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EPIC Workshop 2017



Introduction, and organization logistics

24th–25th October 2017
CDTI, Madrid (Spain)

Jorge Lopez Reig



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EPIC Workshop 2017



Welcome you all in Madrid!
Welcome to Spain!



EPIC Workshop objectives

Present the Horizon 2020 Electric Propulsion SRC activities to the Electric Propulsion community and stakeholders and to collect and assess the latest Electric Propulsion technology developments in Europe.

The EPIC Workshop is organized by the EPIC PSA with the active involvement of all its partners:



EPIC Workshop 2017
Space Electric Propulsion
Strategic Research Cluster H2020

October 24-25 2017

Centro para el Desarrollo Tecnológico Industrial
CDTI
Madrid, Spain
Organized by:
EPIC (PSA of the EP SRC H2020)

Calendar of Events

• Deadline for submission of presentation description, and speaker	1 st June 2017
• Notification of acceptance and invitations	1 st July 2017
• Preliminary programme publication	15 th July 2017
• General registration opens	4 th September 2017
• General registration closes	30 th September 2017
• Final programme publication	30 th September 2017
• Workshop dates	24 th -25 th October 2017

epic-src.eu/workshop2017/ *Registration on the EPIC web*



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EPIC Workshop objectives



The EPIC Workshop programme includes the following:

- PSA and SRC progress and activities
- H2020 Work Programme EP SRC topics
- Stakeholders interaction with Satellite Operators and Satellite Large System Integrators
- Incremental SRC OGs: objectives, proposed approach, team, progress, and early results
- Disruptive SRC OGs: objectives, proposed approach, team, progress, and early results
- Trends in Power Processing Units
- New developments on EP Incremental and Disruptive Technologies (promising thrusters and transversal technologies)
- Dissemination and education SRC activities



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Internet connection:

WIFI: cdti

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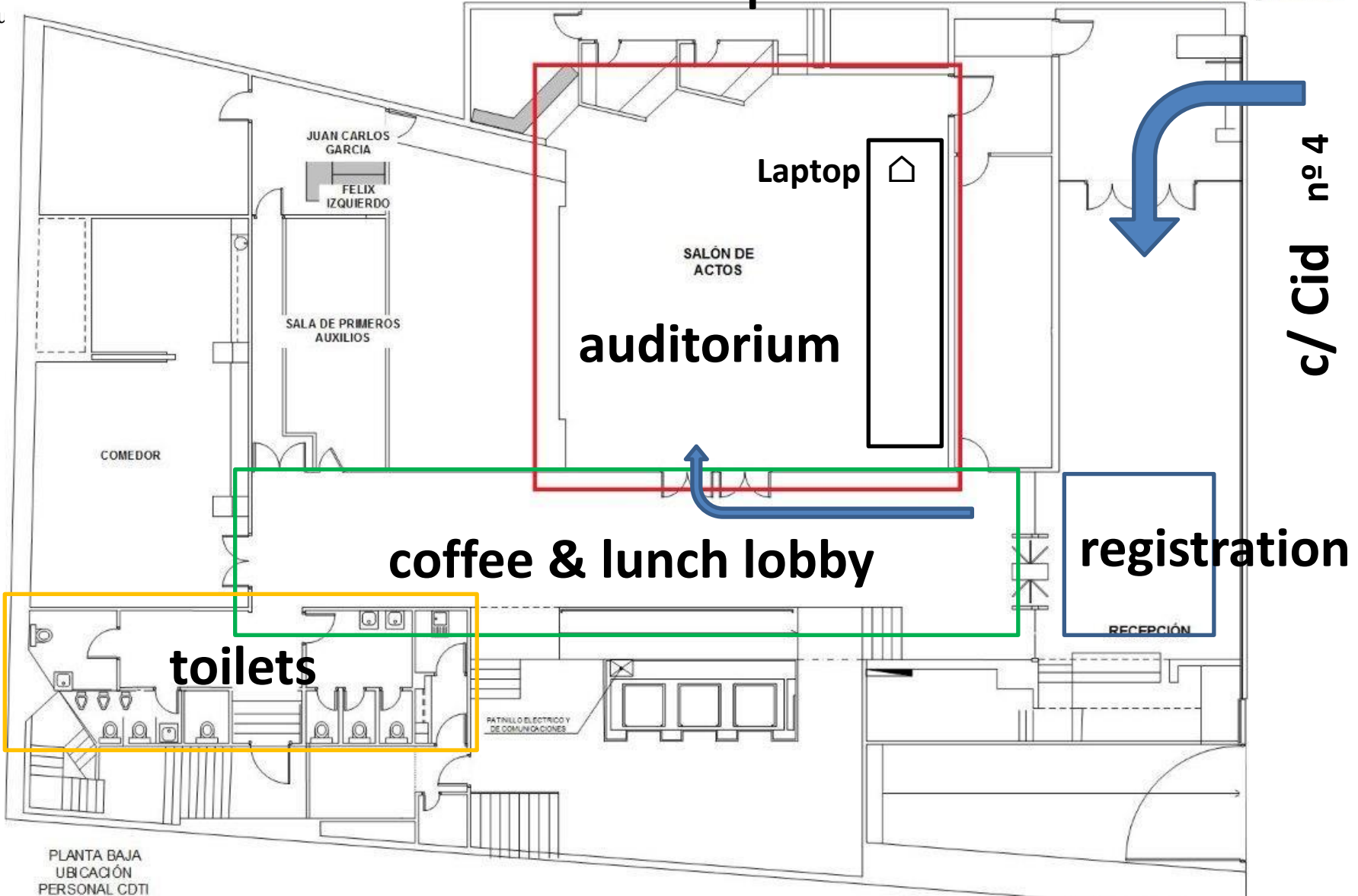


