

# ISP Workshop on Advanced Pulsed Power Technologies

Supported by



## Workshop Agenda

### Monday, 16 February 2026

**Place:** St Aldate's Tavern, 108 St Aldate's, Oxford OX1 1BU

**18h00** Arrival and Get2gether sponsored by PPM

### Tuesday, 17 February 2026

**Place:** Oxford Town Hall, Oxford, OX1 1BX, UK – Assemblies room

**08h30** Registration & Welcome coffee

**09h00** Welcome

E. Spahn – Chairman of the Int. Society on Pulsed Power Applications e.V.

**09h15** Session I – Session chair: Georg Müller (KIT)

A history of pulsed power at AWE (*Invited talk: 30 min*)

> Richard Moore (AWE, UK)

Prototype Electromagnetic Interaction Structure Manufacture and Characterization for Frequencies from X-Band to Ka-Band for Pulsed Power-Driven High Power Microwave Generation

> Edl Schamiloglu (University of New Mexico, USA)

Nanoseconds High Voltage Pulse Generators from Berkeley Nucleonics

> Roberto Foddis (Berkeley Nucleonics Corp., San Rafael, USA)

Experimental Study and TCAD Modeling of Rectifier Diodes Used as Photoconductive Switches for High-Voltage Pulse Generation  
> *Lionel Michard (University of Limoges, France)*

## **10h30     Poster session and coffee break**

Announcement: “The UK Pulsed Power Symposium 2026”

Semiconductor Thyatron Replacement for Extract Kicker Power Supplies  
> *Maliq Martin (ISIS Neutron and Muon Source, STFC, UK)*

A High-Voltage Nanosecond Generator for Non-Thermal Plasma Technology  
> *Thomas Maysonnave (Université de Pau et des Pays de l'Adour, France)*

Pulsed Power Technologies at University of Strathclyde  
> *Igor Timoshkin, Chris Williamson, Timothy Wong, Emma Devine*

Loughborough University, An Overview of Pulsed Power Capability  
> *Nigel Seddon, Felipe Iza, Peter Senior, Peter Rushforth*

Developmental Projects at Loughborough University  
> *Joe Pout, Fred Owusu-Ansah*

HV Power Supply and Magnet Solutions For Fusion  
> *Woodruff Engineering*

## **11h15     Session II – Session chair: Matthew Woodyard (AWE)**

Recent research on HV pulse generators  
> *Rainer Bischoff (ISL, France-Germany)*

All-Solid-State Gigawatt-Class Pulsed Power Generator Based on Custom SOS Diodes: Status and Recent Advances  
> *Anton Gusev (Université de Pau et des Pays de l'Adour, France)*

Advances in Pulse Power Capacitors  
> *Thomas Ebel (University of Southern Denmark, Denmark)*

FLARE - A Bold Strategy to Unlock Fusion Power  
> *Hugo Doyle (FLF, UK)*

## **12h15     Group photo**

## **12h20     Lunch**

13h30    **Lab tours**



Science & Technology Facilities Council  
ISIS Neutron and Muon Source



first light

**Tokamak Energy** 

16h30    **ISP member meeting** (see Agenda at the end)

19h30    **Banquet Dinner** (St Hilda's College, Cowley Place, Oxford OX4 1DY)



**St Hilda's College**  
UNIVERSITY OF OXFORD

19h30    **Drinks Reception**

20h00    **Dinner** (please check seat allocations)

## Wednesday, 11 February 2026

9h00    **Session III** – *Session chair: Anton Gusev (UPPA)*

From Mona Lisa to Mohsena HSSM: Story of the Evolution of a High-Voltage Solid-State Switch Module

> *Mohsen Mortazavi (Eindhoven University of Technology, The Netherlands)*

Lessons learned from 20-kV and 100-kV solid-state Marx generators for developing a 700-kV solid-state Marx generator

