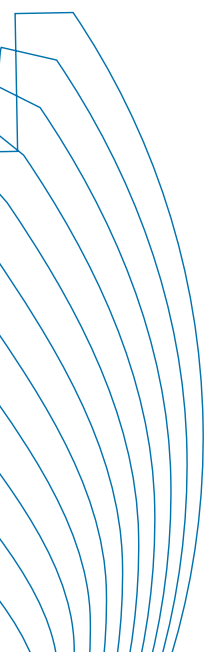




E|DPC-2019

Electric Drives Production
Conference 2019



9th International

Electric Drives Production Conference

3 and 4 December 2019
Esslingen, Germany

Program and Exhibition Brochure

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ABOUT E|DPC

Since 2011, the international Electric Drives Production Conference and Exhibition has established as an outstanding platform for the exchange of experiences for researchers, product developers, production experts, purchasers and potential users of electric drives.

The E|DPC 2019 offers nearly 63 technical contributions, fifty-five scientific and application oriented presentations within two days. The conference offers an comprehensive and in-depth discussion of the latest research on electric drive production and application-related technologies to the participants. In addition to insulation and sheet metal processing, the core topics of the conference will be the design and process development for windings, in particular hairpin windings. Current topics of E-Mobility, Industry 4.0 application cases and other related topics along the value chain will also be presented in accompanying sessions. Comprehensive industrial exhibitions, poster presentations and an inspiring social program will complement the conference and create a sustainable experience for every participant.

ON-SITE ORGANIZATION

Opening time conference:

Tuesday,	3 December 2019,	08:30 AM – 05:30 PM
Wednesday,	4 December 2019,	07:30 AM – 03:15 PM

Phone: +49 8191 125-255

Opening time table top exhibition:

Tuesday,	3 December 2019,	09:00 AM – 05:00 PM
Wednesday,	4 December 2019,	08:00 AM – 03:00 PM

PUBLICATION

All **Scientific Fullpapers** accepted and registered will be part of the proceedings of E|DPC. The scientific contributions will be presented orally in various sessions or as poster presentations and the corresponding papers will be published on **IEEE Xplore®** and indexed by **Scopus** and **Google Scholar**.

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Dear distinguished experts in drive technology!

Slowly but powerfully, the climate change and the enduring pollution of the environment crawls into everybody's consciousness. Millions of young people demonstrate for their right to inherit an intact nature. They are requesting a society that does not overexploit its precious resources ruthlessly, disposes its waste irresponsibly and contaminates our ecosystem with hazardous toxins. Especially the anthropogenic upsurge of carbon dioxide will affect the life of future generations dramatically.

Consumers are successively respecting the concept of sustainability in their purchasing behavior. Highly qualified and committed managers also take the company's values into account in their decision-making process and are aware of the social impact of their actions. Even large private equity funds federate in an unprecedented worldwide Net-Zero Asset Owner Alliance in order to ban investments in carbon-based corporations, and more and more states deploy immense actions to protect nature, e.g. by bringing coal-fired power plants to an end, supporting electro-mobility and even by prohibiting combustion engine driven cars.

The most effective und ultimate action to impede climate warming will be the exit out of the hitherto cherished fossil economy. Sooner or later we will no longer be able to burn oil, gas and coal to heat our homes, to generate electric energy and to drive our cars. The long-term alternative will be the all-electric society, which we already discussed at the first E|DPC in 2011. Electrical machines play a decisive role here, as they are the best solution for converting kinetic energy into electricity and vice versa. On the one hand, electric generators engender electric current in biomass power plants, windmills and hydro-power stations both inconspicuously and decentralized as well as in large scale and powerful. Otherwise, electric motors are able to move cars, boats, even planes, any other kind of vehicles and all sorts of production equipment, clean, quiet, efficient and infinitely variable, as well as economical and without wear. Last but not least, electrically driven heat pumps will use regenerative energy with a very high degree of efficiency for a convenient living.

The expected significant growth of the demand for electric machines, feedstock and components as well as production equipment and automation systems required for them will surely overcompensate the potential economic downturn and strengthen the 9th International Electric Drives Production Conference (E|DPC) 2019. More than ever, intelligent applications, sophisticated electric motor designs, the usage of new materials, process innovations and finally yet importantly operational excellence are crucial for strengthening the competitiveness in times getting tougher.

All these stimulating topics will be covered in the E|DPC 2019, which presents the latest news in materials, production processes, substances and concepts for electric drives. Again, 64 profound and inspiring technical contributions presented by experienced industrial experts and innovative scientists will offer an ideal platform for the exchange of knowledge and the fostering of your personal network in this emerging technical field. Additionally, 18 exhibitors show their cutting-edge technologies in the foyer to discuss your individual requirements and adapt your needs.

