

September 14 Monday

8:30 - 9:00	Opening and Announcement	
9:00 - 10:00	Plenary Session 1	NC Hall
	PL-1 Current Status of Pulsed Power Supply Development in Japan Akira Tokuchi (Pulsed Power Japan Laboratory Ltd., Japan)	
10:00 - 10:30	Coffee Break	
	EAPPC	Oral Session A1 NC Hall
10:30 - 11:00	A1-1 (Invited) MAGPIE 2 Simon Bland (Imperial College London, United Kingdom)	
11:00 - 11:15	A1-2 A 100 kHz/150 A Asymmetrically Driven Bipolar Marx Generator for Irreversible Electroporation Lei Zhao (Xi'an Jiaotong University, China)	
11:15 - 11:30	A1-3 Multi Pulsed Single Source X-ray for Explosive Events Michael Kempkes (Diversified Technologies, Inc., United States of America)	
11:30 - 11:45	A1-4 A Novel Pulsed Power Approach for Controlling Foodborne Trematode Infections in Freshwater Fish Ryosuke Honda (Institute of Industrial Nanomaterials, Kumamoto University, Japan)	
11:45 - 12:00	A1-5 Induced currents in air-core compensated pulsed alternator structural parts Richard Renner (Hochschule München (HM) University of Applied Sciences, Germany)	
	BEAMS	Oral Session A2 Kashiwa
10:30 - 10:45	A2-1 Characterizing Time Resolved Transverse Beam Profile of DARHT Axis-I Sebastian Szustkowski (Los Alamos National Laboratory, United States of America)	
10:45 - 11:00	A2-2 Design of the Multi-Pulse Test Line at the Dual-Axis Radiographic Hydrodynamic Test Facility Alex Press (Los Alamos National Laboratory, United States of America)	
11:00 - 11:30	A2-3 (Invited) Investigation of Variations in Power Flow and Photon Generation in HERMES-III due to Tapering of the Inner and Outer MITL Diameters Timothy Renk (Sandia National Laboratories, United States of America)	
11:30 - 11:45	A2-4 Plasma-filled rod pinch testing on the 1.5MV 'MAXI' radiographic machine Luke Parkinson (AWE Nuclear Security Technologies, United Kingdom)	
11:45 - 12:00	A2-5 Demonstration of direct current induction acceleration using active magnetic flux compensation Jun Hasegawa (Institute of Science Tokyo, Japan)	
12:00 - 13:00	Lunch Break	
13:00 - 14:30	Poster Session 1	Yukitsubaki
	EAPPC	
	P1-1 Development of Pulse Power Supplies Using High-Voltage Semiconductor Switches for SACLA Accelerator Chikara Kondo (JASRI, Japan)	

