

WOMEN @ CTI

EXCLUSIVE NETWORKING PROGRAMME FOR WOMEN IN AUTOMOTIVE

WOMEN NETWORKING AREA

Launched in 2023, CTI again organised a special programme for female delegates, exhibitors and speakers. Participate in this networking and benefit from the insights & exchange with fellow women!

3 DECEMBER 2024

- 10:30 – 11:00 AM **Morning Coffee for the Curious** – Get to know your Peers!
Find out what they do, how they got into the industry and what topics they would like to discuss. Start sharing experiences from your professional life.
- 1:00 – 2:00 AM Networking Lunch Break with Extra Perspectives
Moderated Roundtables: Automotive industry through female eyes
Equity – what is it and how do we embed it within the workplace?
Claire Saville, Operational Marketing Manager, Driveline, Infineum UK Ltd
The value of mentoring - every hero needs a mentor
Nicole von Wieding, Head of Project Management BEV Drives, Volkswagen AG
- 3:30 – 4:15 PM **Walk the Floor** (Main Exhibition Hall)
Meeting Point: Women Networking Area
Visit selected exhibitors who will give insights into their technologies for sustainable mobility

4 DECEMBER 2024

- 10:15 – 11:00 AM **Meet the Start-Ups** (Women Only Group)
Meeting Point: Women Networking Area
Visit the Start-Up Area, meet the founders who present their innovations.
- 12:15 PM – 1:15 PM Networking Lunch Break with W-itamins
Opportunities for women in the automotive and supplier industries through/in the digital transformation.
Roundtable with Sabine Calvo, VP Engineering Performance, Validations & Digital Transformation, Renault Group

START-UP AREA @ CTI

For the first time CTI has set up an exclusive Start-Up Area where young companies will be present. We want to connect innovative start-ups with potential partners, investors, suppliers and decision makers to build valuable relationships and expand their professional network.

Attendees and start-ups can explore opportunities for collaborations and partnerships, for driving growth and opening new avenues.

Start-ups will be introduced on both event days in the plenary hall.

3 December 2024

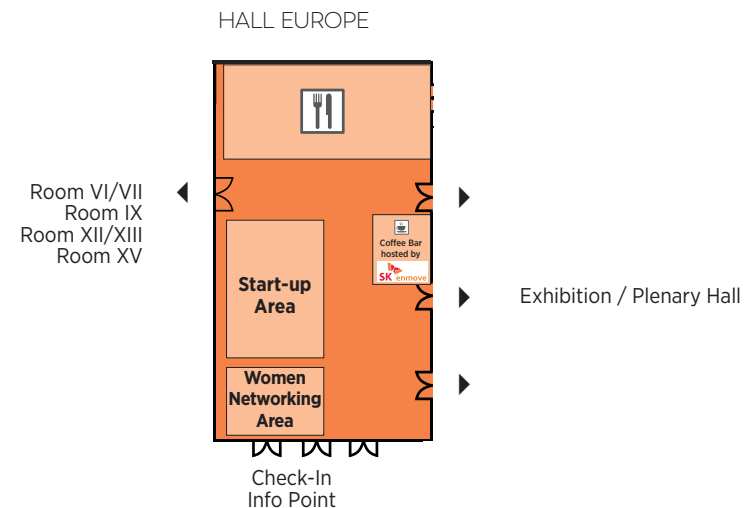
- 12:30 PM **Introduction of Start-Ups @ CTI (Part I)**
Additive Drives | Bruderli | Deeper Pulse | dynamic E flow

Followed by a guided visit of the Start-Up Area

4 December 2024

- 11:45 AM **Introduction of Start-Ups @ CTI (Part II)**
EMIL | HCPSense | hyperdrives | InnoShifting

