Electric Drives Production Conference 2016

6th International Conference
Electric Drives Production
November 30th – December 1st, 2016
Nuremberg, Germany

Preliminary Program
The international Electric Drives Production Conference and Exhibition has been established as an outstanding platform for the exchange of experiences for researchers, product developers, production experts, purchasers and potential users of electric drives in the last years.

E|2016 offers more than 70 technical presentations in a total of 8 tracks within two days: six of them concentrate on the core topics of electric drives production technologies, materials and systems. The focus of the globally accompanying conference on Energy Transfer for Electric Vehicles (E|TEV) is set on the technology of wireless power transmission. And last but not least the conference is hosting the E-MOTIVE track, organized by the German Engineering Federation (VDMA).

Comprehensive industrial exhibitions, poster presentations, technical tours and an inspiring social program will complement the conference and create a sustainable experience for every participant.

The registration desk is located on ground level in the foyer.

Opening time Conference:
Wednesday November 30\textsuperscript{th}, 2016 8:00 AM - 7:00 PM
Thursday December 1\textsuperscript{st}, 2016 8:00 AM - 7:00 PM
Phone: +49 (9122) 3074 527
Mobile: +49 (157) 8167 1737

Opening time Table Top Exhibition:
Wednesday November 30\textsuperscript{th}, 2016 9:00 AM - 5:00 PM
Thursday December 1\textsuperscript{st}, 2016 9:00 AM - 5:00 PM

Conference bags can be picked up at the registration desk. On-spot registrations for the conference, the technical tours, and the evening reception will be possible. On-site payments can be settled in cash (EUR) and by credit card.

Free WiFi is available in all rooms of the exhibition centre.

All registered and accepted papers will be included in the conference proceedings and also published at ieeexplore.org, scopus.com and scholar.google.com.
The 6th International Electric Drives Production Conference is kindly supported by the following organizations:

- Aconf - Platform for international academic conferences
  www.aconf.org

- AMA - Association for Sensors and Measurement
  www.ama-sensorik.de

- FVA - Research Association for Drive Technology
  www.fva-net.de

- antriebstechnik - Technical Magazine for Engineering
  www.antriebstechnik.de

- Automation Valley Nordbayern
  www.automation-valley.de

- Bayern Innovativ
  www.bayern-innovativ.de

- Bundesverband eMobilität e.V.
  http://www.bem-ev.de/

- Bühler Mechatronic Award
  http://www.buehlermotor.com/DE/Mechatronic-Award

- Cluster Mechatronik & Automation e.V.
  www.cluster-ma.de

- ECPE - The Industrial Research Network for Power Electronics in Europe
  www.ecpe.org

- Electrical Manufacturing Coil Winding Association
  www.emcw.org

- ETG - The Power Engineering Society of the VDE
  www.vde.com/etg

- IHK Mittelfranken
  www.ihk-nuernberg.de

- Insitute for Factory Automation and Production Systems
  www.faps.de

- MHI - German Society for Assembly, Handling and Industrial Robots
  www.wgmhi.de

- City of Nuremberg
  www.nuernberg.de

- Nuremberg Metropolitan Region
  www.metropolregionnuernberg.de

- PELS - IEEE Power Electronics Society
  www.ieee-pels.org

- VDMA - German Engineering Federation
  www.vdma.org

- The Magnetics Society UK
  www.ukmagsoc.org

- VDMA - German Engineering Federation
  www.vdma.org
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University of Stuttgart (DE)
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Technische Universitaet Muenchen (DE)
Dr. Risch F.,
BMW AG (DE)
Robens E.,
FVA im VDMA (DE)
Dr. Sakki R.,
ABB Ltd (FI)
Prof. Schuecker E.,
University of Erlangen-Nuremberg (DE)
Prof. Schmidt M.,
University of Erlangen-Nuremberg (DE)
Prof. Shinohara R.,
Kyoto University (JP)
Prof. Steinhilper R.,
University of Bayreuth (DE)
Prof. Suh I.-S.,
Korea Advanced Institute of Science and Technology (KR)
## TIME SCHEDULE

