

SMART 2026 Final Program

Day 0: Sunday, October 18	
9H00-16H00	Registration and information
13H00-14H30 Auditorium L	Tutorial: <i>EVs versus HEVs - A Perpetual Automotive Competitiveness Evolution</i> (E-PACE, Part 1) Ahmed Masmoudi University of Sfax, Tunisia
14H30-15H00	Coffee Break
15H00-16H30 Auditorium L	Tutorial: <i>EVs versus HEVs - A Perpetual Automotive Competitiveness Evolution</i> (E-PACE, Part 2) Ahmed Masmoudi University of Sfax, Tunisia

Day 1: Monday, October 19

9H00-16H00 Registration and information

9H00-10H00 Welcome Reception

10H00-11H15 Opening

11H30-12H30 Plenary Session 1

Auditorium L

SMART26-PS1: *Hydrogen at the Heart of the Energy Transition in the Digital Era*

Ameena Al Sumaiti

Khalifa University, UAE

Chairs: Alessandra Sannella (Italy) and Benedikt Schmuelling (Germany)

12H30-14H00 Lunch

14H00-16H00 **LS1: Lecture Special Session on Sustainable Buildings and Cities:**
Auditorium L **Integrating Technology, Design, and Human Behavior (SS-SBC, Part 1)**

Chairs: Farah Al-Atrash (Jordan) and Janon A.W. Kadhim (USA)

SMART26-SS-SBC-18: *Architectural Dramaturgy as a Theoretical Framework for Environmental Design*

Natheer Abu-Obeid

German Jordanian University, Jordan

INVITED PAPER

SMART26-SS-SBC-01: *Translating Traditional Intelligence into Smart Sustainable Design: Integrating Life Cycle Assessment and Smart-House Technologies*

Maha Salman and Khalid Sabie

Canadian University Dubai, UAE

Maha Dahroug

Western University, Canada

	SMART26-SS-SBC-09: <i>AIA COTE Top 10 Measures for Design Excellence: An American Vision Toward Sustainability in the Built Environment</i> Janon A.W. Kadhim University Sacramento, California, USA SMART26-SS-SBC-16: <i>Adaptive Thermal Comfort in Reused Heritage Buildings: A Comparative Field Study in Amman–Jordan and Trier–Germany</i> Farah Al-Atrash and Rawan Khattab German Jordanian University, Jordan Matthias Sieveke, Robert Thum and Paul Pletz Hochschule Trier University of Applied Sciences, Germany SMART26-SS-SBC-02: <i>Subterranean Urbanism for Sustainable Cities: Underground Architecture as a Climate-Responsive Strategy for Urban Density</i> Maha Salman, Yasmin Helmy and Mohammed Al Subousi Canadian University Dubai, UAE
14H00-16H00 Room H201	LS2: Lecture Special Session on Nanotechnology, Functional Materials, Surface Engineering and Sustainable Technologies (SS-NFSS1, Part 1) Chairs: Suhad Sbeih (Jordan) and Raquel Ramirez-Vazquez (Spain)
	SMART26-SS-NFSS-01: <i>CNN-Based Defect Detection and Performance Degradation Analysis of Photovoltaic Modules under Harsh Climatic Conditions</i> Amina Chahtou and Nassreddine Belhaouas Centre de Développement des Energies Renouvelables, Algeria Siham Zenak Université des Sciences et de la Technologie d’Oran, Algeria Sabrina Hadjer Amouche and Sirine Belezrague University of Algiers 1 Benyoucef Benkhedda, Algeria Brahim Taoussi National Higher School of Commerce, Algeria SMART26-SS-NFSS-03: <i>Spectrophotometric and Electrochemical Antioxidant Activity Evaluation of Limoniastrum Guyonianum Extract from El Oued, Algerian Sahara</i> Cheyma Bensaci, Assia Belfar, Mahdi Belguidoum and Mohamed Hadjadj University of Ouargla, Algeria Zineb Korichi and Yamina Benkrima Ecole Normale Supérieure de Ouargla, Algeria

