EPE '23 ECCE Europe

25th European Conference on Power Electronics and Applications

4 - 8 September 2023, Aalborg, Denmark

Meeting of the

International Scientific Committee

- Online -

20 April 2023

Apologies

- Bruno Allard
- Roger Bassett
- Mathias Hofer
- Yves Perriard
- Maria Pietrzak-David
- Andrea Vezzini
- Matthias Victor
- Tero Viitanen
- Pat Wheeler
- …

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EPE Association

The European Power Electronics and Drives Association

Research · Oudergem, Brussels Region · 1,830 followers

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About

THE EUROPEAN POWER ELECTRONICS AND DRIVES ASSOCIATION: The "European Power Electronics and Drives Association" is an international non-profit scientific association under Belgian law, located in Brussels, Belgium, promoting and coordinating the exchange and the publication of technical, scientific and economic information in the field o … see more

See all details

Resignations & New Members

Resignations:

- Tero Viitanen, ABB Finland – Not enough time
- Hubert Schierling, Siemens - Retired

(Soon to be) New members:

- Ilknur Colak, Schneider Electric, France
- Tobias Geyer, ABB, Switzerland
- Markus Pfeifer, Siemens, Germany (replaces Dr. Schierling)
- Torbjörn Thiringer, Chalmers University, Sweden
  => Approved by EPE EC, All to be approved by PELS

- Giacomo Scelba, University of Catania, Italy
  => To be approved by EPE EC & PELS

Agenda

1. Apologies, Resignations, New Members
2. EPE ECCE Europe 2023 Statistics
3. Status of the Provisional Programme of EPE ECCE Europe 2023
   - Focus Topics
   - Tutorials
   - Keynotes, Special Sessions, Invited Lectures
   - Afternoon Panel Discussion Sessions
   - Etc…
4. Advices for the Organization of EPE ECCE Europe 2023
5. Evaluation of and Discussion on the New Submission Policy
6. List of Regular Topics & Proposals for Focus Topics for EPE ECCE Europe 2024
7. Other Ideas for the Future of the Conference
8. Any other Business

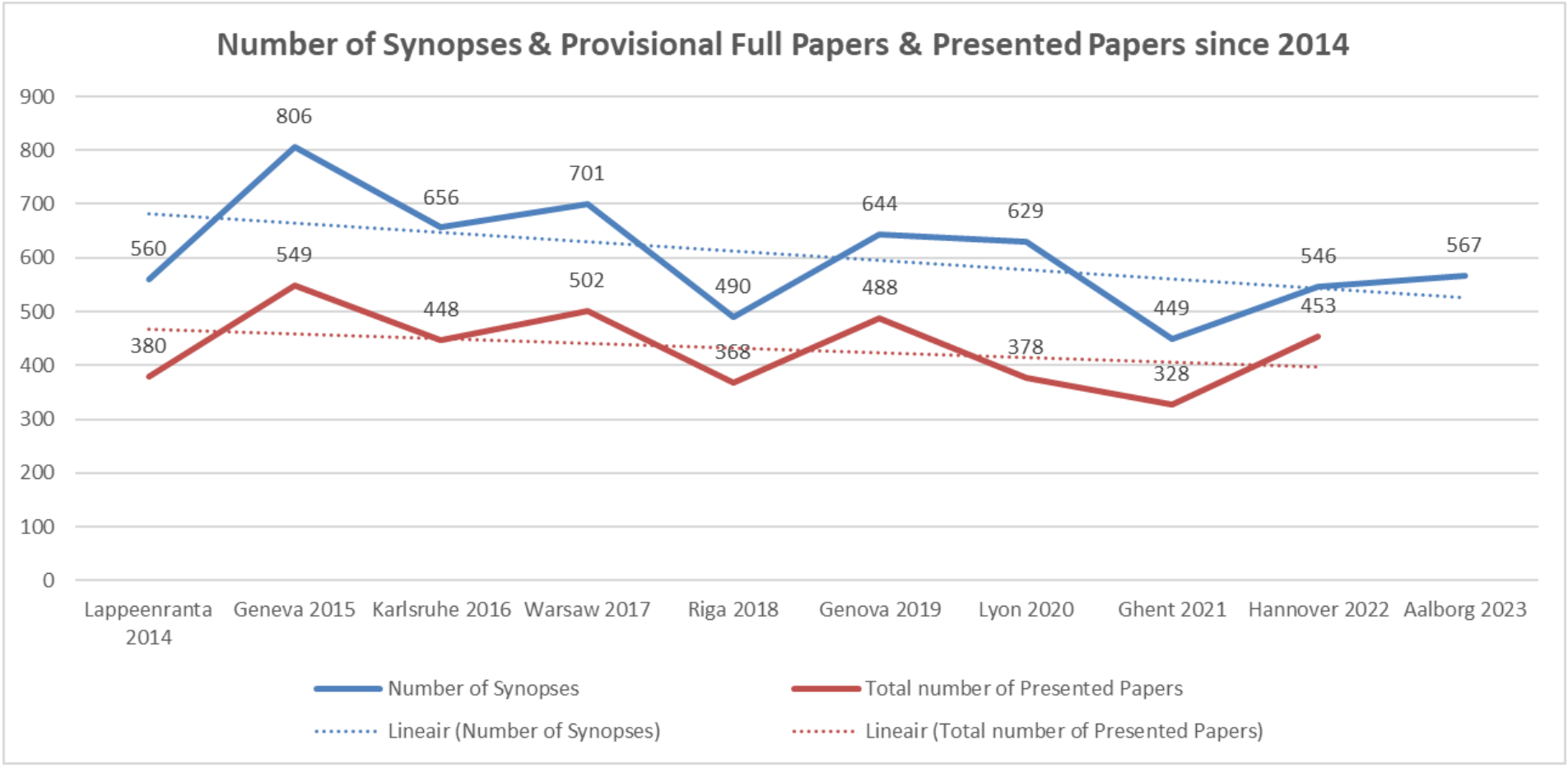
Number of Provisional Full Papers

	EPE'22 ECCE Europe Hannover, Germany (Synopsis + Prov. Full Paper Phase)	EPE'23 ECCE Europe Aalborg, Denmark (Prov. Full Paper Phase)	Difference
Number of Uploads:	568	589	+ 21
Number of Withdrawals:	22	22	0
Number of Provisional Full Papers:	546	567	+ 21

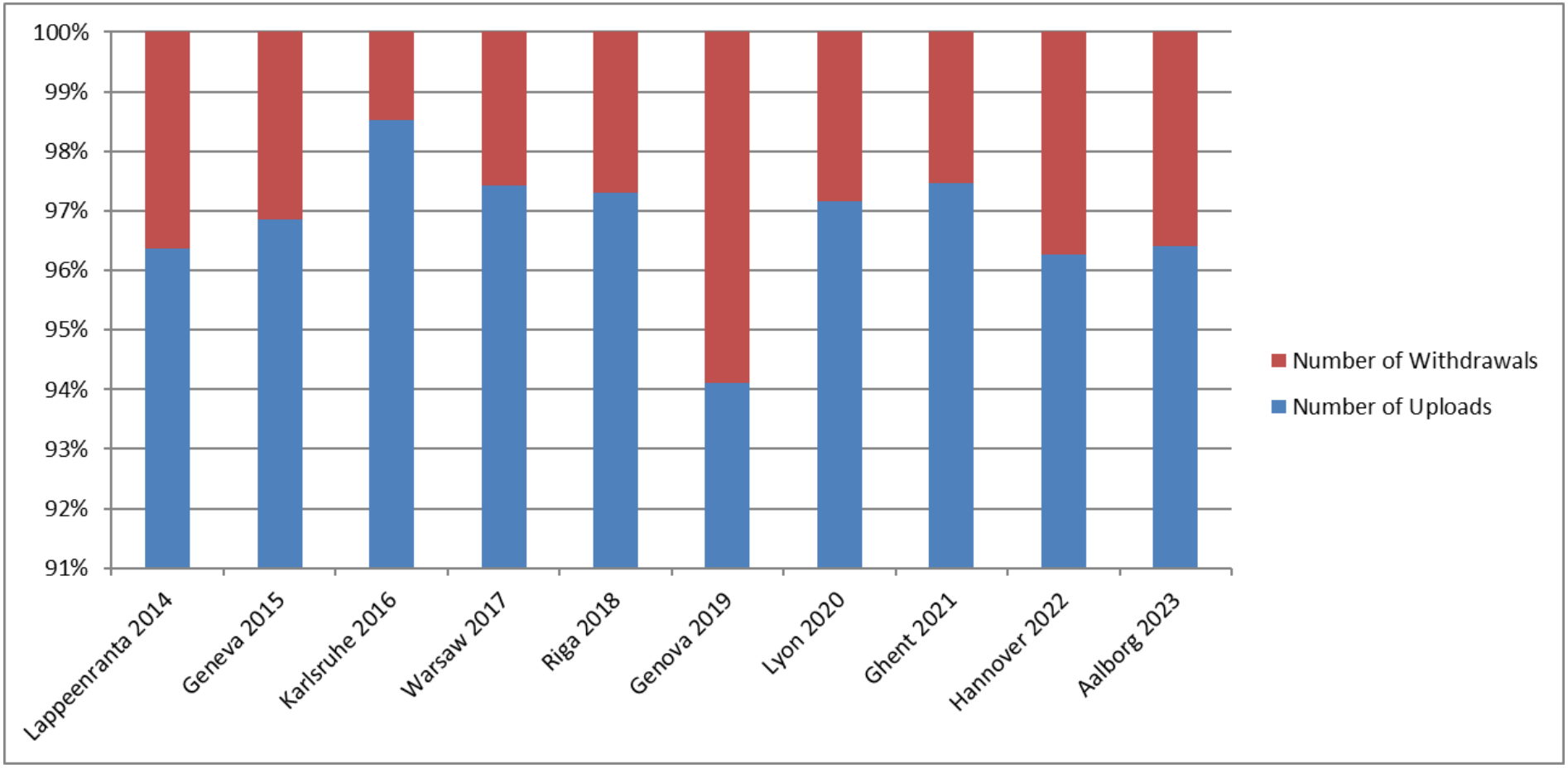
Number of Synopses & Provisional Full Papers

	Lapp'ta 2014	Geneva 2015	Karlsruhe 2016	Warsaw 2017	Riga 2018	Genova 2019	Lyon 2020	Ghent 2021	Hannover 2022	**Aalborg 2023**
Uploads:	582	833	666	718	504	687	648	461	568	**589**
Withdrawn:	22	27	10	19	14	43	19	12	22	**22**
Synopses:	560	806	656	699	490	644	629	449	546	**567**