### OVERVIEW

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<td>9:00 AM</td>
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<td>Foyer NCC West</td>
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<tr>
<td>9:30 AM</td>
<td>Opening Session</td>
<td>Room Paris</td>
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<tr>
<td>11:00 AM</td>
<td>Coffee Break</td>
<td>Foyer NCC West</td>
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<tr>
<td>11:30 AM</td>
<td>Stator Winding Technologies</td>
<td>Room Paris</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>New Approaches for Rotor Production</td>
<td>Room London</td>
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<tr>
<td>11:30 AM</td>
<td>New Design for Permanent Magnet Drives</td>
<td>Room Zuerich</td>
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<tr>
<td>11:30 AM</td>
<td>Power Electronics for Electric Drives</td>
<td>Room Amsterdam</td>
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<tr>
<td>1:00 PM</td>
<td>Lunch Break &amp; Postersession</td>
<td>Foyer NCC West</td>
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<tr>
<td>2:30 PM</td>
<td>Winding Technologies for Series Production</td>
<td>Room Paris</td>
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<tr>
<td>2:30 PM</td>
<td>Substitution of Rare Earth Materials in Electric Drives</td>
<td>Room London</td>
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<tr>
<td>2:30 PM</td>
<td>Simulation and Modeling</td>
<td>Room Zuerich</td>
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<tr>
<td>4:00 PM</td>
<td>Coffee Break</td>
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<tr>
<td>4:45 PM</td>
<td>Potentials of Additive Manufacturing</td>
<td>Room Paris</td>
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<tr>
<td>4:45 PM</td>
<td>Magnetic Quality Control</td>
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<tr>
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<td>Innovative Approaches for Electric Drives</td>
<td>Room Zuerich</td>
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<td>Technology for Quality Assurance</td>
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<tr>
<td>7:30 PM</td>
<td>Evening Reception</td>
<td>Ofenwerk Nuremberg</td>
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**Wednesday, November 30th, 2016**

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<th>Time</th>
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<tbody>
<tr>
<td>9:00 AM</td>
<td>Innovations in Insulation Technologies</td>
<td>Room Paris</td>
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<tr>
<td>10:30 AM</td>
<td>Coffee Break</td>
<td>Foyer NCC West</td>
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<tr>
<td>11:15 AM</td>
<td>Insulation Technologies for Mass Production</td>
<td>Room London</td>
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<tr>
<td>11:15 AM</td>
<td>Innovative Production Methods for Laminations</td>
<td>Room Zuerich</td>
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<tr>
<td>12:45 PM</td>
<td>Lunch Break &amp; Postersession</td>
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<td>2:15 PM</td>
<td>Contacting Technologies</td>
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<td>Loss Mechanisms in Laminations</td>
<td>Room London</td>
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<td>Innovative Measurement Technologies</td>
<td>Room Zuerich</td>
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<td>3:45 PM</td>
<td>Coffee Break</td>
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<tr>
<td>4:15 PM</td>
<td>Closing Session</td>
<td>Room London</td>
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<tr>
<td>5:00 PM</td>
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**Thursday, December 1st, 2016**

### TIME SCHEDULE

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>9:00 AM</td>
<td>Production Impacts on Soft Magnetic Materials</td>
<td>Room Paris</td>
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<tr>
<td>10:30 AM</td>
<td>Coffee Break</td>
<td>Foyer NCC West</td>
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<tr>
<td>11:15 AM</td>
<td>Innovative Production Methods for Laminations</td>
<td>Room London</td>
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<tr>
<td>11:15 AM</td>
<td>Industrie 4.0 in Electric Drives Production</td>
<td>Room Zuerich</td>
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<tr>
<td>12:45 PM</td>
<td>Lunch Break &amp; Postersession</td>
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<tr>
<td>4:15 PM</td>
<td>Closing Session</td>
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<tr>
<td>5:00 PM</td>
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## TIME SCHEDULE
**Wednesday, November 30th, 2016**