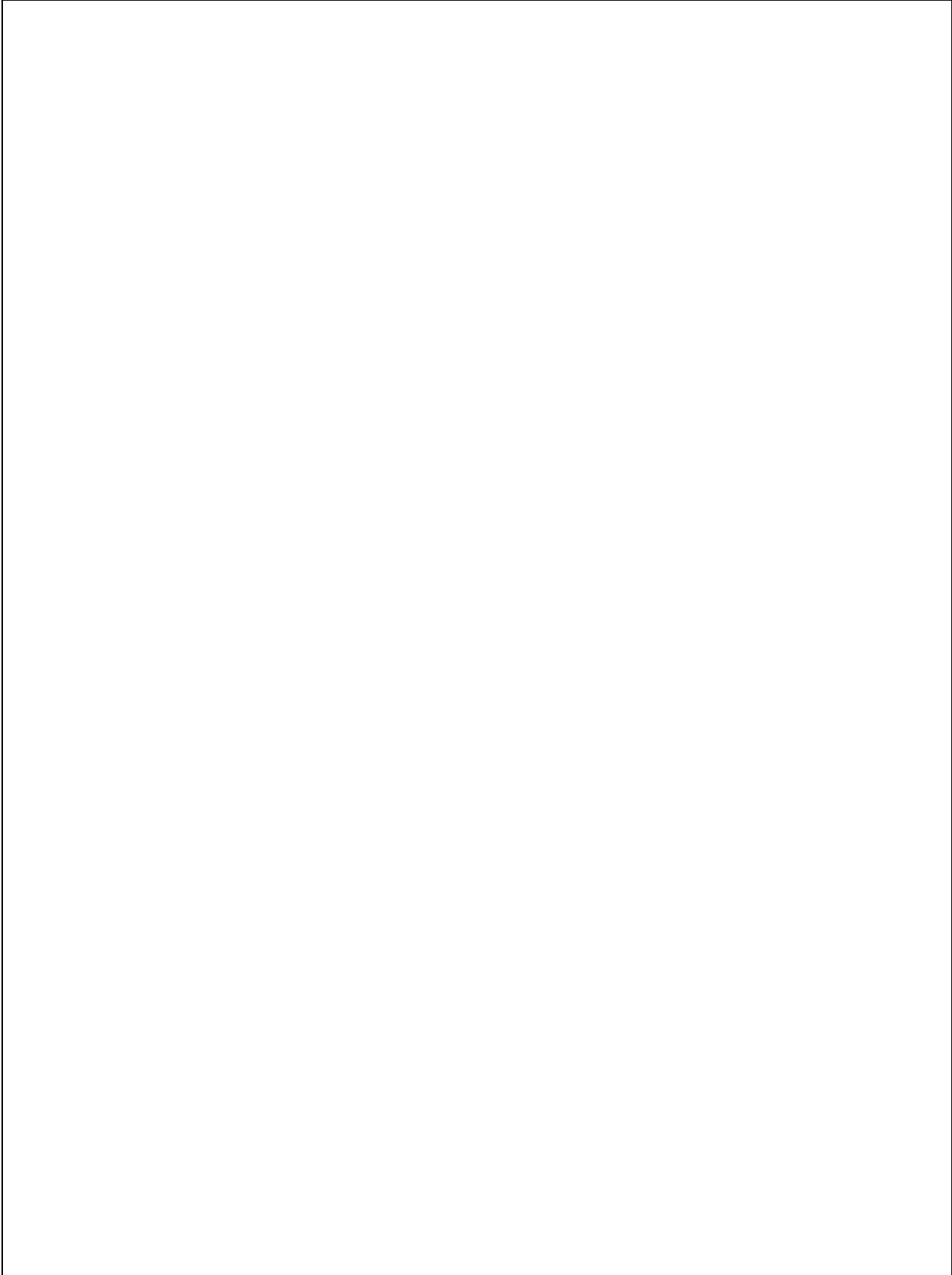
	SMART26-SS-NFSS-04: <i>In Vitro Antioxidant Evaluation of Limoniastrum Guyonianum Extracts from Ouargla (Algeria) Using Spectrophotometric and Electrochemical Techniques</i> Assia Belfar, Cheyma Bensaci, Mahdi Belguidoum and Mohamed Hadjadj University of Ouargla, Algeria Yamina Benkrima and Zineb Korichi Ecole Normale Supérieure de Ouargla, Algeria SMART26-SS-NFSS-05: <i>Polarization-Dependent Open-Aperture Nonlinear Optical Response of Carbon-Nickel Nanolayered Films: Effect of Nickel Thickness</i> Husam H. Abu-Safe and Marah Al-Nsour German Jordanian University, Jordan SMART26-SS-NFSS-06: <i>Understanding Liquid-Solid Contact Electrification Dynamics</i> Sa'id Albarqawi and Stefan A. L. Weber University of Stuttgart, Germany SMART26-SS-NFSS-07: <i>Modification of Standard 3D-printer into a Bio-printer for the Fabrication of Bio-Polymer Scaffolds and Drug-Loaded Wound Dressings</i> Nasim Alnuman, Raneem Hamdona and Mohammad Khanfar German Jordanian University, Jordan
14H00-16H00 Room H203	LS3: Lecture Session on Renewable Energies and Advanced Control Systems Integration in Sustainable Applications Chairs: Ameena Al Sumaiti (UAE) and Hania G. El-Kanj (Kuwait)
	SMART26-08: <i>AI-Driven Solar-Powered Smart Greenhouse with Precision Irrigation and Adaptive Shading for Hot and Arid Climates</i> Hania G. El-Kanj, Saleh A. Alkhabbaz, Mohamad A. AlAli, Maen S. Alhubail, Omar H. AlShammar and Abdullah E. AlShaks Australian University, Kuwait SMART26-31: <i>Techno-Economic Viability of Hybrid Solar PV-Geothermal Heat Pump System for Heating and Cooling Residential Buildings in Algeria</i> Saida Makhoulfi, Salima Ouali, Abdelkader Ait Ouali, Noureddine Benaouda and Mohammed M. Hadjiat Centre de Développement des Énergies Renouvelable, Algeria

