

# EPE 2021 ECCE Europe

September 6-10, 2021  
Ghent, Belgium

The 23<sup>rd</sup>  
European  
Conference on  
Power Electronics  
and Applications



<https://epe2021.com>



## SPONSORSHIP and EXHIBITOR OPPORTUNITIES

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## General Information

<b>CONFERENCE VENUE:</b>	<b>Gent ICC – International Convention Center</b>  Van Rysselbergheedreef 2 - Citadelpark, 9000 Gent, Belgium
<b>CONFERENCE DATES:</b>	From Monday 6 until Friday 10 September, 2021
<b>TUTORIALS:</b>	Monday, the 6 <sup>th</sup> of September 2021
<b>WELCOME COCKTAIL:</b>	Tuesday, the 7 <sup>th</sup> of September 2021
<b>GALA DINNER:</b>	Wednesday, the 8 <sup>th</sup> of September 2021
<b>TECHNICAL VISITS:</b>	Friday, the 10 <sup>th</sup> of September 2021
<b>TECHNICAL SECRETARIAT:</b>	EPE Association C/o Vrije Universiteit Brussel - IrW - ETEC Pleinlaan 2 1050 Brussels, Belgium Tel: +32 (0)2 629 28 19 Fax: +32 (0)2 629 36 20 E-Mail: <a href="mailto:carol.appelmans@vub.be">carol.appelmans@vub.be</a>
<b>INFORMATION:</b>	URL: <a href="http://www.epe2021.com">http://www.epe2021.com</a>  E-mail: <a href="mailto:info@epe2021.com">info@epe2021.com</a>
<b>OFFICIAL LANGUAGE:</b>	The official language of the Conference is English.  Simultaneous translation will not be provided.

## Welcome to Ghent

### GHENT, A CITY WITH A GREAT HISTORY...



The history of Ghent begins in the year 630 when St Amandus chose the site of the confluence (or 'Ganda') of the two rivers, the Lys and the Scheldt, to construct an abbey. Nearly 1400 years of history are still palpable in the city today: a medieval castle surrounded by a moat, an imposing cathedral, a belfry, three beguinages... Nowhere else does one find so much history per square metre than in the historical heart of Ghent!

From the year 1000 to around 1550, Ghent was one of the most important cities in Europe. It was bigger than London and second only to Paris in size. The 60,000 inhabitants it had in the 14th century clung forcefully to their rights: earls and princes discovered that the proud and rebellious people of Ghent would not relinquish their hard-won privileges and freedoms without a fight.

Until the Battle of the Golden Spurs in 1302, the city was ruled by a number of rich merchant families. Because they mostly chose the side of the French king against the Count of Flanders, the people gave them the nickname 'Leliaerts', derived from the lily on the French coat of arms. As the trades and guilds gained more political power in the 14th century, Ghent came to acquire a more democratic government.

Over the centuries the inhabitants of Ghent remained true to their reputation of being headstrong and awkward. They even rebelled against their own child prince, Charles V. But that was a bridge too far: the citizens of Ghent were publicly humiliated and the Klokke Roeland, the symbol of Ghent's independence, was removed from the Belfry. The once powerful city-state had literally and figuratively fallen to its knees.

The economic situation also gradually worsened. The city lost its passage to the sea and the population decreased by half. Only in the second half of the 18th century was there an economic revival. In 1816, under Dutch administration, Ghent acquired its own university. As a commemoration, a statue of king William I of the Netherlands, founder of the University, was unveiled on Reep. Ten years later the city again became a sea port thanks to the Ghent-Terneuzen canal.

Nevertheless, Ghent still continued to sail against the tide: during Belgium's independence struggle many inhabitants remained loyal to the Dutch House of Orange. Ghent later became the continent's first large industrial centre. As a result, it was here that the socialist movement and the first trade union associations appeared.

In 1913, Ghent showed its best side during the World Exhibition. Because it suffered little bomb damage during the two world wars, Ghent's historical heritage has remained largely intact right up to the present, as you will be able to see with your own eyes...

## SO MUCH GHENT – DISCOVER IT YOURSELF

‘The historic heart of Flanders’, ‘a city of all ages’, ‘Mediaeval Manhattan’ and ‘Europe’s best-kept secret’: the nicknames Ghent has collected over the years are as colourful as the city itself. Walk through the centre of Ghent and you will immediately see why it has won so many tourism prizes and earned so much international acclaim.

Nowhere else can you flit so quickly from the 14th to the 21st century and back again, without feeling out-of-place for a minute.



Ghent is full of charming history and modern-day fun. Vibrant Ghent is well worth a stay. Quirky Ghent offers a fascinating cultural cocktail brimming with trendy, modern urban life. It is a city where people enjoy the good life: a chilled-out place where anything goes and a city that feels human. National Geographic Traveller Magazine calls Ghent the most authentic historic city in the world, and it is buzzing with life 24 hours a day.

Ghent has to be not just seen but experienced. Take your time, get lost in the historic centre, explore the museums, enjoy our culinary talent and throw yourself into the bustling nightlife.