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EPIC Workshop Venue



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EPIC Workshop Venue



- Venue: CDTI main auditorium (c/ Cid nº4 (ground floor) 28020 Madrid - Spain). Capacity: (143 max)
- Laptop to upload last minute presentations.
- First 2 rows of seats reserved for session speakers, chairmans, EC, REA and EPIC PSA Team.
- Coffee breaks, “working lunches” and “networking light cocktail” will be provided: lunches (1 hour), coffee breaks (30 min), cocktail (1 hour).
- Registration on 24th and 25th with the same batch.







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EPIC Workshop Chairman's role



- Recollect last minute presentations in the laptop
- Present and introduce each speakers
- Start and finish the session ON TIME
- Manage the time of each speaker:
 - ✓ Yellow label when 5 min remains 
 - ✓ Red label when 1 min remains 
- Manage and promote questions (Q&A)
- Report on the session back to the PSA



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Final Programme 24th October



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Day	Session	Time	Invited speaker			Presentation
			Last name	First name	Company	
Tuesday 24th/October 2017	Registration	8:20-9:00				
	Welcome (Chair: CDTI)	9:00-9:15	Jorge	LOMBA	CDTI	CDTI Welcome, Inauguration Workshop
		9:15-9:30	Jorge	LÓPEZ REIG	CDTI	Introduction, and organization logistics
		9:30-9:50	José	GONZÁLEZ DEL AMO	ESA	PSA Welcome, and EPIC Workshop Objectives
	H2020, EP SRC and PSA (Chair: ESA)	9:50-10:10	Tanja	ZEGERS	European Commission	H2020 and EP SRC, Next Work Programmes
		10:10-10:30	Florence	BEROUD	REA	SRC activities and Operational Grants
		10:30-10:40	José	GONZÁLEZ DEL AMO	ESA	EPIC PSA and activities
	Coffee break	10:40-11:15				
	Incremental SRC Operational Grants (Chair: DLR)	11:15-11:55	Idris	HABBASSI	Safran Aircraft Engines	CHEOPS
		11:55-12:35	Farid	INFED	ArianeGroup	GIESEPP: Solutions for current and future satellite electric propulsion needs – status and progress
		12:35-13:15	Ernst	BOSCH	Thales Deutschland GmbH	HEMPT-NG – Development to provide European competitive EP solutions for future space missions
	Lunch break	13:15-14:15				
	Satellite Large System Integrators (Chair: Eurospace)	14:15-14:30	José	GONZÁLEZ DEL AMO	ESA	Disruptive thruster technologies for telecom & constellations markets
		14:30-14:45	Vincent	JACOD	Airbus Defence & Space	TAS drivers towards electric propulsion versus satellites applications & Electrical propulsion impact on future Earth observation and navigation missions
		14:45-15:00	Phillippe / Steven / Massimiliano	LAMOTTE / AUSTIN / MARCOZZI	Thales Alenia Space	
	Satellite Operators (Chair: SME4S)	15:00-15:15	Birk	WOLLENHAUPT	OHB Systems	OHB's reflections about the first study phase
		15:15-15:30	Antonio	ABAD	Hispasat	ELECTRIC PROPULSION: EUTELSAT STANDOINT
		15:30-15:45	Cosmo	CASAREGOLA	Eutelsal	
	Round table with LSI and Satellite Operators "Electric Propulsion in the telecom and constellations markets" (Chair: SME4S, Rapporteur: ESA)	16:00-16:45	Vincent	JACOD	Airbus Defence & Space	
			Phillippe	LAMOTTE	Thales Alenia Space	
			Markus	PEUKERT	OHB Systems	
			Antonio	ABAD	Hispasat	
			Cosmo	CASAREGOLA	Eutelsal	
Coffee break	16:45-17:15					
	Disruptive SRC Operational Grants (Chair: UKSA)	17:15-17:45	Louis / Eric	GRIMAUD / BRIDOT	Safran Electronics & Defense	GANOMIC: Disruptive technologies for PPU cost & volume efficiency
		17:45-18:15	John	STARK	Queen Mary Univ. of London	HIPERLOC-EP: Development of Electro Spray Colloid Electric Propulsion as a low cost disruptive propulsion technology
18:15-18:45		Denis	PACKAN	ONERA	MINOTOR	
EOM (EO Day)	18:45					
Workshop cocktail	18:45-19:45				Networking light cocktail	