Number of Synopses & Provisional Full Papers



Number of Synopses & Provisional Full Papers



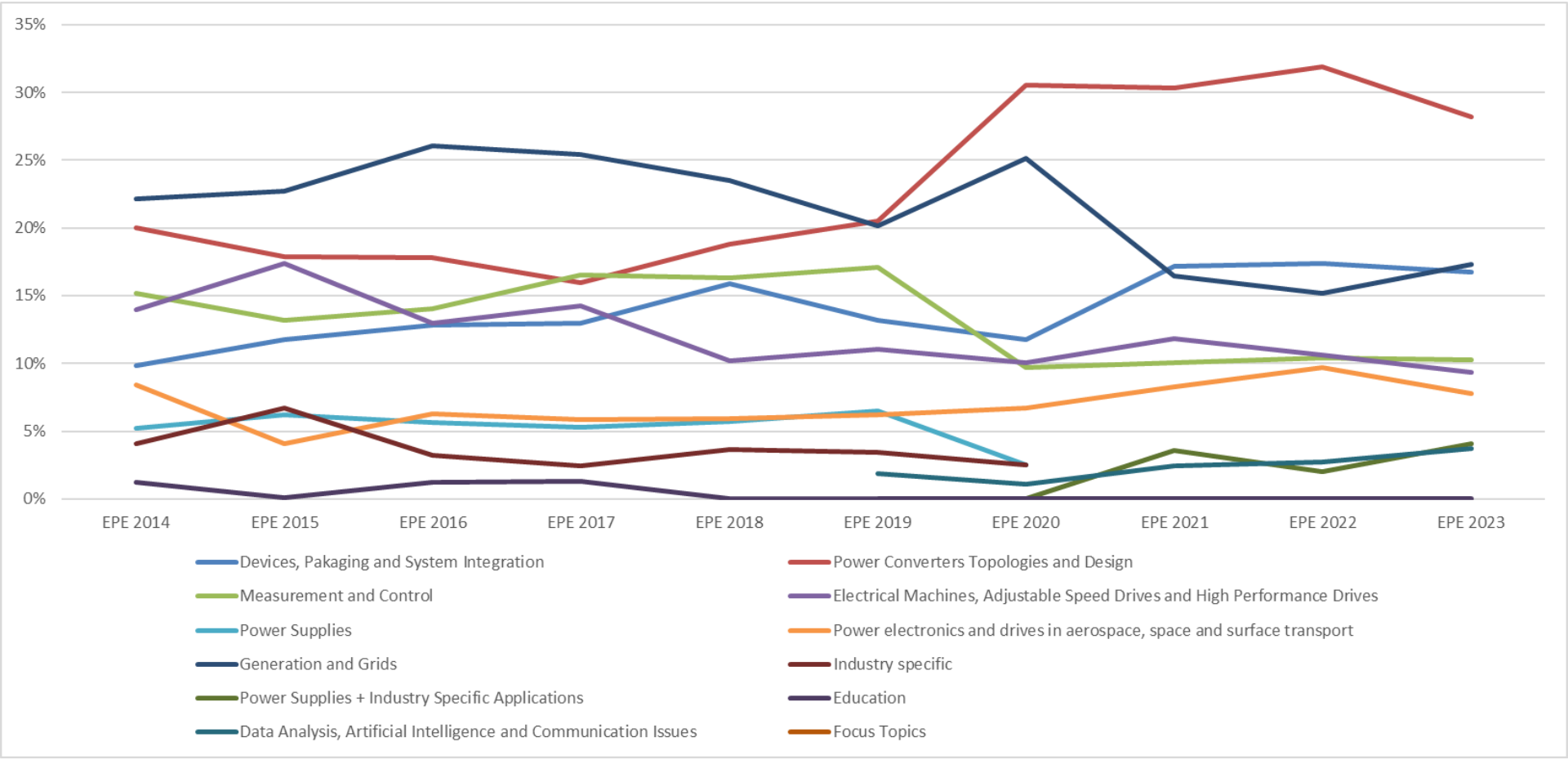
Per Topic: Comparison 2022 ⇔ 2023

Synopses per topic:	EPE 2022	EPE 2023	Evolution	In %
Topic 01: Devices, Packaging and Systems Integration	95	95	0	0 %
Topic 02: Power Converter Topologies (> 2021)	110	100	- 10	- 9 %
Topic 03: Converter Modelling, Design and Low-Level Control	64	60	- 4	- 6 %
Topic 04: Measurement and Control	57	58	+ 1	+ 2 %
Topic 05: Electrical Machines and Drive Systems	58	53	- 5	- 9 %
Topic 06: Renewable Energy Power Systems and Power-to-X	32	45	+ 13	+ 41 %
Topic 07: Grids & Smart Grids	51	53	+ 2	+ 4 %
Topic 08: E-Mobility	53	44	- 9	- 17 %
Topic 09: Power Supplies & Industry Specific Applications	11	23	+12	+ 109 %
Topic 10: Data Analysis, AI and Communication Issues	15	21	+ 6	+ 40 %
Topic 11: Focus Topics		15	+15	
TOTAL	546	567	+ 21	+ 4 %

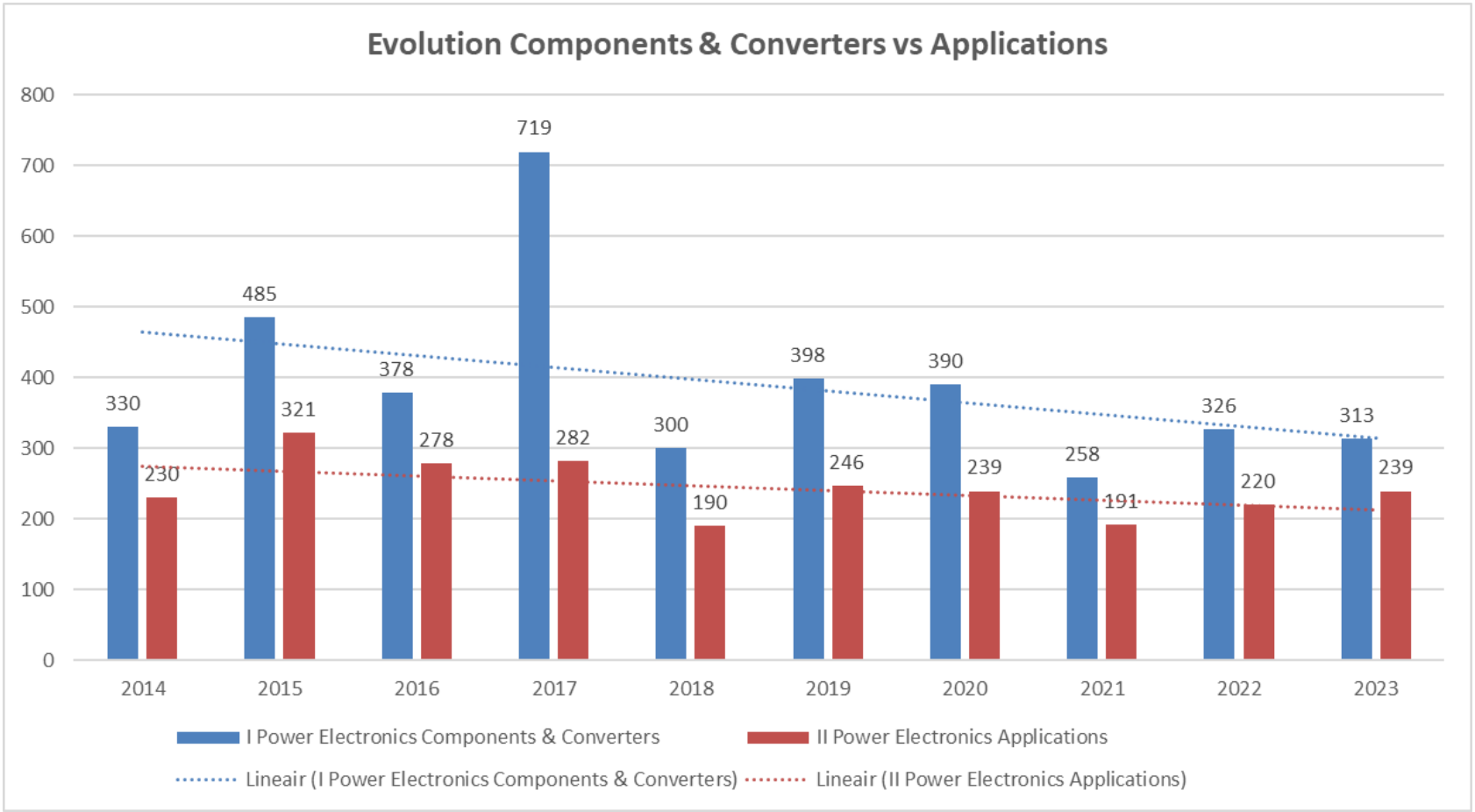
Per Topic: Comparison 2014 ⇔ 2023

Category of Topics	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Devices, Packaging and System Integration	55	95	84	88	78	85	74	77	**95**	**95**
Power Converters Topologies and Design	112	144	117	113	92	132	192	136	**174**	**160**
Measurement and Control	85	106	92	116	80	110	61	45	**57**	**58**
Electrical Machines and Drive Systems	78	140	85	101	50	71	63	53	**58**	**53**
Power Supplies	29	50	37	37	28	42	16			
e-Mobility	47	33	41	42	29	40	42	37	**53**	**44**
Generation and Grids	124	183	171	177	115	130	158	74	**83**	**98**
Industry specific	23	54	21	16	18	22	16			
Power Supplies + Industry Specific								16	**11**	**23**
Data Analysis, AI & Communication Issues	0	0	0	0	0	12	7	11	**15**	**21**
Focus Topics	0	0	0	0	0	0	0	0	**0**	**15**
Totals:	**560**	**806**	**656**	**699**	**490**	**644**	**629**	**449**	**546**	**569**