The E|DPC established to be the unique place for the exchange of technical and informal experiences and for tying your personal network in the electric drives production branch. With your support, the E|DPC developed over the last years towards the most recognized convention in this emerging field.

As promised, we roam through the most important industrial areas in Germany to show exciting production facilities for electric motors and by the way, attractive conference locations to you. Hence, I am looking forward meeting you at the congress center in Esslingen.

A handwritten signature in blue ink that reads "Jörg Franke". The signature is fluid and cursive, with the first name "Jörg" being more prominent.

Prof. Dr.-Ing. Jörg Franke

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**TIME SCHEDULE
OVERVIEW**

TUESDAY, 3 DECEMBER 2019				
8:30 AM	Welcome Coffee			Foyer
9:00 AM	Opening Keynote: Prof. Doppelbauer, Martin, Karlsruhe Institute of Technology (KIT) (DE)			
9:35 AM	Keynote: Flemming, Johannes, P3 automotive GmbH			
10:10 AM	Opening the Conference: Prof. Franke, Joerg, University of Erlangen-Nuremberg (DE)			
10:15 AM	Coffee Break			Foyer
	Track 1 (Plenary Hall)	Track 2 (Room Fils)	Track 3 (Room Aich)	
10:45 AM	Winding Technologies – Round Copper Wire	Manufacturing of Rotors	Industry 4.0 Applications	
12:15 PM	Poster Session and Lunch Break			Foyer
1:30 PM	Winding Technologies – Shaped Copper Wire	Testing Technology for PM-Rotors	Simulation Based Optimization of Electric Motors	
3:00 PM	Coffee Break			Foyer
3:30 PM	Winding Technologies – Advances in Manufacturing Processes	Winding Technologies – Innovative Winding Shapes	Power Electronics & Control Methods	
5:00 PM	End of Conference Day one			
7:30 PM	Evening Reception			

WEDNESDAY, 4 DECEMBER 2019				
7:30 AM	Welcome Coffee			Foyer
	Track 1 (Plenary Hall)	Track 2 (Room Fils)	Track 3 (Room Aich)	
8:00 AM	Insulation Technologies I	Linear Actuators	Manufacturing of Laminated Stacks	
9:30 AM	Coffee Break			Foyer
10:00 AM	Insulation Technologies II	Performed Concentrated Windings	Manufacturing of Magnetic Components	
11:30 AM	Poster Session and Lunch Break			Foyer
12:45 PM	Insulation Technologies III	E-Mobility Concepts	Innovative Electric Machine Design	
2:15 PM	Coffee Break			Foyer
2:45 PM	Closing Session: Prof. Kampker, Achim, RWTH Aachen University (DE)			
3:15 PM	Closing Words and Best Paper Award: Prof. Franke, Joerg, University of Erlangen-Nuremberg (DE)			
3:30 PM	End of Conference			