<table>
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<tr>
<th>Time</th>
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<tr>
<td>9:30 AM</td>
<td><strong>Opening Session: Room Paris</strong></td>
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<tr>
<td>11:00 AM</td>
<td><strong>Coffee Break in Foyer NCC West</strong></td>
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</tbody>
</table>
| 11:30 AM | **Session 1: Room Paris**  
Stator Winding Technologies  
Empowering a needle winding machine for the flexible production of multivariant stators  
Masuch M., University of Erlangen-Nuremberg (DE) |
| 12:00 PM | **Session 2: Room London**  
New Approaches for Rotor Production  
Selective Assembly of Permanent Magnets for reduced Rotor Unbalance  
Manuel P., Karlsruhe Institute of Technology (DE) |
| 12:30 PM | **Session 5: Room Paris**  
Winding Technologies for Series Production  
In-Line strategies and methods to reduce balancing efforts within rotor production for electric drives  
Hofmann B., University of Erlangen-Nuremberg (DE) |
| 1:00 PM  | **Lunch Break & Postersession in Foyer NCC West**                       |
| 2:30 PM | **Session 6: Room London**  
Substitution of Rare Earth Materials in Electric Drives  
Permanent magnets as critical materials in advanced electric drives  
Dr. Gauß R., Fraunhofer ISC IWKS, Hanau (DE) |
| 3:00 PM | **Session 9: Room Paris**  
Optimization Algorithms for Maximizing the Slot Filling Factor of Technically Feasible Slot Geometries and Winding Layouts  
Herrmann P., Technische Hochschule Ingolstadt (DE) |
| 3:30 PM | **Session 10: Room London**  
Magnetic Quality Control  
Prediction of electric motor performance by in-line testing of permanent excited rotors  
Meyer A., University of Erlangen-Nuremberg (DE) |
| 4:45 PM | **Session 11: Room London**  
Additive manufacturing of NdFeB for the production of rare-earth magnets  
Urban N., University of Erlangen-Nuremberg (DE) |
| 5:15 PM | **Session 12: Room London**  
Additive Manufacturing of a Lightweight Rotor for a Permanent Magnet Synchronous Machine  
Magnetic stray field measurement of magnetic specimen  
Lammers S., Direct Manufacturing Research Center (DE) |
| 5:45 PM | **Session 13: Room London**  
Optimized electromagnetic and manufacturing design for a BLDC-Motor substituting rare-earth magnets  
Neubauer A., Mahle International GmbH, Stuttgart (DE) |
| 7:30 PM | **Evening Reception**                                                  |

*The blue timeslots are marking the application-oriented presentations by industrial authors.*
### TIME SCHEDULE

**Opening Session: Room Paris**

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<th>Time</th>
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<th>Session 4: Room Amsterdam</th>
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</thead>
<tbody>
<tr>
<td>9:30 AM</td>
<td>New Designs for Permanent Magnet Drives</td>
<td>Power Electronics for Electric Drives</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Design and Construction of a permanent magnet excited Flux-Switching-Machine</td>
<td>Flexible Printed Circuits: The wide range of smart connection</td>
</tr>
<tr>
<td></td>
<td>Lehr M., Technische Universität Darmstadt (DE)</td>
<td>Kleefeldt S., Mektec Europe GmbH, Weinheim (DE)</td>
</tr>
<tr>
<td></td>
<td>Modeling and Design of PM Retention Sleeves for High-Speed PM Synchronous Machines</td>
<td>Temperature Prediction of DC-Link Film Capacitor Applied in the Electrical Driving System of Electric Vehicle</td>
</tr>
<tr>
<td></td>
<td>Dr. Porru M., University of Cagliari (IT)</td>
<td>Wu C., Dynex Semiconductor, Lincoln (UK)</td>
</tr>
<tr>
<td></td>
<td>The Design Method for High Efficiency PMA-SynRM</td>
<td>Innovative Material Packaging Solutions for superior Power Electronics Devices</td>
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<tr>
<td></td>
<td>Lee J., Hanyang University (KR)</td>
<td>Miric, A., Heraeus Deutschland GmbH &amp; Co KG, Hanau (DE)</td>
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**Coffee Break in Foyer NCC West**

**Lunch Break & Poster Session in Foyer NCC West**

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<th>Session 8: Room Amsterdam</th>
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<td>1:00 PM</td>
<td>Simulation and Modelling</td>
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<tr>
<td></td>
<td>Numerical Vibration Analysis of Electric Drives</td>
<td>Enrichment and Analytics of Charging Transaction Data</td>
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<tr>
<td></td>
<td>Bachinski-Pinhal D., CADFEM GmbH, Grafing (DE)</td>
<td>von Hoffen M., Universität Münster (DE)</td>
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<tr>
<td></td>
<td>Analytic Model of Structural Effects in Toroid Cores with Rectangular Cross Section</td>
<td>Single-Seater Vehicle Prototype Experiment Powered by High Frequency Electric Field on an Asphalt-Paved Roadway</td>
</tr>
<tr>
<td></td>
<td>Hauser W., University of Erlangen-Nuremberg (DE)</td>
<td>Prof. Sakai N., Toyohashi University of Technology (JP)</td>
</tr>
<tr>
<td></td>
<td>Experimental and calculational analysis of the modal behavior of squirrel cage rotors</td>
<td>High Power three-phased Wireless Battery Charger with low Stray Field fed by a single-phased Inverter</td>
</tr>
<tr>
<td></td>
<td>Großhauser J., Siemens AG (DE)</td>
<td>Dr. Turki F., Paul Vahle GmbH &amp; Co. KG, Kamen (DE)</td>
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**Coffee Break in Foyer NCC West**