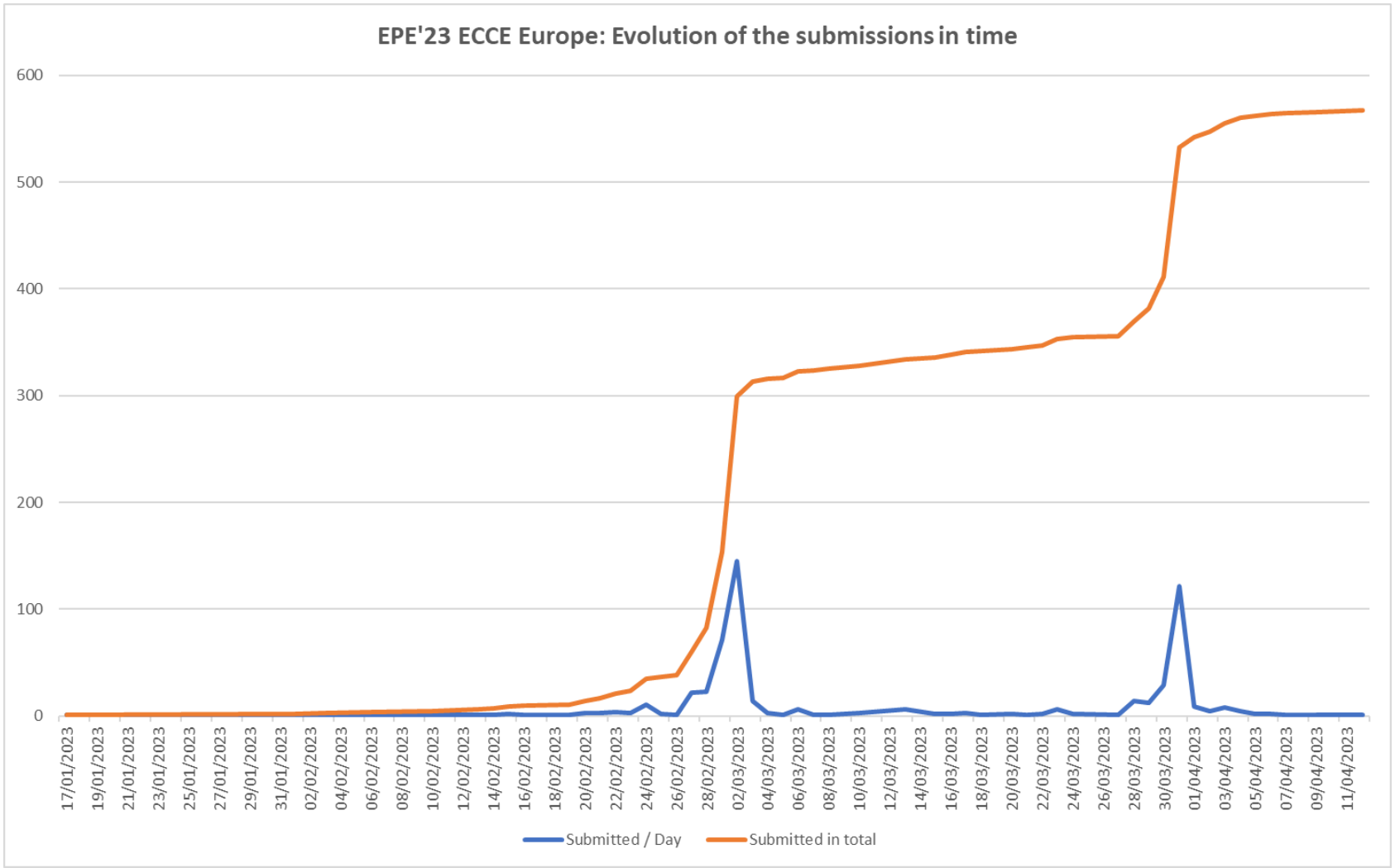
Per Topic: Comparison 2014 ⇔ 2023



Comparison
I. Components & Converters vs II. Applications



Uploads over time



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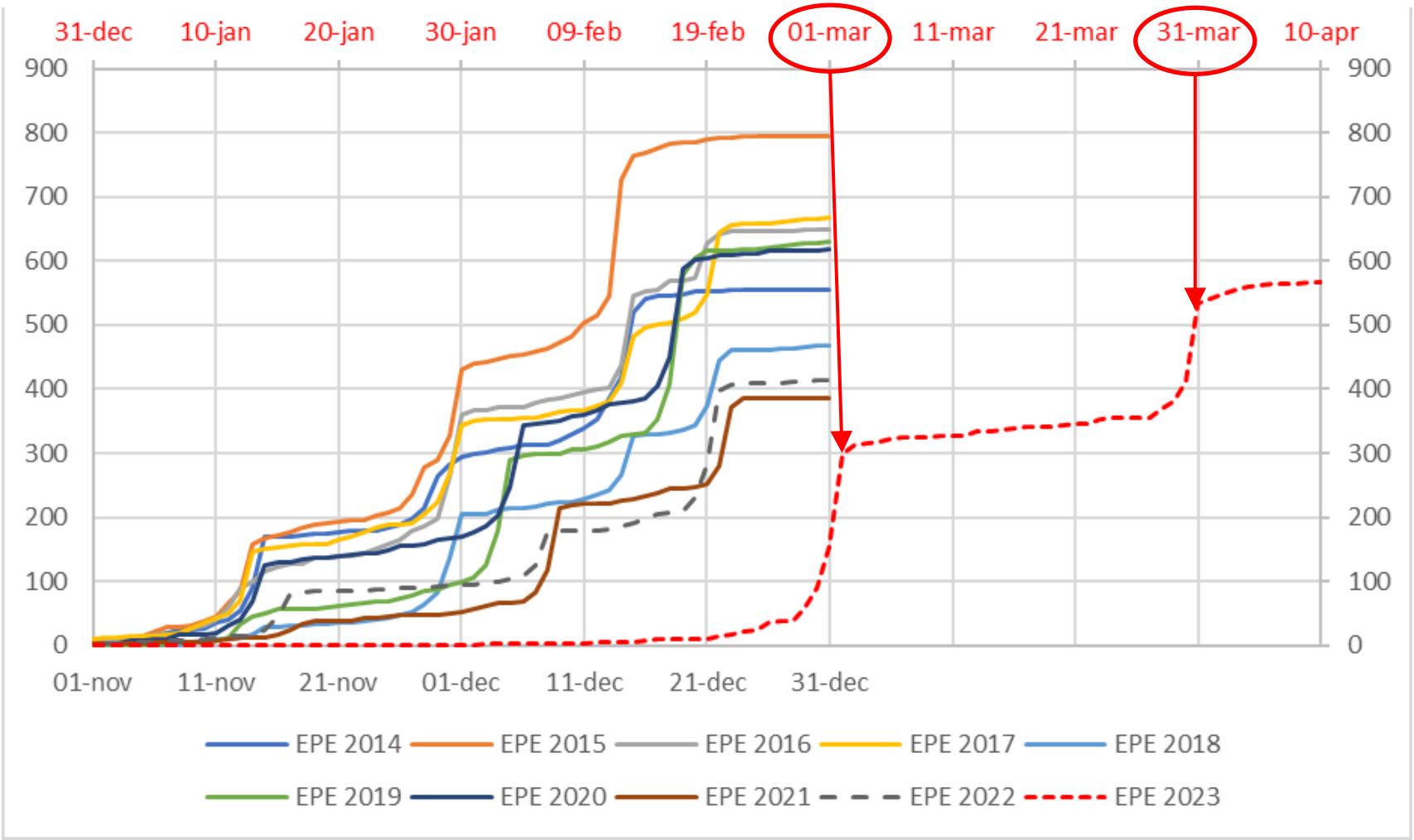
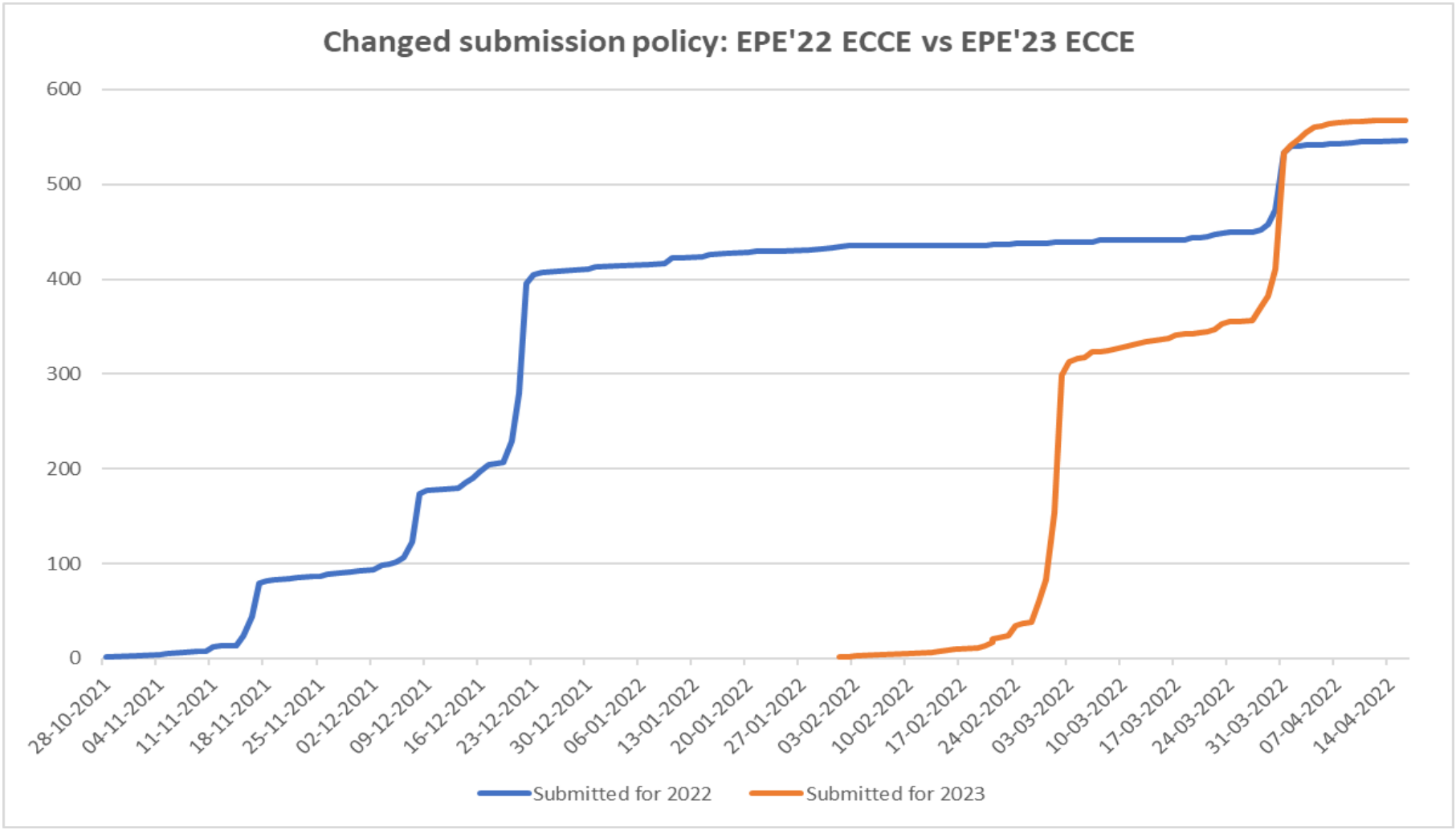
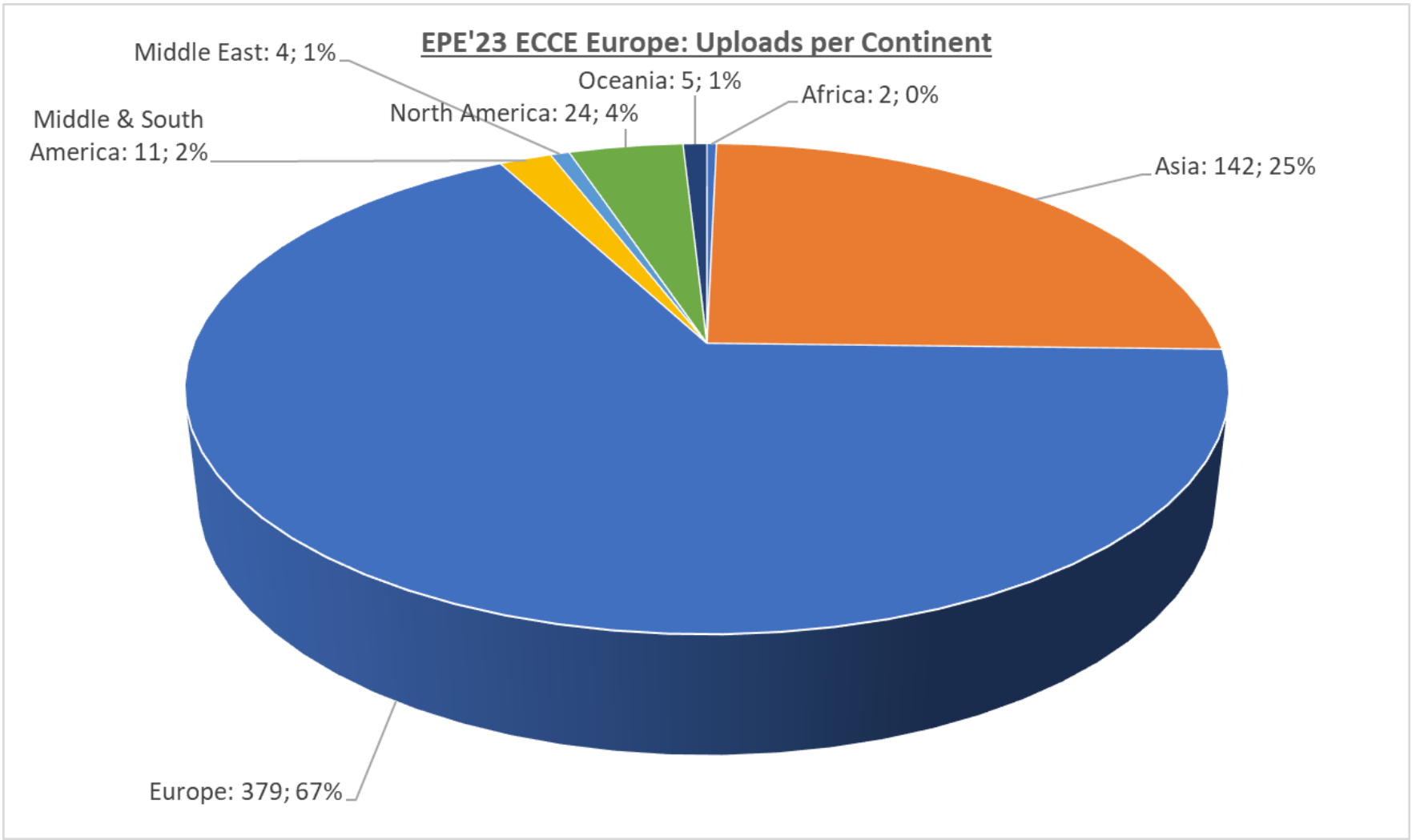