- P1-2 Development of a Reconfigurable Bipolar LTD Driver Board Using FET Switching**
Yo Sawamura (Pulsed Power Japan Laboratory Ltd., Japan)
- P1-3 Development of a Self-Powered MARX Generator**
Hiroaki Kawakami (Pulsed Power Japan Laboratory Ltd., Japan)
- P1-4 Development for Higher accuracy of a Resonant-type High-speed Capacitor charger using a DeQing circuit.**
Kyosuke Nakayama (Pulsed Power Japan Laboratory Ltd., Japan)
- P1-5 Development of a Compact High-Voltage and High-Frequency Pulsed Power Supply Based on Inductive Energy Storage (IES) Using SiC-MOSFETs**
Tieyang Zhao (Pulsed Power Japan Laboratory Ltd., Japan)
- P1-6 Design of Compact Solid-State Pulsed-Power Modulator for X-band Magnetrons**
Yoonseok Lee (Chung-Ang University, Republic of Korea)
- P1-7 Evaluation of High Voltage Insulation for High Voltage Pulsed Power Supply using 13kV SiC MOSFET**
Toshiki Ito (Pulsed Power Japan Laboratory Ltd., Japan)
- P1-8 Long-Pulse Marx Generator Modules for klystron high-voltage power supply in J-PARC LINAC**
Yasuhiro Fuwa (Japan Atomic Energy Agency, Japan)
- P1-9 Performance comparison of power semiconductor devices**
Ryujiro Gombi (Pulsed Power Japan Laboratory Ltd., Japan)
- P1-10 Development of inductive energy storage pulsed power supply using SiC semiconductor devices for ozone production by streamer discharges**
Koichi Takaki (Iwate University, Japan)
- P1-11 Streamer propagation across the dielectric surface of an ultra-wide-band antenna: from a mathematical model to an experimental approach**
Njomza LEDUC (XLIM Research Institute, Université de Limoges, France, France)
- P1-12 Modelling of an x-ray diode in Chicago® and MCNP®**
James Chalmers (AWE, United Kingdom)
- P1-13 Angle-domain-based variable-frequency proportional-resonant controller for Electromagnetic Launch**
Guang Yang (ZheJiang University, China)
- P1-14 Fault-Tolerant Operation Strategy for Open-Winding 3n-Phase Motors Under Phase-Loss Condition in Electromagnetic Launch Applications**
Guang Yang (Zhejiang University, China)
- P1-15 Investigation of Series-Connected PMOS Tail-Cut Switches in Self-Triggered Marx Generator**
Lvheng Ren (Chongqing university, China)
- P1-16 A Modular Solid-State Pulsed Power Generator Utilizing GaN Transistors: Introduction of the Hybrid Charging Method**
Mohsen Feizi (Eindhoven University of Technology (TU/e), Netherlands)
- P1-17 An investigation into Vector Inversion Generator parameters versus switch closing time using a 1kV 10kHz capacitor charger.**
Susan Parker (Imperial College London, United Kingdom)
- P1-18 Design of a 60 kV Solid-State Marx Generator Prototype for Flexible High-Current Microsecond Pulses**
Faisal Mehmood (Eindhoven University of Technology, Netherlands)
- P1-19 Design and Optimization of a 15 kV Solid-State High-Voltage Switch for High-Current, Long-Duration Pulsed Power Applications**
Faisal Mehmood (Eindhoven University of Technology, Netherlands)
- P1-20 LC-Marx Square-Wave Pulse Generator Based on a Series Stacking of SiC JFETs**
Shixin Wang (Chongqing University, China)

P1-21 Design of a 400 kHz bias pulsed power supply for semiconductor processing applications

Yun-Sang Yu (University of Science and Technology(UST), Republic of Korea)

P1-22 Development of a High-Repetition-Rate Pulsed Power Supply using SiC-MOSFETs for a Fast Kicker System in KEK-PF

Satoshi Shinohara (High Energy Accelerator Research Organization, Japan)

BEAMS

P1-23 Electron beam generation and transport in a future injector for Flash Radiography

Claude Fourment (CEA, France)

P1-24 Numerical and experimental development of a new Cherenkov based imaging beam diagnostic

Theo DHOTE (CEA, France)

P1-25 Study of the interaction between an intense relativistic electron beam and an argon background gas at a low pressure

Nicolas Szalek (CEA, France)

P1-26 SPHINX Drift Cell Cherenkov Diagnostic Experimental Data and Empire Comparison

Elaine Rhoades (Sandia National Laboratories, United States of America)

P1-27 Effects of the solenoid magnetic field configuration on the charge-state distribution in a laser ion source

Hayato Okubo (Nagaoka University of Technology, Japan)

P1-28 Rotational Speed Dependence of a Laser Ion Source Using a Rotating-Drum-Liquid-Metal Target

Soshi Ishikawa (Nagaoka University of Technology, Japan)

P1-29 Magnetohydrodynamic Response of Liquid-Metal Flow for High-Repetition Pulsed-Power Load Control

Yunosuke Ishikawa (Nagaoka University of Technology, Japan)

P1-30 Liquid-Metal Response to Pulsed Magnetic-Field Variations for Fusion-Reactor Walls

THANH SANG NGUYEN (Nagaoka University of Technology, Japan)

P1-31 Energy density thresholds for plasma formation on the surface of different materials under high power electron beam bombardments

Yakov Krasik (Technion-Israel Institute of Technology, Israel)

EML

P1-32 High-Repetition-Rate Precision Velocity Control of a Coil-Based Target Injector Using a Variable Current Pulse-Width Circuit for Laser Fusion

Takuya Oguchi (Faculty of Engineering, University of Toyama, Japan)

P1-33 Analysis of the Distribution of Deposition Layers on Various Rail Coatings in Electromagnetic Launch

Haowen Feng (Huazhong University of Science and Technology, China)

P1-34 High Thrust Density Quadruple-Sided PMLM with Equidirectional Toroidal Winding for Electromagnetic Launch Applications

