

September 16 Wednesday

8:30 - 9:30		Plenary Session 3	NC Hall
	PL-3	High Power Microwave Source Design in the Era of AI Edl Schamiloglu (University of New Mexico, United States of America)	
9:30 - 10:00		Coffee Break	
EAPPC		Oral Session E1	NC Hall
10:00 - 10:30	E1-1 (Invited)	Underwater Wire Electrical Explosion: 20 Years of Research and Applications Yakov Krasik (Technion- Israel Institute of Technology, Israel)	
10:30 - 10:45	E1-2	Fast impulsive energisation of thin metallic wires: Heating, vaporisation and formation of plasma in ambient air Emma Devine (University of Strathclyde, United Kingdom)	
10:45 - 11:00	E1-3	Numerical study on the power consolidation method for an explosively-driven MHD generator with segmented electrodes using a pulse forming network Yuta Shuto (ATLA, Japan)	
11:00 - 11:15	E1-4	Development of a 2.5 T Pulsed Magnetic Circuit for High- Power Microwave Systems Gideon Nimo Appiah (Technology Innovation Institute, United Arab Emirates)	
11:15 - 11:30	E1-5	Design of a Pulsed-Power Load Structure for Generating Antiparallel Magnetic Fields in Laboratory Magnetic Reconnection Toru Sasaki (Nagaoka University of Technology, Japan)	
11:30 - 11:45	E1-6	Evaluation of Film Formation Mechanism, Electrical, and Mechanical Properties on Carbon Nanotube-Containing Conductive Adhesives Treated by Atmospheric Pressure Plasma Yutaro Hanami (Nagaoka University of Technology, Japan)	
11:45 - 12:00	E1-7	Pulsed Power Circuit Using Saturable Pulse Transformer with Saturation Control Yuheng Li (Nagaoka University of Technology, Japan)	
BEAMS / EAPPC		Oral Session E2	Kashiwa
10:00 - 10:15	E2-1	Simultaneous Modeling of Nonlinear and Dispersive Processes During RF Generation in Gyromagnetic Nonlinear Transmission Line Nicolas Charrel (CEA, France)	
10:15 - 10:30	E2-2	Designing of a Low Magnetic Field Efficient BWO with Uniform SWS and Tapered Output Waveguide Chitaranjan Jadab (Homi Bhabha National Institute, India)	
10:30 - 11:00	E2-3		
11:00 - 11:15	E2-4	Solid-State Pulsed-Power Modulator for High-Power Magnetron Applications Joo-Young Lee (Chung-Ang University, Republic of Korea)	
11:15 - 11:30	E2-5	Solid-state 200 kV, nanosecond Marx generators for ozone generation and the study of lightning inception Luke Silvestre (Eindhoven University of Technology, Netherlands)	
11:30 - 11:45	E2-6	Pulse modulators for driving Kickers for muEDM and FlashLAB Martin Sack (Karlsruhe Institute of Technology, Germany)	
11:45 - 12:00	E2-7	Computational inverse design of carbon ceramic resistors for enhanced pulse energy tolerance via physics-constrained GAN and PINN Bohan Zhang (Huazhong University of Science and Technology, China)	