Followed by a guided visit of the Start-Up Area



- 7:30 Check-In and Opening of the Exhibition
- 8:30 Opening of the CTI SYMPOSIUM GERMANY 2024 by CTI and the Chairman
- 8:45 **NIO's Power Strategy for Europe, Combining Mobility and Energy Transition**
Hui Zhang, Vice President Europe, Managing Director, NIO
- 9:05 **Building a Sustainable Mobility Future: Challenges from Energy and Resource Markets**
Prof. Dr Karen Pittel, Director of the ifo Center for Energy, Climate and Resources, ifo Institute
- 9:25 **Indian Automotive Market – Trends and Regulations Insights and Case Study from a Tier 1**
Amit Gupta, Managing Director & CEO, Hero Motors
- 9:45 Joint discussion with the Plenary Speakers
- 10:10 Networking Coffee Break and visit to the CTI SYMPOSIUM Exhibition
Company Presentations @ Expo Stage
10:30 Amsted
10:40 Warn Automotive
- 11:00 **Daimler Truck on the Way to CO2 Neutrality**
Christian Krajewski, Director Development E-Axles, Axles and Transmission, Daimler Trucks
- 11:30 **Electric Drives and the Transformation of the Automotive Industry: Framework Conditions and Opportunities**
Oliver Luksic, Parliamentary State Secretary, Federal Ministry for Digital and Transport
- 11:45 **Panel Discussion: Does Regulation Kill Innovation?**
Dr Peter Mock, Managing Director – ICCT Europe, International Council on Clean Transportation
Dr Manfred Schuckert, Vice President – Head of Regulatory Strategy & Int. Hydrogen Strategy, Daimler Truck
Hui Zhang Vice, President Europe, Managing Director, NIO
- 12:30 **Introduction of Start-Ups @ CTI (Part I)**
- Additive Drives
- Brudeli
- Deeper Pulse
- dynamic E flow
- 12:35 Networking Lunch Break and Visit to the CTI SYMPOSIUM Exhibition
Don't miss the Special Programme Features during the Networking Lunch Break!
12:35 Guided visit of the start-ups (Start-Up Area)
1:00 Women Networking Lunch (Room Europe)
1:30 Partner Presentations (details see next page)
- 2:00 **Deep Dive Sessions** (details see next page)
- 3:30 Networking Coffee Break and Visit to the CTI SYMPOSIUM Exhibition
- 4:15 **Deep Dive Sessions**
- 5:30 **Innovation as Driver of the Future** (Plenary Hall)
Dr Rudolf Bencker, SVP Inventions & Innovations Management, BMW Group
- 6:00 Departure to **CTI NETWORKING NIGHT @ Arminius Markthalle**
Shuttle buses depart from the main entrance of the Estrel Hotel

DEEP DIVE SESSIONS | 3 DECEMBER 2024

Session A Electric Powertrains

Plenum

Chair:
Dr M. Winkler, Hyundai
S. Rebhan, Schaeffler

Session B Electric Motors

Room XV

Chair:
U. Sommerhalter, Valeo
Dr P. Nanua, GM

Session C Cooling Fluids and Lubrications

Room IX

Chair:
T. Murr, Shell
G. Bednarek, Stellantis

Session D Fuel Cells

Room VI/VII

Chair:
Jimmy Larsson, Scania
K. Denkmayr, AVL

Session E Development Methods & Tools

Expo Stage

Chair:
Dr A. Sturm, TU Braunschweig
J. Saberi, Magna

Session F Energy & Mobility

Room XII/XIII

Chair:
Dr S. Beiker, Silicon Valley
Mobility
Dr C. Bänder

Session G Thermal Management

Silent
Conference
Stage

Chair:
T. Schmidt, Porsche
Engineering
Dr F. Völkel, Schaeffler

1:30 **World's First EV Fluid Specification from TotalEnergies**
Liang Xue and Flavio Sarti, TotalEnergies

CTI PREMIERE!
Dual Motor 600kW EDU Readied for Niche Volume Production
Maarten Debrouwere, TREMEC

Novel EV Fluid Technology Platforms
Jungsik Yun, SK Enmove Co.