TIME SCHEDULE

Tuesday, 3 December 2019

8:30 AM	Welcome Coffee		
9:00 AM	Opening Keynote: Prof. Doppelbauer, Martin, Karlsruhe Institute of Technology (KIT) (DE)		
9:35 AM	Keynote: Benchmark of Modern Electrification Concepts – Which Electric Vehicles Fascinate Customers with their Technologies? Flemming, Johannes, P3 automotive GmbH (DE)		
10:10 AM	Opening of the Conference: Prof. Franke, Joerg, University of Erlangen-Nuremberg (DE)		
10:15 AM	Coffee Break in Foyer Ground Floor		
	Session 1: Plenary Hall Winding Technologies – Round Copper Wire	Session 2: Room Fils Manufacturing of Rotors	Session 3: Room Aich Industry 4.0 Applications
10:45 AM	Innovative Needle Winding Production Process: a 5-Year Journey Kiefer, Dieter, Marsilli Deutschland GmbH (DE)	Cutting Edge Rotor Casting Technology – High Performance Cast Rotors with Zero Porosity Szilágyi, Péter, breuckmann eMobility GmbH (DE)	Machine Learning in Electric Motor Production – Potentials, Challenges and Exemplary Applications Mayr, Andreas, Friedrich-Alexander University of Erlangen-Nuremberg (FAU) (DE)
11:15 AM	Flexible and Highly Productive Hairpin Manufacture with Bihler Servo Technology Lehmann, Martin, Otto Bihler Maschinenfabrik GmbH & Co.KG (DE)	Sensitivity Analysis and Validation of the Intelligent Assembly Process for Permanent Magnet Rotors with the Balancing Grade G 2.5 Wößner, Wilken, Karlsruhe Institute of Technology (KIT) (DE)	Quality Modelling in Battery Cell Manufacturing Using Sensor Fusion – A Review Wanner, Johannes, Institute for Energy Efficiency in Production (EEP) (DE)
11:45 AM	Feasibility Study for Enameled Round Copper Wire Compression within Grooves of Electrical Machines Dr. Sell-Le Blanc, Florian, Weiße, Lando, Aumann Espelkamp GmbH (DE)	Comparison of Additive Balancing Processes for Rotors in the Context of High Speed Electric Traction Motors Masuch, Michael, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) (DE)	Fault Classification and Correction Based on Convolutional Neural Networks Exemplified by Laser Welding of Hairpin Windings Vater, Johannes, BMW Group (DE)
12:15 PM	Lunch Break in Foyer Ground Floor		
	Session 4: Plenary Hall Winding Technologies – Shaped Copper Wire	Session 5: Room Fils Testing Technology for PM Rotors	Session 6: Room Aich Simulation Based Optimization of Electric Motors
1:30 PM	Manufacturing Influences on the Motor Performance of Traction Drives with Hairpin Winding Gläsel, Tobias, Friedrich-Alexander-University of Erlangen-Nuremberg (FAU) (DE)	Vibro-Acoustic Investigations on Electric Motors Using Laser Doppler Vibrometry Fritzsche, Marco, Polytec GmbH (DE)	AC Loss Analysis with SyMSpace Including Actual Wire Positions Dr. Silber, Siegfried, Linz Center of Mechatronics GmbH (AT)
2:00 PM	Influence of Wire Tolerances on Hairpin Shaping Processes Wirth, Felix, Karlsruhe Institute of Technology (KIT) (DE)	Investigation of the Measurability of Magnet Quality for IPM Rotors by Using an Opposing Field and a Rotor Scan System Schwarzer, David, TU Berlin (DE)	Air Gap Influence in Axial Flux Machines with Different Excitation Schwarz, Patrick, TU Ilmenau (DE)
2:30 PM	Systematic Modification of Bar Wound Winding Characteristics Dr. Lindner, Mathias, IAV Automotive Engineering GmbH (DE)	Fast and Accurate Magnetic and Topographic Mapping of Permanent Magnet Rotors Dr. Vervaeke, Koen, Magcam NV (BE)	Thermal Analysis of a Hollow-Shaft Rotor Cooling System for a High Speed High Power Automotive Traction Motor Institution Dr. Gai, Yaohui, Motor Design Ltd. (GB)

TIME SCHEDULE

Tuesday, 3 December 2019

3:00 PM	Coffee Break in Foyer Ground Floor		
	Session 7: Plenary Hall Winding Technologies – Advances in Manufacturing Processes	Session 8: Room Fils Magnetic Materials and Manufacturing Processes	Session 9: Room Aich Power Electronics & Control Methods
3:30 PM	Validation of a Flatpack Bending Simulation Model Based on the Yield Strength Influences of Electrical Steel Sheets on Stator Core Diameter Wüterich, David, SEG Automotive Germany GmbH (DE)	E-Mobility and Induction Heating Technology: 2 Perfect Partners? Dr. Seitzer, Andreas, Himmelwerk Hoch- und Mittelfrequenzanlagen GmbH (DE)	User-Oriented Control of a Drive System over the Whole Operating Range Ketterer, Christina, Robert Bosch GmbH (DE)
4:00 PM	Resource-Efficient, Innovative Coil Production for Increased Filling Factor Linnemann, Maik, Fraunhofer-Institut für Werkzeugmaschinen und Umformtechnik (DE)	Heavy-Rare-Earth-Elements-Free Hot-Deformed Nd-Fe-B Magnets for Traction Motors Dr. Hioki, Keiko, Daido Steel Co., Ltd. (JP)	Effects of Fast Switching Semiconductors Operating Variable Speed Low Voltage Machines Kilper, Moritz, Daimler AG (DE)
4:30 PM	Development of a New Model Based Servo-Controlled Wire Tensile Force Control for Stator Winding Applications Hofmann, Janna, Karlsruhe Institute of Technology (KIT) (DE)	Automation Including Laser Processing for Prototype and Serial Production of Components for Electric Drives Krahl, Ingomar, Jonas & Redmann (DE)	SIMQN – Harmonic Energy Recycling with an Active Power Filter Mütze, Katharina, Condensator Dornit GmbH (DE)
5:00 PM	End of Conference Day One		
7:00 PM	Departure to Evening Reception by Bus		
7:30 PM	Evening Reception at Wichtel Hausbrauerei – for further information please see page 15.		