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<th>Time</th>
<th>Session 11: Room Zürich</th>
<th>Session 12: Room Amsterdam</th>
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</thead>
<tbody>
<tr>
<td>4:00 PM</td>
<td>Innovative Approaches for Electric Drives</td>
<td>Magnetic Measurement for Quality Assurance</td>
</tr>
<tr>
<td></td>
<td>Control of synchronous-reluctance-motors without encoder for industrial applications</td>
<td>From simple magnets to magnetic rotors – fast and precise measurements for your production environment</td>
</tr>
<tr>
<td></td>
<td>Weigel T., Siemens AG (DE)</td>
<td>Holzhey R., Innovent e.V., Jena (DE)</td>
</tr>
<tr>
<td></td>
<td>A Variable Reluctance RESolver Magnetic-Circuit Simulation with Test Bench Verification</td>
<td>BLDC-motor Production Process surveillance based on Parameter Identification Method</td>
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<td></td>
<td>Neidig N., Daimler AG, Stuttgart (DE)</td>
<td>Dr. Hillenbreand F., imc Meßsysteme GmbH, Berlin (DE)</td>
</tr>
<tr>
<td></td>
<td>High Speed Flux Reversal Motor</td>
<td>Contribution Announced</td>
</tr>
<tr>
<td></td>
<td>Dmitrievskii V., Ural Federal University, Yekaterinburg (RU)</td>
<td>Peters V., Fraunhofer IIS (DE)</td>
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**Evening Reception**