2:00 **Meeting the Needs of Smaller Electric Vehicles: An Optimised Lightweight and Compact EDU**
Dr Simon Klacar, InfiMotion Technology Europe

Ultra-Efficient Dual-Rotor Radial-Flux Induction Motors: A Rare-Earth-Free Alternative for EV Drives
Dr Alexander Rosen, DeepDrive

Dedicated Electric Driveline Fluid (EDF) Development for an e-Axle Platform
Thomas Kraft, FUCHS Lubricants Germany and Dr Mirjam Bäse, Magna Powertrain

The Challenge of Hydrogen Quality for Automotive Fuel Cells
Dr Graham Smith, National Physical Laboratory

A Methodology for In-Process Maturity Rating for Vehicle Powertrain Software
Ole Behnke, Mercedes Benz

Pioneering Electric Vehicle Charging with the Mobile Battery Swapping Station
Sven Steinwascher, GTSYSTEM

Development of Integrated Thermal Management Analysis Technology for EV 3in1 Driveline Components
Sang-Min Park, Hyundai-Transys

2:30 **High Efficiency EDU – > 94% Average Cycle Efficiency and Cost-Effective Drivetrain**
Wilhelm Vallant, AVL

Exploiting the Advantages & Mitigating the Weaknesses of Axial Flux Machines
Tim Woolmer, CTO, YASA

Dedicated eFluids for Energy Efficiency
Andrew Wood, Infineum UK

Fuel Cell Aging: CAE based Layout for Optimal System Design in Heavy-Duty Trucks
Dr Matthias Thewes, FEV Europe

Lumped Parameter Thermal Network Model of an Electric Machine
Felipe Da Chunha Nunez, TotalEnergies One Tech

Possible Contributions of Vehicle-to-Grid to the Electricity Sector within German Energy Transition
Prof. Dr Harald Schwarz, BTU Cottbus-Senftenberg

Framework for Optimisation of E-Drive Systems incl. Drive Thermal Management
Fabian Notz, TU Braunschweig

3:00 **Gen5 eDrive – Cost Efficient Platform eAxle Solutions for Medium to High Power Classes**
Karsten Kühkamp, Valeo eAutomotive

Rare-Earth Free Traction Electric Machines with Interchangeable Rotors
Rajesh Kallur-Krishnamoorthy, RWTH Aachen University in cooperation with FEV Europe GmbH

Novel Robust Power Dense Motor e-Fluid Cooling Concepts
Dr Stephan Schlimpert, Flanders Make

LCA of a FCEV Truck and Optimisation of the Operating Strategy
Prof. Dr Alexander Gelner, TH Ingolstadt

Fast FEA Based Models to Minimise Cost, Development and Sustainability
Dr Joachim Druant, Dana

Vehicle Sourced Energy Flexibility for the Future Electricity Grid
Simon Massat, TU Darmstadt

New Refrigerant Valve Block for Battery Electric Vehicles
Frank Hohmann, IAV

3:30 Networking Coffee Break in the CTI SYMPOSIUM EXPO & Special Programm (see page 1)

Networking Coffee Break in the CTI SYMPOSIUM EXPO (Special Programm see page 1)

Commercial Vehicles

Markets, Policies and Supply Chains

Hybrid Powertrains

4:15 **Innovative Multilevel Battery Systems: Advancing Energy Storage Technologies**
Dr Manuel Kuder, PULSETRAIN

Optimisation and Comparative Analysis of Electric Machine Topologies with Varying Magnetic Materials
Dr Branko Ban, Alvier

More Sustainable Lubricants for Electrified Heavy Duty Drive Trains
Leonard Kieckebusch, Shell Global Solutions

MAN hTGX – HD-Tractor Powered by H45-Hydrogen ICE Equipped with Voith Plug and Drive Hydrogen Storage System
Dr Andreas Broda, MAN and Tobias Baumann, Voith

Minimising Scope 3 Emissions by Electric Powertrain Design Optimisation
Dr Dominik Lechleitner, Graz University of Technology

Light Vehicle Powertrain Outlook to 2035
A. Saboor Imran, S&P Global

A New Scalable Transmission Family for ICE-Based, 48V, and HV Hybrid Applications
Marc Gukelberger, Magna

4:45 **Efficiency and Cost Innovation with xONEdrive Solutions**
Frederik Däumer, hofer powertain