The blue timeslots are marking the application-oriented industrial contributions.

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TIME SCHEDULE

Wednesday, 4 December 2019

7:30 AM	Welcome Coffee in Foyer Ground Floor		
	Session 10: Plenary Hall Insulation Technologies I	Session 11: Room Fils Linear Actuators	Session 12: Room Aich Manufacturing of Laminated Stacks
8:00 AM	Testmethods for eDrive High Voltage Insulation Systems Dr. Herold, Christoph, Von Roll Schweiz AG (CH)	Improved Thermal Behavior of an Electromagnetic Linear Actuator with Different Winding Types and the Influence on the Complex Impedance Reißenweber, Lukas, Coburg University of Applied Sciences and Arts (DE)	Influence of Cutting Tool Wear on Core Losses and Magnetizing Demand of Electrical Steel Sheets Regnet, Martin, Technical University of Nuremberg GSO (DE)
8:30 AM	Welding Technologies for Hairpin Stators Bapp, Jaro, e-tech GmbH (DE)	Digital Twin of the Linear Winding Process Based on Explicit Finite Element Method Weigelt, Michael, University of Erlangen-Nuremberg (DE)	Measurement Technologies for Evaluation of Magnetic Properties of Stator Cores Dr. Mierczak, Lukasz, Dr. Brockhaus Messtechnik GmbH & Co. KG (DE)
9:00 AM	Insulation Materials for Electrical Motors – Characterization of Impregnating Resins Brodbeck, Markus, ELANTAS Europe GmbH (DE)	Electrically Powered Ultra Dynamic & High Force Density Actuators Froese, Patrick, MetisMotion GmbH (DE)	Series Production Challenges of High Efficient Flux Barrier Permanent Magnet Machines Dr. Greifelt, Andreas, FEAAM GmbH (DE)
9:30 AM	Coffee Break in Foyer Ground Floor		
	Session 13: Plenary Hall Insulation Technologies II	Session 14: Room Fils Preformed Concentrated Windings	Session 15: Room Aich Manufacturing of Magnetic Components
10:00 AM	Impregnation Process Solutions Motta, Carlo, bdtronic GmbH (DE)	FLEXICOIL: Increased Slot Filling with Preformed Coils Produced by Forming Technology Dr. Schencke, Thomas, INA – Drives & Mechatronics AG & Co. KG (DE)	New Soft Magnetic Cobalt-Iron Material for Electric Drives Dr. Fohr, Frederik, VACUUMSCHMELZE GmbH & Co. KG (DE)
10:30 AM	Voltatex® 4224 – Impregnating Resin with High Thermal Conductivity Rohrbeck, Lars-Göran, Axalta Coating Systems Germany GmbH & Co. KG (DE)	Manufacturing of Conically Shaped Concentrated Windings for Wheel Hub Engines by a Multi-Stage Upsetting Process Petrell, Daniel, RWTH Aachen University (DE)	Evaluation of Soft Magnetic Ferrosilicon FeSi6.5 for Laser Beam Melting Urban, Nikolaus, Friedrich-Alexander University of Erlangen-Nuremberg (DE)
11:00 AM	How New Magnet Wire with Peek Polymer Coating Can Help Increase Electric Machine Performance Bonnett, James, Victrex plc (GB)	Design and Evaluation Methodology for Insulation Systems of Low Voltage Drives with Preformed Coils Pauli, Florian, RWTH Aachen University (DE)	Potentials of Process Monitoring during Laser Welding of Electrical Steel Laminations Ziegler, Marco, Friedrich-Alexander University of Erlangen-Nuremberg (FAU) (DE)
11:30 AM	Lunch Break in Foyer Ground Floor – Accompanied by Poster Session		