> *Luke Silvestre (Eindhoven University of Technology, The Netherlands)*

Design of the Initial Pulse Module for a 300-kV Scalable High-Voltage, High-Current Pulse Generator for Flexible Microsecond Pulses

> *Faisal Mehmood (Eindhoven University of Technology, Netherlands)*

Fast Semiconductor Closing Switches for Pulsed Power Applications

> *Jane Lehr (University of New Mexico, USA)*

Rise time improvements on a 20kV 50ns solid state switch assembly by impedance adjustments

> *Michael Osemann (Research Instruments GmbH, Germany)*

An ultra-fast switch technology concept for future beam transfer at CERN using impact ionization triggering of high voltage thyristors.

> *Alicia Ana del Barrio Montanes (enaDyne, Germany)*

350 kA Passively-Activated Tokamak Protection Switch for Runaway Electron Mitigation

> *Kathleen Quinlan (Diversified Technologies, Inc., USA)*

**10h45 Coffee break**

**11h15 Session IV – Session chair: Oliver Liebfried (ISL)**

Pulsed Power at Imperial College

> *Simon Bland (Imperial College London, UK)*

The use of pulsed power for efficient hydrogen production

> *Peter R Rushforth (Loughborough University / SJPI, UK)*

Long Life Spark Gap

> *Thanasi Frost (MBDA, UK)*

When pulsed voltage speaks through magnetism: investigating the magnetic nature of a spiral generator

> *Thor Wens (University of Liège, Belgium)*

Reproducing electric arcs for electromatic launcher muzzle arcs studies

> *Vincent Andraud (ISL, France-Germany)*

Modelling of Fast-Switching GaN Transistors Based on Pulsed S-Parameter Measurements

> *Ivan Vorotiahin (KIT, Germany)*

Development towards a fast pulse power supply for a muon trap

> *Johannes Alt (KIT, Germany)*

**13h00 Departure**

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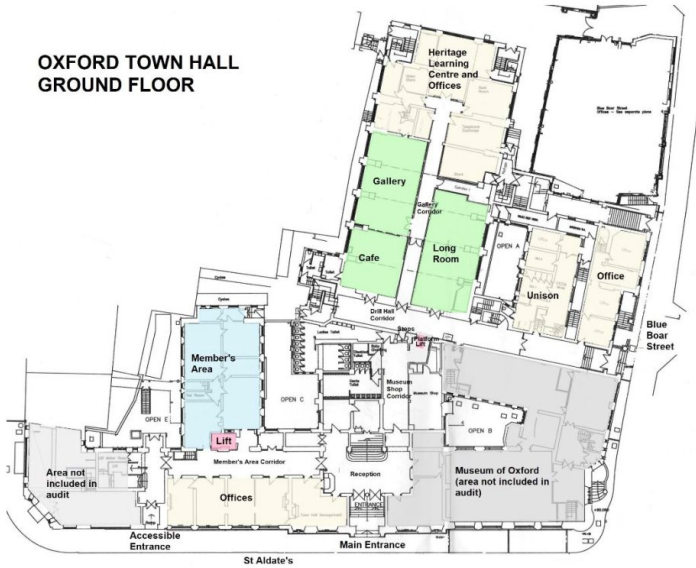
## Agenda of the ISP Member Meeting

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1. Welcome and nomination of the secretary (Spahn)
2. Resolution of the agenda
3. Report of the managing committee (Spahn)
4. Current topics (Spahn)
  - a) PPPS 2025
  - b) 5<sup>th</sup> ISP PhD workshop in Eindhoven, Netherlands
  - c) Members
  - d) PayPal account
  - e) ...
5. Report of the treasurer (Liebfried/Spahn)
6. Report of the cash auditors (André Geiger / Luke Silvestre)
7. Release of the managing committee
8. Election of the cash auditors
9. Resolution of the budget 2026
10. Appointed dates
11. Miscellaneous

## Floor Plan Oxford Town Hall

### OXFORD TOWN HALL GROUND FLOOR



### OXFORD TOWN HALL FIRST FLOOR

