



# EPIC WORKSHOP 2022 PROGRAMME

HOSTED BY



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Germany

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 EPIC h2020

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#space #electricpropulsionisEPIC



# EPIC WORKSHOP

## DETAILED PROGRAMME

04.04.

MONDAY

### WELCOME SPEECHES

11:30 - **Andrés Lüdeke, German Space Agency at DLR**  
Introduction to the Hybrid Event Platform and COVID measures

11:55 - **José Gonzalez Del Amo, European Space Agency**  
EPIC Workshop Introduction

12:00 - **Florence Beroud, European Health and Digital Executive Agency**  
HaDEA Welcome Speech

12:15 - **Daniel Nölke, Directorate-General for Defence Industry and Space**  
DG DEFIS Welcome Speech

12:30 - **Romain Lezier, Directorate-General for Defence Industry and Space**  
DG DEFIS Welcome Speech

12:45 - **Rene Kleeßen, German Space Agency at DLR**  
DLR Welcome Speech

13:00 - **Marc Hofmann, Federal Ministry for Economic Affairs and Climate Action**  
BMWK Welcome Speech

13:15 - **Jamila Mansouri, European Space Agency**  
ESA Welcome Speech

13:30 - LUNCH BREAK

14:30 - **Orson Sutherland, European Space Agency**  
BepiColombo & Mars Sample Return Vehicle

15:00 - **Georg Herdrich, University of Stuttgart - Institute of Space Systems**  
Human Spaceflight, Deep Space Gateway & Colonization and the roll of High-Electric Propulsion

15:30 - **Frank Jansen, DLR Bremen – Institute of Space Systems**  
The cluster of high-performance electric propulsion systems in the astronaut MARS/EUROPA flagship

16:00 - **Ernst Bosch, Thales Deutschland**  
Incremental Line – EPIC Project HEMPT-NG2

16:30 - COFFEE BREAK

16:45 - **Pilar Valles, Ariane Group**  
Incremental Line - EPIC Project GIESEPP-MP

17:15 - **Vanessa Vial, Safran Aircraft Engines**  
Incremental Line – EPIC Project CHEOPS MP

17:45 - **Tommaso Misuri, SITAEL**  
Incremental Line – EPIC Project ASPIRE

18:30 - RECEPTION DINNER



# EPIC WORKSHOP

## DETAILED PROGRAMME

05.04.

TUESDAY

ROUNDTABLE

09:00 - **José Gonzalez Del Amo, European Space Agency**  
EPIC Workshop Welcome of the day

09:15 - **Walter Ballheimer, Reflex Aerospace**  
UN:IO: Reflex Aerospace Satellite Constellation

09:30 - **Panel Discussion: „Low Power Electric Propulsion Systems“**

**Chairwoman:**

-Lisa Martin Perez, German Space Agency at DLR

**Panelists:**

-Walter Ballheimer, Reflex Aerospace

-Marcel Berger, AST Advanced Space Technologies

-Vanessa Vial, Safran Aircraft Engines

-Mercedes Ruiz, SENER

10:15 - **Stefan Weis, Thales Deutschland**  
Incremental Line – EPIC Project HEMPT-NG2

10:45 - COFFEE BREAK

11:00 - **Dagmar Lauer, Ariane Group**  
Incremental Line - EPIC Project GIESEPP-MP

11:30 - **Vanessa Vial, Safran Aircraft Engines**  
Incremental Line – EPIC Project CHEOPS LP

12:00 - **Tommaso Misuri, SITAEL**  
Disruptive Line – EPIC Project AETHER

12:45 - **Mercedes Ruiz, SENER**  
Disruptive Line – EPIC Project HIPATIA

13:30 - LUNCH BREAK

ROUNDTABLE

14:30 - **Panel Discussion: „Very Low Power Electric Propulsion Systems“**

**Chairwoman:**

-Davina Di Cara, European Space Agency

**Panelists:**

-Roger Walker, European Space Agency

-Alexander Reissner, Enpulsion

-Antonio Gurciullo, Exotrail

-Giulio Coral, ThrustMe

-Martin Tajmar, Technical University Dresden

-Franz Georg Hey, Airbus Defence & Space

15:30 - COFFEE BREAK

15:45 - **Franz Georg Hey, Airbus Defence & Space**  
Disruptive Line – EPIC Project iFACT

16:30 - **Antoine Blanchet, COMAT**  
Disruptive Line – EPIC Project PJP

17:15 - **Angel Post, Advanced Thermal Devices**  
Disruptive Line – EPIC Project NEMESIS

18:00 - BREWERY DINNER



# EPIC WORKSHOP

## DETAILED PROGRAMME

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06.04. WEDNESDAY (1)

