze Liang, Mr. Yiwei Feng, Mr. Chenguo Yao, Prof. Shoulong Dong
- 11:15am **10.7kV nanosecond pulse generator based on pulse forming line and transmission line transformer**
» [Dr. Jiuxin Ma](#), Mr. Lvheng Ren, Prof. Liang Yu, Mr. Chenguo Yao, Prof. Shoulong Dong



Continued from **Wednesday, 28 June**

11:30am **Influence of Switch Prefire on the Reliability of Large-Scale Linear-Transformer-Driver Accelerator**

» [Mr. Zhenyu Wang](#), Prof. Jian Wu, Ms. Ziwei Chen, Mr. Zhiyuan Jiang, Mr. Yiming Zhao, Mr. Xiaofeng Jiang, Mr. Zhiguo Wang, Prof. Fengju Sun

11:45am **A Fast-edge Square-wave Adjustable Pulse Current Generator based on Coupling Inductor**

» [Dr. Lisheng Zhao](#), Prof. Shoulong Dong, Mr. Shupeii Mao, Mr. Yiwei Feng, Mr. Chenguo Yao, Prof. Liang Yu

12pm **Effect of Voltage Rise Rate on Partial Discharge Characteristics of BOPP Film Under Positive Nanosecond Pulse Voltage**

» [Dr. Yong Chen](#), Prof. Yan Mi, Mr. Canhui Liu, Mr. Yakui Zhu, Prof. Ruijin Liao

12:15pm **Multi-gawatt pulsed power systems for societal applications**

» [Dr. Archana Sharma](#), Dr. Rishi Verma

12:30pm **Discharge Investigation and Switching Characterization of Multi-gap Multi-aperture Pseudospark Switch for Fast Pulse Power Applications**

» [Mr. Akhilesh Mishra](#), Dr. Shikha Misra, Dr. Varun ., Mr. Bharat Lal Meena, Mr. Alok Mishra, Dr. Ram Prakash Lamba, Dr. Udit Narayan Pal

12:45pm **An improved parametric model for the simulation of trigatron gas switches**

» [Mr. Yanbo Liu](#), Prof. Li Chen, Mr. Weisen Zhang, Mr. Feng Zhang, Ms. Yizhuo Wei, Ms. Qi Yuan, Mr. Yubo Sun

1pm **Influence of long and short pulse widths on sterilization of cut vegetables packaged at low oxygen concentration using pulsed plasma**

» [Mr. Pengcheng Cui](#), Mr. Ko Kimura, Dr. Koki Saito, Prof. Minamitani Yasushi

1:15pm **A short-circuited transmission line in exemplification of a contactless opening switch for pulsed power application.**

» [Mr. Oleg Egorov](#)

1:30pm **Skin effect in coaxial cables and high-frequency oscillations in pulse facilities**

» [Prof. Boris Fridman](#)

1:45pm **PS2009: Skin Effect and Energy Losses in Toroidal Core of Pulse Transformer**

» [Prof. Boris Fridman](#), Mr. Yuri Krukov, Mr. Constantin Lobanov

12pm **Lunch**

1:30pm **Oral 3G - Oral 3G: High Energy Density Physics and related Applications**

Lonestar Salon D

Chaired by: Mr. Charles Rose

1:30pm **The WARP Reactor Concept**

» [Dr. Michael Anderson](#), Mr. James (Kurt) Walters, Mr. Enrique Anaya, Mr. Donald Max, Dr. William Stygar, Dr. Anthony Link

1:45pm **INTENSE, NEUTRALIZED-ION BEAM FOR FUSION**

» [Dr. Frank Wessel](#), Mr. Andrew Egly, Mr. Cameron Chavez

2pm **Advanced High Voltage Switching Technology for Fusion Reactor Power Systems**

» [Dr. Steven Pronko](#), Dr. David Sanabria, Prof. Michael Mazzola, Mr. James Gafford

2:15pm **Understanding the impact of drive current rise-time to the magneto-Rayleigh-Taylor instability in wire-array Z-pinchs on an 8-MA generator**

» [Dr. Qiang Yi](#)

2:30pm **Air Core Transformer for use in Flux Compression Generator Power Conditioning**

» [Mr. Tyler Watson](#), Dr. James Dickens, Dr. Andreas Neuber, Dr. John Mankowski



