

Session Program

18-22 Sept 2022



10th International Workshop on the Mechanisms of Vacuum Arcs (Hybrid MeVArc 2022)

Modelling & Simulation

Chania, Crete
Orthodox Academy of Crete, Platanias 73006, Greece

Monday 19 September

11:30

Modelling & Simulation: Phenomenological models

Session | **Location:** Chania, Crete, Orthodox Academy of Crete, Platania 73006, Greece | **Convener:** Yinon Ashkenazy

11:30-12:00

Simulation of High-Field Conditioning and Operation

Speaker

Mr Lee Millar

12:00-12:30

Monte Carlo simulation of vacuum breakdown occurrence statistics including the electromagnetic power flow dependence

Speaker

Andreas Kyritsakis

12:30-13:00

Phenomenological description of vacuum breakdown

Speaker

Mikhail Benilov

13:00

Tuesday 20 September

09:00

Modelling & Simulation: Atomistic

Session | **Location:** Chania, Crete, Orthodox Academy of Crete, Platanias 73006, Greece | **Convener:** Flyura Djurabekova

09:00–09:30

Numerical study of dark current dynamics and reflection and transmission phenomena in a High-Gradient Backward Travelling Wave accelerating cavity using the electromagnetic simulation software CST Studio.

Speaker

Pablo Martinez-Reviriego

09:30–10:00

Mechanistic understanding of material evolution under electric fields during Rf breakdown

Speaker

Dr Soumendu Bagchi

10:00–10:30

Vacuum Insulator Flashover

Speaker

Matthew Hopkins

10:30

Wednesday 21 September

09:00

Modelling & Simulation: Plasma surface interactions

Session | **Location:** Chania, Crete, Orthodox Academy of Crete, Platanias 73006, Greece | **Convener:** Matthew Hopkins

09:00–09:30

Concurrent multi-scale modelling of vacuum arc plasma initiation

Speaker

Mr Roni Koitermaa

09:30–10:00

Exploring Dependencies of Work Function on Topography and the Application to Micron-scale Field Emission Model for PIC-DSMC Simulations

Speaker

Chris Moore

10:00–10:30

Thermal runaway and the Pre-breakdown characteristics of FCC, BCC and HCP metal nanotips under the high electric field using PIC-ED-MD simulations

Speaker

Bing Xiao

10:30

Thursday 22 September

09:00

Modelling & Simulation: Atomistic simulations

Session | **Location:** Chania, Crete, Orthodox Academy of Crete, Platanias 73006, Greece | **Convener:** Mr Lee Millar

09:00–09:30

Investigation of electrical breakdown phenomena: multiscale-multiphysics simulations and experimental aspirations

Speaker

Veronika Zadin

09:30–10:00

Atomistic simulations of growth mechanisms of hydrogen blisters in copper

Speaker

Alvaro Lopez Casalilla

10:00–10:30

#2011287 Cu Surface Diffusion Bias under Electric Field Gradient - Accelerated Molecular Dynamics, Finite Elements Method, and Density Functional Theory

Speaker

Jyri Kimari

10:30