	SMART26-39: <i>CFD-Based Optimization of Air Channel Height for Air-Cooled Photovoltaic Panels under Jordanian Summer Conditions</i> Shahed Al-Rawashdeh Al-Balqa Applied University, Jordan SMART26-58: <i>A Multi-Criteria Decision Support Framework for Sustainable Greenhouse Management in Organic Agri-Food Supply Chains: A Literature-Based Conceptual Model</i> Islam Asem S. Abusohyon, Massimo Caruso, Giuseppe Aiello, Rosario Miceli and Antonella Certa University of Palermo, Italy SMART26-68: <i>Smart Green Home Automation and Energy Management System using Programmable Logic Controller, Photovoltaic Generation, and Battery Energy Storage</i> Gheath Y. Bader, Tareq Al-Badri, Ahmad Y. Rjoub and Ahmad Al-Assaf German Jordanian University, Jordan SMART26-94: <i>Application of a Low-Cost IoT System for Detecting Over-Irrigation at Several Sites in a Semi-Arid Region</i> Abdulqader Dada, Ghaith Al-Shishani and Qasem Abdelal German Jordanian University, Jordan Muhammad R. Al-Kilani Irbid National University, Jordan Sami Saed Tafila Technical University, Jordan Waleed Ahmad University of Jordan, Jordan
16H00-16H30	Coffee break
16H30-18H30 Auditorium L	LS4: Lecture Special Session on Sustainable Buildings and Cities: Integrating Technology, Design, and Human Behavior (SS-SBC, Part 2) Chairs: Farah Al-Atrash (Jordan) and Maha Salman (UAE)
	SMART26-SS-SBC-07: <i>Integrating Renewable Energy and Water Reuse Strategies for Sustainable University Buildings in Saudi Arabia</i> Fatma Ahmed Hasanain Prince Sultan University, KSA SMART26-SS-SBC-08: <i>Building Envelope Design Parameters and HVAC Configuration of a Commercial Office in Amman - Jordan</i> Farah Ahmad Rommaneh, Gana Saeb Alouran and Rafat Al-Waked German Jordanian University, Jordan