Continued from Wednesday, 28 June	
2:45pm	<p>Understanding electrode plasma formation on wires and thin foils via vacuum ultraviolet spectroscopy of desorbed surface contaminants</p> <p>» <u>Mr. Trevor Smith</u>, Dr. Mark Johnston, Dr. Nick Jordan, Dr. Michael Cuneo, Dr. Jens Schwarz, Prof. Ryan D. McBride</p>
3pm	<p>Design and Characterization of an Explosive Opening Switch for Flux Compression Generator Applications</p> <p>» <u>Ms. Kaylee Allen</u>, Mr. Nicholas Harrison, Dr. James Dickens, Dr. Andreas Neuber, Dr. John Mankowski</p>
3:15pm	<p>Investigation of the Milling Response of PBX 9501 and PBX 9502</p> <p>» <u>Mr. Scott Watkins</u>, Mr. Keegan Kelp, Mr. Luke Boswell, Mr. Ethan Spurbeck, Ms. Raimi Clark, Dr. John Mankowski, Mr. Jacob Brinkman, Dr. James Dickens, Dr. Andreas Neuber</p>
1:30pm	<p>Oral 3I - Oral 3I: Technologies Supporting High Power Microwave Sources <i>Lonestar Salon E</i> Chaired by: Dr. Amanda Loveless</p>
1:30pm	<p>Compact L-Band Helical Antenna Designed For Pulsed Transmission</p> <p>» <u>Mr. Robert Miller</u>, Dr. Frank Rose</p>
1:45pm	<p>1D PIC-MCC modeling of cathode plasma formation and expansion in vacuum diodes</p> <p>» <u>Mr. Vedanth Sharma</u>, Mr. Andy M. Castillo, Dr. Yusuke Yamashita, Dr. Kentaro Hara</p>
2pm	<p>Self-Compression of Ultra-Intense, Ultra-Short Microwave Pulse in a Gas-Filled Waveguide by a Propagating Ionization Front</p> <p>» <u>Dr. Yang Cao</u>, Mr. Vladislav Maksimov, Dr. Yury Bliokh, Dr. John Leopold, Prof. Ya. E. Krasik</p>
2:15pm	<p>Compact EMP(Electro Magnetic Pulse) Generator Installing a Peaking Circuit</p> <p>» <u>Dr. Gen URABE</u>, Mr. Yuta SHUTO, Mr. Masahiko OKADA</p>
2:30pm	<p>A high transmission multilayer window for short Gaussian wave pulses</p> <p>» <u>Prof. Rueli Fu Jao</u>, Dr. Kaviya Aranganadin, Prof. Hua-Yi Hsu, Dr. John Verboncoeur, Prof. Ming-Chieh Lin</p>
2:45pm	<p>Implementation and Benchmark of Simple Space-Charge Limited and Field Emission Algorithms in 1-D Particle-in-Cell Simulations</p> <p>» <u>Mr. Guo-Ning Wang</u>, Ms. Kaviya Aranganadin, Prof. Hua-Yi Hsu, Prof. John Verboncoeur, Prof. Ming-Chieh Lin</p>
3pm	<p>High Power Microwave Breakdown of C4F7N (Novac 4710) Gas Mixtures</p> <p>» <u>Mr. Brandon Bywater</u>, Dr. John Mankowski, Dr. James Dickens, Dr. Andreas Neuber, Dr. Jacob Stephens, Mr. Matthew Capps</p>
3:15pm	<p>Peculiar streamer development and breakdown characteristics under repetitive submicrosecond pulses in electronegative gas mixtures at high pressures</p> <p>» <u>Dr. Zheng Zhao</u>, <u>Mr. Qiuyu Gao</u>, Prof. Anbang Sun, Prof. Jiangtao Li</p>
2pm	<p>Oral 3H - Oral 3H: Industrial Pulsed Power Applications <i>Lonestar Salon F</i> Chaired by: Dr. Tom Huiskamp</p>
2pm	<p>NANOSECOND PULSED PLASMA JETS IMPINGING ON WATER FOR AMMONIA GENERATION</p> <p>» <u>Mr. ZACH CAUDELL</u>, Mr. Nikolai Covacci, Ms. Zinat Nisha, Dr. Olga Pakhomova, Prof. Chunqi Jiang</p>
2:15pm	<p>Nanosecond pulse discharge based ozone generation with 10 parallel reactors</p> <p>» <u>Mr. Hayato Koyanagi</u>, Mr. Kazuma Takeuchi, Prof. Takao Namihira, Dr. Douyan Wang</p>