Below are 10 tips on what to see and do in Ghent:

### 1. The Castle of the Counts

A trip to Ghent is simply not complete without a visit to the mysterious ‘Castle of the Counts’. This important sight in Ghent is a castle with a very turbulent past, closely intertwined with the complex—often stormy—political and social history of the city. It is the only remaining mediaeval castle with a moat and largely intact defence system in Flanders. Your visit to the Castle of the Counts will give you a complete picture of heraldic culture in the 12th century. The gatehouse, ramparts, keep, count’s residence and stables are open to visitors. The Castle of the Counts boasts a unique collection of torture equipment. What used to be the pantry now features the torture equipment, which is displayed in a suggestive executioner’s cabinet. The former courtroom features the collection of judicial objects. The Castle of the Counts also hosts all kinds of cultural activities, events and activities, for example during the Ghent Festivities. It is also a popular place to get married for Ghent’s locals.



## 2. The Ghent Altarpiece: supreme divine art



© Wikipedia / Web Gallery of Art

The Ghent Altarpiece, or 'The Adoration of the Mystic Lamb' by the Van Eyck brothers, completed in 1432, is recognized worldwide as a great work of art, and one of the most influential paintings ever made. It is an absolute must-see during your stay in Ghent. A total of 18 panels form a magical evocation of scenes from the Bible, as well as a portrait of the church warden, Joos Vijd, who commissioned the altarpiece, and his wife Elisabeth Borluut. The monumental Ghent Altarpiece was painted on oak panels covered in thin layers of a mixture of chalk and animal glue. The figures were applied in several layers of oil paint. The combination of the painstaking work and transparent paint creates an extra dimension. Discover it for yourself as you stand in front of this masterpiece. You will see that an inner glow seems to radiate from the painting: the light of the divine.

## 3. History on the *Graslei* and *Korenlei*



Ships have been docking here since the 11th century and Ghent wouldn't have it any other way. The beauty of the Graslei in Ghent brings everyone and everything to a standstill. This is the place where beautiful façades are reflected in the River Lys. Tourists and residents like to relax on either side of

the water, whether dangling their legs over the quay, or sitting comfortably at a café terrace. The houses by the water live and breathe history. The *Cooremetershuys* is now an accessory store. In the Middle Ages, however, the official corn measurer presided over the grain trade there. Have a good look at the completely restored façade of the Guild House of the Free Sailors as well. A lot of money has been invested in this building over the centuries, and it shows! The stately stepped gable from the old corn store has been watching over the town since the 13th century.

#### 4. Old St Elizabeth Beguinage

The beguinages of Flanders and the Netherlands are always oases of calm and stillness, where you might still expect to see an old beguine mumbling her prayers in a doorway. Two of Ghent's three beguinages have been included on the UNESCO World Heritage list. Although the Old St Elizabeth Beguinage, in *Begijnhofdries* in Ghent, is no longer enclosed by a wall, making it simply part of the city, it still has a unique atmosphere. Today the Old St Elizabeth Beguinage is known as 'holy corner', a place of religious tolerance, because it has no less than three different churches: one is Roman Catholic, one is Orthodox and the other is Protestant.



#### 5. Ghent Belfry, world heritage

Look up at the magical city skyline: you can't miss it. The Belfry is the middle tower in the famous row of three, between St Bavo's Cathedral and St Nicholas' Church. A fiery dragon, the proud symbol and mascot of Ghent, guards the historic heart of the city. The Ghent Belfry symbolises the city's prosperity and independence. The Cloth Hall, built onto the Belfry, was completed in 1907. The flamboyant Brabant Gothic style of the Cloth Hall is an ode to the industry to which Ghent owes so much. Every Sunday morning you can hear the carillonneur at work between 11 am and 12 noon, and you can enjoy a carillon concert on the first Friday of each month from 8 to 9 pm. In the summer months, the concert takes place every Saturday night! The Ghent Belfry is a recognised UNESCO World Heritage.



## 6. St Michael's Bridge, romantic Ghent



St Michael's Bridge is the place for romantic hearts. Wherever you look, there is a breathtaking view: you are surrounded by 360 degrees of Ghent's charming beauty. Get an extra-special fairy-tale view of the heart of Ghent at twilight, when all the historic sights are gorgeously illuminated. St Michael's Bridge used to be a flat turntable bridge, but it was replaced by stone arches at the beginning of the 20th century. In the middle of the bridge is a beautiful central lantern with a bronze statue of St Michael.

## 7. St Bavo's Cathedral: majestic tower



This magnificent sight on *Sint-Baafsplein* in Ghent is a proud old lady: don't just walk past her on your city trip. St Bavo's Cathedral is the oldest parish church in the lively heart of Ghent. It stands on the site of a 10th century church and a 12th century Romanesque church. The latter was dedicated to St John the Baptist. In the Middle Ages, Ghent was a rich and powerful city that had the means to commission ever-larger and more opulent churches. So the Church of St John the Baptist was converted during the 15th and 16th centuries into the imposing Gothic St Bavo's Cathedral.

## 8. Magical Ghent in the evening

As evening falls, the daylight in Ghent does not simply make way for the streetlights. There is light art to enjoy as well. Streets, squares and buildings are covered in an artistic light display. It is almost as though the city were getting dressed up for the theatre. The effect is awe-inspiring. Discover Ghent Alight and immerse yourself in this de-light-ful evening experience! The Ghent Light Plan was first designed in 1998. The idea was to provide sustainable lighting for the city without wasting energy. But at the same time, it has transformed the centre of Ghent into a magical nocturnal landscape of light and shadow. Architectural accents, streets, monuments and squares are lit up to display them at their best. Ghent is a leading light in combining environmentally conscious lighting with beauty. Let the play of atmospheric lights spark your imagination. Rediscover the city by night in a whole different way. The city has received many prizes and international acclaim for its pioneering role in integrated city lighting and illumination.