	SMART26-SS-SBC-10: <i>Dynamic Energy Simulation and Conservation-Compatible Retrofit of Beit Arar Cultural House in Jordan</i> Batool Al Qarara'a, Thekra Al Banawi, Hala Al Adwan and Rafat Al-Waked German Jordanian University, Jordan SMART26-SS-SBC-21: <i>Urban Pavements for Water, Energy, and Resource Recovery: A BIM-Based Approach to Circular Economy Applications</i> Jamel Neji, Abir Jendoubi and Asma Gati University of Tunis El Manar, Tunisia Gaetano Di Mino Palermo, Palermo, Italy SMART26-SS-SBC-03: <i>Fixed Shading Devices and their Effect on Daylighting and Thermal Comfort in Office Buildings</i> Samah Khalaf and Bashar Hammad German Jordanian University, Jordan SMART26-SS-SBC-04: <i>Fixed Shading Devices and their Effect on Energy Consumption in Office Buildings</i> Samah Khalaf and Bashar Hammad German Jordanian University, Jordan
16H30-18H30 Room H201	LS5: Lecture Special Session on Nanotechnology, Functional Materials, Surface Engineering and Sustainable Technologies (SS-NFSS2, Part 2) Chairs: Suhad Sbeih (Jordan) and Amina Chahtou (Algeria)
	SMART26-SS-NFSS-08: <i>Voronoi Diagrams as a Novel Approach for Visualizing Urban Radiofrequency Electromagnetic Field Exposure</i> Raquel Ramirez-Vazquez, Isabel Escobar and Enrique Arribas University of Castilla-La Mancha, Spain Suhad Sbeih German Jordanian University, Jordan SMART26-SS-NFSS-09: <i>Optimization of Plasma Surface Treatment for Improved Wettability of Gold-Coated Electrochemical Biosensors</i> Suhad Sbeih and Rasha Rawajfeh German Jordanian University, Jordan Muayad Esaifan University of Petra, Jordan Raed Shadfan Atlas Medical Co, Jordan

	SMART26-SS-NFSS-10: <i>Exploratory Fabrication of a Bilayered PCL-PLA Scaffold with Bioactive Dip-Coating</i> Walid Al-Zyoud, Dana Mustafa, Mohammad Khanfar and Ahmad Albadarin German Jordanian University, Jordan Ola Tarawneh Al-Zaytoonah University of Jordan, Jordan SMART26-SS-NFSS-11: <i>A Predictive Maintenance Strategy for Wind Turbine Components Based on Fatigue Crack Evolution</i> Imane Elmeguenni, Mohamed Maizi and Madjid Tata Centre de Développement des Energies Renouvelables, Algeria SMART26-SS-NFSS Closing: <i>Debriefing and Open Discussion</i> Suhad Sbeih German Jordanian University, Jordan Raquel Ramirez-Vazquez University of Castilla-La Mancha, Spain Amina Chahtou Centre de Développement des Energies Renouvelables, Algeria
16H30-17H50 Room H203	LS6: Lecture Session on Sustainability Enhancement through Recycling and Circular Economy Strategies Chairs: Hania El-Kanj (Kuwait) and Celma O. Ribeiro (Brazil)
	SMART26-57: <i>Life Cycle Assessment of Plastic Shopping Bags in Jordan: A Comparative Study of HDPE and LDPE with Circular Economy Implications for Carbon Footprint Reduction</i> Mariam Mo'adi, Layan Yaaqba and Safwan Altarazi German Jordanian University, Jordan SMART26-74: <i>Valorization of Waste Tires through Pyrolysis: Oil Composition and Resource-Recovery Pathways</i> Alan O. Goulart, Pedro H. P. T. Porto, Edgar R. Rios, Isabel C. Beiler, Paulo C. C. de Araujo, Claudio A. O. Nascimento and Celma O. Ribeiro University of Sao Paulo, Brazil SMART26-80: <i>Sustainability Assessment of Waste Tire Pyrolysis for Material and Energy Recovery: A Circular Economy Strategy</i> Isabel C. Beiler, Alan O. Goulart, Claudio A. O. Nascimento and Celma O. Ribeiro University of Sao Paulo, Brazil