Guixian Chen (Zhengzhou University, China)

P1-35 Model-Free Noncascade Predictive Speed Control of PMLSM Drives Based on Extended State Observer Using Ultralocal Model

Ming Zhang (Zhengzhou University, China)

P1-36 Voltage control of PM synchronous linear motors for electromagnetic launch

Chengcheng Liu (Zhengzhou University, China)

P1-37 Linear Motor Electromagnetic Ejection System Control Based on Two-Degree-of-Freedom Parallel Feedforward Compensation

Yang Huang (Zhengzhou University, China)

P1-38 Design and Optimization of a Novel Two-Degree-of-Freedom Launcher With Tetrahedral Dual-Mover Configuration and Concentric Ring Windings

Tiantian Wang (Zhengzhou University, China)

P1-39 Research on the influence of trigger control algorithm of multi-stage synchronous induction coil launcher

Jing Tang (SEEE, HUST, China)

P1-40 A Cross-Scale Mapping Study of Air Gap Degradation Caused by Mechanical Fatigue in a linear-rotary launcher

Qi Yin (Zhengzhou University, China)

P1-41 Electromagnetic Field Analysis of Electromagnetic Rail Launch Considering Velocity Skin Effect

Yifan Sun (Dalian university of technology, China)

14:30 - 15:00

Coffee Break

EAPPC

Oral Session B1

NC Hall

15:00 - 15:30

**B1-1
(Invited)**

A Solid-State Nanosecond GW-Range Pulse Generator based on a Novel Epitaxial SOS Diode

Ejlal Shahriari (University of Pau, France)

15:30 - 15:45

B1-2

Revealing the magnetic nature of spiral generators

Thor Wens (Université de Liège, Belgium)

15:45 - 16:00

B1-3

Xcimer's KJC: A New Class of Excimer Laser Amplifier for ICF Applications

Landon Collier (Xcimer Energy Corporation, United States of America)

16:00 - 16:15

B1-4

Cell to Cell Interactions within an Inductive Voltage Adder

Mark Sinclair (AWE Nuclear Security Technologies, United Kingdom)

16:15 - 16:30

B1-5

A Transmission-Line-Based Pseudospark-Based Switch for Marx Generator Triggering

Aesha Al Mualla (DERC, Technology Innovation Institute, United Arab Emirates)

16:30 - 16:45

B1-6

Investigation of Enhanced Degradation in Supercapacitors under Extreme High-Current Pulsed Operation

Fabian Albrecht (ISL, Germany)

16:45 - 17:00

B1-7

Design of a 60 kV Solid-State Marx Generator Prototype for Flexible High-Current Microsecond Pulses

Faisal Mehmood (Eindhoven University of Technology, Netherlands)

EML

Oral Session B2

Kashiwa

15:00 - 15:15

B2-1

A Study on the Electromagnetic Characteristics and Optimization of a linear-rotary launcher Linear Unit Considering Coupling Effects

Qi Yin (Zhengzhou University, China)

15:15 - 15:30

B2-2

Development of a Calculation Program for Coil-based Fusion Fuel Injection Systems

Mayuko Koga (University of Hyogo, Japan)

15:30 - 15:45

B2-3

Numerical Study of Projectile Dynamics in a Coil-Type Target Injector for Laser Fusion

Taichi Takezaki (University of Toyama, Japan)

15:45 - 16:00

B2-4

Design and Thrust Ripple Suppression of a Novel Electromagnetic Launcher with Tubular Long-Primary Flux-Switching Permanent Magnet Linear Motor

Keyang Yang (Zhengzhou University, China)

- 16:00 - 16:15 **B2-5** **End force optimization of the tetrahedral permanent magnet linear motor with the primary misalignment**
Mengfan Zhang (Zhengzhou University, China)
- 16:15 - 16:30 **B2-6** **Research on the Numerical Model of Reluctance Coil Launcher**
Ao Zhou (Wuhan University, China)
- 16:30 - 16:45 **B2-7** **Design of graded-conductivity and magnetic armatures for improved force smoothness and efficiency in axial coilguns**
Abdulkadir Balikci (Gebze Technical University, Turkey)
- 16:45 - 17:00 **B2-8** **Research on Trigger Control of Multi-stage Coilgun Based on Position Detection**
Guanyu Hao (SEEE, HUST, China)