7:30 PM

*The blue timeslots are marking the application-oriented presentations by industrial authors.*
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<th>Time</th>
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<td>9:00 AM</td>
<td>Innovations in Insulating Technologies</td>
<td>Production Impacts on Soft Magnetic Materials</td>
</tr>
<tr>
<td></td>
<td>Thin-walled injection molding for slot insulation of long stator sheet stacks</td>
<td>Influences of separation and joining processes on single tooth laminated stacks</td>
</tr>
<tr>
<td></td>
<td>Kleine Büning M., RWTH Aachen University (DE)</td>
<td>Kraemer A., Karlsruhe Institute of Technology (DE)</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>Theoretical benefits of powder coatings regarding copper fill factor of electric machines</td>
<td>Numerical homogenization and simulation of a lamination stack</td>
</tr>
<tr>
<td></td>
<td>Hoffmann B., University of Erlangen-Nuremberg (DE)</td>
<td>Baloglu M., University of Erlangen-Nuremberg (DE)</td>
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<tr>
<th>Time</th>
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<tr>
<td>10:00 AM</td>
<td>Contribution Announced</td>
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<td>Rasp R., Coppering</td>
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<th>Time</th>
<th>Session 16: Room Paris</th>
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<td>11:15 AM</td>
<td>Advanced insulation systems for cost-effective, high power density e-motors</td>
<td>Rotary cutting of Electrical Steel Strip Rotary cutting of Electrical Steel Strip in Stamp and Die Arrangement</td>
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<td></td>
<td>Bonnet J., Victrex Technology (DE)</td>
<td>Hubert M., University of Erlangen-Nuremberg (DE)</td>
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<tr>
<td>11:45 AM</td>
<td>Impregnation of Hybrid and Electric Motors. Temperature process and quality effect for massive production</td>
<td>Effect of stress relief annealing condition on the microstructure and magnetic properties of non-oriented electrical steel</td>
</tr>
<tr>
<td></td>
<td>Motta C., bdtronic GmbH, Weikersheim (DE)</td>
<td>Dr. Park J., POSCO Technical Research Laboratories (KR)</td>
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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>12:45 PM</td>
<td>Lunch Break &amp; Postersession in Foyer NCC West</td>
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<tr>
<th>Time</th>
<th>Session 19: Room Paris</th>
<th>Session 20: Room London</th>
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<tr>
<td>2:15 PM</td>
<td>Quantification of the influence of varying electrode shapes and materials on the thermo-crimping process</td>
<td>Influence of cutting edge on core loss induced through various manufacturing parameters</td>
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<tr>
<td></td>
<td>Spreng S., University of Erlangen-Nuremberg (DE)</td>
<td>Schneider M., University of Erlangen-Nuremberg (DE)</td>
</tr>
<tr>
<td>2:45 PM</td>
<td>Innovative Approaches for the Removal of the Insulation of Magnetic Wire</td>
<td>Eddy current loss analysis of coated permanent magnets in synchronous machines</td>
</tr>
<tr>
<td></td>
<td>Gläßel T., University of Erlangen-Nuremberg (DE)</td>
<td>Gerlach T., Technische Hochschule Nuremberg (DE)</td>
</tr>
<tr>
<td>3:15 PM</td>
<td>Contacting Processes for Series Production Concerning Quality Aspects</td>
<td>Improved Calculation of Iron Losses in Large Salient-pole Synchronous Hydro-generators</td>
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<tr>
<td></td>
<td>N.N.</td>
<td>Jacobs S., ArcelorMittal (LU)</td>
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<th>Session I E-MOTIVE : Room Amsterdam</th>
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<td>Guidelines for the production planning process under uncertainty regarding the degree of automation</td>
<td>Approaches towards Market Analysis and Commercialization of Electric In-wheel Motors for Light Vehicles</td>
</tr>
<tr>
<td>Fisel J., Karlsruhe Institute of Technology (DE)</td>
<td>Sachs C., University of Stuttgart (DE)</td>
</tr>
<tr>
<td>Robust Design Optimization of Electrical Machines and Drive Systems for High Quality Mass Production</td>
<td>Interests and attitudes on the subject of electric mobility</td>
</tr>
<tr>
<td>Dr. Lei G., University of Technology Sydney (AU)</td>
<td>Heß J., Technische Universität Chemnitz (DE)</td>
</tr>
<tr>
<td>The Least Energy Demand Method as unique tool to evaluate and rate the energy efficiency of the Electric Drives Production</td>
<td>Electric Powertrain for Helicopter Tail Rotor</td>
</tr>
<tr>
<td>Kreitlein S., University of Erlangen-Nuremberg (DE)</td>
<td>Castellini L., Umbra Cuscinetti S.p.A. (IT)</td>
</tr>
<tr>
<td>Coffee Break in Foyer NCC West</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Session 18: Room Zürich</th>
<th>Session II E-MOTIVE : Room Amsterdam</th>
</tr>
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<tbody>
<tr>
<td>Production Optimization with Methods of Industry 4.0</td>
<td>N.N.</td>
</tr>
<tr>
<td>Towards an inline quick reaction system for actuator manufacturing using data mining</td>
<td></td>
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<tr>
<td>Sand C., Robert Bosch GmbH (DE)</td>
<td>E-MOTIVE Track reserved for VDMA</td>
</tr>
<tr>
<td>Automated Quantification of Tool Wearing Conditions using Predictive Analytics</td>
<td></td>
</tr>
<tr>
<td>Fleischmann H., University of Erlangen-Nuremberg (DE)</td>
<td></td>
</tr>
<tr>
<td>Potentials of Industry 4.0 of the production of permanent excited rotors</td>
<td></td>
</tr>
<tr>
<td>Abersfelder S., Robert Bosch GmbH (DE)</td>
<td></td>
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<tr>
<td>Lunch Break &amp; Postsession in Foyer NCC West</td>
<td>12:45 PM</td>
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<table>
<thead>
<tr>
<th>Session 21: Room Zürich</th>
<th>Session III E-MOTIVE : Room Amsterdam</th>
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<tr>
<td>Innovative Measurement Technologies</td>
<td>N.N.</td>
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<tr>
<td>Comparison analysis of the magnetic field and the magnetic force inside of an electromagnetic actuator with the use of an anchor measuring sensor</td>
<td>E-MOTIVE Track reserved for VDMA</td>
</tr>
<tr>
<td>Heyder A., Robert Bosch Gmb (DE)</td>
<td>2:15 PM</td>
</tr>
<tr>
<td>Holistic Production Analysis for Actuator Manufacturing using Data Mining</td>
<td></td>
</tr>
<tr>
<td>Sand C., Robert Bosch GmbH (DE)</td>
<td>2:45 PM</td>
</tr>
<tr>
<td>Non-standard measurements and new technology for soft magnetic material testing using digital feedback control</td>
<td></td>
</tr>
<tr>
<td>Siebert S., Dr. Brockhaus Messtechnik GmbH &amp; Co. KG (DE)</td>
<td>3:15 PM</td>
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<tr>
<td>Coffee Break in Foyer NCC West</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Closing Session: Room London</th>
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<tr>
<td>Buehler Mechatronic Award: Muhr P., Buehler Motor GmbH, Nuremberg (DE)</td>
<td>4:15 PM</td>
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<tr>
<td>Best Paper Award: Prof. Feldmann K., University of Erlangen-Nürnberg (DE)</td>
<td>4:40 PM</td>
</tr>
<tr>
<td>Closing Words: Prof. Franke J., University of Erlangen-Nürnberg (DE)</td>
<td>4:50 PM</td>
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</tbody>
</table>

