

**orari** Sunday September 1, 2024 • Cittadella Politecnica, Corte Interrata (Rooms I)

08:00	Registration			
	<b>Room 1</b>	<b>Room 3</b>	<b>Room 5</b>	<b>Room 7</b>
09:30	<b>TUTORIAL 1</b> • Influence of Permanent Magnet Synchronous Machines Control Parameters on Acoustic Noise and Vibrations Due to Maxwell Forces. <i>J. Le Besnerais, Eomys Engineering</i>	<b>TUTORIAL 2</b> • Embedded Rapid Control Prototyping (RCP) for Electric Motors: Open Source Experimental Approach for the User. <i>R. Delpoux, INSA Lyon</i> <i>L. Kerhuel, Microchip Technology</i> <i>H. Houmsi, INSA Lyon</i>	<b>TUTORIAL 3</b> • Self-commissioning Techniques for AC Motor Drives. <i>P. Pescetto, Politecnico di Torino</i> <i>S. Odhano, Newcastle University</i> <i>M. Hinkkanen, Aalto University</i> <i>L. Peretti, KTH Royal Institute of Technology</i>	
12:00	Lunch			
13:00	<b>TUTORIAL 4</b> • Advanced Manufacturability of Electrical Machines Enabled by 3D Printing Technology. <i>A. Selema, Ghent University</i> <i>P. Sergeant, Ghent University</i>	<b>TUTORIAL 5</b> • Advancements in Digital Design of Rare Earth Free Electric Traction Motors. <i>M. Popescu, Ansys Inc.</i> <i>M. Carbonieri, Ansys Inc.</i>	<b>TUTORIAL 6</b> • From Geometric Model to System Simulation: Physical Modeling and Control of Electric Motors with Simulink and Simscape. <i>F. He, Mathworks</i> <i>S. Ferrari, Politecnico di Torino</i>	<b>TUTORIAL 7</b> • High-performance Torque Controllers for Multi-three-phase Motor Drives. <i>S. Rubino, Politecnico di Torino</i>
15:30	Coffee break			
16:00	<b>TUTORIAL 8</b> • Advanced Massive Simulation and Optimization of Electrical Machines for E-mobility Segment. <i>T. Yamada, JSOL Corporation</i> <i>H. Sano, JSOL Corporation</i> <i>S. Nategh, SEDRIVE</i>	<b>TUTORIAL 9</b> • Industrial Medium-voltage Drives: from Components to Systems and Applications. <i>T. Geyer, ABB System Drives</i>	<b>TUTORIAL 10</b> • Embedded Code Generation from PLECS for Electric Drives. <i>B. Arnet, PLEXIM Inc</i>	<b>TUTORIAL 11</b> • Past, Present and Future of Fault-tolerant Modular Motor Drives for Safety-critical Applications. <i>T. Jahns, University of Wisconsin - Madison</i>
18:30	Welcome Reception			

**Monday September 2, 2024**

<b>orari</b>	Aula Magna Politecnico di Torino, Main Building
07:30	Registration
08:00	Welcome of the Rector of Politecnico di Torino and of the General Chairs of ICEM 2024.
08:30	<b>Keynote 1</b> • Electrifying Horizons: Navigating the Future of Mobility and Transportation: Segments, Metrics, Challenges, Enablers. <i>P. Savagian</i>
09:00	<b>Keynote 2</b> • The Wheel Reinvented: How Yasa Established a New Standard in Axial-Flux Emotors. <i>T. Woolmer</i>
09:30	ICEM 50 <sup>th</sup> Year Anniversary, Address by Prof. Gerard Capolino.
10:00	Move to Oral Session Rooms for coffee break

**orari** Cittadella Politecnica, Corte Interrata (Rooms I)

	<b>Room 1</b>	<b>Room 3</b>	<b>Room 5</b>	<b>Room 7</b>	<b>Room 9</b>	<b>Room 2</b>	<b>Room 4</b>	<b>Room 10</b>
10:40	<b>Rotating Machines 1.</b> <i>Chairs: M. Kamper, J. A. Tapia</i>	<b>Design Issues (Optimization, Modelling, Simulation) 1.</b> <i>Chairs: A. Knight, G. De Donato</i>	<b>Thermal Analysis of High-Reliability Motor Drives for EV Applications 1.</b> <i>Chairs: P. S. Ghahfarokhi, A. J. Marques Cardoso</i>	<b>Innovative Magnetic Materials for 3D Printing and Sustainability of Electromagnetic Devices.</b> <i>Chairs: L. Ferraris, C. Henaux</i>	<b>Electrical Drives 1.</b> <i>Chairs: R. Bojoi, S. A. Odhano</i>	<b>Electrical Machines and Drives for Renewable Energy Generation 1.</b> <i>Chairs: J. T. E. F. Ferreira, A. Giraud</i>	<b>Diagnostics and Condition Monitoring 1.</b> <i>Chairs: G. Capolino, S. B. Lee</i>	
12:20	Lunch, Poster Session 1 and Student Forum Posters							

