

20th March

Electric motor industry - 1

*Chairperson: H. Born
RWTH Aachen University*

- 11:00 **M. Nankemam - PEM RWTH Aachen University**
Systematic categorization of current radial flux machines for traction applications
- 11:25 **K. Vostrov - LUT University**
Revolutionizing motor reliability: a novel approach to mitigating inverter-induced bearing currents
- 11:50 **S. Hardelt - Kisting AG**
Kisting adhesives for laminated core bonding
- 12:15 **F. Gnaedinger - Huntsman Advanced Materials**
Latest epoxy resin innovations for mass production of magnet-free rotor designs

Measurement & testing of electric motors - 1

*Chairperson: A. Credo
University of L'Aquila*

- 15:00 **D. Popovic Renella - Senis Group Switzerland**
Pure 3D magnetic field camera
- 15:25 **L. Viscardi - GrindoSonic BV**
Dissipative microcracks detection in magnets through pulse excitation testing
- 15:50 **K. Vervaeke - Magcam NV**
Optimizing the permanent magnet rotors of the Formula electric Belgium and the Innoptus Solar team electric race cars
- 16:15 **R. Slatter - Elsoma**
Production integrated measurement technologies for motor and sensor magnets

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E-mobility and advanced powertrains - 3

*Chairperson: I. Petrov
LUT University*

- 10:30 **I. Petrov - LUT University**
Advanced cooling methods of electrical machines
- 10:55 **J. Elmquist, J. Bonnet, F. Schemm - Victrex**
Material, manufacturing, and assembly opportunities and challenges when using thermoplastic stator sleeves in PMSM with direct stator slot oil cooling
- 11:20 **I. Teliban - Magnetfabrik Bonn**
Robust angle measurement with an in-shaft solution

Materials - 2

*Chairperson: G. Fabri
University of L'Aquila*

- 12:00 **M. Lanz - Aalen University Materials Research Institute Aalen**
Investigation of time-dependent demagnetization for long-term use of permanent magnets
- 12:25 **M. Pasquale - INRIM**
Online catalog of first magnetization curves for FEM simulations
- 12:50 **C. Lomoschitz - Axalta Coating Systems Austria**
Electrical insulation trends in E-mobility increased efficiency and sustainability

Electric motor industry - 3

*Chairperson: G. Fabri
University of L'Aquila*

- 14:30 **J. D. Fuente - Cometel**
Lamination scrap handling
- 14:55 **P. Buchsteiner - Comsol Multiphysics**
Insights into modeling and simulation for enhanced electric motor performance
- 15:20 **Y. Bajah - RWTH Aachen University**
Digital simulation of an electric motor production facility for optimization and industry 4.0 applications

20th March**E-Mobility and advanced powertrains - 1***Chairperson: M. Villani
University of L'Aquila*

- 11:00 G. De Boni - SPIN Applicazioni Magnetiche**
Innovative motors for the energy transition: All solutions from Spin
- 11:25 M. Aydin - thyssenkrupp Electrical Steel**
Grain oriented electrical steel for higher efficiency, more torque and reduced CO2 footprint in axial flux motors
- 11:50 D. Kirigo - Feintool System Parts Sachsenheim**
Introducing glulock ® bonding process for improved e-motor cores
- 12:15 P. Arnold - Additive Drives**
PFA insulation for electric motors beyond the automotive industry

Manufacturing technologies - 1*Chairperson: G. Fabri
University of L'Aquila*

- 15:00 J. Happ - haprotec**
Handling of permanent magnets in automation
- 15:25 L. M. Heine, R. Hendel - Laserline**
Reliable welding of copper with blue diode lasers
- 15:50 M. Beranek - Trumpf Laser und Systemtechnik**
Latest laser technologies for increasing the robustness of the welding process of electric drive copper hairpin windings
- 16:15 A. Selema - Ghent University**
Advanced engineering and manufacturability of electrical machines enabled by 3D printing technology

21th March**Electric motor industry - 2***Chairperson: T. Jezdinsky
European Copper Institute*

- 10:30 T. Jezdinsky - European Copper Institute**
Trends in motor technologies, and why old electric motors should be replaced faster - presented by the EU-MORE project
- 10:55 F. Ortiz Bustos - LUT University**
Novel materials in electrical machines
- 11:20 A. Levermann, M. Krupa - SHWire**
Winding wire matrix reloaded V2.0 - how the systematic wire selection method has developed

Transformers*Chairperson: T. Jezdinsky
European Copper Institute*

- 12:00 K. Warnakulasuriya - Teesside University UK**
Designing of 24-pulse transformer for a high power high voltage DC power supply application
- 12:25 K. Warnakulasuriya - Teesside University UK**
The design of high power high frequency oil-immersed transformers for remotely operated (ROV) applications

Manufacturing technologies - 2*Chairperson: A. Kampker
RWTH Aachen University*

- 14:30 G. Fuchs, J. Bissels - TU Munich**
Efficiency increase of asynchronous motors using casting technology approaches
- 14:55 S. Hartmann - PEM RWTH Aachen University**
Reduction of tooling costs in the hairpin stator production by using variant-flexible twisting tools
- 15:20 T. A. Backes - PEM RWTH Aachen University**
Enabling the hairpin stator process chain towards processing new wire materials
- 15:45 S. Sinha - Precision Processing Manufacturers**
Slinky and axial flux production technologies

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Women4Metals

*Chairperson: S. Klein, T. Winter
Aurubis AG*

- 11:00 Women4Metals**
Women in our industry – We want you! Really?