*The blue timeslots are marking the application-oriented presentations by industrial authors.*
POSTERSESSION in  Foyer NCC West
Wednesday, November 30th, and Thursday, December 1st, 2016

Benefits of an universal winding machine

Mahr A., University of Erlangen-Nuremberg (DE)

SPONSORS
The Organizing Committee sincerely thanks the following organizations and companies for sponsoring E|DPC 2016:

GOLD SPONSOR

MARSILLI

ALUMINIUM SPONSOR

Technical Co-Sponsor

IEEE

www.ieee.org
Floor Plan

E|DPC 2016 will take place at the Nürnberg Convention Center (NCC) West of Nuremberg Messe.

The subway station „Messe“ is located at the west entry of the Nuremberg Exhibition.

You will find the

- Conference and Exhibition information desk located on level 0
- Table Top exhibition in level 0 and 1
- Conference in level 2

Exhibition Centre Nuremberg
The International Electric Drives Production Conference offers an outstanding platform for the exchange of experiences for developers, researchers and potential users. The focus of the conference will be set on the presentation of highly innovative products from various industries as well as manufacturing processes and strategies. Additionally there will be an accompanying industrial exhibition, tutorials, poster presentation, technical tours and an associated program.

The E|DPC will be completed by a comprehensive exhibition, directly connected to the E|DPC 2016 Conference. Companies, research institutes and other organizations will be offered the opportunity to present their products and services to all participants.

- You will meet developers and manufacturers of electric drives and generators
- You will get the opportunity to answer specific technical questions from trade visitors
- As an exhibitor you will be along the production chain and the production-related cross-cutting issues for electric drives and generators

### FULL SERVICE BOOTH PACKAGE

- Booth 2m x 2m (table top in Foyer)
- 1 E|DPC conference ticket
- 1 table and 2 chairs provided by Nürnberg Convention Center
- power connection, triple plug outlet, FI protection switch, power consumption
- listing on our website www.edpc.eu with link to your website
- further services like high-voltage current, stand guards, equipement etc. can be ordered directly at the Nürnberg Convention Center at your own expense

### INSTALLATION

Tuesday, November 29th, 2016, 1:00 PM-7:00 PM;

### DISMANTELING

Thursday, December 1st, 2016, 6:00 PM-9:00 PM;
Partial or complete dismantling of displays before the official closing of the Exhibition on Thursday, December 1st, 2016 is expressly prohibited.

<table>
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<tr>
<th>Full Service Booth Package*</th>
<th>€ 1500,-</th>
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<tbody>
<tr>
<td>additional booth space /m²</td>
<td>€ 60,-</td>
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</table>

All Prices plus VAT
* Gold Sponsors save 20% (see Sponsorship Packages)
Refunds, minus a €100 processing fee, will be made for booth cancellations if cancelled before October 1, 2016. If cancelled after October 1, 2016 the full booth fee must be paid.
SOCIAL PROGRAM
Wednesday, November 30th, 2016

EVENING RECEPTION

The EJDC 2016 Evening Reception is an official stand-up reception. Detailed technical discussions are guaranteed and accompanied by piano background music and a carried franconian buffet. Registered members will be informed timely about the location.

AGENDA of the Evening Reception

07:30 PM: Welcome Address
07:45 PM: Opening of the buffet
08:30 PM: Get-Together

BUFFET

A regional buffet will be prepared and served.