Potential of High Performance Hollow Wire Rotor Cooling in Externally Excited Motors
Maximilian Zinner, ARRK Engineering and Björn Scheffele, dynamic E flow

Pushing the Boundaries of Electric Vehicle (EV) Lubrication – How Low Can You Go?
Dr Amanda Eastwood, Lubrizol

Maximising Driveline Efficiency for Electric Trucks and Buses
Gert-Jan Vogelaar, Mazaro

An Integrative Analysis of Powertrain Architectures with Focus on e-Corner Solutions
Felix Wipfler, Schaeffler Technologies

How Different Resource Availabilities and Market Demands Influence Trends in e-Powertrains
Lukas Giesemann, P3

DE4LoRa – Double-E-Drive for Long Range: Innovative Plug-in Hybrid
Aaron Kappes, TU Darmstadt

5:15 Change to Plenum for Plenary Speech

Change to Plenum for Plenary Speech

6:00 Departure to CTI Networking Night @ Arminius Market Hall (Estrel Hotel Main Entrance)

Departure to CTI Networking Night @ Arminius Market Hall (Estrel Hotel Main Entrance)

- 8:00 Check-In and Opening of the Exhibition
- 8:30 Opening of Day 2 by the Chairman
- 8:45 **How Digital Transformation will Support Breakthrough in Time-To-Market Acceleration and Cost Reduction**
Dr Sabine Calvo, VP Engineering Performance, Validations & Digital Transformation, Renault Group
- 9:05 **Software Defined Vehicle in the AI Era**
William Wei, Advisor to FPT Automotive, CMO & EVP of Skymizer
- 9:25 **Status Quo of Battery Cell Production in Europe**
Nicolas Steinbacher, Program Lead, Northvolt Drei Project GmbH
- 9:45 Joint Discussion with the Plenary Speakers
- 10:10 Networking Coffee Break and Visit to the CTI SYMPOSIUM Exhibition
Company Presentations @ Expo Stage
10:30 Jing-Jin Electric
10:40 Sumitomo
- 11:00 **Panel Discussion: Back from the Dead ? ICE in Passenger Vehicles**
Dr Norbert Alt, COO & Executive Vice President, FEV Group GmbH
Prof. Dr Maximilian Brauer, Head of the Vehicle Powertrain Department, TU Berlin
Dr Tobias Block, Managing Director Strategy, eFuel Alliance
Prof. Dr Markus Lienkamp, Institute/Chair of Automotive Technology, TU Munich
- 11:45 **Introduction of Start-Ups @ CTI (Part II)**
- EMIL
- HCP Sense
- hyperdrives
- InnoShifting
- 11:50 Networking Lunch Break and Visit to the CTI SYMPOSIUM Exhibition
Don't miss the Special Programme Features during the Networking Lunch Break!
11:50 Guided visit of the start-ups (Start-Up Area)
12:15 Women Networking Lunch (Room Europe)
12:45 Partner Presentations (details see next page)
- 1:15 **Deep Dive Sessions** (details see next page)
- 2:45 Coffee Break and Visit to the CTI SYMPOSIUM Exhibition
- 3:30 **Deep Dive Sessions**
- 4:30 Change to Plenum
- 4:45 **Summary and Closing by the Chairman**
- 5:00 End of CTI SYMPOSIUM GERMANY 2024