TIME SCHEDULE

Wednesday, 4 December 2019

12:20 PM	Scientific Poster Session at Foyer Ground Floor		
	Knowledge-based Support of the Production System Design by Semantic Technologies Using the Example of the Electric Motor Production Mayr, Andreas, Friedrich-Alexander University of Erlangen-Nuremberg (DE)		
	Advances in Quality Monitoring of Stray Fields on Rotors of Permanent Magnet Synchronous Motors v. Lindenfels, Johannes, Friedrich-Alexander University of Erlangen-Nuremberg (DE)		
	Comparison and Analysis of Stator Plate Holder on Yokeless and Segmented Armature Machine Uta Nugraha, Yoga, Center of Excellence for Automotive Control & System Institut Teknologi Sepuluh Nopember (ID)		
	Accelerated Production Ramp-Up Utilizing Clustering and Visualisation of Process Chain Interrelationships Meiners, Moritz, Friedrich-Alexander University of Erlangen-Nuremberg (DE)		
	Deep-Learning-Based Automatic Optical Inspection of Soldering Connections in Power Electronics Production Metzner, Maximilian, Friedrich-Alexander University of Erlangen-Nuremberg (DE)		
	Coherences between Production Technology and Performance of Electric Traction Drives Halwas, Maximilian, Karlsruhe Institute of Technology (DE)		
	Study Experimental and Simulation of Cooling System in BLDC Motor Controller for Electric Scooter Firdaus, Mochammad Ilham, Center of Excellence for Automotive Control & System Institut Teknologi Sepuluh Nopember (ID)		
	Systematic Investigation of the Grooving Process and its Influence on Slot Insulation of Stators with Hairpin Technology Mayer, Dominik, Karlsruhe Institute of Technology (DE)		
	Session 16: Plenary Hall	Session 17: Room Fils	Session 18: Room Aich
	Insulation Technologies III	E-Mobility Concepts	Innovative Electric Machine Design
12:45 PM	EV/HEV Motor Encapsulation with Thermal Class H and Thermo-Conductive Resin System Dr. Menozzi, Alberto, Demak srl (IT)	Comparison of Two Different Winding Sets for dual Three-Phase Permanent Magnet Machines Keller, Daniel, Daimler AG (DE)	E-Motor Design using Multi-Physics Optimization Gruber, Hans, Altair (DE)
1:15 PM	Challenges in Electric Machine Stator Manufacturing and Their Influences on Thermal Performance Dr. Guo, Yufeng, University of Warwick (GB)	Cost Optimal Design Strategy of Electric Powertrains for Medium and Heavy-Duty Vehicles Based on Product Development and Production Costs Pandey, Rahul, RWTH Aachen University (DE)	Aerospace Electric Generator Design Considerations Dr. Reinap, Avo, Lund University (SE)
1:45 PM	Encapsulation of Electric Drives: Improving Cycle Time and Crack Resistance Dr. Gnädinger, Florian, Huntsman Advanced Materials CH	Method for Capacity Planning of Changeable Production Systems in the Electric Drives Production Niemann, Jens, BMW AG (DE)	Design Optimization for Torque Density in Brushless DC Motor with IPM V-type Using PSO Cahyadi, Arief, Center of Excellence for Automotive Control & System Institut Teknologi Sepuluh Nopember (ID)
2:15 PM	Coffee Break in Foyer Groundfloor		
	Closing Session: Plenary Hall		
2:45 PM	Closing Keynote: The Future of Electric Mobility in Germany: Electric, Climate-Neutral, Value-Adding! Prof. Kampker, Achim, RWTH Aachen University (DE)		
3:15 PM	Best Paper Award and Closing Words: Prof. Franke, Joerg, University of Erlangen-Nuremberg (DE)		
3:30 PM	End of Conference		

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TABLE TOP EXHIBITION

Tuesday, 3 December and Wednesday, 4 December 2019

EJDPC Table Top Exhibition showcases components, semi-finished goods and materials as well as production-related cutting-edge processes in the production of electric drives and generators.

Meet German and international providers of this technology. Find out about the latest products, innovations and trends, as well as current issues to produce your electric drive or generator. You will receive trend-setting impulses for the use and processing of new materials, productive and flexible assembly technologies as well as innovative motor topologies and control concepts.

Visit the Exhibition *in the Foyer Ground Floor* and take the chance to meet new dialogue partners from industry and science.

Exhibition topics

The structure of the product groups are based on the value-chain and the production-related cutting-edge processes in the field of the production of electric drives and generators.

Value-chain

- Components
- Semi-Finished Goods and Materials

Production-related cutting-edge Processes

- Production Techniques/Manufacturing Facilities and Tools
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TABLE TOP EXHIBITION

Tuesday, 3 December and Wednesday, 4 December 2019



CEIA – INDUCTION HEATING GENERATORS

Strada Provinciale di Pesciola,
54 – Loc. Vicinaggio
52041 Civitella in Val di Chiana –
Arezzo – Italy
www.ceia-power.com

CEIA Induction Generators, Control Units, Optical Pyrometers are suitable to be used in automatic production lines. With the integrated Web Server and Data Log It is possible to perform automatic data storage, monitoring temperatures, output power, frequency, voltage, inductor current, for a proper process of quality control. High-energy efficiency and the highest reliability are the main characteristics of Ceia Units. Our systems are the ideal for E-Mobility Industry, for applications of shrink fitting of the stator in the housing, magnet bonding of the rotor and induction curing.