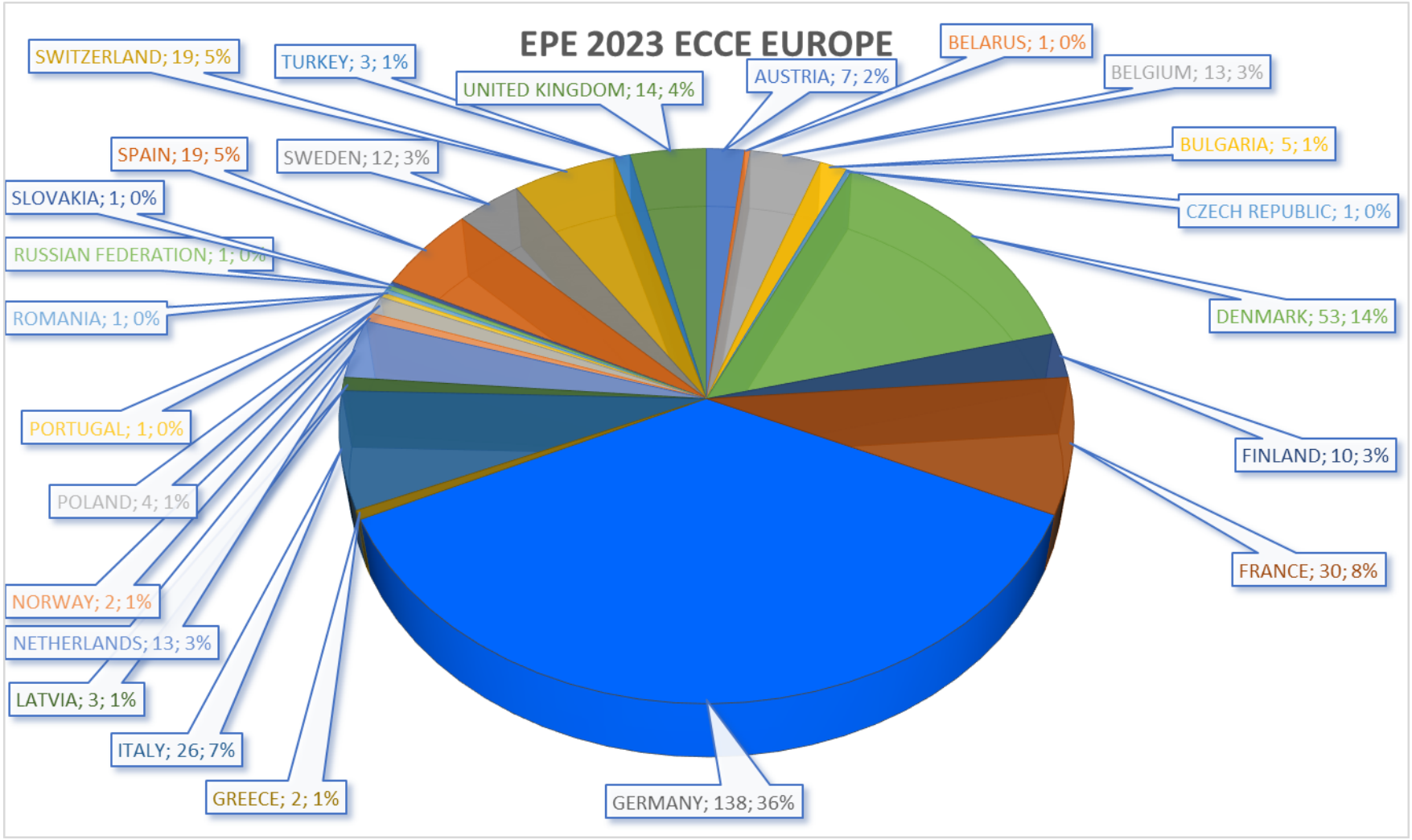
Uploads over time



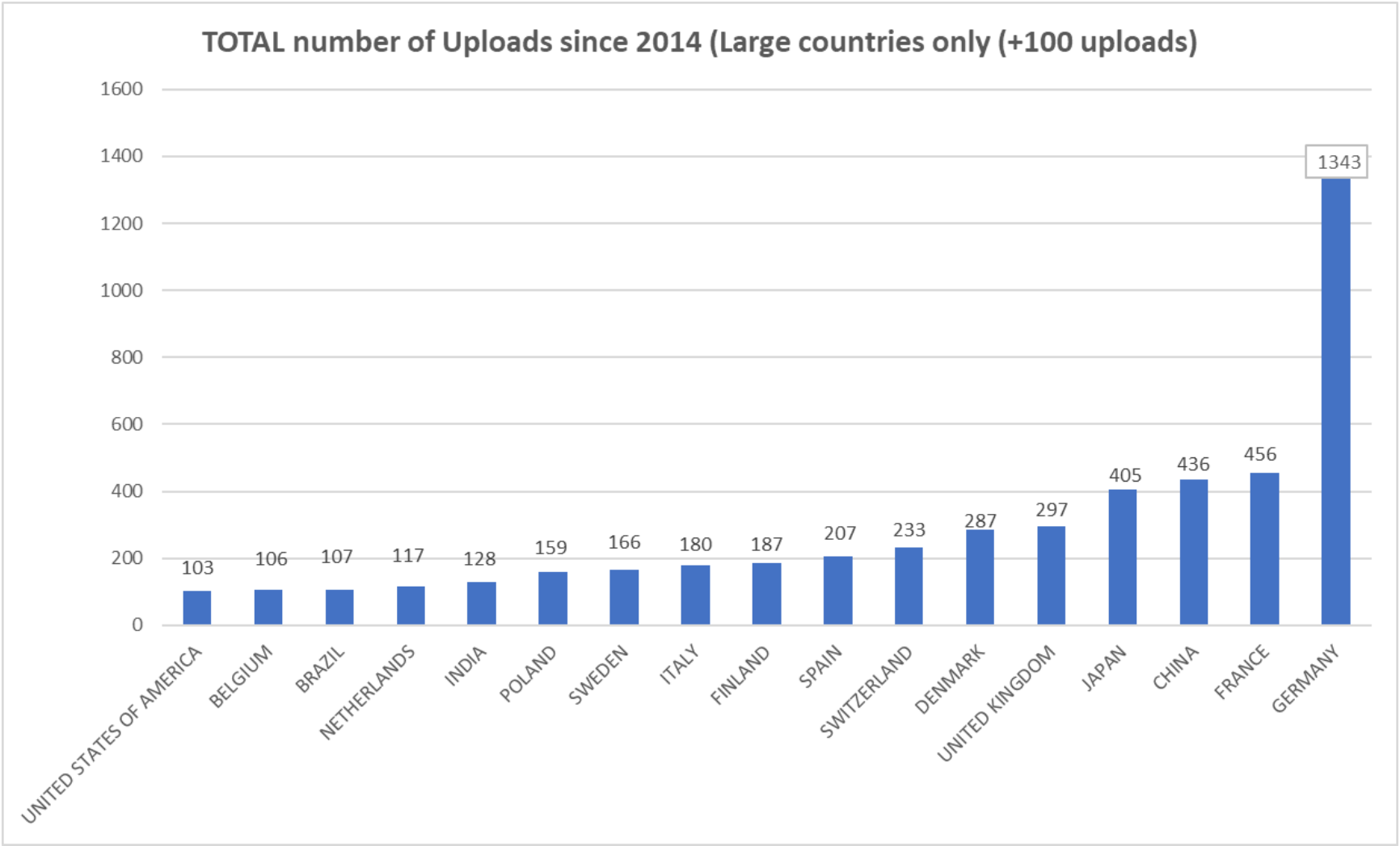
Uploads per Continent



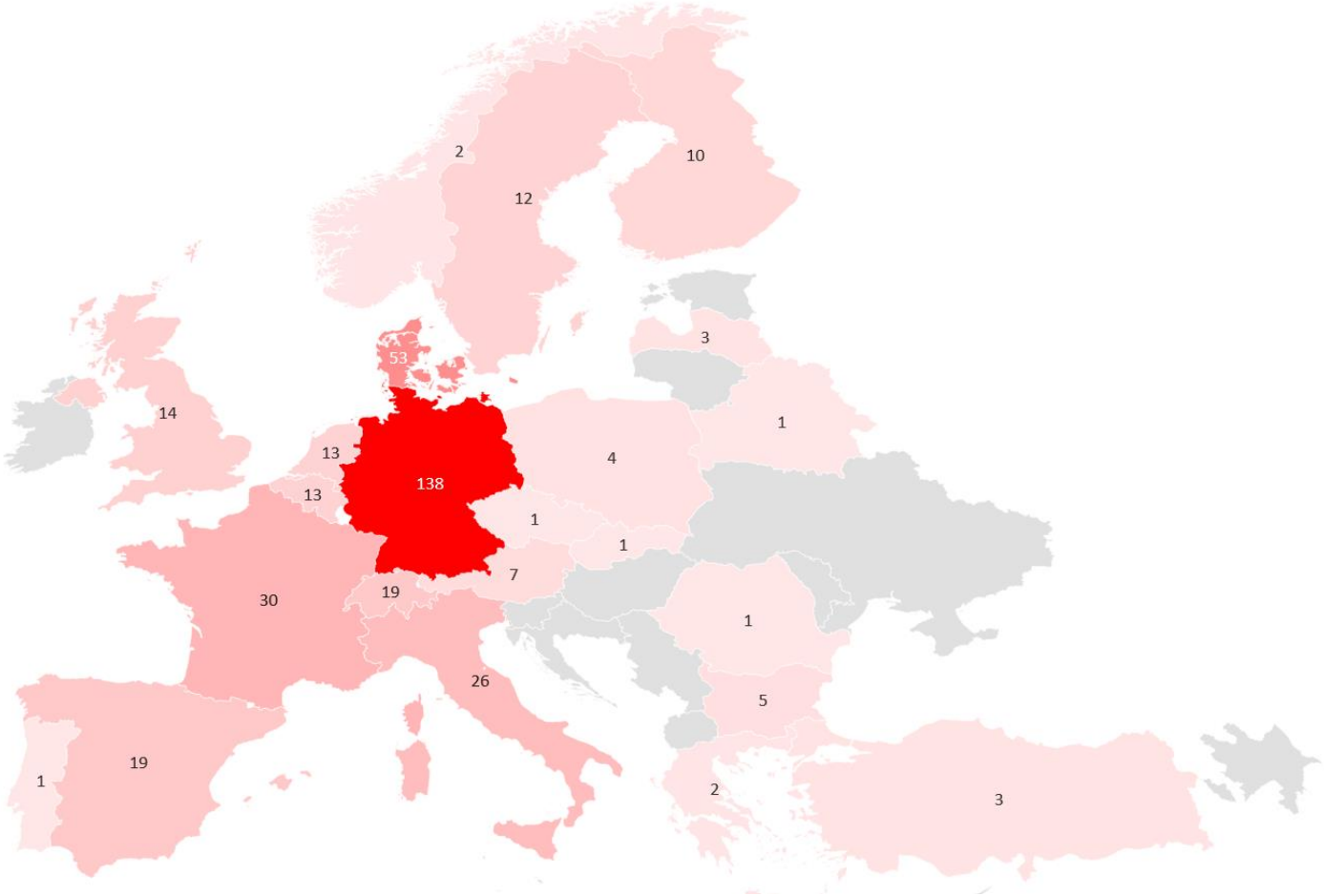
Uploads per Country in Europe



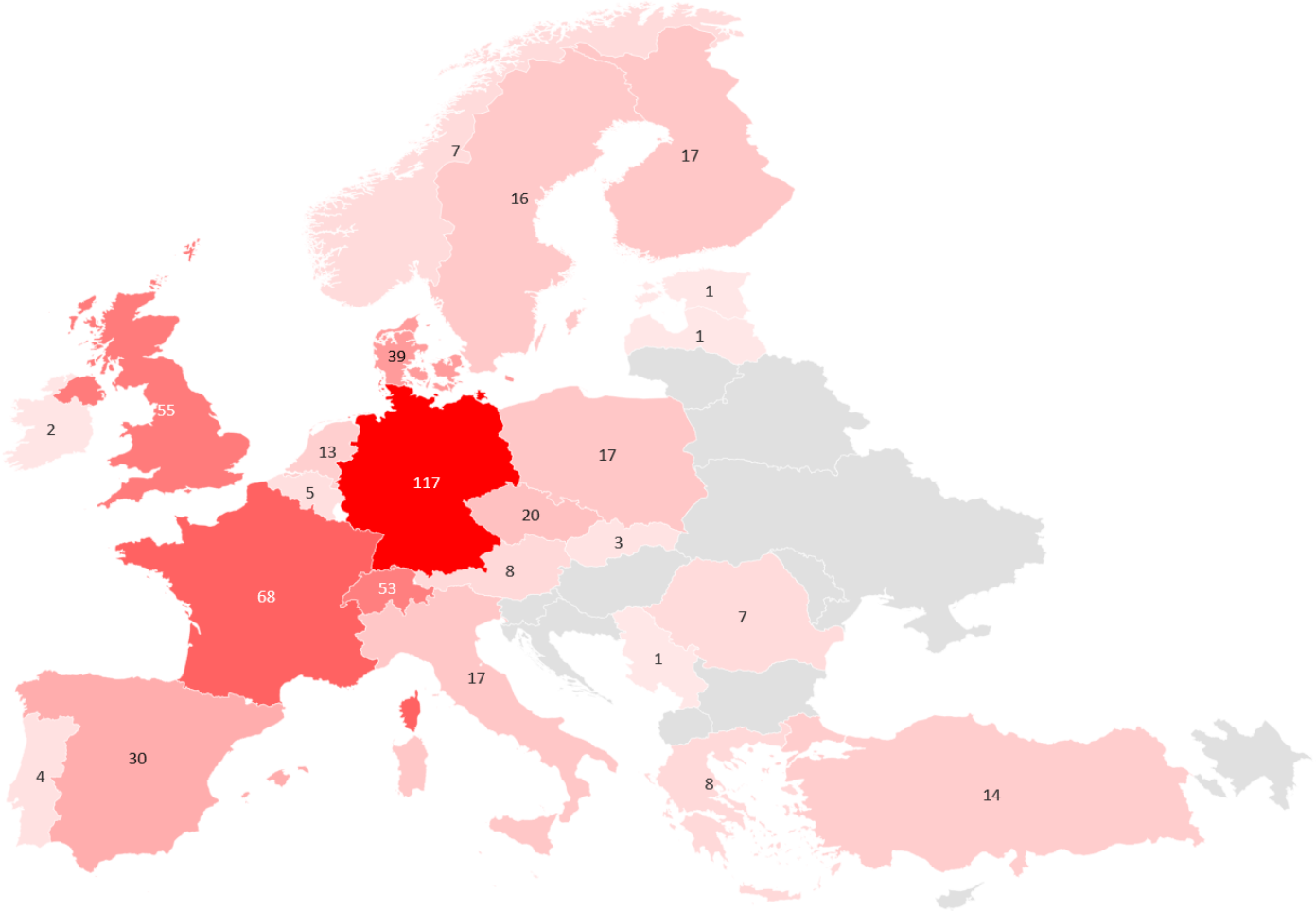
Uploads per Country ("Large" countries only)