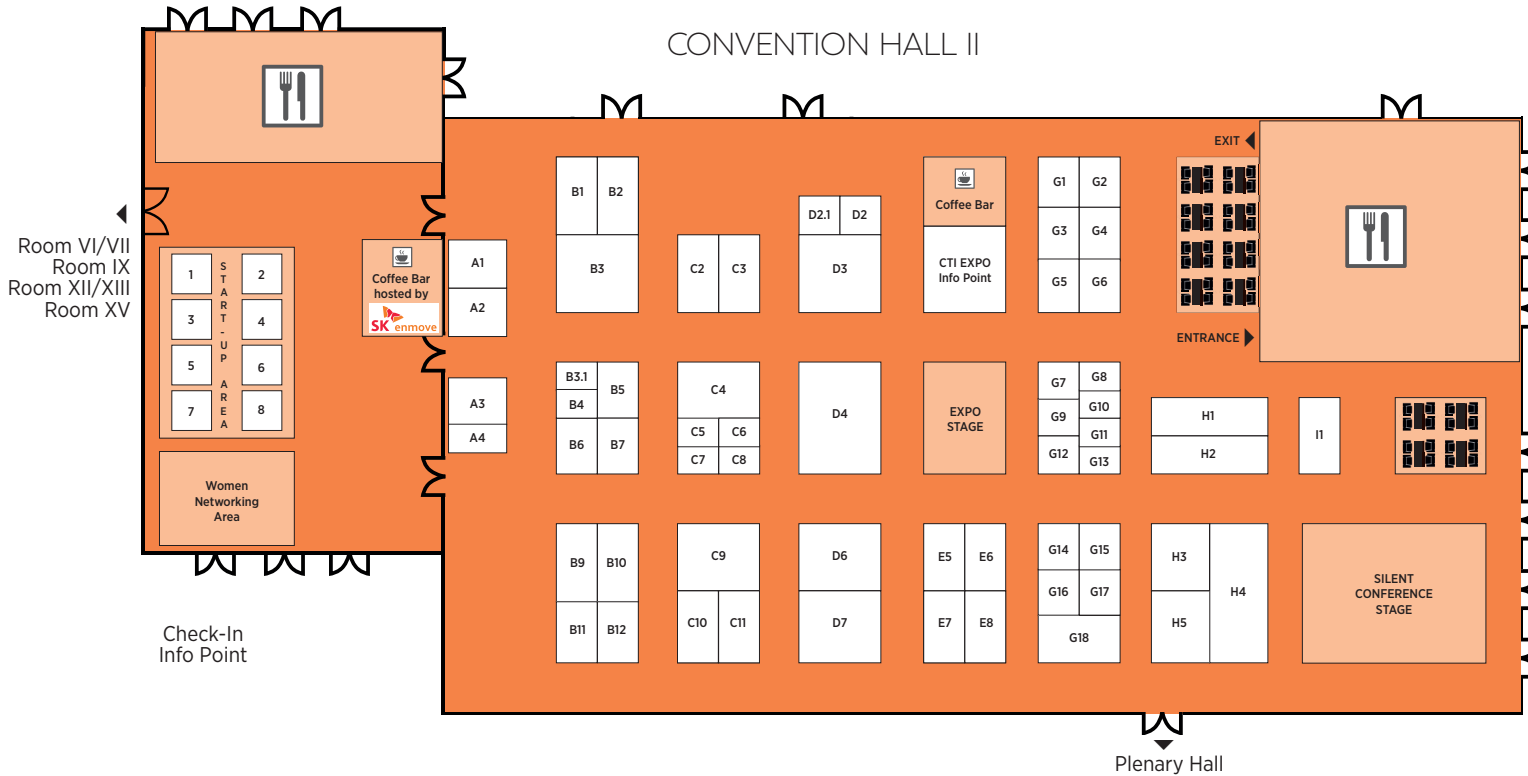
DEEP DIVE SESSIONS | 4 DECEMBER 2024

	Session H Electric Powertrains	Plenum	Session I Power Electronics	Room XV	Session J Batteries	Room IX	Session K Commercial Vehicle Powertrains	Room VI/VII	Session L Advanced Manufacturing & Powder Metallurgy	Expo Stage	Silent Conference Stage	Session M Artificial Intelligence in Powertrain Development	Session N Transmission Components	Room XII/XIII
	Chair: R. Schuermans, Toyota T. Peichl, TU Darmstadt		Chair: K. Müller, IAV J. Lyjak, GM		Chair: Dr K. Bennewitz, VW T. Schmidt, Porsche Engineering		Chair: D. Adamczyk, ZF Dr U. Burr, Voith		Chair: J. Münzenberger, ALD			Chair: Dr A. Strum, TU Braunschweig Dr K. Denkmayr, AVL	Chair: J. Jennings, Amsted Prof. Dr P. Tenberge, RU Bochum	
12:45			Sustainable and Efficient Methods for Recycling Vehicle Wire Harness Volker-Uwe Strueken, SEI Automotive Europe						Beyond Tailpipe Emissions: The Race to Net Zero Mark Rushton, aPriori					
1:15	Accessible People Mover (APM): Agile Development of 48V Powertrain System Thomas Haine, Toyota Motor Europe ; Frederik Baudrier, Forsee Power ; Nabal Pandey, FEV Europe		Powering the Future: Balancing Performance, Profitability and Sustainability in EV Power Electronics Dr Naser Almohammed, FEV Europe / FEV Consulting		Enabling Rapid Charging within EV Battery Design Adam Dendrinos, AVL		Combined Cooling for Electric Machine, Gearbox and Power Take Off for Commercial Vehicles Rickard Holmgren, Scania CV		The Introduction of Soft Magnetic Composite (SMC) Metal Powder in Electric Motor Technologies Dr Nils Bornemann, Höganäs Germany			Deep Learning Virtual Sensors and Digital Twin for Next Generation Electric Drive Systems Skander Oueslati, BorgWarner	2-Speed ATC Clutch Wear Compensation Method Hanbyn Jeon, Hyundai-Wia Company	
1:45	Comparison of Wheel Hub and Central Drives with Focus on Energy Consumption and Costs Patrick Starke, IAV		System Cost Optimisation with New Power Semiconductor Solutions Considering Long Distance Driving Mark Nils Muenzer, Infineon Technologies		Scaling Up Extreme Performance Batteries: Creating an Ecosystem to Meet Complex Requirements Uwe Klaus Hotz, Nyobolt		Benefits of Central Drive Gear Reduction for Commercial Electric Vehicle Application Grzegorz Konopka, Eaton Mobility Group		An Innovative Approach to Reduce Scrap in Hairpin Motor Production Using Digital Twin and SPC Dr Ingo Lindner, Hexagon Metrology			Machine Learning in Holistic Powertrain Concept Design of Heavy-Duty Electric Vehicles: A Case Study Anna Rozum, RWTH Aachen University	Enhanced Torque Vectoring Systems for Electrical Drive Unit Maxime Paul, Valeo	