DEMAK S.R.L.

Strada Del Cascinotto 163
10156 Torino
Italy
www.demakgroup.com

Demak is the world leader in resin encapsulation techniques, particularly of electrical traction motors. Resins are a perfect electrical insulator and they provide properties absolutely incompatible with other insulating methods: enhanced water and dust resistance, chemical resistance, less vibrations, less noise but most of all a perfect heat dissipation. Demak, having supplied full automatic lines to OEM and Tier1 suppliers, masters the encapsulating process with the use of specific resin systems specifically developed for electrical traction motors. The use of Continuous Vacuum Technology is crucial to Demak equipment and processes, in order to guarantee the best impregnation without any bubble or voids inside the final product.

Demak Group has two hearts: mechanical and chemical: this way we can provide 360° support and complete custom processes.



Universität Erlangen-Nürnberg FAPS

Fürther Str. 246b
80429 Nürnberg
www.fabs.fau.de

The "E|DriveCenter" (Bavarian Technology Center for Electrical Drives) of the Institute for Factory Automation and Production Systems (FAPS) of the Friedrich-Alexander-University Erlangen-Nuremberg (FAU), innovates drive concepts and the related production technologies. These developments are aimed to be transferred from scientific findings to industrial applications.

The key activities of the E|Drive Center are the analysis and optimization of the production-oriented construction and the production process design of components and systems for electrical drives. Furthermore, the manufacturing and testing processes are addressed for the components of inductive charge electric vehicles.

The center supports the automotive industry in the increasing usage of electric drive systems for the vehicles, and it improves the knowledge transfer in the field of electric drive technology in Bavarian industries.



Forschungsvereinigung
Antriebstechnik e.V.

Forschungsvereinigung Antriebstechnik e.V.

Postfach 71 08 64
60498 Frankfurt

The Research Association for drive technology (FVA – Forschungsvereinigung Antriebstechnik e.V.) is a non-profit association for joint precompetitive research and training in the field of drive technology.

Focus is mainly on transforming the jointly generated research knowledge to a useful form for industrial practice. Research projects concentrate on the complete drive train (mechanical, electrical and mechatronic) in stationary industrial plants, mobile vehicles and machines. All elements in the value-added chain are put to test from materials, production technologies, quality assurance, components, systems, calculation and simulation through to environmental compatibility, quality, costs and innovation management.

Currently over 200 ongoing projects are coordinated and managed each year by 25 active working groups.



Himmelwerk Induction Heating Solutions

Jopestr. 10
72072 Tübingen
www.himmelwerk.com

HIMMELWERK was founded in 1879 by Mr. Gottlob Himmel in Tübingen, Germany. The production of high-frequency generators for inductive and capacitive heating commenced in 1950. Since almost 70 years, our HF- and MF induction heating equipment is serving customers all over the world. Key industries are automotive, electro-mobility, aerospace, medical instruments, optical industry, forging, machine building, automation, bonding, soldering, melting and shrink-fitting. We have solutions from 2 kHz to 2 MHz and from 2 kW to 250 kW module power for our highly diversified customers.

TABLE TOP EXHIBITION

Tuesday, 4 December and Wednesday, 5 December 2018

HUNTSMAN

Enriching lives through innovation

Huntsman Advanced Materials

Switzerland GmbH

Klybeckstr. 200

4054 Basel

Switzerland

www.huntsman-emobility.com

Huntsman Advanced Materials is a leading global chemical solutions provider with a long heritage of pioneering technologically advanced epoxy, acrylic and polyurethane-based polymer products. Our know-how and expertise of more than 60 years allow us to develop and provide manufacturers of electric motors with a wide range of electrical insulation and thermal management solutions that answer the most stringent requirements in the electrified powertrain:

- > High Tg and fast cure impregnation systems for dipping and trickle impregnation
- > Highly crack resistant and thermally conductive encapsulants



LINZ
CENTER OF
MECHATRONICS
GMBH

Linz Center of Mechatronics

Altenberger Straße 69

4040 Linz

Austria

www.lcm.at

We focus on the design, simulation, prototyping and testing of PMSM drive systems including power electronics and control. Development of optimization and control tools (SyMSpace, X2C), and design of magnetic bearings and special drives complete our portfolio.