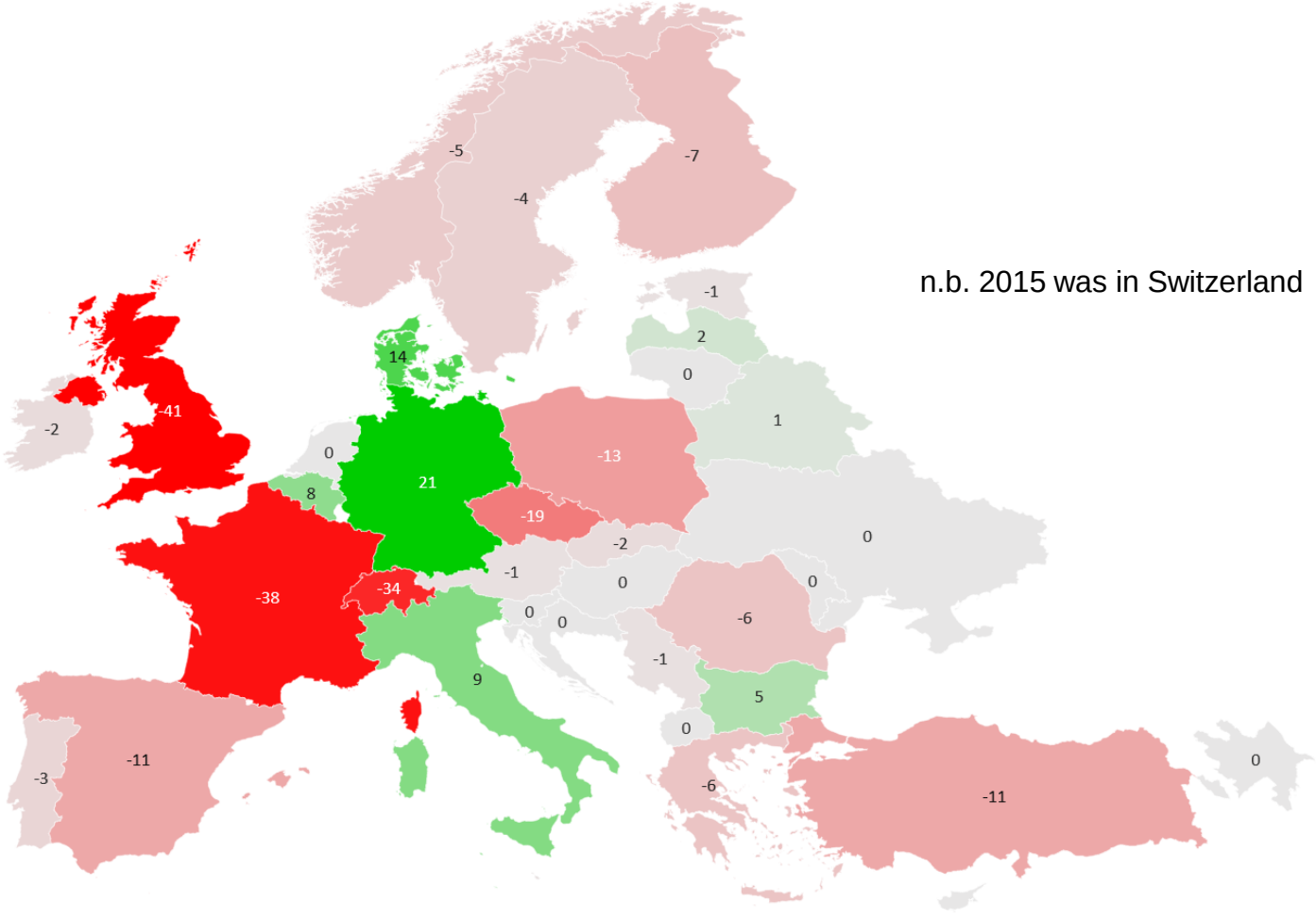
2023 Submissions per European Country



Submissions per European Country – Geneva 2015

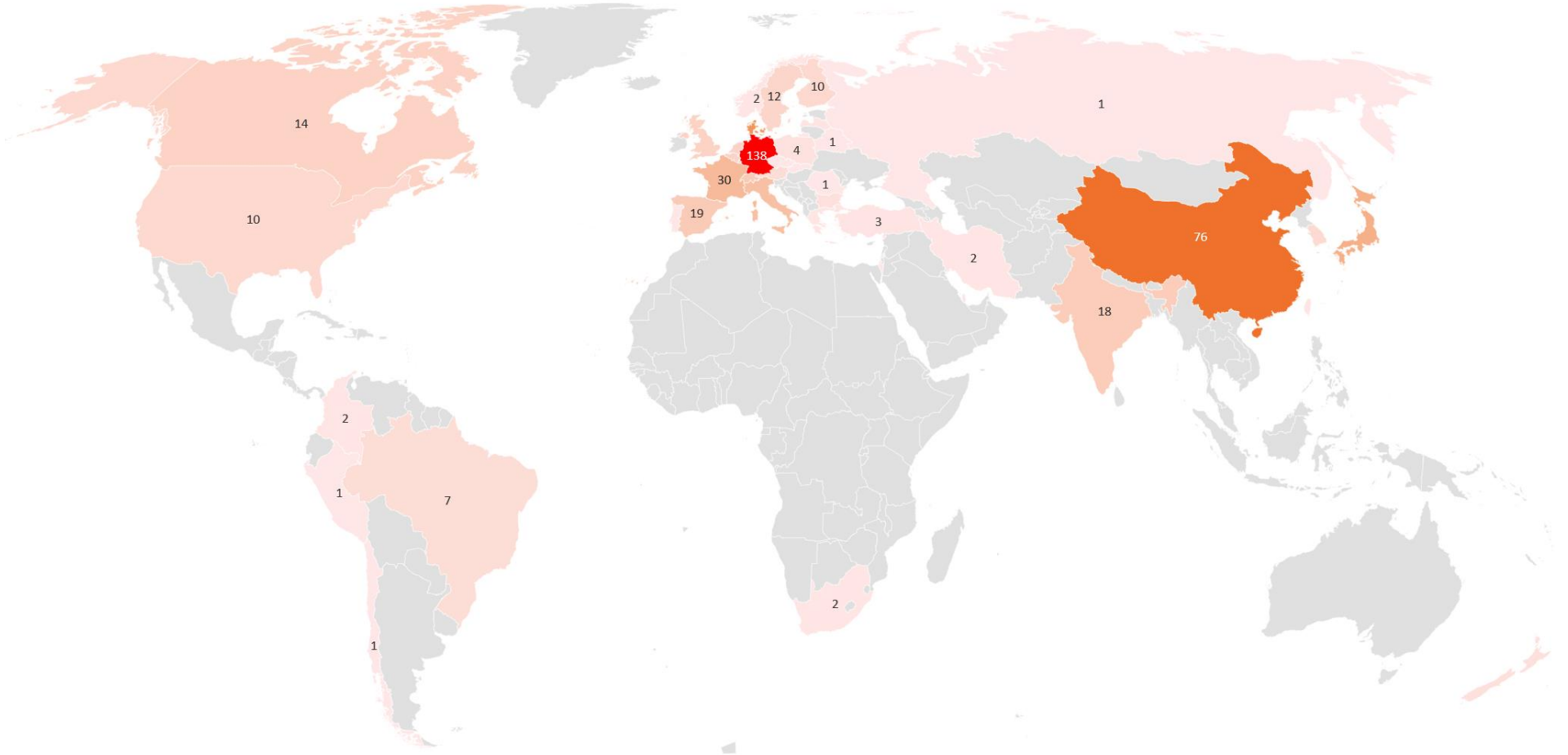


Submissions per European Country – Comparison 2023-2015

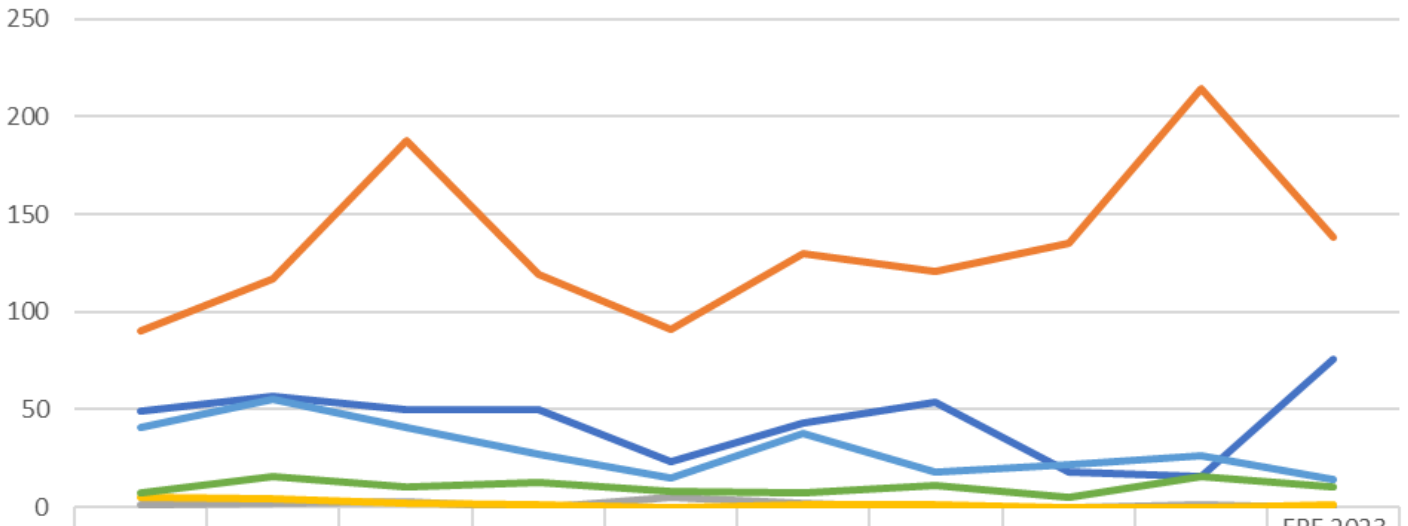


n.b. 2015 was in Switzerland

2023 Submissions Worldwide



Remarkable evolutions since 2014

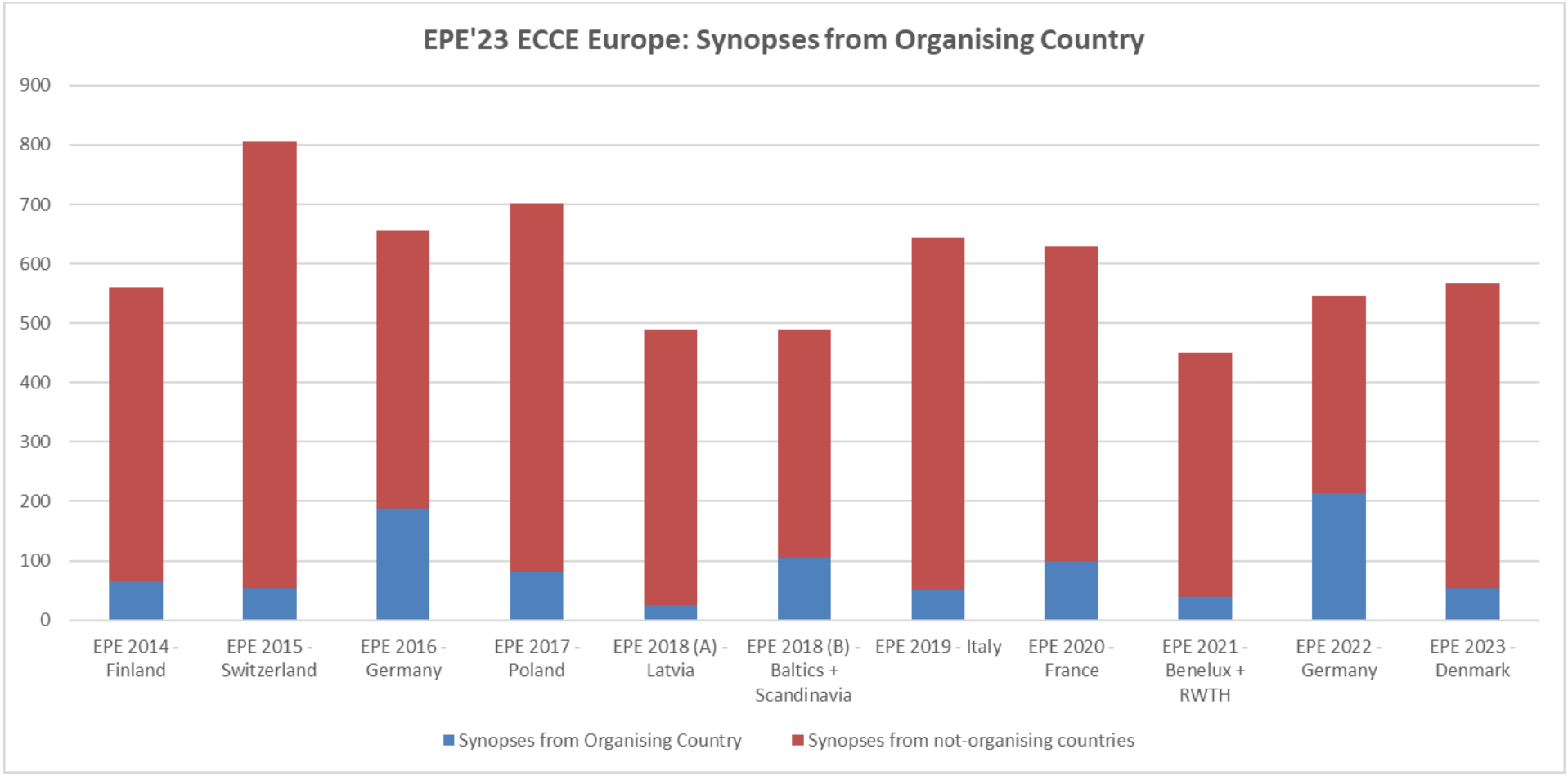


	EPE 2014	EPE 2015	EPE 2016	EPE 2017	EPE 2018	EPE 2019	EPE 2020	EPE 2021	EPE 2022	EPE 2023 ECCE Europe
CHINA	49	57	50	50	23	43	54	18	16	76
GERMANY	90	117	188	119	91	130	121	135	214	138
IRELAND	1	2	3	0	5	2	0	0	1	0
PORTUGAL	5	4	2	1	0	1	1	0	0	1
UNITED KINGDOM	41	55	41	27	15	38	18	22	26	14
UNITED STATES OF AMERICA	7	16	10	13	8	7	11	5	16	10