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Final Programme 25th October



Wednesday 25th/October 2017	Registration	8:30-9:00				
	Welcome of the day	9:00-9:15	Jorge	LÓPEZ REIG	CDTI	Introduction, and organization logistics
	Incremental Technologies PPU's (Chair: CDTI)	9:15-9:30	Fernando	PINTO	Airbus Defence & Space	PPU activities in Airbus DS Space Equipment
		9:30-9:45	Guillaume / Javier / Nicoletti	GLORIEUX / PALENCIA / WAGNER	Airbus Defence & Space (FR / ES / DE)	PPU developments for Incremental Technologies (HET / GIE / HEMPT) and common building blocks
		9:45-10:00	Frédéric	VARASTET	Safran Electronics & Defense	Safran PPU roadmap
		10:00-10:15	Eric	BOURGUIGNON	Thales Alenia Space Belgium	GEO Dual Mode PPU and LEO HEMPT PPU
	Coffee break	10:15-10:45				
	Incremental Technologies (Chair: BELSPD)	10:45-11:00	Farid	INFED	ArianeGroup	Shape Memory Alloy Valve – New Technology for Telecom Satellite Applications
		11:00-11:15	Michel	POUCET	Bradford Engineering BV	Development of the Next-Generation Fluid Management Technologies for LEO, GEO & Navigation Satellites
		11:15-11:30	Kevin	HALL	QinetiQ	Development of a Ring Cusp high power thruster
		11:30-11:45	Mariano	ANDRENUCCI	SITAE S.p.A.	DEVELOPMENT OF A 20 kW CLASS HALL THRUSTER FOR SPACE TRANSPORTATION AND EXPLORATION
		11:45-12:00	Daniele	PAVARIN	University of Padua	Helicon research at University of Padua and T4i
		12:00-12:15	Pablo	FAJARDO	Universidad Carlos III Madrid	An advanced simulation code for Hall effect thrusters
		12:15-12:30	Jochen	SCHNEIN	Universität der Bundeswehr/Transmit	RIT technology for space debris removal
	Round table "Trends in Power Processing Units" (Chair: ESA)	12:30-13:15	Eric	BOURGUIGNON	Thales Alenia Space Belgium	
			Luca	BENETTI	SITAE S.p.A.	
			Fernando	PINTO	Airbus Defence & Space	
			Alain	DEMAIRÉ	DHB Sweden	
			Matthias	GOLLOR	ESA	
	Lunch break	13:15-14:15				
	Disruptive Thruster Technologies I (Chair: CNES)	14:15-14:30	Franz Georg	HEY	Airbus Defence & Space	Electric Propulsion Opportunities for Future Scientific Explorations Missions
		14:30-14:45	Alberto	GARBAYO	AVS Added Value Solutions	Disruptive EP technologies at AVS
		14:45-15:00	Georg	HERDRICH	Baylor University/ Institut für Raumfahrtssysteme (IRS)	Overview on IRS electric and advanced electric propulsion activities
		15:00-15:15	Luc	HERRERO	COMAT	Vacuum arc thruster development
		15:15-15:30	Jean-Luc	MARIA	EXOTRAIL	Exotrail miniature HET for CubeSats
	Disruptive Thruster Technologies II (Chair: CDTI)	15:30-15:45	Christophe	KOPPEL	Kopos Consulting Ind.	Liquid PPT for attitude and orbit control of space vehicles
		15:45-16:00	Francesco	GUARDUCCI	Mars Space Ltd	EP Technologies Development at Mars Space Ltd
		16:00-16:15	Mercedes	RUIZ HARO	SENER	Development and tests of HPT-05
16:15-16:30		Ane	AANESLAND	ThrustMe	Next generation ion thruster with imbedded neutralization and propellant	
16:30-16:45		Luis	CONDE	Universidad Politécnica de Madrid	Development and current status of the ALPHIE (Alternative Low Power Ion Engine) plasma thruster	
Coffee break	16:45-17:15					
Disruptive Transversal Technologies (Chair: ASI)	17:15-17:30	Angel	POST	Advanced Thermal Devices (ATD)	C12A7-e- ELECTRIDE. A PROMISING MATERIAL FOR IONIC THRUSTERS	
	17:30-17:45	Fabrizio	SCORTECCI	AEROSPAZIO Tecnologie s.r.l.	Standardisation and Improvement of EP Diagnostics	
	17:45-18:00	Alexander	REISSNER	ENPULSION	Industry 4.0 Meets Space - Establishing a production line for 100+ EP thruster per year.	
	18:00-18:15	Marcelo	COLLADO	ARQUIMEA	Shape Memory Alloy Technologies for Electric Propulsion Valves	
	18:15-18:30	Stephen	GABRIEL	University of Southampton	Electric propulsion activities at the university of Southampton: Incremental and Disruptive	
Workshop Conclusions	18:30-18:45	José	GONZÁLEZ DEL AMO	ESA	EPIC Workshop conclusions	
EDM (EO Workshop)	18:45					

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Many thanks!!