## 9. Ghent: City of Art

Do you like modern art or would you rather look at paintings by the Flemish Old Masters? In Ghent you will find the past right alongside the present. Centuries of history and culture go hand in hand here with contemporary liveliness and modern creativity. Each of the museums in Ghent is an experience in its own right.

A wide range of themes such as psychiatry, the visual arts or the city's industrial past offer something for everyone. The Adoration of the Mystic Lamb by the Van Eyck brothers is one of Ghent's absolute top attractions. Every season, the S.M.A.K. comes up with astonishing international exhibitions at world level.



## 10. Ghent for Foodies

Of all the culinary specialities of the region, *Ghent waterzooi* is undoubtedly the best known. Ghent also has one of the most exciting culinary scenes in Europe. Proportionally, the city has more vegetarian restaurants than say Paris or London, and therefore calls itself the veggie capital of Europe, a title to be proud of! There are dozens of fun, unique little restaurants, shops and there is even an organic supermarket!



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## GHENT UNIVERSITY



CAMPUS BOEKENTOREN WITH THE ROZIER-PLATEAUCOMPLEX, UNIVERSITY LIBRARY & BLANDIJNBERG  
© UGENT, FOTO JONAS VANDECASTEELE & YENTL VANDENDRIESSCHE

Ghent University, a top 100 university and one of the major universities in Belgium, was established by King William I of the Netherlands in 1817. After the Belgian revolution of 1830, the newly formed Belgian state began to administer the university. Ghent University is one of the biggest Flemish universities with about 44,000 students and 9,000 staff members. 11 faculties offer more than 200 courses and conduct in-depth research within a wide range of scientific domains. Ghent University Global Campus is also the first European university in Songdo, South Korea.

### EELab – the Electrical Energy Laboratory

Part of the Faculty of Engineering and Architecture, Department of Electromechanical, Systems and Metal Engineering, is the Electrical Energy Laboratory. This research group, EELab, is active in various areas of electrical energy conversion, electrical drives (electrical machines, power electronics for drives, and control of drives), electromagnetic field calculations (development of FE software for field calculations and application to the design of electromagnetic devices), magnetic material modelling and characterization and electrical power networks (including also power electronic converters for mains applications).



At the Electrical Energy Laboratory, research is performed in the following areas:

- Low frequency electromagnetic fields and magnetic materials;
- Power Systems;
- Power Electronics;
- Drive Systems and control for electrical machines;
- Energy and cluster management.

Next to these research areas, the following (non-exhaustive) list of services is offered to industry:

- Experimental identification of magnetic properties of ferromagnetic materials: magnetic measurements of magnetization curves, hysteresis loops, electromagnetic losses, ...
- Numerical electromagnetic and thermal field computations: the numerical computations are combined with routines for optimizing low frequency electromagnetic devices.
- Design of active and passive magnetic shields for low frequency applications such as power cables, induction heating,...
- Optimization and design of electrical machines with high efficiency, based on numerical models and optimization routines, and experimental testing
- Control, design, optimization and condition monitoring of dynamic drivetrains driven by electric and hydraulic actuators
- Lemcko, as part of EELAB, is specialised in troubleshooting power quality and EMI problems in electrical grids and industrial automation networks. Lemcko also assists on the development of new electrical and electronic devices and can perform pre-/full-compliant testing according to the relevant European Standards. Lemcko gives education on-demand on these topics.
- EELab is member of Flanders Make, the strategic research centre in Flanders for the manufacturing industry



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- More information about the University of Ghent: <https://www.ugent.be/en/>
- More information about the Electrical Energy Laboratory: <https://www.ugent.be/ea/eemmecs/en/research/eelab/electrical-energy-laboratory>