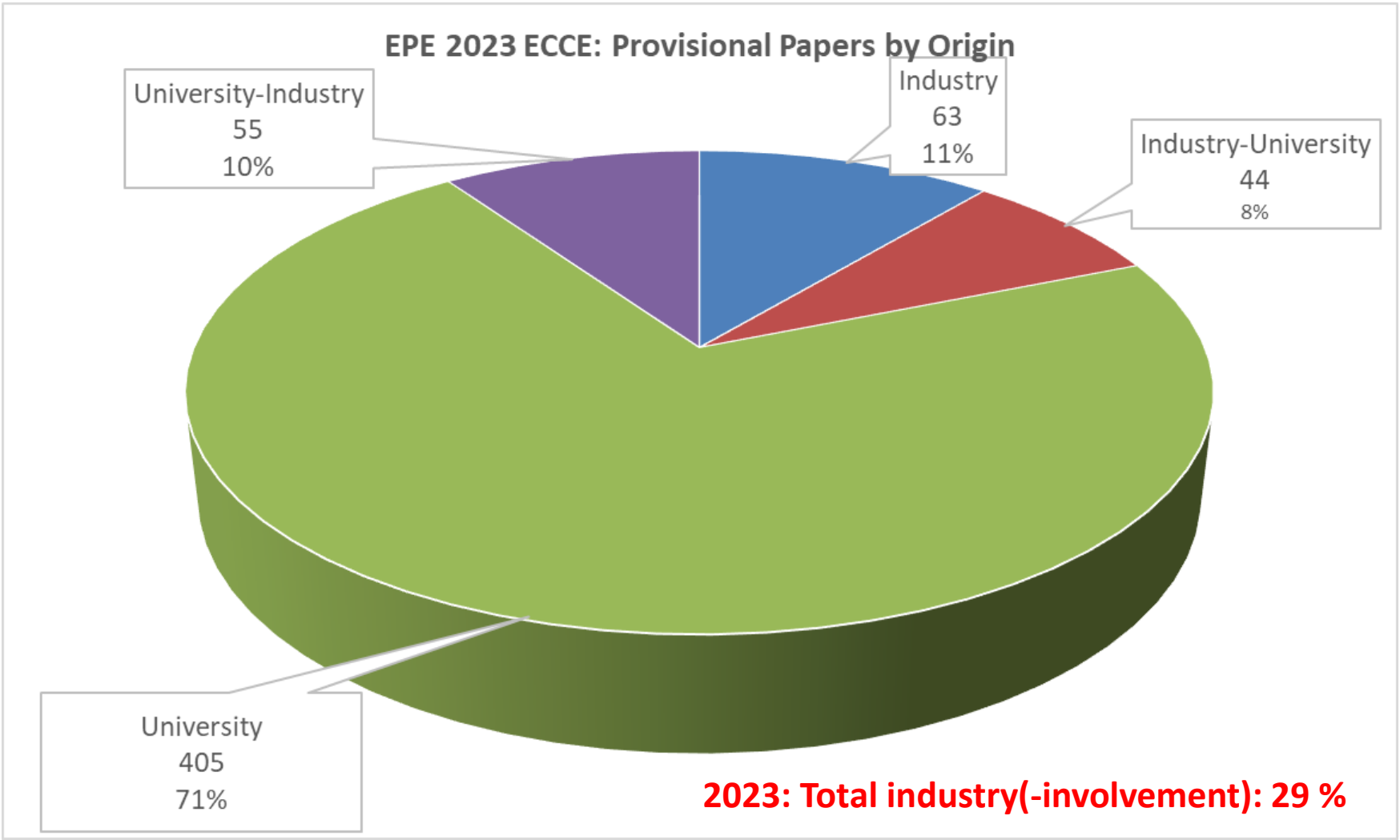
Synopses & Prov. Full Papers per Organising Country

	Organizing Country	Total Number	In %
EPE 2014 ECCE – Finland	65	560	12 %
EPE 2015 ECCE – Switzerland	53	806	7 %
EPE 2016 ECCE – Germany	188	656	29 %
EPE 2017 ECCE – Poland	80	699	12 %
EPE 2018 ECCE (A) – Latvia	25	490	5 %
EPE 2018 ECCE (B) – Baltics + Scandinavia	105	490	21 %
EPE 2019 ECCE – Italy	52	644	8 %
EPE 2020 ECCE – France	100	629	16 %
EPE 2021 ECCE – Benelux + RWTH	39	448	9 %
EPE 2022 ECCE – Germany	(182) 214	(437) 546	39 %
EPE 2023 ECCE – Denmark	**53**	**567**	**9 %**

Synopses & Provisional Full Papers per Organising Country

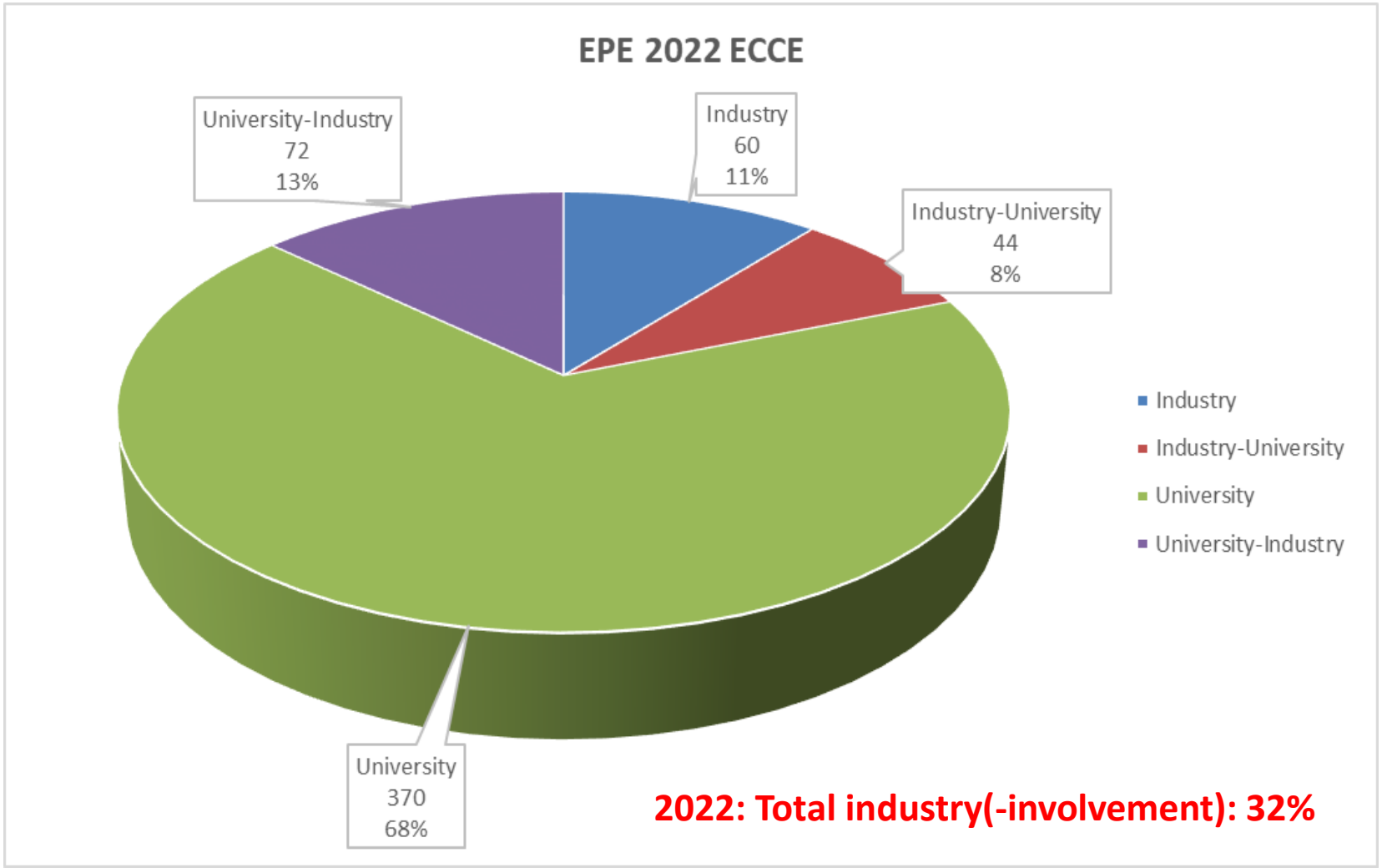


Synopses per Origin



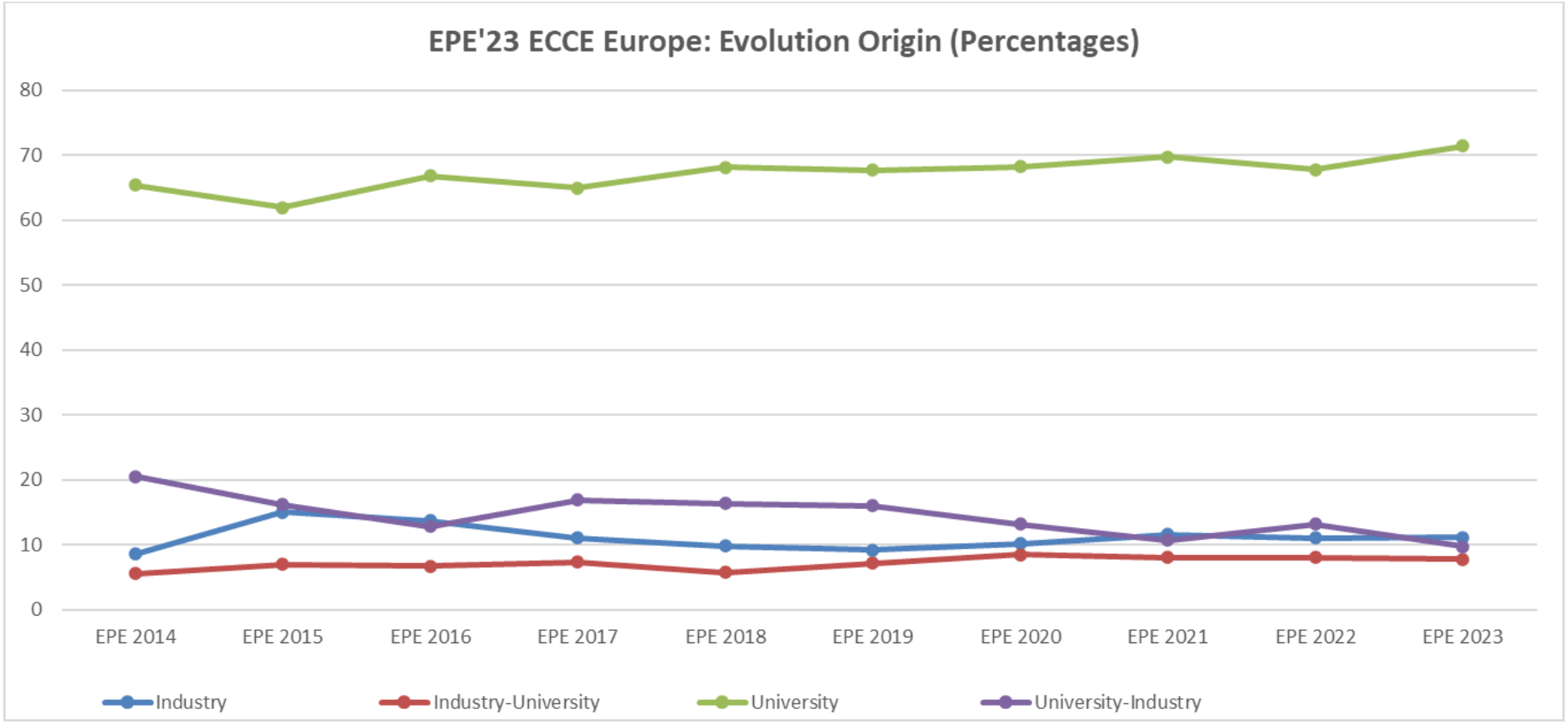
2023: Total industry(-involvement): 29 %