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- 09:00 - **José Gonzalez Del Amo, European Space Agency**  
EPIC Workshop Welcome of the day
- 09:15 - **Jens Schmidt, DLR Göttingen – Institute of Aerodynamics and Flow Technology**  
Capabilities of DLR's STG-ET facility for the testing of Electric Propulsion
- 09:30 - **Johan Kuiper, Bradford Engineering**  
Industrialization and Qualification of Next-Generation Electric Propulsion Fluid Management Systems
- 09:45 - **Michel Poucet, LMO**  
Development and Validation of a Miniaturised Electric Propulsion Thrust Pointing Mechanism for CubeSat and Small Satellites
- 10:00 - **Bernhard Seifert, FOTEC**  
Development and Qualification of the FEEP Technology for future Science and Earth Observation Missions
- 10:15 - **Gilles Bouhours, Thales Alenia Space**  
**Stefan Weis, Thales Deutschland**  
**Tommaso Andreussi, SITAEL**  
Disruptive Line – EPIC Project EDDA
- 11:00 - **Alexander Reissner, Enpulsion**  
4 years of ENPULSION propulsion systems in space: A review and lessons learnt from launching 99 thrusters

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11:15 - COFFEE BREAK

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ROUNDTABLE

- 11:30 - **Markus Peukert, OHB System AG**  
Qualification of Electric Propulsion Thrusters - A Nightmare  
**Panel Discussion: „Qualification & Testing of Electric Propulsion Systems“**
- Chairman:**  
-Alain Demaire, OHB Sweden
- Panelists:**  
-Herve Camares, Airbus Defence & Space  
-Olivier Duchemin, Safran Aircraft Engines  
-Dmytro Rafalskyi, ThrustMe  
-Alexander Reissner, Enpulsion  
-Hans Leiter, Ariane Group  
-Ernst Bosch, Thales Deutschland  
-Cosmo Casaregola, Eutelsat  
-Markus Peukert, OHB System AG  
-Peter Klar, Justus Liebig University Giessen  
-Daniel Schiller, German Space Agency at DLR

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13:30 - LUNCH BREAK

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# EPIC WORKSHOP

## DETAILED PROGRAMME

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06.04. WEDNESDAY (2)

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- 14:30 - **Martin Wendling, Safran Electronics**  
Disruptive Line – EPIC Project GaNOMIC
- 15:15 - **Eric Trehet, Airbus SAS**  
**Javier Torres, Airbus Crisa**  
Airbus DS PPU new developments for HET, GIT and technologies status
- 15:30 - **Martin Blaser, ASP Equipment**  
Modular PPU Design (thrusters up to 1kW)
- 15:45 - **Eric Bourguignon, Thales Alenia Space Belgium**  
PPU Developments at Thales Alenia Space in Belgium
- 16:00 - **Alessandro Ferreri, AVS United Kingdom**  
Thruster and Power Processing Unit design of PET electro spray propulsion system for small satellites
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- 16:15 - COFFEE BREAK
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- 16:30 - **Eduardo Ahedo, Universidad Carlos III de Madrid**  
Research activities at the Plasmas and Space Propulsion Team (EP2)
- 16:45 - **James Sadler, URA Thrusters**  
HYDRA – A Chemical-Electrical Hybrid Propulsion System Using Electrolyser Water as a Propellant
- 17:00 - **Marcus Collier Wright, Neutron Star Systems**  
Progress in Research and Development of Superconductor-Based Applied-Field Magnetoplasmadynamic Technology
- 17:15 - **Aaron Knoll, Imperial College London**  
Overview of Research within the Imperial Plasma Propulsion Laboratory
- 17:30 - **Burak Karadag, University of Surrey**  
Disruptive Electric Propulsion Research and Development Activities at the Surrey Space Centre
- 17:45 - **Sam Reeve, URA Thrusters**  
Microwave Electrothermal Thruster Development Activities at URA Thrusters
- 18:00 - **Charlie Ryan, University of Southampton**  
Electro spray thruster research at the University of Southampton
- 18:15 - **Heiko Dartsch, AST Advanced Space Technologies**  
Highly modular fluidic control solutions for EP systems with large scale production in mind
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- 18:30 - END OF THE DAY
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# EPIC WORKSHOP

## DETAILED PROGRAMME

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### 07.04. THURSDAY (1)

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09:00 - **José Gonzalez Del Amo, European Space Agency**  
EPIC Workshop Welcome of the day

09:15 - **Holger Kersten, Thomas Trottenberg**  
University of Kiel

09:45 - **Kristof Holste, Torsten Henning**  
Justus Liebig University Giessen

10:15 - **Jochen Schein**  
Bundeswehr University Munich

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10:45 - COFFEE BREAK

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11:00 - **Georg Herdrich**  
University of Stuttgart - Institute of Space Systems

11:30 - **Martin Tajmar**  
Technical University Dresden

12:00 - **Chris Volkmar, Uwe Probst**  
University of Applied Sciences Mittelhessen