**orari** Cittadella Politecnica, Corte Interrata (Rooms I)

14:20	<b>Rotating Machines 2.</b> <i>Chairs: L. Ferraris, M. Henke</i>	<b>Design Issues (Optimization, Modelling, Simulation) 2.</b> <i>Chairs: S. Ferrari, L. Tutelea</i>	<b>Thermal and Losses Issues-magnetic and Insulation Materials 1.</b> <i>Chairs: A. Krings, R. Wrobel</i>	<b>Motor and Generator Windings-design, Manufacturing and Maintenance</b> <i>Chairs: J. T. E. F. Ferreira, S. Stipetić</i>	<b>Electrical Machines and Drives for Sustainable Transportation 1.</b> <i>Chairs: Z-Q. Zhu, A. Kladas</i>	<b>Highly Reliable Electrical Drives: Controls, Modulation and Architectures for Reliability.</b> <i>Chairs: G. Migliazza, G. Buticchi</i>	<b>Diagnostics and Condition Monitoring 2.</b> <i>Chairs: A. Cardoso, J. Antonino-Daviu</i>	<b>Industrial Session 1</b> <i>Chair: C. Bianchini</i>
16:00	Coffee break							
16:20	<b>Rotating Machines 3.</b> <i>Chairs: N. Bianchi, J. Barta</i>	<b>Design Issues (Optimization, Modelling, Simulation) 3.</b> <i>Chairs: G. De Donato, A. Di Gerlando</i>	<b>Thermal and Losses Issues-magnetic and Insulation Materials 2.</b> <i>Chairs: S. Stipetić, S. Rubino</i>	<b>Advanced Manufacturability of Electrical Machines Enabled by 3D Printing Technology.</b> <i>Chairs: A. Selema, P. Sergeant</i>	<b>Electrical Drives 2.</b> <i>Chairs: D. Barater, M. Hinkkanen</i>	<b>Special Machines, Linear Machines, Actuators and Sensors 1.</b> <i>Chairs: J. Bird, M. Repetto</i>	<b>Fault Tolerant Machines and Drives.</b> <i>Chairs: M. Mengoni, L. Vancini</i>	
18:00	<b>IES Electrical Machines Technical Committee Meeting</b>							

**Tuesday September 3, 2024**

<b>orari</b>	Aula Magna Politecnico di Torino, Main Building								
07:30	Registration								
08:00	Smart Driving Systems for E-mobilities Applications. G. Guanzhong - Wolong								
09:00	Keynote 3 - Advanced Electrical Drivetrains for Propulsion and Traction Applications. A. EL Rafea								
09:30	Keynote 4 - Inferior Performance of Electric Motors Caused by Manufacturing-induced Degradation of Stator Magnetic Properties. L. Mierczak								
10:00	Move to Oral Session Rooms for coffee break								
<b>orari</b>	Cittadella Politecnica, Corte Interrata (Rooms I)								
	<b>Room 1</b>	<b>Room 3</b>	<b>Room 5</b>	<b>Room 7</b>	<b>Room 9</b>	<b>Room 2</b>	<b>Room 4</b>	<b>Room 10</b>	
10:40	Rotating Machines 4. Chairs: G. De Donato, M. Galea	Electrical Machines and Drives for Sustainable Transportation 2. Chairs: S. Nuzzo, F. Ortiz	Diagnostics and Condition Monitoring 3. Chairs: L. Frosini, R. Romary	Design Issues (Optimization, Modelling, Simulation) 4. Chairs: N. Simpson, A. Credo	Sustainable Electric Drives for E-mobility 1. Chairs: Md. Jahirul, S. Nuzzo	Special Machines, Linear Machines, Actuators and Sensors 2. Chairs: M. Ito, L. Papini	Data-driven Design for Electrical Machines: Methodology, Modelling, and Multidisciplinary Optimization. Chairs: Y. Xiao, Y. Ma		
12:20	Lunch, Poster Session 2								
14:20	Rotating Machines 5. Chairs: R. Dutta, F. Giulii Capponi	Thermal Analysis of High-reliability Motor Drives for EV Applications 2. Chairs: A. Cardoso, P. S. Ghahfarokhi	Diagnostics and Condition Monitoring 4. Chairs: A. Karlis, T. Wolbank	Design Issues (Optimization, Modelling, Simulation) 5. Chairs: C. Espanet, D. Barater	Sustainable Electric Drives for E-mobility 2. Chairs: Md. Jahirul, S. Nuzzo	Special Machines, Linear Machines, Actuators and Sensors 3. Chairs: C. Bianchini, E. Poskovic	Use of Artificial Intelligence for Optimized Design of Electrical Machines and Drives. Chairs: F. Crescimbin, M. Quercio	Industrial Session 2 Chair: C. Bianchini	
16:00	Coffee break								
16:20	Move to main Aula Magna, Politecnico di Torino - Main Building			"Galileo Ferraris Memorial" Session by Prof. A. Boglietti					
17:30	ICEM NPO General Meeting								
19:30	Gala Dinner at MAUTO and free Museum visit								