Synopses & Prov. Full Papers per Origin



2022: Total industry(-involvement): 32%

Synopses & Prov. Full Papers per Origin



2023: Total industry(-involvement): 29 %

Received Tutorial Proposals

	TITLE	Duration	Average score	Ranking	Decision
TUT 01	Second-Life EV Batteries for Renewable and Smart Grid Storage Applications	Half Day	7,45	9	ACCEPTED - Monday - Afternoon
TUT 02	Recent Advancements on High-Power DC/DC Converters for DC Transmission and Distribution	Half Day	7,73	5	ACCEPTED - Monday - Afternoon
TUT 03	SiC MOSFET Gate Drivers for High-Power Applications	Half Day	8,18	3	ACCEPTED - Friday - Morning
TUT 04	Solid State Transformers: Topologies, Use Cases, Design Considerations, and Challenges	Half Day	6,55	19	ACCEPTED - Monday - Morning
TUT 05	Multi-objective and highly precise optimization of high performance SiC and GaN multilevel	Full Day	6,64	18	ACCEPTED - Friday - Full Day
TUT 06	Switching Loss Measurements in Power Semiconductors	Half Day	7,17	16	ACCEPTED - Monday - Afternoon
TUT 07	Fundamentals and Advancements of Modern High-frequency Magnetic Components	Half Day	8,25	2	ACCEPTED - Monday - Morning
TUT 08	Advanced control of industrial medium-voltage multi-phase wind power conversion systems	Full Day	7,18	15	ACCEPTED - Monday - Full Day
TUT 09	Understanding Lithium-Ion Batteries as a Partner of Power Electronics	Full Day	7,70	6	ACCEPTED - Monday - Full Day
TUT 10	Grid-Forming Converters: Principles and Practices	Full Day	7,30	13	ACCEPTED - Monday - Full Day
TUT 11	On the use of machine learning for battery state of health estimation	Half Day	6,55	19	REFUSED
TUT 12	Advances in SiC Power Conversion Technologies for High-Frequency and High-Power	Half Day	5,73	25	REFUSED
TUT 13	Multi-sampling control of power electronic converters	Half Day	7,64	8	ACCEPTED - Friday - Morning
TUT 14	Intelligent BMS	Full Day	7,30	13	ACCEPTED - Monday - Full Day
TUT 15	System Level Modelling and Pseudo Real-Time Simulation of MVDC Distribution Grids	Half Day	6,25	22	REFUSED
TUT 16	New Advances and Trends on Model Predictive Control for Power Electronics and Electrical	Half Day	7,11	17	ACCEPTED - Friday - Afternoon
TUT 17	Challenges and Perspectives of Medium Voltage SiC MOSFETs (>6kV) in Power Electronic	Half Day	7,33	11	ACCEPTED - Monday - Morning
TUT 18	Reflective Wave Mitigation for SiC Motor Drive	Half Day	7,75	4	ACCEPTED - Friday - Afternoon
TUT 19	EV Charging: Power Conversion, Quality, and Digitalization	Half Day	6,44	21	ACCEPTED - Monday - Morning
TUT 20	Reliability and Prognostics Towards Lifetime Improvement of Automotive Power Electronics	Half Day	7,40	10	ACCEPTED - Monday - Afternoon
TUT 21	High Bandwidth Current Sensor and its Applications in SiC/GaN Converters	Half Day	6,22	23	REFUSED
TUT 22	Matrix and Spreadsheet Based Simplified Universal Analysis Techniques For DC-DC	Half Day	6,00	24	REFUSED
TUT 23	Online Impedance Measurement and Analysis of Li-Ion Batteries	Half Day	5,67	26	REFUSED
TUT 24	Planar Magnetics for On Board Chargers and others	Half Day	7,33	11	ACCEPTED - Monday - Afternoon
TUT 25	Design of High-Performance Power Electronic Motor Drives using State-of-the-Art Wide	Half Day	7,67	7	ACCEPTED - Monday - Afternoon
TUT 26	Electrified Hydrogen Systems – Challenges and Opportunities	Half Day	Invited	1	ACCEPTED - Monday - Morning

Status of preparation of technical programme
Information from the Local Organising Committee'23

IEEE POWER ELECTRONICS SOCIETY
Powering a Sustainable Future

IEEE ENERGY CONVERSION CONGRESS & EXPO

Conference Chairmen

Conference General Chair:

- **Francesco IANNUZZO** — **Professor, Aalborg University, Denmark**

Conference Co-Chairs:

- **Frede BLAABJERG** — **Professor, Aalborg University, Denmark**

- **Stig MUNK-NIELSEN** — **Professor, Aalborg University, Denmark**

- **Philip C Kjaer** — **Vestas Wind Systems A/S, Denmark**

IEEE POWER ELECTRONICS SOCIETY
Powering a Sustainable Future

ECCE
IEEE ENERGY CONVERSION CONGRESS & EXPO

Local Organising Committee

- **Technical- / Social event chairs:**
  Amjad Anvari-Moghaddam – Aalborg University – Denmark
  Peter Omand Rasmussen – Aalborg University – Denmark
  Dao Zhou – Aalborg University – Denmark

- **Publicity chairs:**
  Martin Kjær – Aalborg University – Denmark
  Heng Wu – Aalborg University – Denmark
  Fangzhou Zhao – Aalborg University – Denmark
  Hongbo Zhao – Aalborg University – Denmark

- **Website / Information chair:**
  Saeed Peyghami – Aalborg University – Denmark

- **Tutorial chair:**
  Ariya Sangwongwanich – Aalborg University – Denmark

- **Logistics chair:**
  Peter Omand Rasmussen – Aalborg University – Denmark

- **Exhibition chair:**
  Amir Sajjad Bahman – Aalborg University – Denmark

- **Financial chair:**
  Pooya Davari – Aalborg University – Denmark

- **Communication / Social Media chair:**
  Subham Sahoo – Aalborg University – Denmark

- **Programme Liaison / Technical chairs:**
  Huai Wang – Aalborg University – Denmark
  Xiongfei Wang – Aalborg University – Denmark

- **Quality chair:**
  Dao Zhou – Aalborg University – Denmark

Other people involved

Programme Chairman:

- Sjoerd BOSGA ABB Corporate Research, Sweden

And of course:

- Philippe HAMACHER – EPE Association, Belgium
- Nancy LANGSBERG – EPE Association, Belgium
- Philippe LATAIRE – EPE Association / Vrije Universiteit Brussel, Belgium
- Jean-Luc THOMAS – EPE Association / Le CNAM, France
- Franck THABAUD & Colleagues – Carte Blanche, France

Focus Topics

Tuesday 5 September: Energy Islands
1. Renewable Energy systems and Power-to-X
2. Energy Islands

Wednesday 6 September: Energy Storage
3. Energy-storage technologies
4. Electric Vehicles

Thursday 7 September: Emerging Technologies in Power Electronics
5. Emerging Power Electronic Devices and Semiconductors
6. Reliability and Artificial Intelligence in Power Electronics

Focus Topics

Each of the Focus Topics will be covered by the following **key formats:**

- 1 Keynote Presentation
- 1 Dedicated Lecture Session (invited and normal papers)
- 1 Dedicated Dialogue Session (invited and normal papers)
- 1 Panel Discussion (= Industrial Forum)

Optional additional formats are:

- Tutorials
- Technical Visits

Status of the Focus Topics

Tuesday 5 September

Item	FT 1 - Renewable Energy Systems and Power-to-X		FT 2 - Energy Islands
Chair	**Pooya DAVARI (Aalborg University)**		**Xiongfei WANG (KTH)**
Co-Chair	**Ahmed ABDELHAKIM (ABB)**		**Jun Bum KWON (Energinet)**
Keynote	**Adrian TIMBUS (Hitachi Energy)**		**Hanne Storm EDLEFSEN (Energinet)**
	Power-to-X		Energy Islands
Panel Moderation	Pooya DAVARI (Aalborg University)		Xiongfei WANG (KTH)
	Ahmed ABDELHAKIM (ABB)		Jun Bum KWON (Energinet)
Panellists	ABB, Hitachi Energy, Advent Energy, Siemens Energy, AEG Solutions, etc…		Ørsted, Vestas, Shell, etc…
Tutorials	1 - Tutorial 26		3 - Tutorials 2, 4, & 10
Technical Tour	Advent Energy		Østerild (Wind turbine test place)

Status of the Focus Topics

Wednesday 6 September

Item	FT 3 - Energy-Storage Technologies		FT 4 - Electric Vehicles
Chair	Daniel-Ioan STROE (Aalborg University)		Mats ALAKÜLA (Lund University - Swedish Electromobility Center)
Co-Chair	Julia KOWAL (TU Berlin)		Fran MARQUEZ (Lund University - Swedish Electromobility Center)
			Eckart HOENE (IZM Fraunhofer)
Keynote	Søren DAHL (Topsoe) Title unknown		
Panel Moderation	Daniel-Ioan STROE (Aalborg University)		Mats Alaküla (Lund University - Swedish Electromobility Center)
	Julia KOWAL (TU Berlin)		Fran Marquez (Lund University - Swedish Electromobility Center)
			Eckart HOENE (IZM Fraunhofer)
Panellists	Topsoe, Advent Energy, Northvolt, etc...		Volkswagen, Koenigsegg, Infineon, Wolfspeed, etc...
Tutorials	1 - Tutorial 9		3 - Tutorials 19, 20, & 24
Technical Tour	Pending, Advent Energy = possibility		

Status of the Focus Topics

Thursday 7 September

Item	FT 5 - Emerging Power Electronic Devices and Semiconductors		FT 6 - Reliability and Artificial Intelligence in Power Electronics
Chair	Kevin HERMANNS (PE Systems)		Huai WANG (Aalborg University)
Co-Chair	Subham SAHOO (Aalborg University)		Norbert HANIGOVSKI (Danfoss)
Co-Chair			
Keynote			Johan W. KOLAR (ETH Zürich) Circular Economy (CE) in Power Electronics
Panel Moderation	Kevin HERMANNS (PE Systems) Subham SAHOO (Aalborg University)		Huai WANG (Aalborg University) Norbert HANIGOVSKI (Danfoss)
Panellists	Danfoss, Siemens, Schneider Electric,...		Vestas, Neurspace, Frenetic, etc...
Tutorials	To be defined		
Technical Tour	To be defined		Aalborg University - Energy Department

Status of the Focus Topics

Keynotes

1 Keynote for each of the Focus Topics (titles preliminary):

FT1 - Renewable Energy Systems and Power-to-X:

Adrian Timbus: Power-to-X – Optimizing X for a Sustainable Society

FT2 - Energy Islands:

Hanne Storm Edlefsen: Energy Islands – the Key to harvest huge amounts of wind power

FT3 - Energy-Storage Technologies: **Søren Dahl:** ***Title unknown***

FT4 - Electric Vehicles: **TBA**

FT5 - Emerging Power Electronic Devices and Semiconductors: **TBA**

FT6 - Reliability and Artificial Intelligence in Power Electronics: **Johan W. Kolar:** ***Title unknown***

Integrated / Co-Located Events

Monday: *PELS Young Professionals Reception (cooperation with IEEE PELS YP)*

Tuesday: *IEEE Diverse Future Leadership* (cooperation with IEEE WiE)
Possible subtitles: "Diversity in Engineering", "Gender Cooperation in Engineering" or "Together in Engineering"

Thursday: *IEEE PELS Mentorship Dinner (cooperation with IEEE)*

Further:

- The Power Electronic Conversion Technology Annex PECTA –Sessions *
- Frede Blaabjerg & colleagues: "Sustainability in Power Electronics" *
- AVL List GmbH, Infineon AG & VUB: Special Session - Reliability and Lifetime prediction of WBG power electronics in automotive applications *

* A programme, timeslots and locations will be foreseen

Gold Sponsors:

Silver Sponsors:

Contributor Sponsors:

Institutional Sponsor:

Power Electronic Conversion Technology Annex PECTA

Pending or to be confirmed: Hitachi Energy Denmark, Volkswagen,...

Exhibitors:

altoo MEASUREMENT SCIENCE

ENGINEERING TOMORROW Danfoss

SEMIKRON DANFOSS

dSPACE

ECPE

EGSTON POWER

Fuji Electric Innovating Energy Technology

GOmeasure TEST EQUIPMENT

HIOKI

ITECH Your Power Testing Solution

imperix

KEYSIGHT

KOHSEL TRANSFORMER SOLUTIONS

Leapers Semiconductor

MITSUBISHI ELECTRIC Changes for the Better

ModelingTech

nexperia EFFICIENCY WINS.