GUIDED WALKING TOURS

Parallel to the evening reception several half-hour guided tours will be offered free of charge.

Nürnberger Christkindlesmarkt

The famous Nürnberger Christkindlesmarkt will take place from November 25th to December 24th, 2016. A visit during EJDC 2016 will be possible.

HOTEL RECOMMENDATION

For hotel recommendation please contact the tourist office Nuremberg:
Tel.: +49 (911) 2336 121
http://www.hotel.nuernberg.de

For your accommodation several hotels are booked all over the city. For prices and reservation, please use the reservation form on our website www.edpc.eu.

TOURIST INFORMATION

Nuremberg Convention and Tourist Office
Frauentorgraben 3
90443 Nuremberg
Tel.: +49 (911) 23360
http://www.tourismus.nuernberg.de/
| APPROACH |

| HIGHWAYS TO NUREMBERG |

![Highway Map] (Image)

| BY CAR |

You may reach E|DPC via car from the highway:
- A9: Take exit 52 - Fischbach
- A6: Take exit 59 - Langwasser
- A73: Take exit 34 - Zollhaus
Your navigation system will find NuernbergMesse if you enter “Karl-Schoenleben-Strasse” as address or Messezentrum as a special destination.

| BY PUBLIC TRANSPORTATION |

To reach E|DPC from Nuremberg Main Station:
- Take subway no. 1 or 11 in direction “Langwasser”
- Take stop “Messe”

To reach E|DPC from Nuremberg Airport:
- Take subway no. 2 in direction “Roethenbach”
- Take stop “Main Station”
- Take subway no. 1 or 11 in direction “Langwasser”
- Take stop “Messe”
Please find more Information on the website www.vgn.de.
VERANSTALTUNG


THEMENSPEKTRUM

- Energieeffizientes Wohnen
- Innovative Heizsysteme
- Ambient Assisted Living
- Intelligente Heimvernetzung
- Usability im Smart Home
**VERANSTALTUNG**


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<tr>
<th>PROGRAMM</th>
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<tr>
<td>30.11.</td>
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<tr>
<td>Nachhaltige Produktions-</td>
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<tr>
<td>Effiziente Anlagentechnik zur</td>
</tr>
<tr>
<td>01.12.</td>
</tr>
<tr>
<td>Effiziente Prozess- und</td>
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<tr>
<td>Lösungen zur Effizienzsteigerung</td>
</tr>
<tr>
<td>Energieeffizienz in der Elektromaschinenba</td>
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<tr>
<td>Energieeffizienz in der Umformtechnik</td>
</tr>
<tr>
<td>Energieeffiziente Schweiss- und</td>
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<tr>
<td>Abendveranstaltung am 30.11.2016</td>
</tr>
</tbody>
</table>
Are you interested in supporting the E|DPC conference and presenting your company or institute as a sponsor? With the following packages the E|DPC is the ideal platform for the individual advertising of your innovative products and services:

<table>
<thead>
<tr>
<th>ALUMINIUM PACKAGE</th>
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</table>
| 1. You are listed as an official Aluminium Sponsor of the E|DP Conference 2016 with your logo  
  • on the E|DP Conference homepage with a link to your own homepage,  
  • the proceedings,  
  • the program booklet,  
  • the conference posters presented on billboards at the venue,  
  • on all organizational slides shown at the conference, and  
  • all printed conference related matters (call for papers, invitation, conference program, etc.) which are distributed electronically by email, on paper by standard mail or at the conference.  
  2. Your company will be enabled to sponsor specific congress items or give-aways; your logo will be printed on them, e.g.  
  • congress bags  
  • batch lanyards  
  • writing pads  
  • ball pens or pencils  
  • others on request (first come, first served) |

€ 2.000

<table>
<thead>
<tr>
<th>COPPER PACKAGE</th>
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</table>
| 1. You are listed as an official Copper Sponsor of the E|DP Conference 2016 with your logo (see aluminium package).  
  2. Your company will be enabled to sponsor specific congress items or give-aways (see aluminium package).  
  3. Your company will be allowed to enclose one company brochures in the congress bag.  
  4. Participation fees for employees of your company are reduced by 10%.  
  5. Participation fees for guests who are invited by you and which are paid by you are reduced by 10%.  
  6. You may print one half-page advertisement (color)  
    • in the printed conference proceedings and  
    • in the program booklet  
  7. Your company will be enabled to sponsor specific congress events, e.g.  
    • coffee breaks  
    • lunch breaks  
    • congress dinner  
    • others on request (first come, first served) |