12:00 - 13:00

Lunch Break

13:00 - 14:30

Poster Session 3

Yukitsubaki

EAPPC

- P3-1** **Effects of Single-Sided and Double-Sided Pulsed Plasma Treatment on the Color Quality of Packaged Cut Cabbage**
Pengcheng Cui (Yamagata University, China)
- P3-2** **Characteristics of Pulsed Corona Discharge Using a Bipolar Marx Generator**
Xin Wang (Nagaoka University of Technology, China)
- P3-3** **Effects of MV class Pulsed Electric Fields on proteins**
Nene Yoshioka (Kumamoto University, Japan)
- P3-4** **Multiscale Effects and Experimental Study of Myocardial Ablation Induced by Micro-Nano Sequenced Combined Pulsed Electric Fields**
Yubo Zhao (School of Electrical Engineering, Chongqing University, China)
- P3-5** **Structural Modulation of Bovine Serum Albumin and Enhancement of BSA-EGCG Interactions by Nanosecond Pulsed Electric Fields**
Nerija Zurauskiene (Center for Physical Sciences and Technology, Lithuania)
- P3-6** **Development of a High-Current Pulsed Power Generator and Its Application to Rapid MAX Phase Synthesis**
Kotaro Endo (National Institute of Technology, Oyama College, Japan)
- P3-7** **Effect of Plasma Irradiation on Germination and Growth of Grass Species for Slope Greening Using Native Plants**
Kazuki Nagao (National Institute of Technology, Oyama College, Japan)
- P3-8** **Assessment of electric current in biological samples exposed to subnanosecond high-voltage pulses**
Alexey Zhabin (University of Pau and the Pays de l, France)
- P3-9** **Growth of Multi-Layered Insulating Thin Films on Various Electrically Conductive Adhesives Treated by Atmospheric Pressure Plasma**
Motoki Maegawa (Nagaoka University of Technology, Japan)
- P3-10** **Experimental results of membrane materials for the application of pulsed power in oilfield applications**
Charles Fensky (Blue Spark, Canada)
- P3-11** **Characterization of Nanosecond Pulsed Power Supply for High-Concentration Ozone Production: Decoupled Analysis of Discharge Quality and Energy Density**
Kohei Watanabe (Kumamoto University, Japan)
- P3-12** **Analytical and Numerical Analysis on Rock Penetration in Pulsed Power Drilling Technology**
Timothy Wong (University of Strathclyde, Glasgow, United Kingdom)
- P3-13** **Development of a Pulsed MHD Debris Removal Device for High-Repetition Extreme Ultraviolet Lithography Light Sources**
Shinri Endo (Nagaoka University of Technology, Japan)
- P3-14** **High-voltage operation of high-power sub-GHz burst pulse generator for bioelectrical applications using gas-filled insulation**
Ryota Homma (Yamagata University, Japan)
- P3-15** **Learning the Science and Engineering of a Pulsed Power Electrolysis Cell**
Peter Rushforth (Loughborough University, United Kingdom)
- P3-16** **Spatial Distribution of Ions in High-Repetition Laser Ablation Plasma for Beyond Extreme Ultraviolet Lithography Light Sources**
Takatoshi Harada (Nagaoka University of Technology, Japan)

- P3-17 The effect of pulsed electric fields on ATP-related substances in bonito meat**
Shota Iizuka (Yamagata University, Japan)
- P3-18 Feasibility Study of Railgun Type Launcher for Transporting Moon Soil to Earth for Mining Helium 3**
Shen Shou Max Chung (National Penghu University of Science and Technology, Penghu, Taiwan)
- P3-19 Response of Liquid-Metal Flows to ECR Plasma Perturbations in a Solar-Wind Simulator**
Misaki Sawada (Nagaoka University of Technology, Japan)
- P3-20 Material-Dependent Effects of Initial Surface Temperature on Laser Ablation Propulsion Efficiency**
Yinru Wang (Nagaoka University of Technology, China)
- P3-21 Thrust Enhancement of a Laser-Powered Propulsion System Using a Pulsed MHD Accelerator**
Soushiro Oku (Nagaoka University of Technology, Japan)
- P3-22**
- P3-23 Nonlinear Increase of Vircator Output Power As the Foil Anode Model Pseudo-Particle Transmission Ratio Increase**
Shen Shou Max Chung (National Penghu University of Science and Technology, Penghu, Taiwan)
- P3-24 Study and realization of a Cherenkov-type microwave source operating in TM02 mode**
Quentin Lestrade (CEA Gramat, France)
- P3-25 Characterization of Shot-to-Shot Variations in a Virtual Cathode Oscillator**
Yukimasa Murata (Nagaoka University of Technology, Japan)
- P3-26 Influence of Magnetic Core Characteristics in Non-Linear Transmission Line**
Arata Hirashima (National Institute of Technology, Oyama College, Japan)
- P3-27 High-power electromagnetic sources for medical and defense applications**
Francois Ruffat (Pau and Pays de l'Adour University, France)
- P3-28 Investigation of RBWO Geometry for Ku-Band High Power Microwave Generation**
Kozo Shiga (Nagaoka University of Technology, Japan)

EML

- P3-29 Armature Exit Velocity of Two-stage Electromagnetic Injection System**
Xiangjie Wu (Huazhong University of Science and Technology, China)
- P3-30 Effects of Armature Length on Launch Efficiency and Timing Robustness of Multi-Stage Induction Coilguns**
Xiang Su (State Key Laboratory of High Density Power Conversion (HUST), China)
- P3-31 Mathematical analysis of the current density on the rails and armature of railgun**
Zahra Bahrami (Imam Khomeini International University (IKIU), Iran)
- P3-32 Equivalent Network Modeling of a Coreless Electromagnetic Launcher**
Claudia Simonelli (University of Pisa, Italy)
- P3-33 Numerical Modeling of Linear and Rotary Motion in Linear Induction Launchers**
Nicolo Gori (University of Pisa, Italy)
- P3-34 Modern and Historical Railgun System Considerations**
Ian McNab (Naval Postgraduate School (Rtd.), United States of America)
- P3-35 Rapidly deployable remote sensing with an EM launched air vehicle**
Ian McNab (Naval Postgraduate School (Ret.), United States of America)
- P3-36 Development of High Power Density Cascade Charging Power Supply for Electromagnetic Launch**
Jing Han (Institute of Electrical Engineering, Chinese Academy of Sciences, China)