Continued from **Wednesday, 28 June**

2:30pm **Development of portable nitric oxide generator using pulsed arc discharge**
 » [Mr. Tsuyoshi Ogata](#), Mr. Yuki Akimoto, Prof. Takao Namihira, Dr. Douyan Wang

2:45pm **Design and simulation of 1 MV, 10 kA, 50 ns Flash X ray system**
 » [Mr. Ankur Patel](#), Dr. Rakhee Menon, Dr. Amitava Roy

3pm **Afternoon Break**
Exhibit Area (Lonestar Salon A,B,C)

4pm **Poster Session 3 -
 Poster Session 3: High Energy Density Physics, Particle Beam & Accelerator Technologies & Industrial & Medical Pulsed Power Applications**
Lonestar Pre-function A
 Chaired by: Mrs. Emily Schrock and Dr. Susan Heidger and Prof. Chunqi Jiang and Mr. Seth Miller

PS3001: Inductive effects in electron-beam-induced excitation and ionization of air and other gases
 » [Dr. Stuart Jackson](#), Dr. Eric Kaiser, Dr. David Hinshelwood, Dr. Nancy Isner, Dr. Elaine Rhoades

PS3002: Design and Discharge Characterization of Pseudospark Discharge Based Plasma Cathode Electron Source for High Density and Energetic Short Pulsed e-beam Generation
 » [Dr. Udit Narayan Pal](#), Dr. Varun ., Mr. Akhilesh Mishra, Mr. Navin Kumar Sharma, Dr. Radha Raman Mishra, Dr. Ram Prakash Lamba

PS3003: Development of a Test Stand to Evaluate Future DARHT-I Insulator Designs
 » [Mr. Nicholas Kallas](#)

PS3004: REFLECTION LIMITATION IN MULTI-PULSE RADIOGRAPHY APPLICATIONS BY MEANS OF DISPERSIVE COAXIAL LINES.

» [Dr. Charly Sigogne](#), Dr. Antoine Silvestre de Ferron, Prof. Laurent Pecastaing, Dr. Laurent COURTOIS, Dr. Baptiste Cadilhon, Dr. Bruno Cassany, Mr. Alexandre GOEURY

PS3005: Commissioning and operation of the new PSB KSW paining bumpers

» [Mr. Gregor Gräwer](#), Dr. Chiara Bracco

PS3006: LSP modelling of the output line of the MAXI pulsed power machine

» [Mr. Anthony Meadowcroft](#), Mr. Aled Jones, Mr. Mark Sinclair

PS3007: Comparison of Diagnostic Capabilities at SPHINX and RKA Pulsed Power Experiments

» [Dr. Elaine Rhoades](#), Dr. Nicolas Szalek, Mr. Benjamin Elbrecht, Dr. Israel Owens, Dr. David Hébert, Dr. Pierre Grua, Dr. Christopher Moore, Dr. Keith Cartwright, Dr. Jacques Gardelle

PS3008: An ultra-wideband, high-power coaxial diagnostic for measurement of waveform directionality

» [Mr. Ivan Aponte](#), Dr. Zach Shaw, Dr. Evan Scott, Dr. Trevor Burris-Mog, Dr. Piotr Wiewior, Dr. Stephen Bayne

PS3009: CHARACTERISATION OF THE CESAR ELECTRON BEAM FOR STUDIES AND SIMULATIONS OF ALUMINUM HYDRODYNAMIC RESPONSE AT HIGH FLUENCES

» [Dr. Nicolas Szalek](#), Dr. Jacques Gardelle, Mr. Alain Galtié, Dr. David Hébert, Mrs. Béatrice Bicrel, Mr. Romain Riffet, Mr. Stephane Petitjean

PS3010: Revisiting Cavity Modes in the DARHT Axis II Beam Injector

» [Dr. J. Martin Taccetti](#)

PS3011: Upgraded gamma-ray generator based on ironless pulsed betatron

» [Mr. Oleg Shamro](#), Mr. Yurii Kuropatkin, Mr. Vladimir Nizhegorodtsev, Mr. Kirill Savchenko, Dr. Viktor Selemir, Mr. Vadim Fomichev, Mr. Ailan Chinin