€ 3.000

<table>
<thead>
<tr>
<th>GOLD PACKAGE</th>
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</table>
| 1. You are listed as an official Gold Sponsor of the E|DP Conference 2016 with your logo (see aluminium package).  
  2. Your company will be enabled to sponsor specific congress items or give-aways (see aluminium package).  
  3. Your company will be allowed to enclose two company brochures in the congress bag.  
  4. Participation fees for employees of your company are reduced by 20%.  
  5. Participation fees for guests who are invited by you and which are paid by you are reduced by 20%.  
  6. You may print one full-page advertisement (color)  
    • in the printed conference proceedings and  
    • in the program booklet  
  7. Your company will be enabled to sponsor specific congress events (see copper package).  
  8. Your company will be enabled to present products and services within the Table Top Exhibition with a reduced fee of 20% (see exhibition full service package). |

€ 5.000
VENUE

E|DPC 2016 will take place at the Nuernberg Convention Center (NCC) West of Nuernberg Messe on November 30th and December 1st, 2016. For your accommodation several hotels are booked all over the city. For prices and reservation, please use the reservation form on our website www.edpc.eu. Nuremberg boasts a unique mixture of tradition and modern times. Both people born here and people who moved here appreciate its extraordinary quality of life. At the same time, Nuremberg is a modern city with 500,000 inhabitants, and the centre of a prospering European metropolitan region with 2.5 million inhabitants. Its almost thousand years of history are still obvious in its cityscape. Please find more information at www.nuernberg.de.

TABLE TOP EXHIBITION

E|DPC 2016 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 Table Top Exhibition please contact the E|DPC Office (service@edpc.eu) or visit the website www.edpc.eu.

SPONSORSHIP

Are you interested in supporting E|DPC 2016 and presenting your company or organization as a sponsor? E|DPC 2016 is the ideal platform for the individual advertising of your innovative products and services. For further information, please visit our website www.edpc.eu/sponsoring-partners.

REGISTRATION

By fax: +49 (911) 5302 9070 Online: www.edpc.eu
By email: service@edpc.eu

For the fax registration please use the following registration form:

Salutation ___________________ Title __________________________
First Name _________________________________________________
Last Name _________________________________________________
Company Name _____________________________________________
Department ________________________________________________
Street/Unit number __________________________________________
Postal Code ____________ City ________________________________
Country ___________________________________________________
Phone ____________________________________________________
Fax ______________________ Mobile phone _____________________
e-mail _____________________________________________________

CONFERENCE FEE

Includes access to all conference sessions, access to the exhibition, participation at the evening reception, coffee and lunch breaks, conference proceedings (printed and electronic).

   Standard Fee o 980,- € plus VAT
   Reduced Fee*  o 580,- € plus VAT

Voucher code: __________________________

I also register for
  o Evening Reception (included)

* Reduced fee for International Program Committee members, speakers and university members. All prices plus VAT.

RELEASE FORM

By registering to the E|DPC Conference you agree to store, administer and use your personal data for the generation of your invoice and for informing you continuously about the latest research results and technology transfer activities of the Institute for Factory Automation and Production Systems (FAPS) of the University of Erlangen-Nuremberg and of FAPS-TT GmbH. Your personal data will not be transferred to third parties. If you do not wish to receive further information, please inform us immediately.

With the registration you also agree that photographs of your person can be taken during the E|DPC Conference. The University of Erlangen-Nuremberg shall have the non-exclusive, transferable, worldwide right in perpetuity to exploit such photographs in any and all forms, including, but not limited to reporting on the aforementioned conference.

Cancellations received in writing prior to October 30th, 2016 will be refunded less a 100,- € plus VAT administration fee. After October 30th, 2016 the fee will be fully charged.

Conference Organizer:
E|DPC office, c/o FAPS-TT GmbH
Fuerther Straße 246b, D-90429 Nuremberg

NürnbergMesse GmbH - NCC West
Messezentrum, 90471 Nuremberg
Conference Contact
FAPS-TT GmbH
phone: +49 (9122) 3074 527
fax: +49 (9122) 3074 529
email: service@edpc.eu
web: www.edpc.eu