**Wednesday September 4, 2024**

<b>orari</b>	Aula Magna Politecnico di Torino, Main Building								
08:00	Registration								
08:30	Multiphysics Modeling and Optimization of Electric Motors. L. Kvale, COMSOL								
09:00	ETEL: 50 Years of Precision and Experience in Direct Drive Motion. A. Fasolo, ETEL								
09:30	Design for Post Assembly Magnetisation. M. Swallow, BUNTING MAGNETICS								
10:00	Move to Oral Session Rooms for coffee break								
<b>orari</b>	Cittadella Politecnica, Corte Interrata (Rooms I)								
	<b>Room 1</b>	<b>Room 3</b>	<b>Room 5</b>	<b>Room 7</b>	<b>Room 9</b>	<b>Room 2</b>	<b>Room 4</b>	<b>Room 10</b>	
10:40	Design Issues (Optimization, Modelling, Simulation) 6. Chairs: A. Castagnini, G. Bramerdorfer	Electrical Machines and Drives for Sustainable Transportation 3. Chairs: G. Fabri, T. Thiringer	Thermal and Losses Issues-magnetic and Insulation Materials 3. Chairs: P. Mellor, S. Vaschetto	Diagnostics and Condition Monitoring 5. Chairs: T. Wolbank, P. Panagiotou	High Efficiency Electrical Machines for Transportation Electrification. Chairs: A. Kladas, M. Galea	Electrical Drives 3. Chairs: L. D. Tornello, M. Chomat	High Torque Density Flux Modulation Machines and Drives. Chairs: S. Jia - T. Zou		
12:20	Lunch								
13:20	Design Issues (Optimization, Modelling, Simulation) 7. Chairs: S. Durovic, F. Graffeo	Electrical Machines and Drives for Sustainable Transportation 4. Chairs: P. Pescetto, A. Takahashi	Thermal and Losses Issues-magnetic and Insulation Materials 4. Chairs: M. Cossale, S. Nategh	Diagnostics and Condition Monitoring 6. Chairs: K. Koutrakos, L. Frosini	Off-highway Vehicle Electrification: Electric and Hybrid Powertrains and Components. Chairs: S. Nuzzo, T. Minav	Electrical Drives 4. Chairs: M. Pastorelli, A. Geiger	Switched Reluctance Machines and Drives. Chairs: H. Hua - L. Ge	Industrial Session 3 Chair: C. Bianchini	
15:00	Coffee break								
15:20	Design Issues (Optimization, Modelling, Simulation) 8. Chairs: P. Bolognesi, N. Takorabet	Electrical Machines and Drives for Sustainable Transportation 5. Chairs: V. Madonna, J. Pecotich	Electrical Machines and Drives for Renewable Energy Generation 2. Chairs: K. Garner, F. Graffeo	Rotating Machines 6. Chairs: B. Mccrow, S. Rubino	Intelligent Model-based Design & Simulation Technology of Electrical Machines Targeting E-Mobility. Chairs: P. Sarbajit, C. Junghwan	Electrical Drives 5. Chairs: P. Pescetto, K. Lubin	Superconducting Electrical Machines. Chairs: M. Mueller, F. Marignetti		
17:20	Move to main Aula Magna, Politecnico di Torino - Main Building								
19:30	ICEM Awards and Closing Ceremony								