Continued from **Wednesday, 28 June**

PS3012: Compact Accelerator Technology and Its Applications

» [Dr. Wade Rush](#), Dr. Chunguang Jing

PS3101: Investigation of Machining Response of Inert PBX 9501 and PBX 9502 Surrogate Materials

» [Mr. Keegan Kelp](#), Mr. Scott Watkins, Mr. Luke Boswell, Mr. Ethan Spurbeck, Ms. Raimi Clark, Dr. Andreas Neuber, Dr. James Dickens, Dr. John Mankowski, Mr. Jacob Brinkman

PS3102: Response of PBX 9501 and PBX 9502 to Sawing Operations

» [Mr. Ethan Spurbeck](#), Mr. Scott Watkins, Ms. Raimi Clark, Mr. Keegan Kelp, Mr. Luke Boswell, Dr. John Mankowski, Mr. Jacob Brinkman, Dr. James Dickens, Dr. Andreas Neuber

PS3103: REVIEW ON LMJ HIGH PULSE POWER SUPPLIES : DESIGN AND PROCESSES

» [Mr. Marc Geitzholz](#), Mr. Alexandre GOEURY, Mr. Olivier JAMES, Dr. Laurent COURTOIS, Mr. Xavier HEBERT

PS3104: Development of Solid-State Switch for Current Commutation in Hybrid DC circuit breaker

» [Mr. Chan-Hun Yu](#), Dr. Sung-Roc Jang, Dr. Hyoung-Suk Kim, Mr. Tae-Hyun Kim, Mr. Seong-Ho Son, Mr. chang-hyun Kwon

PS3105: Mobile power supply system of electromagnet for gamma-ray generator based on cyclic accelerator

» [Mr. Vadim Fomichev](#), Mr. Yurii Kuropatkin, Mr. Vladimir Nizhegorodtsev, Mr. Kirill Savchenko, Dr. Viktor Selemir, Mr. Ailan Chinin, Mr. Oleg Shamro

PS3106: Raman Thermometry of PBX 9501 and PBX 9502

» [Mr. Luke Boswell](#), Ms. Raimi Clark, Mr. Scott Watkins, Dr. Andreas Neuber, Dr. James Dickens, Dr. John Mankowski, Dr. Jacob Stephens, Mr. Jacob Brinkman

PS3107: A Study on the EMP Shielding Rate of Plasma Limiter according to the connected Comparison of Electric Double Layer Capacitors

» [Mr. HyungWook Kang](#), Mr. HyunSeung Lee, Prof. Kun-A Lee

PS3108: Tert-butyl Phosphonic acid as a way to Improve Homogeneity in Barium Titanate Nanoparticle/Epoxy Composites

» [Mrs. Jessica Domrzalski](#), Mr. Charles Pearce, Mr. Tyler Stevens, Mr. Todd Monson, Mr. Simeon Gilbert, Mr. Damion Cummings

PS3109: 5.6MW Three levels NPC Converter for CRAFT NNBI

» [Dr. Shengmin Pan](#), Mr. Baocan He, Mr. Hulin Feng, Mr. Denghui Wang, Prof. Yiyun Huang

PS3201: Pulse Density Modulation for Wireless Transfer of Power and Waveforms to Nanorectenna-based Closed-Loop Neurostimulator

» [Mr. Adnan Hanif](#), Prof. Miloš Doroslovački

PS3202: STUDY OF THE EFFECT OF PRESSURE WAVES GENERATED BY HIGH-POWER ELECTRIC DISCHARGES IN SALT-SATURATED WATER ON MICRO-ORGANISMS

» [Mr. Laurent ARIZTIA](#), Dr. Thierry REESS, Dr. Magali RANCHOU-PEYRUSE, Dr. Anthony RANCHOU-PEYRUSE, Dr. Marion DUCOUSSO

PS3203: Continuous-wave measurements of the shielding efficacy of light-weight, rapidly deployable materials

» [Mr. Brandon Bywater](#), Mr. Jake Slattery, Dr. John Mankowski, Dr. James Dickens, Dr. Andreas Neuber, Dr. Jacob Stephens, Ms. Crystal Nelson, Mr. Neil Koone, Mr. Donald Friesen, Mr. David Hattz

PS3204: Simulation and Scaled Experimental Study of Lightning Induced Electromagnetic Fields in Unique Rebar Structures

» [Mr. Austin Hewitt](#), Mr. Jake Slattery, Dr. John Mankowski, Dr. James Dickens, Dr. Andreas Neuber, Mr. Donald Friesen, Mr. David Hattz, Mr. Neil Koone, Ms. Crystal Nelson, Dr. Jacob Stephens