2:15	Novel X-in-1 Electric Drive Unit Platform to Optimise Function Integration Dr Håkan Sandquist, InfiMotion Technology Europe		Increasing Power Capacity with Dual Output Inverters Dr Temoc Rodriguez, Ricardo		Battery Direct Oil Cooling - Advantages and Testing Methodologies Iliaria Travi, Petronas		Electrical Drive System – How Voith Supports the Mobility and Transport Transformation Manuel Calero, Voith		Unleashing Potential: TSRF Topology Improves Electric Motor Performance using SMC Materials Dr Alex Stepuk, EVR Motors			AI-Powered Innovation: Harnessing Data Analytics in Modern Powertrain Development Dr Nikolaus Keuth, AVL	Optimisation of EV Drivetrain Efficiency: Impact of Lubricant Selection Dr Amir Kadiric, Imperial College London	
2:45	Networking Coffee Break and Visit to the CTI SYMPOSIUM Exhibition & Special Programm (see page 1)						Networking Coffee Break and Visit to the CTI SYMPOSIUM Exhibition & Special Programm (see page 1)							
3:30	How to Design the Optimal Bearing Concept for Rotor and Input Shafts of an Electric Powertrain? Sebastian Schweins, SKF		Wide Bandgap Technology Drives Advanced HV Architectures for BEVs Dr Ayman Ayad, Schaeffler Technologies		Lab to Life: Applied Battery Modeling Dr Michael Baumann, TWAICE Technologies		Optimising Performance, Efficiency, Capacity, and Cost for Electric Light Commercial Vehicles Martin Burgbacher, AAM		Sustainable Mobility Powered by Advanced Casting Technology Carolin Neumann, ACTech			EV Thermal Management With Model Predictive Control and Machine Learning Patrick Schutzeich, FEV Europe	Including Realistic Gear Material Fatigue Data in Design, Manufacturing and Maintenance Johannes Mann, Hexagon	
4:00	Benefits of Axle Disconnects in AWD BEVs Considering Various E-Motor Architectures Prashant Ramakrishna Hegde, BorgWarner		An Advanced E/E Integration Solution for Electric Drive Systems Dr Gerald Sammer, AVL		Electrochemical Impedance Spectroscopy (EIS) Implementation in Battery Management Systems (BMS) Davide Cavaliere, Marelli		Electrifying Last-Mile Logistics: Introducing the eD1 MINI with Chassis-by-Wire Innovation Joachim Trumpff, GETEC Getriebe Technik		Enhancing NVH Performance in EV Gearing Systems through Powder Metallurgy and Polymer Dr Philipp Kauffmann, Johnson Electric			Towards an AI-based Multi-Modal Approach in Technical Drawing Analysis Yunying Zeng, Karlsruhe Institute of Technology (KIT)	The Schaeffler e-Bearing Family – Solutions for Future BEV Applications Dr Benedikt Neubauer, Schaeffler Technologies	
4:30	Change to Plenum						Change to Plenum							
4:45	Summary and Closing						Summary and Closing							
5:00	End of CTI SYMPOSIUM GERMANY 2024						End of CTI SYMPOSIUM GERMANY 2024							