**GENT ICC – INTERNATIONAL CONVENTION CENTER****Gent ICC – International Convention Center**

Van Rysselbergheedreef 2 - Citadelpark, 9000 Gent, Belgium

Gent ICC: <https://www.iccgent.com/?lang=en>

## EPE ECCE Europe Conference

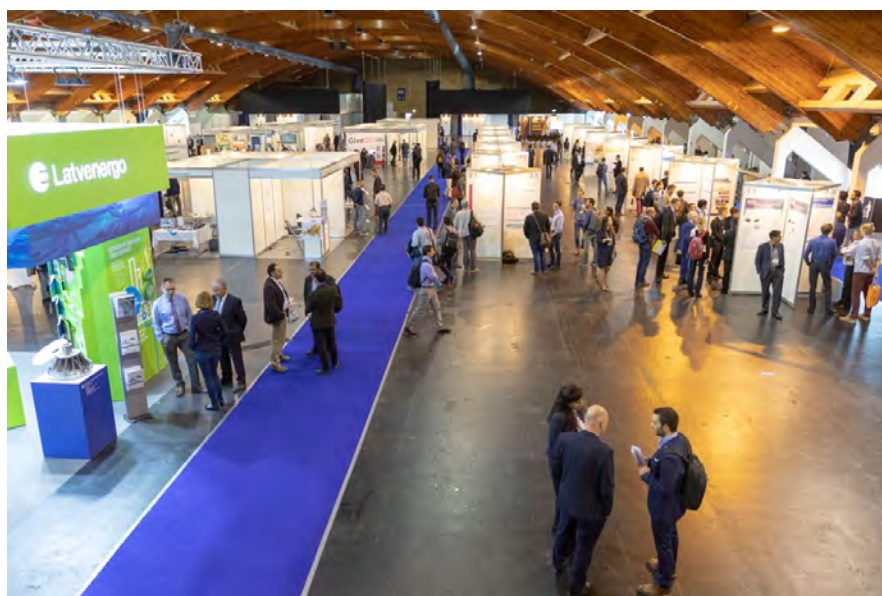
### AIMS OF THE CONFERENCE

The EPE ECCE Europe conference is the largest in its field, attracting experts from numerous countries every year to join in the discussions. With the objective to exchange and meet fellow professionals and academics, the EPE ECCE Europe conference brings together researchers, engineers, etc. working at the forefront of power electronics technologies. For this type of event, where the future role of power electronics in this ecological and technological revolution will be explored, the EPE ECCE Europe conference is one of the privileged places. EPE ECCE Europe Ghent 2021 will provide the opportunity to discuss a number of subjects, not only during the lecture and poster sessions of the conference but also at the exhibition, industrial forums and tutorials.

### ORGANIZATION AND VENUE

The Power Electronics community will gather in **Ghent**, Belgium, from 6 to 10 September 2021, to exchange views on research progresses and technological developments in the various topics described hereunder. On Monday 6 September a number of tutorials will be organised and several technical visits are planned on Friday 10 September.

The 23<sup>rd</sup> Conference on Power Electronics and Applications (and Exhibition), EPE'21 ECCE (Energy Conversion Congress and Expo) Europe is co-sponsored by the EPE Association and IEEE PELS. It will take place at the Gent ICC – International Convention Center.



EPE'18 ECCE Europe, Riga – Exhibition and dialogue sessions

## LIST OF TOPICS

Electrification of mobile and non-mobile systems is progressing fast. Novel battery systems are being developed not only for drones, passenger cars and heavy-duty vehicle applications, but also for stationary storage applications. They need intelligent Battery Management Systems and control units as well as appropriate charging devices. For vehicle applications, high-power charging stations are being developed to reduce charging time. Bi-directional V2X charging systems allow for better grid management and, when combined with smart charging, for an increased share of renewables in the electricity mix. Power electronics interfaces, with their emerging wide bandgap (WBG) technologies (such as SiC and GaN), are a key element in these developments towards high energy-efficient systems. The reliability aspect is crucial in these and many other applications. Considering the reliability aspect in the design phase of battery systems, drivetrains, charging systems with both AC and DC networks, etc., will improve the lifespan of those systems and provide more robustness with less maintenance.

The EPE ECCE Europe conference is the largest in its field, attracting experts from numerous countries every year to join in the discussions. With the objective to exchange and meet fellow professionals and academics, the EPE ECCE Europe conference brings together researchers, engineers, etc. working at the forefront of power electronics technologies. For this type of event, where the future role of power electronics in this ecological and technological revolution will be explored, the EPE ECCE Europe conference is one of the privileged places. EPE ECCE Europe Ghent 2021 will provide the opportunity to discuss a number of subjects, not only during the lecture and poster sessions of the conference but also at the exhibition, industrial forums and tutorials.

On top of the tutorials, lecture and dialogue sessions and technical visits, the organising committees will propose several discussion sessions within the industrial forums as well as special sessions of power electronics related trends. The conference will specifically focus on the following challenging topics:

Tuesday, the 7<sup>th</sup> of September 2021: **Battery Systems**  
(BMS, Balancing Circuits, Control Units,...)

Wednesday, the 8<sup>th</sup> of September 2021: **Transportation Electrification**  
(Charging Systems, V2X, Energy Management,...)

Thursday, the 9<sup>th</sup> of September 2021: **Reliability of Power Electronic Systems and Components**  
(Failure Mechanisms, Predictive Algorithms,...)

The conference topics are as follows:

### 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 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 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 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

**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 6: RENEWABLE ENERGY POWER SYSTEMS**

- 6.a. Wind-Energy Systems
- 6.b. Solar-Energy Systems
- 6.c. Other Renewable-Energy Systems
- 6.d. Energy Harvesting
- 6.e. Energy Storage Systems for Renewable Energy

**Topic 7: GRIDS, SMART GRIDS, AC & DC**

- 7.a. Power Electronics in Transmission and Distribution Systems
- 7.b. HVDC & FACTS
- 7.c. Micro-Grids
- 7.d. Smart Grids
- 7.e. Mobile Power Stations

- 7.f. Power Quality Issues and Power Factor Correction Techniques
- 7.g. DC Grids including Fault Coordination and Protection
- 7.h. Hybrid Circuit Breakers
- 7.i. Real-Time Simulation and Hardware in the Loop