Continued from **Wednesday, 28 June**

PS3205: Reverse Vortex Flow Plasma for plasma active water production

» [Dr. Yun-Sik JIN](#), Dr. Chuhyun Cho, Mr. Daejong Kim, Dr. Chae-Hwa Shon

PS3206: Solid-State Medical Pulsed Power

» [Mr. Alex Henson](#), Dr. James Prager, Dr. Kenneth Miller, Mr. Jacob Hagan

PS3207: Effect of atmospheric pressure repetitively pulsed high-voltage nanosecond discharges on physical and chemical properties of sulfide minerals

» [Dr. Igor Bunin](#), Dr. Irina Khabarova

PS3208: Control of a Zonal Power System Supporting Transient Loads

» Mr. Cole Tschritter, Dr. Alexander Johnston, Mr. Linh Vu, [Dr. David Wetz](#), Dr. Tuyen Vu, Dr. Karl Schoder, Dr. James Langston, Dr. Mischa Steurer, Dr. Christian Schegan, Dr. Mark Stanovich, Dr. John Heinzl

PS3209: Quantification and Maximization of Shockwave during Aluminum Wire Explosion

» [Mr. TAIKI EGUCHI](#), Mr. Taku Inoue, Mr. Mikiya Matsuda, Dr. Shigeru Tanaka, Dr. Douyan Wang, Prof. Takao Namihira

PS3301: Two-Resolution UV/Visible Spectroscopic Measurements of Local Mass Injection Dense Plasma Focus for Characterizing Plasma Parameters

» [Dr. Eric Kaiser](#), Dr. Stuart Jackson, Dr. Andrey Beresnyak, Dr. Robert Comisso, Dr. Joseph Schumer

PS3302: Experiments and PIC Simulations of plasma opening switch using XOOPIC

» [Mr. Sunil Kanchi](#), Dr. R Shukla, Dr. Archana Sharma

PS3303: Pulsed Power and Diagnostic capabilities for High Energy Density Physics Studies in the UC San Diego Pulsed Power Plasmas Group

» [Dr. Simon Bott-Suzuki](#), Dr. Pia Valdivia, Mr. Joshua Simpson, Mr. Hanyu Hu, Ms. Ann Truong, Dr. Simon Bland, Ms. Susan Parker, Dr. Jiaqi Yan

PS3304: Overview of the CASTLE circuit simulator*

» [Dr. Raymond Allen](#), Dr. David Hinshelwood

PS3305: Technological Requirements for Inductively Driven Lithium Shell Fusion

» [Dr. John Slough](#)

PS3306: Laser modulated energetic N₂⁺ molecular ion in Au target

» [Prof. Guiqiu Wang](#), Mr. Jian Wang

PS3307: Underwater electrical explosion characteristics of copper wire with gaps

» Mr. Heng Zhang, [Mr. Bo Liu](#), Mr. Hua Li, Mr. Lingpeng Zhong, Ms. Xue Lv, Ms. Qin Hang

PS3308: Gaseous Species Analysis for Dense Plasma Focus Reliability and Repeatability

» [Ms. Tiffany Berntsen](#), Dr. Michael Butcher, Dr. Melissa Showers, Dr. Benjamin Tobias, Mr. Tyler Werne

PS3309: Saturation of Yield in Dense Plasma Focus Due to Current Redirection Phenomenon

» Dr. Daniel Lowe, Dr. Edward Christopher Hagen, Mr. Steve Molnar, Mr. Michael Blasco, Mr. Jeremy Garrod, Mr. Blake Harris, Mr. Larry Robbins, [Mr. Adam Ikehara](#), Mr. Jeeno Doria, Mr. Parker Winters, [Mr. Giovanni Acevedo](#), Mr. Rafael Castro

PS3310: Study of impact on contribution to gain stability in the Pre-Amplifier Module of the National Ignition Facility through upgrades in its pulse power system

» [Mr. Robert Beard](#), Mr. BRUNO LE GALLOUDEC, Mr. Glen James, Mr. Anthony Runtal, Mr. Matt Johnston, Dr. Lawrence Pelz



Continued from **Wednesday, 28 June**

PS3311: Computational scaling laws for fusion yield in reactor relevant plasma liner magneto-inertial fusion