	SMART26-45: <i>Quantum Neural Networks Processing with Quantum Filters</i> Ziad Elkhatib and Sherif Moussa Canadian University Dubai, UAE
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Day 2: Tuesday, October 20

9H00-10H00 Auditorium L	Plenary Session 2 SMART26-PS2: <i>Sustainability of Power Semiconductors</i> Shiori Idaka Mitsubishi Electric Europe B.V., Germany Chairs: Stephan Frei (Germany) and Alexander Adams (Germany)
10H00-10H30	Coffee Break
10H30-12H30 Auditorium L	LS7: Lecture Special Session on Sustainable Buildings and Cities: Integrating Technology, Design, and Human Behavior (SS-SBC, Part 3) Chairs: Farah Al-Atrash (Jordan) and Janon A.W. Kadhim (USA)
	SMART26-SS-SBC-15: <i>From Connectivity to Ecosystem: A Landscape-Led, Green-and-Smart Retrofit of Traditional Urban Stairways - The Case of the Zajal Stairs, Amman</i> Nina Zeidan Lebanese University, Beirut, Lebanon Farah Al-Atrash German Jordanian University, Jordan SMART26-SS-SBC-06: <i>Fostering Sustainability Through Smart Planning by Assessing Sustainability Performance in Smart Cities Context. A Case Study of Al-Khaldi Medical District</i> Haya Abdallah Amayreh and Farah Al-Atrash German Jordanian University, Jordan SMART26-SS-SBC-12: <i>AI-Driven Building Simulation Accuracy Assessment in Sustainable Design: An Empirical Case Study in Al-Karak Using the XGBoost Models</i> Thekra Al-Banawi and Farah Al-Atrash German Jordanian University, Jordan SMART26-SS-SBC-17: <i>Assessing Low Vision Accessibility in Urban Environments: A Comparative Analysis Using the Low Vision Assessment Tool</i> Motaz Emad Albitar and Omaimah Ali Al-Arja German Jordanian University, Jordan

	SMART26-SS-SBC-05: <i>Towards A Walkable Transit Corridor: Assessing the Pedestrian Built Environment of the BRT Chatchment Area - the Case of Queen Rania Street, Amman</i> Aseil Basil Tannous, Farah Al-Atrash and Muna Yacoub Hindiye German Jordanian University, Jordan SMART26-SS-SBC-14: <i>Old Doha Port as a Smart Mobility Hub: Assessing Its Role in Sustainable Transport Operations During the FIFA World Cup Qatar 2022</i> Mohammed Al-Mostafawi Al-Hashimi Hamad Bin Khalifa University, Qatar
10H30-12H30 Room H201	LS8: Lecture Session on Renewable Systems: Energy Efficiency and Power Quality Enhancement Chairs: Benedikt Schmuelling (Germany) and Ameena Al Sumaiti (UAE)
	SMART26-16: <i>Regression Analysis for Predicting the Efficiency of Photovoltaic Cells</i> Ahmed Abughali, Mohamad Alansari, Maher Maalouf and Ameena Al Sumaiti Khalifa University, UAE SMART26-24: <i>Power Quality Improvement of Offshore Tidal-Wind Systems Using Voltage-Oriented Control in the South African Grid</i> Ladislav M. Kangaji, Atanda Raji and Efe Orumwense Cape Peninsula University of Technology, South Africa SMART26-27: <i>Volt-Var Function in Smart PV Inverters for Voltage Regulation in Medium-Voltage Distribution Networks: A Case Study on a 5 MVA Solar Project</i> Baraa Zghoul Electricity Distribution Company, Jordan Sameer M. Bataineh Fahad Bin Sultan University, KSA Osama Saadeh German Jordanian University SMART26-40: <i>A Per-Mechanism Acceleration Factor Framework for Lifetime Prediction of PEM Water Electrolysers</i> Veerendra Chabbi, Konrad Steindorff, Aysegül Büyükarıslan, Marcel Benecke and Steffen Doerner Hochschule Magdeburg-Stendal, Germany