EXHIBITION AND FLOORPLAN

HALL EUROPE

CONVENTION HALL II



GFU Maschinenbau GmbH	G1
GKN Powder Metallurgy	C2
HCP Sense GmbH	6
Hexagon	G3
HOERBIGER Antriebstechnik Holding GmbH	G16
Höganäs Germany GmbH	A2
HYCET Transmission Technology Hebei Co.,Ltd	B10
Hyperdrives GmbH	5
InfiMotion Technology AB	D3
Infinitech UK Ltd.	E6
InnoShifting GmbH	1
Jing-Jin Electric	B5
JSJ Tiny Life GmbH	I1
JTEKT Corporation	C8
KENOTOM PC	B12
KISSsoft AG	G15
Magna	D6
Miba Group	E7
Nidec GPM GmbH	G9
PARTICLEWORKS EUROPE SRL	G17
PETRONAS Lubricants International	H3
PMC Technologies Inc.	G10
Scherdel GmbH	A4
Schunk Carbon Technology GmbH	G6
Shell Deutschland GmbH	A1
SMT	C6
Stelter Zahnradfabrik GmbH	C7
Sumitomo Electric - SEI Automotive Europe Ltd.	E8
teamtechnik Maschinen und Anlagen GmbH	G4
TotalEnergies Lubrificants	H4
TREMEC	H2
Valeo	H1
Victrex	G12
Walter Henrich GmbH - Wieland	B11
Warn Automotive	G11
WUXI SHINDEN MODERN INTELLIGENT TECHNOLOGY CO.,LTD	B7
ZeBeyond Ltd	G2

AAM	A3
ACTech	B1
Additive Drives GmbH	2
Afton Chemical	G5
Amsted Automotive	C4
ARRK Engineering GmbH	D2
ATESTEO GmbH & Co. KG	H5
AVL	B3
BorgWarner Inc.	C9
Brand KG (brandgroup)	C11
Brudeli Green Mobility AS	3
Castrol Germany GmbH	C10
Christian Bauer GmbH + Co. KG	G8
CTI Infopoint - Helpdesk - Reservation	C1
Curtiss-Wright, Metal Improvement Company, LLC	D2.1
DANA Incorporated	D4

Dassault Systemes Deutschland GmbH	G13
Deeper Pulse	7
DuPont Specialty Products Operations Sàrl	C3
DVS TECHNOLOGY GROUP	C5
dynamic E flow GmbH	4
Dynax Corporation	B2
ElringKlinger AG	B9
ELTRO GmbH	B3.1
Emil Motors GmbH	8
EMOTORS	G7
Ernst Grob AG	B6
EVR Motors	G14
Feintool International Holding AG	G18
FEV	E5
FUCHS LUBRICANTS GERMANY GMBH	D7
Gehring Technologies GmbH + Co. KG - Nagel	B4

Plenary Hall