**Topic 8: E-MOBILITY**

- 8.a. Electric Drive Trains for On- and Off-Road Vehicles
- 8.b. Electric Drive Trains for Rail Vehicles
- 8.c. Electric Drive Trains for Aerospace and Space Applications
- 8.d. Electric Drive Trains for Marine Applications (Offshore, Subsea and Ships)
- 8.e. On-Board Power Converters
- 8.f. Batteries: Management Systems (BMS), Monitoring and Life-Time Prediction
- 8.g. Vehicle Battery Chargers: Contact and Contactless
- 8.h. Fuel Cells: Converters, Control, Diagnostics and System Integration
- 8.i. Smart Charging and Vehicle to Grid Interaction

**Topic 9: POWER SUPPLIES AND INDUSTRY-SPECIFIC APPLICATIONS**

- 9.a. Low Voltage DC Power Supplies
- 9.b. High Voltage DC Power Supplies
- 9.c. Distributed Power Supplies
- 9.d. Uninterruptible Power Supplies (UPS)
- 9.e. Lighting: Solid-State Lighting and Electronic ballasts
- 9.f. Contactless (Wireless) Power Supply
- 9.g. Industry-Specific Applications (Cement, Steel, Paper, Textile, Mining, etc...)
- 9.h. Applications in Physics Research and Related Areas

**Topic 10: DATA ANALYSIS, ARTIFICIAL INTELLIGENCE AND COMMUNICATION**

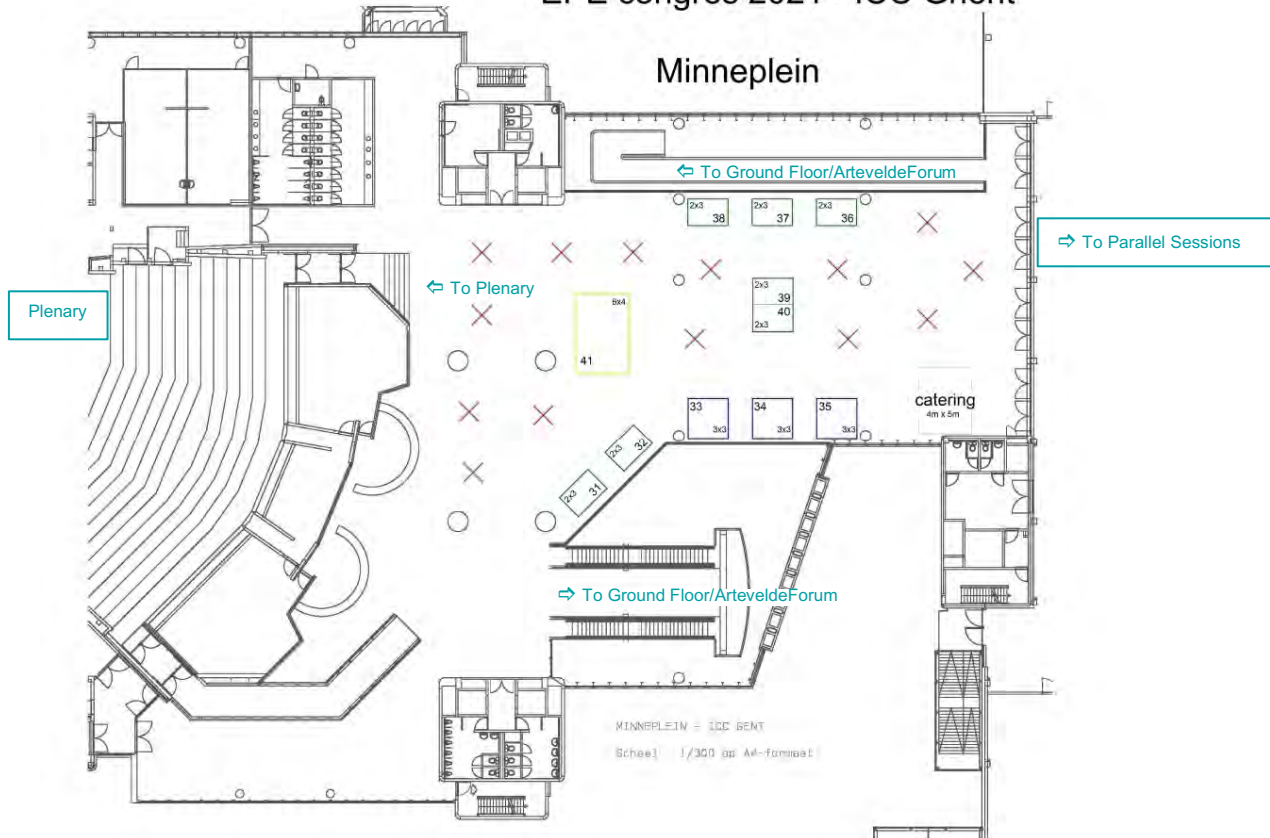
- 10.a. Data Analysis applied to Power Electronics and Drive Systems
- 10.b. Application of Artificial Intelligence to Power Electronics and Drive Systems
- 10.c. Communication for Power Electronics and Drive Systems
- 10.d. Wireless Control
- 10.e. Diagnostics