» [Mr. Aalap Vyas](#), Prof. Jason Cassibry, Dr. Samuel Langendorf

PS3312: A Dispersion Interferometer for Measuring Millimeter Scale MITL Electrode Plasma Formation on Sandia's Mykonos Driver

» [Mr. Nathan Hines](#), Mr. Pablo Reyes, Mr. Derek Lamppa, Dr. Thomas Awe, Dr. Jens Schwarz, Prof. Mark Gilmore

PS3313: Noise-robust fusion power supply multi-granularity fault diagnosis based on wavelet Integrated one-dimension convolutional neural network

» Mr. Heng Zhang, [Mr. Lingpeng Zhong](#), Ms. Qin Hang, Ms. Xue Lv, Mr. Bo Liu, Mr. Nongsen Huang, Mr. Jiasong Ding

PS3314: A Study on Energy Efficiency Improvement of Mechanical Switch Z-Source Circuit Breaker in MVDC

» [Mr. HyunSeung Lee](#), Prof. Kun-A Lee, [Mr. HyungWook Kang](#)

6pm **Banquet and Award Presentations**
Lonestar Salon D&E

Thursday, 29 June

7am **Breakfast in Exhibitor area**
Exhibit Area (Lonestar Salon A,B,C)

7:30am **Registration**
Lonestar Pre-function A

8am **Plenary 3**
Lonestar Salon D&E

8:15am **Ignition on the NIF: Challenges, Achievements & Lessons for Pulsed Power ICF**
Lonestar Salon D&E
Chaired by: Dr. Susan Heidger and Dr. Stephen Bayne

8:15am **Ignition on the NIF: challenges, achievements, and lessons for pulsed power ICF**
» [Dr. Nathan Meezan](#)

9:30am **Morning Break**
Exhibit Area (Lonestar Salon A,B,C)

10am **Oral 4A - Oral 4A: High Energy Density Physics and related Applications 4**
Lonestar Salon D
Chaired by: Dr. Kyle Peterson

10am **Pulsed Power Science and Technology Development at Various Scales at Sandia National Laboratories**
» [Mr. Josh Leckbee](#), Dr. Michael Cuneo, Dr. Randy Curry, Dr. Jonathan Douglass, Mr. Joseph Felix, Dr. Gregory Frye-Mason, Dr. Brian Hutsel, Dr. Kyle Peterson, Dr. Mark Savage, Dr. Jens Schwarz, Dr. Adam Steiner, Mr. Brian Stoltzfus

10:30am **Development progress of next-generation simulations for magnetically insulated transmission lines**
» [Mr. Ayden Kish](#), Mr. Michael Lavell, Mr. Andrew Sexton, Dr. Ibrahim Mohammad, Mr. Tyler Mason, Dr. Rick Spielman, Prof. Adam Sefkow

10:45am **Development of M4, a Gain Demonstrator for First Light Fusion's Projectile Driven ICF Concept**
» [Mr. Paul Holligan](#)

11am **Design Options and Manufacturing Feasibility of a Monolithic Radial Transmission Line for Machine 4**
» [Dr. Cristian Dobranszki](#), Dr. Luis Sebastian Caballero Bendixsen, Dr. Jamie Darling, Dr. Nicolas Niasse, Mr. Paul Holligan, Mr. Oliver Hall, Mr. Rafik Guiga Soares da Silva, Dr. Nicholas Hawker, Mr. Jake Wood-Gee, Dr. Danny DeBecker, Mr. Iwan Pepperell, Mr. Oliver Fordham