P3-37 Research on Transient Process Control Technology for High-Thrust Linear Motors

Hanyang Qin (Beijing Mechanical Equipment Institute, China)

P3-38 Breech and Muzzle Voltage in Solid Armature Railgun

Ye Ren (State Key Lab. of High-Density Electrical Energy Conversion, China)

P3-39 A Cumulative Damage Life Prediction Method for Coil Launchers Considering Elastic Modulus Degradation of Glass Fiber/Epoxy Materials

Zhengyang Yuan (Wuhan University, China)

P3-40 Development of a Spectroscopic Temperature Measurement System for Electrothermal Gun Plasma Using the Line-Pair Method Synchronized with Pulsed Power Discharge

Kaito Minamide (Nagaoka University of Technology, Japan)

Late Submissions**P3-41 Ion Energy Spectrum Measurements in the Interaction of a Magnetic Field with a High-Speed Mixed-Gas Plasma Flow**

HUYNH AN (Nagaoka University of Technology, Japan)

P3-42 Selective Phenolic Extraction During Cold Soak of Red Musts Using Bipolar Pulsed Electric Fields: A Case Study on High Quality Varieties

Luis Redondo (Lisbon School of Engineering, ISEL, Portugal)

P3-43**P3-44 High Voltage Capacitor Technology for Pulse Power Applications**

Chip Yang (Knowles/CDE, United States of America)

14:30 - 15:00

Coffee Break**EAPPC****Oral Session F1****NC Hall**

15:00 - 15:30

**F1-1
(Invited)****Pulsed Power for Plasma Performance**

Guus Pemen (Eindhoven University of Technology, Netherlands)

15:30 - 15:45

F1-2**The scalability of streamer discharge generation for industrial air purification**

Chiel Ton (Eindhoven University of Technology, Netherlands)

15:45 - 16:00

F1-3**Diagnostics of Magnetic Pulse Welding Processes based on Magnetic Field Measurements**

Nerija Zurauskiene (Center for Physical Sciences and Technology, Lithuania)

16:00 - 16:15

F1-4**Comparison of plasma properties between RF excitation and RF superimposed DC excitation**

Yu Feng (Institute of Electrical Engineering, Chinese Academy of Sciences, China)

16:15 - 16:30

F1-5**Low Profile and Mass Manufacturable PCB Diagnostics for Pulsed Power Applications**

Micah LaPointe (Xcimer Energy Corporation, United States of America)

16:30 - 16:45

F1-6**Liquidless Pulsed Plasma Fracturing and Crushing of Rocks: Challenges and Opportunities for Practical Applications**

Igor Timoshkin (Department of EEE, University of Strathclyde, United Kingdom)

16:45 - 17:00

F1-7**Plasma formation on macro inhomogeneities during a skin explosion of flat conductors at megaampere current level**

Stanislav Chaikovsky (Institute of Electrophysics of the UB RAS, Russian Federation)

BEAMS / EAPPC**Oral Session F2****Kashiwa**

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| 15:00 - 15:15 | F2-1 | Wideband All-Metal Patch Arrays for Pulsed High-Power Microwave Applications
Yen-Sheng Chen (National Taipei University of Technology, Taiwan) |
| 15:15 - 15:30 | F2-2 | The interactions of 9.6 GHz, 0.8-ns duration and 600 MW peak power microwave pulse with neutral gas and preliminary formed plasma - intriguing experimental phenomena
Yakov Krasik (Technion-Israel Institute of Technology, Israel) |
| 15:30 - 16:00 | F2-3
(Invited) | Control of X-Ray Dose Distributions Using an Inductive Current Divider for High-Current Electron Beams
Stephen Swanekamp (Naval Research Laboratory, Plasma Physics Division, United States of America) |
| 16:00 - 16:15 | F2-4 | Novel X-band High-Power Relativistic Diffraction Output Magnetrons
Yakov Krasik (Technion-Israel Institute of Technology, Israel) |
| 16:15 - 16:30 | F2-5 | Developing pulsed power technology for railgun power supply at the French-German Research Institute of Saint-Louis (ISL)
Oliver Liebfried (French-German Research Institute of Saint-Louis (ISL), France) |
| 16:30 - 16:45 | F2-6 | 20 kV Series-Connected MOSFET vs IGBT: A Comparative Study for Nanosecond Pulsed Power Applications
Seyed Mohsen Mortazavi (Eindhoven University of Technology (TU/e), Netherlands) |
| 16:45 - 17:00 | F2-7 | Streamlined Modelling of Emerging GaN HEMTs
Ivan Vorotiahin (Karlsruhe Institute of Technology, Germany) |