The Linz Center of Mechatronics is active in 4 areas: E-drives, hydraulic drives, mechanics & control, sensors & wireless communication. Our >90 engineers have serviced over 300 customers from many different areas all over Europe and beyond.



MAGCAM
advanced
magnet
inspection

Magcam NV

Romeinse Straat 18

3001 Leuven

Belgium

www.magcam.com

Magcam is a technology leader, specialized in advanced inspection systems for permanent magnets, based on its unique magnetic field camera technology. Magcam's world-class magnetic field cameras are used for quality control, as well as development of high-end permanent magnets and magnet systems. Magcam's customers include automotive companies, motor/generator constructors, sensor manufacturers, medical and biotech companies, consumer electronics producers, high-end speaker OEM's, research labs, magnet producers.

Magcam offers a product range consisting of measurement hardware, advanced data analysis software, automation software as well as measurement services, feasibility studies and development projects.

MARSILLI

Marsilli S.p.A.

Via per Ripalta Arpina 14

26012 Castelleone

Italy

www.marsilli.com

MARSILLI has been working for over 80 years standing out for its research and technological innovations. This has allowed the company to reach a global consolidated position as a Solution Provider for Factory Automation covering different industries such as automotive, appliances, electromechanical applications and RFID. MARSILLI has developed in depth and ground-breaking expertise in all the assembly processes which have a winding phase as the core.

Today, MARSILLI is a worldwide leader in Winding & Assembly Systems for coils and motors where precision, flexibility and customization are mandatory. Designing, assembling and delivering equipment with a unique passion, MARSILLI provides absolutely reliable solutions together with outstanding quality.



Motor
Design
Limited

Motor Design Ltd

5 Edison Court

LL13 7YT, Wrexham

www.motor-design.com

Motor Design Ltd (MDL) is a world leader in developing advanced software and tools for electric machine design. We have been developing electric motor design software since 1998. Our software, Motor-CAD, enables design engineers to evaluate motor topologies and concepts across the full operating range and produce designs that are optimised for performance, efficiency and size. Motor-CAD software's four integrated modules EMag, Therm, Lab and Mechenable multiphysics calculations to be performed quickly and iteratively, so users can get from concept to final design in less time.



Polytec

Polytec

Polytec-Platz 1-7

76337 Waldbronn

www.polytec.com

For over 50 years Polytec provides high-technology, optical measurement solutions to researchers and engineers. Our commitment is to provide the most precise and reliable optical instruments and sensors available for non-contact measurement of vibration, length, speed, surface topography and process analytics. Polytec systems help to solve pressing challenges in R&D and engineering like optimizing durability and acoustics of electric drives, battery inverters, control units, sensors and PCBs. Furthermore, they can be used for process control and 100% acoustic quality control in production.

TABLE TOP EXHIBITION

Tuesday, 3 December and Wednesday, 4 December 2019

STIEFELMAYER
lasertechnik

**Stiefelmayer – Lasertechnik
GmbH & Co.KG**
Rechbergstraße 42
73770 Denkendorf
www.stiefelmayer-lasertechnik.de

Continual improvements lead us to high expertise in laser cutting machines for the E-Mobility Business. Stiefelmayer stands for high class workmanship since 1874.

effective S+L

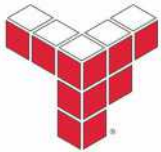
Here the most modern laser Technology, light carbon construction and dynamic Motor drives meld into a laser machine with capabilities that have been hitherto unknown.

LW2

Comfortable and flexible laser welding machine for high precise stator and rotor stacks.

Contract processing

Laser cut Stator and rotor laminates for prototypes, mini series or starting new series, single sheets or stacks in various stacking technology.



TECNOFIRMA S.p.A.

TECNOFIRMA S.p.A.
Viale Elvezia, 35
20900 Monza (MB)
Italy
www.tecnofirma.com

Tecnofirma is a leading manufacturer of High-Quality Impregnation and surface treatment machinery, for the Automotive industry. With our Unique solution and concepts, we can achieve short cycle times and high Product-Quality. Our Product range starts with the Pilot machinery for Prototyping and ramp up to the full automatized production line for short cycle time. We are Partner of Big Players in the automotive industry and other industrial fields. From our head Quarter in Monza, our Chinese affiliate and wide range of partners in Germany, France, USA and Mexico we can support our global customers around the world.

wieland

Wieland-Werke AG
Graf-Arco-Str. 36
89079 Ulm
www.wieland.com

With sales of approx. 500 thousand tons, the Wieland Group is the world's leading supplier of semi-finished products made of copper and copper alloys.