OMICRON LAB

OPAL-RT TECHNOLOGIES

pcim EUROPE

plexim electrical engineering software

Schneider Electric

Typhoon HIL

YOKOGAWA

ZES ZIMMER Precision Power Measurement

Pending or to be confirmed: Hitachi Energy Denmark, InfraTech…

Tomorrow's Paper Selection Meeting

Topic 1: DEVICES, COMPONENTS, PACKAGING AND SYSTEM INTEGRATION
- NEE Hans-Peter
- DIECKERHOFF Sibylle
- FRIEBE Jens

Topic 2: POWER CONVERTERS TOPOLOGIES
- HILLER Marc
- DWORAKOWSKI Piotr
- HEGAZY Omar

Topic 3: CONVERTER MODELLING, DESIGN AND LOW-LEVEL CONTROL
- SIEMASZKO Daniel
- MUSUMECI Salvatore

Topic 4: MEASUREMENT, SUPERVISION AND CONTROL FOR POWER CONVERTERS
- MONMASSON Eric
- ZANCHETTA Pericle

Topic 5: ELECTRICAL MACHINES AND DRIVE SYSTEMS
- BOSGA Sjoerd
- CACCIATO Mario
- SEMAIL Betty

Topic 6: RENEWABLE ENERGY POWER SYSTEMS AND POWER-TO-X
- BAKRAN Mark
- ECKEL Hans-Günter
- JUNG Marco

What is the situation?
How do you plan to proceed?

Tomorrow's Paper Selection Meeting

Topic 7: POWER ELECTRONICS IN TRANSMISSION AND DISTRIBUTION SYSTEMS
- CARPITA Mauro
- BACHA Seddik
- ZOBAA Ahmed

Topic 8: E-MOBILITY
- BOECKER Joachim
- VAN MIERLO Joeri
- MALLWITZ Regine

Topic 9: POWER SUPPLIES AND INDUSTRY-SPECIFIC APPLICATIONS
- KYYRÄ Jorma
- WIJNANDS Korneel
- MARTINEZ Wilmar

Topic 10: DATA ANALYSIS, ARTIFICIAL INTELLIGENCE AND COMMUNICATION
- DAVARI Pooya
- BRIFF Pablo

Topic 11: FOCUS TOPICS
- WANG Huai
- WANG Xiongfei

What is the situation?
How do you plan to proceed?

Evaluation of and Discussion on the New Submission Policy

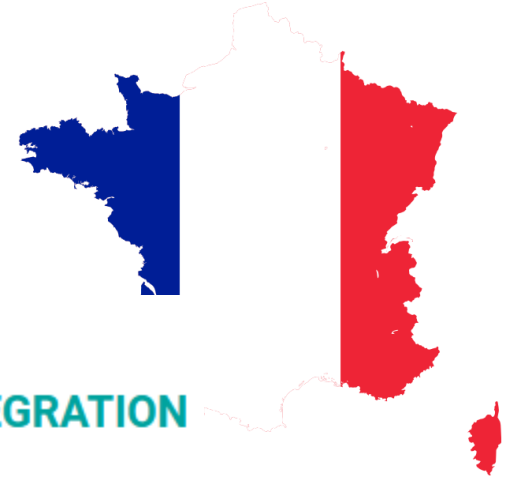
?

Advices for the organization of EPE'23 ECCE Europe

?

Topics for EPE'24 ECCE Europe

The 26th European Conference on Power Electronics and Applications



I POWER ELECTRONICS COMPONENTS AND CONVERTERS

Topic 1: DEVICES, COMPONENTS, PACKAGING AND SYSTEM INTEGRATION

1.a. Passive Components
1.b. Active Devices and Components (Si)
1.c. Active Devices and Components (Wide Bandgap and other New Materials)
1.d. Components and Devices for Specific Applications, including for Pulsed Power
1.e. System Integration, Packaging & Thermal Management
1.f. Reliability & Life-Time

Topic Chair: Hans-Peter NEE
Topic Co-Chair: Sibylle DIECKERHOFF
Topic Co-Chair: Jens FRIEBE

Topic 2: POWER CONVERTERS TOPOLOGIES

2.a. Modular Multilevel Converters
2.b. Solid State Transformers
2.c. Grid Connected Converters
2.d. Resonant Converters
2.e. HF Power Converters
2.f. Wide-Band Gap Power Electronics

Topic Chair: Marc HILLER
Topic Co-Chair: Piotr DWORAKOWSKI
Topic Co-Chair: Omar HEGAZY

Topics for EPE'24 ECCE Europe

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Topic 3: CONVERTER MODELLING, DESIGN AND LOW-LEVEL CONTROL

3.a. Converter Design and Optimisation
3.b. Converter Modelling and Low-level Control, including Gate-Drives
3.c. EMI/EMC in Power Electronics including HF Phenomena

Topic Chair: Daniel SIEMASZKO
Topic Co-Chair: Salvatore MUSUMECI
Topic Co-Chair: ?

Topic 4: MEASUREMENT, SUPERVISION AND CONTROL FOR POWER CONVERTERS

4.a. Standard and Advanced Modulation Techniques
4.b. Standard and Advanced Current / Voltage / Synchronization Control Techniques
4.c. Estimation, Identification and Optimisation Methods
4.d. Measurement Techniques, Sensors and State Observers
4.e. Condition Monitoring and Life-Time Prediction

Topic Chair: Eric MONMASSON
Topic Co-Chair: Pericle ZANCHETTA
Topic Co-Chair: ?

Topics for EPE'24 ECCE Europe

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II POWER ELECTRONICS APPLICATIONS

Topic 5: ELECTRICAL MACHINES AND DRIVE SYSTEMS

5.a. Electrical Machines and Actuators
5.b. Adjustable-Speed Drives and Converter-Machine Interactions
5.c. Design, Optimisation and Control of Electric Drives
5.d. Condition Monitoring and Life-Time Prediction

Topic Chair: Sjoerd BOSGA
Topic Co-Chair: Mario CACCIATO
Topic Co-Chair: Betty SEMAIL

Topic 6: RENEWABLE ENERGY POWER SYSTEMS AND POWER-TO-X

6.a. Wind-Energy Systems
6.b. Solar-Energy Systems
6.c. Energy Storage Systems for Renewable Energy
6.d. Energy Management Systems
6.e. Energy Harvesting
6.f. Power-to-X
6.g. Other Renewable-Energy Systems

Topic Chair: Mark BAKRAN
Topic Co-Chair: Hans-Günter ECKEL
Topic Co-Chair: Marco JUNG

Topics for EPE'24 ECCE Europe

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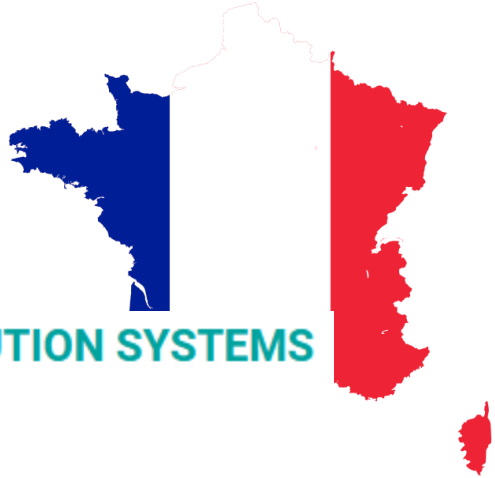

Topic 7: POWER ELECTRONICS IN TRANSMISSION AND DISTRIBUTION SYSTEMS

7.a. HVDC, FACTS, Solid State Transformers and Hybrid Circuit Breakers
7.b. Smart Grids
7.c. AC and DC Distribution and Micro Grids, including Fault Coordination and Protection
7.d. Power Quality Issues and Power Factor Correction Techniques
7.e. Charging Power Stations, Bidirectional V2G
7.f. Energy Harvesting, Energy Storage Systems and Renewable Diurnal and Seasonality Issues
7.g. Smart and Energy Efficient Buildings
7.h. Real-Time Simulation and Hardware in the Loop

Topic Chair: Mauro CARPITA
Topic Co-Chair: Seddik BACHA
Topic Co-Chair: Ahmed ZOBAA

Topic 8: E-MOBILITY

8.a. Electric Drive Trains for Passenger and Light Duty Vehicles
8.b. Electric Drive Trains for Heavy Duty Vehicles and Buses
8.c. Electric Drive Trains for Rail Vehicles
8.d. Electric Drive Trains for Aerospace Applications (Aircrafts, Drones)
8.e. Electric Drive Trains for Marine Applications (Offshore, Subsea and Ships)
8.f. On-Board Power Converters, WBG Technology as well as On-Board DC-Voltage Networks
8.g. Vehicle Battery Chargers: On-Board (Wired and Inductive) and Stationary (Ultra) Fast Chargers
8.h. Smart Charging and Vehicle to Grid Interaction
8.i. Batteries: Management Systems (BMS), Monitoring and Life-Time Prediction
8.j. Fuel Cells: Converters, Control, Diagnostics and System Integration

Topic Chair: Joachim BÖCKER
Topic Co-Chair: Joeri VAN MIERLO
Topic Co-Chair: Regine MALLWITZ

Topics for EPE'24 ECCE Europe

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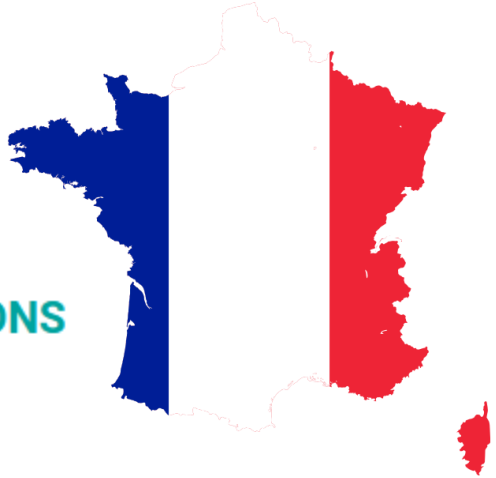

Topic 9: POWER SUPPLIES AND INDUSTRY-SPECIFIC APPLICATIONS

- 9.a. Wireless Power Transfer Systems
- 9.b. Applications for Electrolyzers and Fuel Cells
- 9.c. Applications in Hydrogen Storage and Transmission
- 9.d. Low Voltage DC Power Supplies
- 9.e. High Voltage DC Power Supplies
- 9.f. Distributed Power Supplies
- 9.g. Uninterruptible Power Supplies (UPS)
- 9.h. Lighting: Solid-State Lighting and Electronic Ballasts
- 9.i. Industry-Specific Applications (Cement, Steel, Paper, Textile, Mining, etc…)
- 9.j. Applications in Physics Research and Related Areas

Topic Chair: Jorma KYYRÄ
Topic Co-Chair: Korneel WIJNANDS
Topic Co-Chair: Wilmar MARTINEZ

Topic 10: DATA ANALYSIS, ARTIFICIAL INTELLIGENCE AND COMMUNICATION

- 10.a. Data Analysis applied to Power Electronics and Drive Systems
- 10.b. Application of Artificial Intelligence to Power Electronics and Drive Systems
- 10.c. Communication for Power Electronics and Drive Systems
- 10.d. Wireless Control of Power Electronics Systems
- 10.e. Diagnostics of Power Electronics Systems
- 10.f. Digital Twin of Power Electronic Converters and Systems
- 10.g. Big Data and Artificial Intelligence in Energy Conversion

Topic Chair: Pooya DAVARI
Topic Co-Chair: Pablo BRIFF
Topic Co-Chair: ?

Topics for EPE'24 ECCE Europe

The 26th European Conference on Power Electronics and Applications

Ideas for Focus Topics?

2022:

Technology Focus Topics:

- New Power Electronic Devices
- Integration and Adverse Effects of WBG Devices
- Batteries in Power Electronics

Application Focus Topics:

- Electrification of Aircraft
- Electrification of On- and Off-Road Vehicles
- Electricity and Hydrogen based Energy Systems

2023:

Energy Islands

- Renewable Energy Systems and Power-to-X
- Energy Islands

Energy Storage

- Energy-Storage Technologies
- Electric Vehicles

Ideas for 2024?

Emerging Technologies in Power Electronics

- Emerging Power Electronic Devices and Semiconductors (~~Cyber-security in Power Electronics~~)
- Reliability and Artificial Intelligence in Power Electronics

Other ideas for the future of the EPE ECCE Europe Conferences ?

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IEEE POWER ELECTRONICS SOCIETY
Powering a Sustainable Future

IEEE ENERGY CONVERSION CONGRESS & EXPO

Any Other Business

?

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Next meeting of the ISC

?

IEEE POWER ELECTRONICS SOCIETY
Powering a Sustainable Future

IEEE ENERGY CONVERSION CONGRESS & EXPO

Thank You !

Enjoy the Paper Selection Meeting Tomorrow…..