## GENT ICC - EXHIBITION MAP

EPE congres 2021 - ICC Ghent



EPE congres 2021 - ICC Ghent



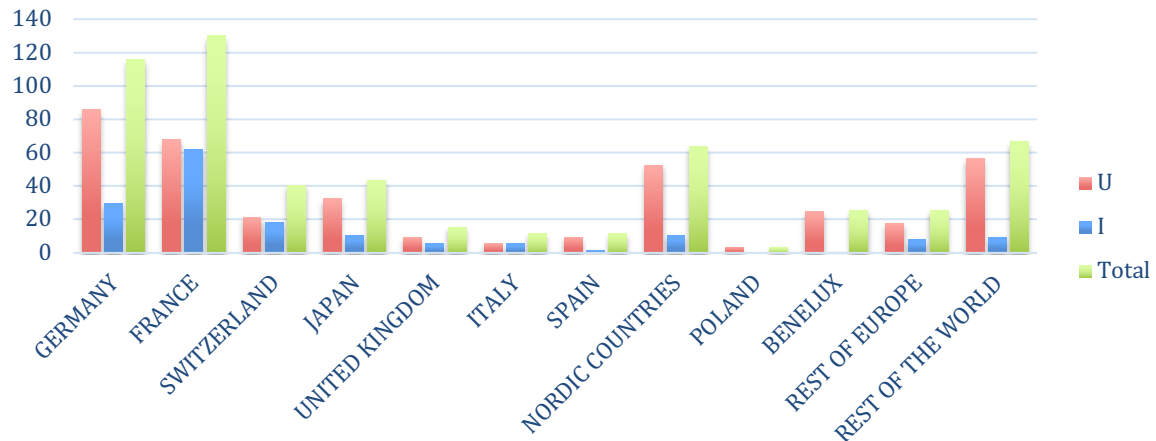
## Facts and Figures

### PARTICIPATION AT PREVIOUS EDITIONS

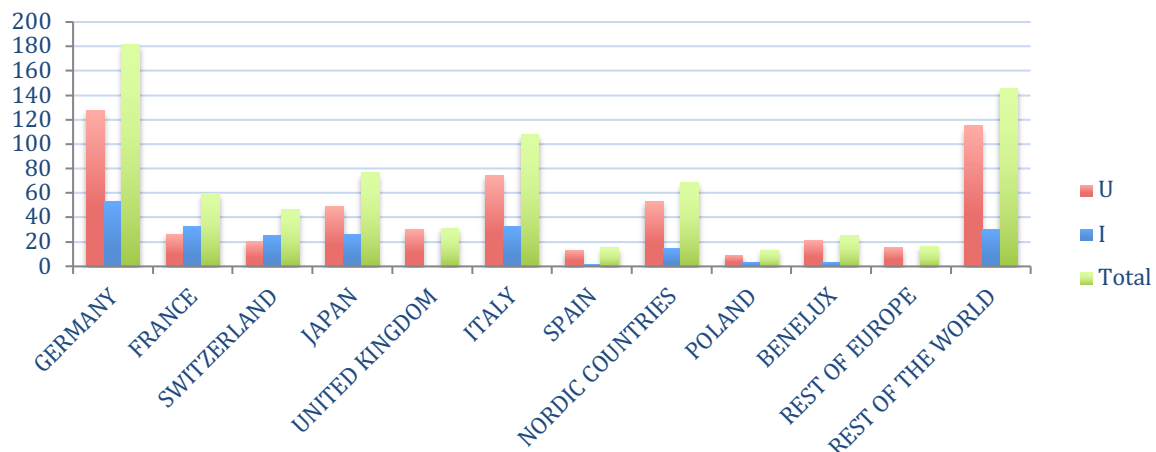
<b>1985:</b>	Brussels, Belgium	Nº of participants:	<b>650</b>
<b>1987:</b>	Grenoble, France	Nº of participants:	<b>750</b>
<b>1989:</b>	Aachen, Germany	Nº of participants:	<b>850</b>
<b>1991:</b>	Firenze, Italy	Nº of participants:	<b>1000</b>
<b>1993:</b>	Brighton, United Kingdom	Nº of participants:	<b>750</b>
<b>1995:</b>	Seville, Spain	Nº of participants:	<b>800</b>
<b>1997:</b>	Trondheim, Norway	Nº of participants:	<b>975</b>
<b>1999:</b>	Lausanne, Switzerland	Nº of participants:	<b>1040</b>
<b>2001:</b>	Graz, Austria	Nº of participants:	<b>850</b>
<b>2003:</b>	Toulouse, France	Nº of participants:	<b>1000</b>
<b>2005:</b>	Dresden, Germany	Nº of participants:	<b>805</b>
<b>2007:</b>	Aalborg, Denmark	Nº of participants:	<b>875</b>
<b>2009:</b>	Barcelona, Spain	Nº of participants:	<b>1130</b>
<b>2011:</b>	Birmingham, United Kingdom	Nº of participants:	<b>1002</b>
<b>2013:</b>	Lille, France	Nº of participants:	<b>1107</b>
<b>2014:</b>	Lappeenranta, Finland	Nº of participants:	<b>653</b>
<b>2015:</b>	Geneva, Switzerland	Nº of participants:	<b>970</b>
<b>2016:</b>	Karlsruhe, Germany	Nº of participants:	<b>919</b>
<b>2017:</b>	Warsaw, Poland	Nº of participants:	<b>913</b>
<b>2018:</b>	Riga, Latvia	Nº of participants:	<b>650</b>
<b>2019:</b>	Genova, Italy	Nº of participants:	<b>950</b>
<b>2020:</b>	Lyon, France (VIRTUAL)	Nº of participants:	<b>565</b>