For the production of strip, sheets, bars, rods, wire, tubes and sections, mainly recycling materials supplemented by virgin metals are used in the company-owned foundries.

This results in semi-finished products of the highest quality for a wide variety of customer applications, e.g. in the automotive, electronics and refrigeration/air conditioning sectors, as well as for mechanical engineering.

ABOUT SÜDDEUTSCHER VERLAG VERANSTALTUNGEN GMBH

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Find out more on www.sv-veranstaltungen.de.

REGISTRATION

Please register using the enclosed coupon or online at www.edpc.eu. After we have received your registration, we will send you a confirmation and an invoice, which we would ask you to settle before the event begins. In the event of cancellations received **after 20 November 2019**, or non-appearance, the full participation fee will be billed. However, a replacement participant can be designated. For cancellations before this date, a **€ 150** administration fee will be charged. Cancellations and registrations must be made in writing. The event organizer reserves the right to change the location and/or time of the whole event or individual parts of it or to alter or cancel it at short notice.

CONFERENCE FEE

Standard Fee € 1080,- Reduced Fee* € 690,- One Day Fee € 690,-

*Reduced Fee for Speakers, Program Committee Members, University Members and Authors. All prices are subject to VAT according to European regulations.

VENUE

E|DPC 2019 will take place at the Neckar Forum Esslingen, Ebershaldenstraße 12, 73728 Esslingen on 3 and 4 December 2019.
Parking: APCOA Parking, Grabbrunnenstr. 19



ACCOMODATION

For your accommodation we reserved a contingent of rooms at the hotels Park Consul Stuttgart and ECO INN Esslingen for the participants of the E|DPC Congress.

Please make your reservation directly with the hotels, quoting E|DPC.

Hotel Park Consul Stuttgart

Grabbrunnenstraße 19, 73728 Esslingen am Neckar
Phone: +49 711 41111-0
Preferential rate:
Single room 148,00 € incl. breakfast and VAT.

ECO Inn

Kanalstraße 14–16, 73728 Esslingen am Neckar
Phone: +49 711 310589-0,
Preferential rate:
Single room 99,00 € incl. breakfast and VAT.

EVENING RECEPTION

All participants of E|DPC 2019 are invited to the E|DPC 2019 Evening Reception on 3 of December 2019, 7:30 PM.

Detailed technical discussions are guaranteed and accompanied by a regional menu. The event will take place at the Wichtel Hausbrauerei, Mettinger Straße 113, 73728 Esslingen.



TABLE TOP EXHIBITION

E|DPC 2019 will be completed by a focussed Table Top Exhibition. Companies, research institutes and other organizations will be offered the opportunity to present their products and services to all participants. For any further questions regarding the E|DPC 2019 Table Top Exhibition please contact Katharina Krines, Phone: +49 8191 125-429, E-Mail: katharina.krines@sv-veranstaltungen.de.

SUPPORTERS

Are you interested in supporting E|DPC 2019 and presenting your company or organization as a sponsor? E|DPC 2019 is the ideal platform for the individual advertising of your innovative products and services. For further information, please contact Katharina Krines, Phone: +49 8191 125-429, E-Mail: katharina.krines@sv-veranstaltungen.de.

PLEASE REGISTER ONLINE FOR THIS CONFERENCE: WWW.EDPC.EU





E|DPC-2020

Electric Drives Production
Conference 2020

CALL FOR PAPERS

10th International

Electric Drives Production Conference

8 and 9 December 2020
Ludwigsburg, Germany

SUBMIT YOUR CONTRIBUTION

Experts of industry and science are invited to present a contribution on the topics listed or on other topics that correspond to the general subject of the conference. Abstracts about 300 words containing significant figures should be submitted online in English to the conference office containing the following information:

- Title of the contribution
- Subject/topic of the contribution
- 3–6 keywords
- Full name, organization or company, postal and email addresses of all authors

Abstracts will be reviewed before acceptance by the International Program Committee. <https://www.edpc.eu/call-for-papers/>

E|DPC TABLE TOP EXHIBITION

E|DPC 2020 will be completed by a comprehensive Table Top exhibition. Companies, research institutes and other organizations will be offered the opportunity to present their products and services to all participants. It is a perfect opportunity to meet your target audience. Detailed technical discussions will be guaranteed.

APPLICATION-ORIENTED CONTRIBUTION

In particular, experts of industry are invited to present an issue within an application-oriented industrial track without the necessity of preparing a fullpaper.

After the final acceptance of your abstract, the presentation/slides will be published in the accompanying industrial transcript.

The application-oriented contribution is an ideal platform for exhibitors and non-exhibitors to present technologies.