Material efficiency and EU resilience need alternative to PM for our sustainable uptake of e-mobility

*Chairperson: T. Jezdinsky
European Copper Institute*

- 15:00 T. Jezdinsky - European Copper Institute**
Overview on policy & market issues (Critical raw material act and recycling targets, EU resilience in supply vs rare earths under Chinese control)
- 15:25 P. Szilagyi - Wieland eTraction Systems**
Zero porosity rotor as one optimization strategy to support IM as one alternative to PM motors in e-drive trains
- 15:50 B. Austin - Dennis Ferranti Ltd**
Challenges but also new tech innovations in advanced cooling of motor a/o low cost manufacturing strategies
- 16:15 H. Born - RWTH Aachen University**
Hairpin windings for IM to round-up different technologies areas

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Measurement & testing of electric motors - 2

*Chairperson: A. Credo
University of L'Aquila*

- 10:30 E. Maggi - Laboratorio Elettrofisico**
The magnetic controls of stator and rotors: from the individual parts to the finished product
- 10:55 M. Kuhnt - Institute Dr. Foerster & Co. KG**
Measurements of the coercivity in accordance with EN IEC 60404-7:2020
- 11:20 L. Mierczak - Brockhaus Measurements**
Inferior performance of electric motors caused by degradation of stator magnetic properties after manufacturing processes
- 11:45 K. Leibold - Gossen Metrawatt**
Interturn short-circuit test in the field
- 12:10 A. Herrera, U. Ranninger - Omicron electronics**
Challenges when performing partial discharge measurements under AC and impulse voltage stress

UK Magnetics Society Special Session

*Chairperson: D. Popovic Renella
SENIS Group, Switzerland*

- 12:45 T. Schliesch - MAX BAERMANN GMBH**
Injection Moulded Magnets for Electrical Machines
- 13:00 P. Scheuber - BOMATEC AG**
Eddy Current Reduction with Reasonable Costs using Snakeline Magnets
- 13:15 J. Gassmann - Fraunhofer IWKS**
High performance magnets: new developments in processing, recycling and substitution
- 13:30 M. Urban - SENIS AG**
True 3D Magnetic Field Camera and 3D Mappers Revolutionize Fast and Precise Inspection
- 13:45 Panel Discussion**
Advancements in Magnetism: Innovations, Applications, and Sustainability

Materials - 3

*Chairperson: A. Credo
University of L'Aquila*

- 14:30 P. Persoone, W. Vandenbroucke - Bekaert**
Enhancing electrical performance with PEEK coated magnet wires: a deep dive into IEC compliance
- 14:55 C. Gundlach - TU Braunschweig Institute of Joining and Welding**
Novel test method for the comprehensive characterization of potting materials
- 15:20 S. Bottegal, L. Marino - Syensqo**
e-Motor outstanding overall improvement enabled by Syensqo new Ajedium™ PAEK slot liner

20th March**Materials - 1***Chairperson: L. Ferraris
Politecnico di Torino*

- 11:00 A. Abouelyazied, T. Van de Putte - ArcelorMittal**
Non oriented electrical steel and its contribution to the carbon footprint reduction of electric vehicles
- 11:25 L. Ferraris - Politecnico di Torino**
A new insight in the NdFeB magnets recycling process
- 11:50 P. File - Nichia Magnet Materials**
Bonded samarium iron nitride - a case for automotive usage
- 12:15 F. Franchini - Politecnico di Torino**
Simulation and measurement of magnetization curves of soft magnetic composite materials
- 12:40 D. Ferrigato, R. Chiodini - FAET, UL**
Procurement strategies and electrical insulation systems

E-mobility and advanced powertrains - 2*Chairperson: M. Villani
University of L'Aquila*

- 15:00 S. Nategh - SEDRIVE (Sustainable Electric Drive)**
Future and trend in electrical machine development and need for new winding technologies
- 15:25 H. P. Reicher, F. Radeck - SHWire, Schwering & Hasse Elektrodraht**
How to reduce safety margins in e-drives at 800V+
- 15:50 A. Jorissen - bdtronic**
How to achieve slot fill factors higher than 99% with trickle impregnation for 800V e-drive hairpin rotors

21th March**Battery and full-vehicle***Chairperson: A. Kampker
RWTH Aachen University*

- 10:30 J. Schmied - PEM RWTH Aachen University**
Shaping the European battery industry
- 10:55 V. Mussehl - PEM RWTH Aachen University**
The EU recycling market - a viable and sustainable business
- 11:20 A. Teufl - AIS**
Unveiling the power of ablative materials for enhanced fire protection in electric vehicles
- 11:45 E. Kikte, G. Eckers - EA Elektro Automatik**
Advantages of using ecofriendly power electronics solutions for battery testing
- 12:10 T. Hadzovic - PEM RWTH Aachen University**
Simulation-based development of thermal management for heavy duty fuel cell commercial vehicles

E-mobility and advanced powertrains - 4*Chairperson: M. Villani
University of L'Aquila*

- 14:30 N. Tomita - Nihon Denji Sokki Co.**
IPM rotor magnetization technology for high magnetization
- 14:55 F. Veglia - Tau Group**
800+ Volts powertrain application: the magnet wire
- 15:20 M. Bayerlein - PEM RWTH Aachen University**
Fixed route refueling strategy for fuel cell trucks