Continued from Thursday, 29 June	
11:15am	<p>Fluid Dynamic Pulsed Power for Low-Cost Fusion » Dr. Peter Turchi</p>
11:30am	<p>Performance of passive magnetically insulated debris shields on the Z machine at Sandia National Laboratories† » Dr. Mark Savage, Dr. Kathy Chandler, Mr. Daniel Headley, Dr. Andy Porwitzky, Dr. David Rose, Mr. Pete Wakeland, Dr. David Yager-Elorriaga</p>
10am	<p>Oral 4B - Oral 4B: Industrial & Medical Pulsed Power Applications 4 <i>Lonestar Salon E</i> Chaired by: Mr. Edwin A. Oshin</p>
10am	<p>Robust Voltage Control of Plasma Pulsing Generators for Semiconductor Manufacturing Applications » Dr. Jairo Viola, Mr. Justus Nwoke, Prof. YangQuan Chen</p>
10:15am	<p>Characteristics of nanosecond pulse streamer discharge in a coaxial electrode using a quadruple emiCCD camera system » Mr. Hirakawa YOUICHI, Mr. Kazuto Yamamoto, Dr. Douyan Wang, Prof. Takao Namihira</p>
10:45am	<p>Application of pulsed discharge to recycling laminated CFRP by the separation and recovery of carbon fiber » Mr. Keita Sato, Dr. Taketoshi Koita, Dr. Keishi Oyama, Mr. Koji Yamaguchi, Prof. Chiharu Tokoro</p>
11am	<p>Separation of cathode materials in the lithium-ion battery from the binder by underwater pulse discharge » Prof. Chengxiang Li, Mr. Ming Dai, Dr. Yan Zhou, Mr. Pengfei Kou, Dr. Cheng Yao, Dr. Dan Chen</p>
11:15am	<p>Application of pulsed wire discharge to separation at the adhesion interface between bonded different resin plates » Dr. Taketoshi Koita, Mr. Yoshiki Egawa, Prof. Takao Namihira, Prof. Chiharu Tokoro</p>
11:30am	<p>Design of multi-layer and multi-turn tooling coils for electromagnetic pulse forming applications » Mr. Deepak Kaushik, Dr. JOY THOMAS M.</p>
10am	<p>Oral 4C - Oral 4C: Dielectric Phenomena in Gases and related Test Systems <i>Lonestar Salon F</i> Chaired by: Dr. Susan Heidger</p>
10am	<p>Second Generation Experimental Apparatus for Direct Observation of Vacuum Surface Flashover » Mr. William Brooks, Ms. Raimi Clark, Mr. Michael Mounho, Mr. Jeremy Sceiford, Dr. Matthew Hopkins, Dr. James Dickens, Dr. Jacob Stephens, Dr. Andreas Neuber</p>
10:15am	<p>Statistical characterization of anode-initiated vacuum surface flashover » Mr. Michael Mounho, Ms. Raimi Clark, Mr. William Brooks, Dr. Matthew Hopkins, Dr. Andreas Neuber, Dr. Jacob Stephens</p>
10:30am	<p>HFSS ENABLES 3D FINITE ELEMENT TIME-DOMAIN SIMULATIONS FOR SHORT-PULSE ELECTROMAGNETICS » Dr. Shahid Ahmed</p>
10:45am	<p>Apparatus for Pulsed Testing of Novec 4710 mixtures with multiple electrode geometries and setup characterization+ » Mr. Luke Silvestre, Mr. Jakob Matthies, Mr. Nathan Fryar, Dr. Jacob Stephens, Dr. John Mankowski, Dr. James Dickens, Dr. Andrew Young, Dr. Andreas Neuber</p>
11am	<p>Characterization of Novec 4710 under Pulsed Breakdown in Insulating Gas Mixtures+ » Mr. Jakob Matthies, Mr. Luke Silvestre, Mr. Nathan Fryar, Dr. Jacob Stephens, Dr. John Mankowski, Dr. James Dickens, Dr. Andrew Young, Dr. Andreas Neuber</p>
11:15am	<p>High Pressure operation of Ultra -zero Air as a Replacement for SF6 » Mr. Seth Miller, Dr. Randy Curry, Mr. Owen Johns, Dr. Rick Spielman</p>