## PARTICIPANTS - STATISTICS FROM PREVIOUS EPE ECCE EUROPE CONFERENCES

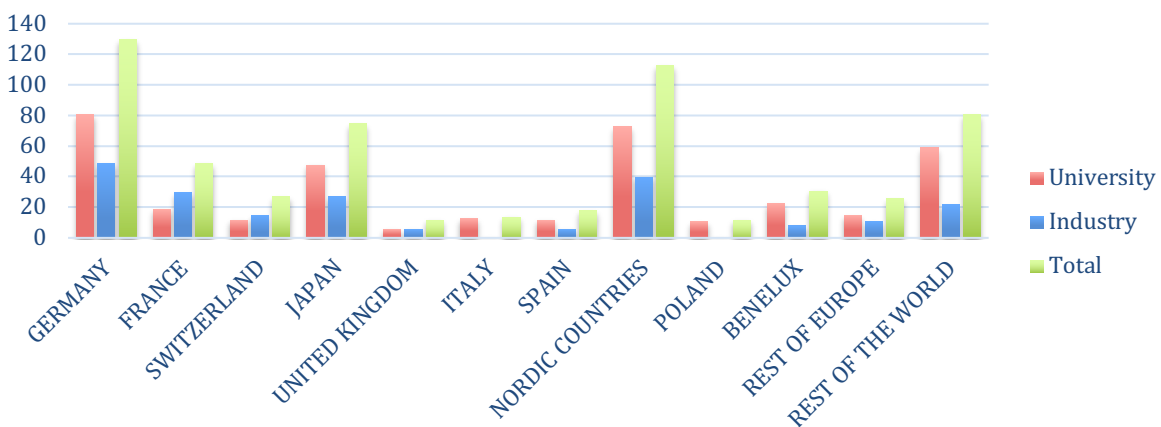
### EPE ECCE Europe 2020 - Lyon (Virtual)