12:30 - **Lars Lewerentz**  
University of Greifswald

13:00 - **Daniel Spemann, Christoph Eichhorn**  
Leibniz Institute of Surface Engineering

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13:30 - LUNCH BREAK

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14:30 - **Emilia Wegrzyn, AVS United Kingdom**  
Engineering Design of a Thruster-pointing Mechanism (TPM-250) for Deep Space and IOS Nanosats

14:45 - **Pierre Moutet, Dactem Development**  
Experimental performances of an optimized thrust balance used for accurate measurements in electrical thruster qualification endurance testing

15:00 - **Theodora Andreescu, Romanian R&D Institute**  
Development and Experimental Validation of a Disruptive RF Propulsion Technology based on Helicon Discharges

15:15 - **Jorge Gonzalez, DIFFER**  
Direct thrust measurements, plasma plume kinetics and numerical simulations of the alternative Low Power Hybrid Ion Engine (alphie)

15:30 - **Luis Conde, Universidad Politecnica de Madrid**  
A low power heaterless plasma discharge (HPD) cathode for electric propulsion applications

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15:45 - COFFEE BREAK

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# EPIC WORKSHOP

## DETAILED PROGRAMME

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### 07.04. THURSDAY (2)

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15:45 - COFFEE BREAK

16:00 - **Frank Koch, Orbit Recycling**

Comparison of In-Situ Simulant vs Commercial Propellant: Initial Tests of Aluminium Propellant in a Pulsed Cathodic Arc Thruster

16:15 - **Konstantinos Katsonis, DEDALOS**

Exploration of the Neptune-triton system using ISRU electric propulsion

16:30 - **Mick Wijnen, ienai SPACE**

ATHENA & IENAI GO/360: a concurrent engineering approach to thruster design for micro-, nano- and picosatellites

16:45 - **Dejan Petkow, SPARC Industries SARL**

Status and Benefits of Computational EP Development - Today and Tomorrow

17:00 - **Paul Schedler, ETH Zurich**

Model inference with a One-Dimensional Hall Thruster code

17:15 - **Chloe Berenguer, DEDALOS**

Modeling and diagnostics of ISRU technology electric thrusters meant for extremely low Earth orbits propulsion

17:30 - **Fabian Plaza, Advanced Thermal Devices**

Novel approach to EP based on NH<sub>3</sub> as propellant and on-board energy generation

17:45 - **Adam Obrusnik, PlasmaSolve s.r.o**

Simulation-guided engineering of a novel, high-efficiency, plasma source for air-breathing EP

18:00 - **Adrián Domínguez-Vázquez, Universidad Carlos III de Madrid**

HYPHEN: a multi-thruster simulation platform for plasma space propulsion systems

18:15 - **Massimo Panarotto, Chalmers University of Technology**

Towards Digital Twin-driven Robust Design of Electric Propulsion Architectures

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18:30 - END OF THE DAY

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# EPIC WORKSHOP

## DETAILED PROGRAMME

08.04. FRIDAY

- 09:00 - **José Gonzalez Del Amo, European Space Agency**  
EPIC Workshop Welcome of the day
- 09:15 - **Martin Hörenz, Forschungszentrum Jülich**  
Public Funding Programs in Germany
- 09:30 - **Shiv Contractor, ESA BIC Bavaria**  
INNOSpace Masters and ESA Business Incubation Center
- 09:50 - **Julius Jördens, Starburst Accelerator**  
Starburst Accelerator for Startups

10:05 - COFFEE BREAK

### ROUNDTABLE

10:20 - **Panel Discussion: „History, lessons learned and path forward from previous Electric Propulsion Startups“**

**Chairman:**

-Rosario Pavone, SME4SPACE

**Panelists:**

-Ane Aanesland, ThrustMe

-Daniele Pavarin, T4I

-Viktor Serbin, SETS

-Antonio Gurciullo, Exotrail

### EVENT HORIZON

11:30 - **Startup Pitch Session („Shark Tank“-Style)**

**Jurors:**

-Christian Ziach, HighTech Gründerfonds

-Frank Jansen, DLR Bremen – Institute of Space Systems

-Alain Demaire, OHB Sweden

-Julius Jördens, Starburst Accelerator

**Startups:**

-Marcus Collier-Wright, Neutron Star Systems

-Aleksandr Kharlan, Starwell

-Dejan Petkow, SPARC Industries

-Paul Nizenkov, Boltzplatz

-Mick Wijnen, ienai SPACE

-Mark Stokes, Magdrive

-Jan Mataro, Kreios Space

13:15 - **José Gonzalez Del Amo, European Space Agency**  
EPIC Workshop Closing Remarks

13:30 - LUNCH BREAK

OPEN NETWORKING

15:00 - END OF THE WORKSHOP