Continued from Thursday, 29 June	
11:30am	<p>Mechanisms and Modeling of High Pressure breakdown Physics in Ultra -Zero air</p> <p>» Mr. Seth Miller, Dr. Randy Curry, Mr. Owen Johns, Dr. Rick Spielman</p>
12pm	<p>Lunch</p>
1pm	<p>Workshop - Pulsed Power for Fusion Applications Workshop</p> <p><i>Lonestar Salon F</i></p> <p>Chaired by: Dr. Randy Curry and Mr. Josh Leckbee and Prof. John Verboncoeur and Dr. Charlie Anderson and Dr. Simon Bland and Dr. Ahmed Diallo and Mr. BRUNO LE GALLOUDEC and Dr. Frank Hegeler and Mr. Paul Holligan and Dr. Keith LeChien and Dr. Vidya Nalajala</p>
1:20pm	<p>Workshop Goals</p> <p><i>Lonestar Salon F</i></p> <p>Chaired by: Dr. Randy Curry</p>
1:30pm	<p>Keynote: Enabling Technologies for Fusion Power Plants: Pulsed Power System Needs</p> <p><i>Lonestar Salon F</i></p> <p>Chaired by: Dr. Randy Curry</p>
2pm	<p>Workshop Presentations 1 - Workshop Presentations 1</p> <p><i>Lonestar Salon F</i></p> <p>Chaired by: Dr. Randy Curry</p>
2pm	<p>Pulsed Power Systems maintenance and reliability in the National Ignition Facility.</p> <p>» Mr. BRUNO LE GALLOUDEC, Mr. Robert Beard, Mr. Anthony Runtal, Mr. David Housley, Mr. Shaho Hamadamin, Mr. Glen James, Mr. Dave Schwedler, Mr. Tyron Bettis, Mr. Juan Andres, Mr. Brandon Gonzales, Mr. Wesley Hill, Mr. Leroy James, Mr. Jorge Machuca, Mr. Jose Miranda, Mr. Christopher McHenry, Mr. Elmer Pita, Mr. Steven Ruiz, Mr. Mark Stiers</p>
2:20pm	<p>On the Path to Next Generation Pulsed Power at Sandia National Laboratories</p> <p>» Dr. Kyle Peterson, Dr. Shalini Banerjee, Dr. Chris Bourdon, Dr. Justin Brown, Dr. Michael Cuneo, Dr. Randy Curry, Dr. Garrett Dranichak, Dr. John Gauthier, Dr. George Laity, Mr. Josh Leckbee, Mr. Diego Lucero, Dr. Gregory Frye-Mason, Dr. Thomas Mattsson, Dr. G Randall McKee, Dr. Brian Hutsel, Dr. Andy Porwitzky, Dr. Gregory Rochau, Dr. Daniel Ruiz, Dr. Mark Savage, Dr. Paul Schmit, Dr. Christopher Seagle, Dr. Luke Shulenburger, Dr. Daniel Sinars, Dr. Stephen Slutz, Dr. Adam Steiner, Dr. Roger Vesey, Dr. Matthew Weis, Mrs. Michelle Wemhoner, Ms. Charlene Wiuff, Dr. Mark Smith</p>
2:40pm	<p>First Light Fusion's Future Pulsed Power Requirements and Reactor Vision</p> <p>» Mr. Paul Holligan</p>
3pm	<p>Pulsed magnetic fusion</p> <p>» Dr. Keith LeChien</p>
3:20pm	<p>Overview of Zap Energy Repetitive Pulsed Power</p> <p>» Dr. Vidya Nalajala, Mr. Brad Maynard, Mr. William Reass, Mr. Corwin Hansen, Dr. Harpreet Singh Grover</p>
3:40pm	<p>Mid-workshop Break</p> <p><i>Lonestar Salon F</i></p>
4pm	<p>Workshop Presentations 2 - Workshop Presentations 2</p> <p><i>Lonestar Salon F</i></p> <p>Chaired by: Dr. Randy Curry</p>



Continued from **Thursday, 29 June**

- 4pm **Xcimer Energy: An IFE System Enabled by a High-Energy Excimer Driver**
» [Mr. Conner Galloway](#), [Mr. Doug Weidenheimer](#), Dr. Austin Steinforth, Dr. Cyrus Herring, Dr. Susana Reyes, Mr. Alexander Valys, Dr. Joseph Mangano, Dr. Paul Hoff, Dr. Gary Eden
- 4:20pm **Selection and Advances in High Reliability Capacitors for Pulsed Fusion Applications**
» [Mr. Mark Schneider](#), Dr. Matt Schalnatz, Dr. Clayton Shallcross, Mr. Robert Cooper, Mr. Jeffrey Trial, Mr. Mark Cacaouse, Mr. John Crankshaw, Mr. Terrance Houston, Dr. David Giorgi, Ms. Karen Anderson
- 4:40pm **Next Generation Nanolayered Capacitor Films**
» [Mr. Mason Wolak](#), Mr. Mike Ponting, Mr. Kevin Cameron
- 5pm **High Current Tokamak Protection Switch**
» Dr. Marcel Gaudreau, Ms. Kathleen Quinlan, Ms. Arieanna Blanchette, Dr. David Cope, Mr. Michael Kempkes, [Ms. Rebecca Simpson](#)
- 5:20pm **Break**
Lonestar Salon F
- 6pm **Panel Discussion - Panel Discussion**
Lonestar Salon F