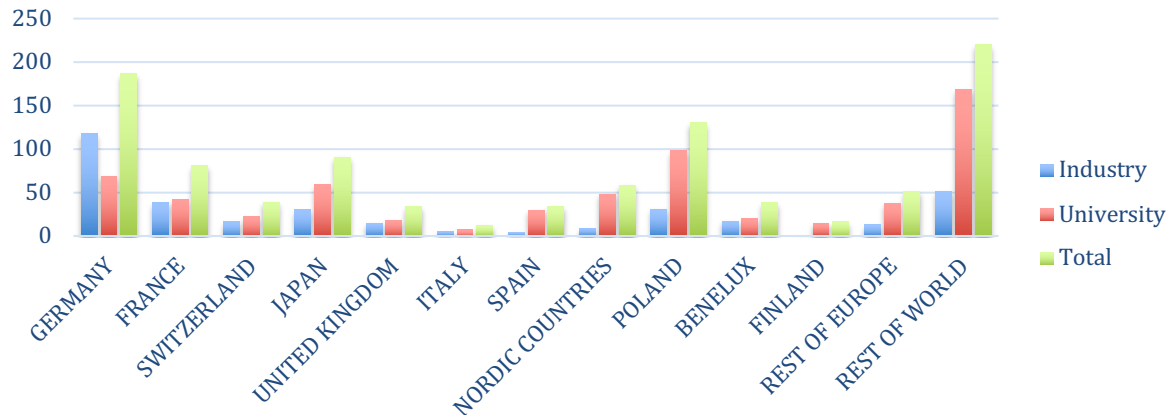
### EPE ECCE Europe 2019 - Genova



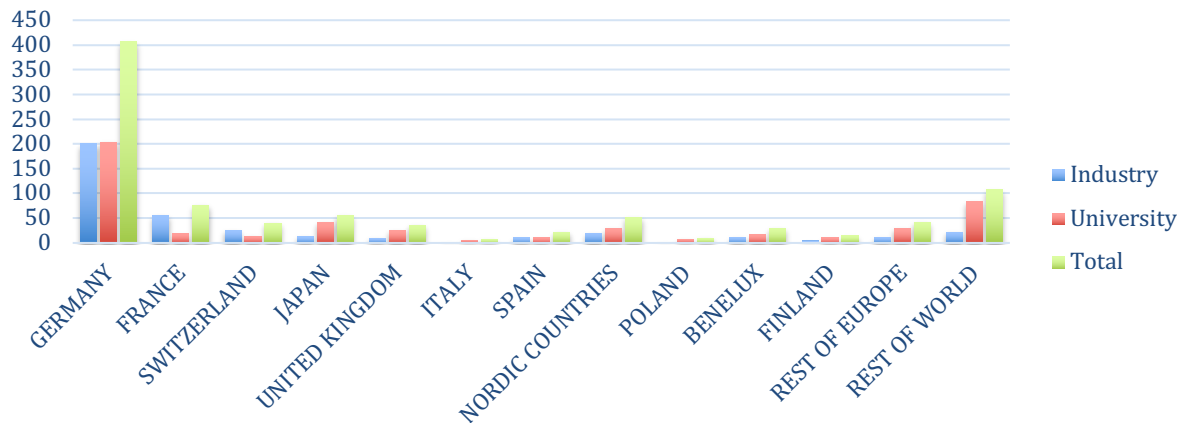
### EPE ECCE Europe 2018 - Riga



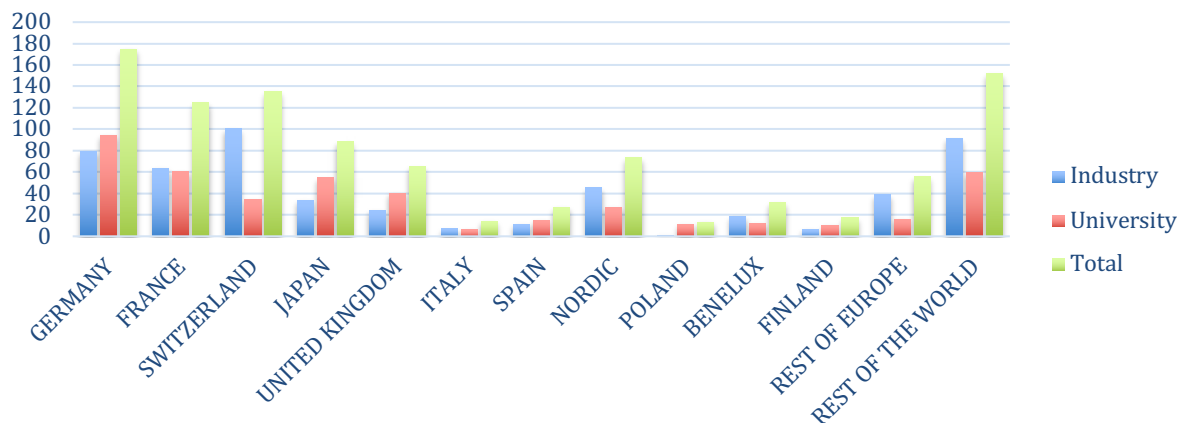
## EPE ECCE Europe 2017 - Warsaw



## EPE ECCE Europe 2016 - Karlsruhe



## EPE ECCE Europe 2015 - Geneva



## EXHIBITORS FROM 2011 TO 2020 AT EPE ECCE EUROPE

ABB	Semiconductor	PVA TePla Analytical Systems
ADMESSE Elektronik	ICEL-KENDEIL	RENAULT
Adwatec Oy	IEEE PELS	RGM SpA
Agilent Technologies	IET	Rohde & Schwarz
Allatherm	imec	ROHM Semiconductor
Alstom	imperix	SAFRAN Group
AMS Technologies	Imtech Industry International	Science City Research Alliance
ANSYS	Intelec 2011	ScienLac Electronic Systems
Applied Magnetics	ISE Magnetics	Sensitec
Axco-Motors Oy	John G. Peck Ltd	SERIGROUP srl
AVL	Johann Lasslop	SEW-EURODRIVE
Behlke Power Electronics	Kaschke Components	SIEMENS
Boige & Vignal Transport	Keysight Technologies	SMA Solar Technology
Boschman / APC	Kontram Oy	Speedgoat
Bs&T Frankfurt am Main GmbH	Leclanché Capacitors	SP Control Technologies
CALTEST Instruments	LEM International	SRT Microcéramique
CEDRAT	Lemsys	Stäubli
CINERGIA	Linksium- EPICUB-G2Elab	STS GmbH & Co KG
COMER srl	Magna-Power Electronics	SuperGrid Institute
Converteam	Manitoba Hydro International – PS	Taylor & Francis Group
CST-Computer Simulation	CAD	Technika Obliczeniowa
Technology	MathWorks LTD	Technosoft SA
DACPOL	MDL Technologie	TEKNOCEA/CITCEA-UPC
Daimler	MeasureIT (National Instrument)	Teledyne LeCroy
DEWESoft	Mentor Graphics	TESPOL
Dewetron	Mersen	Thales Alenia Space Belgium
Drive eO	Mesago PCIM GmbH	Thales Microelectronics
dSPACE	Methode Electronics	The Ampère House
Dynex	Mitsubishi Electric Europe	TOWERJAZZ
ECPE	MONT-ELE	Transfer Multisort Elektronik
EEL SpA	MUECAP GmbH – ICEL s.r.l	Transphorm
EGSTON System Electronics	National Instruments	Transtech GmbH & Co KG
Electronic Concepts Europe	NIDEC INDUSTRIAL SOLUTIONS	Transys
ETRI	OCEM Power Electronic	Triphase nv.
EUROCONTROL SpA	Omicron Lab	TRUMPF Huettinger
FTCap	Opal-RT Technologies	TRW
FuG Elektronik	PEM UK - Power Electronic	TWERD Power Electronics
Fuji Electric Europe	PGE	Typhoon HIL
GaN Systems	Phase Motion Control S.p.A.	United Technologies Research
Gecko Simulation	Plexim GmbH	Center
General Electric	PMK	VACON
Goaland	Pole MEDEE	VISEDO
GvA Power Electronics	Poseico SpA	Wiley Blackwell
HF Instruments & IWATSU	Positronic Europe	Yokogawa Europe
HIMAG	Power Design	ZES Zimmer
HIOKI E.E. CORPORATION	Power Electronic Measurements	Zurich Instruments AG
HBM-Hottinger Baldwin Messtechnik	POWERSYS	
Hrep & Westcode	PPM	
HVP High Voltage Products	Pulse MC2	