	SMART26-52: <i>Sustainable Renewable Energy Development and Critical Mineral Dependency: A Case Study of Cobalt Mining</i> Noura M. Karray, Adel Ben Hamed and Mounir Bouzguenda King Faisal University, KSA Mohammed G. Gronfula Al Asaala Colleges, KSA SMART26-54: <i>Sustainable Production of Hydrogen from Biomass: Exploration of Technology Landscape and Innovation Routes</i> Mariam Bataineh, Rahmeh Alsaadi and Ghassan M Tashtoush Jordan University of Science and Technology, Jordan
16H30-18H30 Room H203	LS9: Lecture Session on Drives, Converters, and Control Strategies Dedicated to Sustainable Applications Chairs: Shiori Idaka (Germany) and Amal Souissi (Tunisia)
	SMART26-19: <i>Application of System-Level Diagnosis and Control Functions in Electronically Protected Automotive Power Distribution Networks</i> Marvin Rübartsch, Martin Schwier, Michael Gerten and Stephan Frei TU Dortmund University, Germany SMART26-22: <i>Cooperative and Disturbance-Rejection Control for Power Inspection UAVs with Distributed Drive System</i> Yin Sun, Chang Sun, Hao Hu, Junhan Xu and Xiang Zhang State Grid Jiangsu Electric Power Co. Ltd, China Chuncheng Pu Nanjing University of Aeronautics and Astronautics, China SMART26-23: <i>Predictive Controlled 3L-NPC Inverter Fed IM Drives Under Leg Defect: Application to Fault-Tolerant EV Powertrains</i> Wiem Zouari, Bassem El Badsı and Ahmed Masmoudi University of Sfax, Tunisia SMART26-30: <i>Development and System Integration of a Hybrid Go-Kart Demonstrator for Sustainable Mobility Education</i> Franz Ole Dannenberg, Sky Rost, Philipp Schirmer, Domenic Bauer, Bennet Hennings, Tom Selau, Alexander Adams, and Konrad Steindorff University of Applied Sciences Magdeburg-Stendal, Germany SMART26-79: <i>On the Influence of Converter Losses on Loss-Minimization Algorithms for Induction Motor Drives: Modeling and Experimental Validation</i> Massimo Caruso, Antonino Oscar Di Tommaso and Rosario Miceli University of Palermo, Italy

	SMART26-92: <i>Efficient Power Flow Management in SiC-Based Three-Port DC/DC Converters for Renewable Applications</i> Hamzeh Aljarajreh, Mohamad Farhat and Hania G. El-Kanj Australian University, Kuwait
10H30-12H30 Room H205	LS10: Lecture Session on Electric Machine Design, Modelling, and Features Investigation: Integration in Sustainable Applications (Part 1) Chairs: Shuangxia Niu (China) and Imen Abdennadher (Tunisia)
	SMART26-89: <i>Electromagnetic Torque Performance Enhancement of a Novel Rare Earth Free Wound Field Flux Switching Machine</i> Zeynep Tüfek Cappadocia University, Turkey Başak Tepretmez and Emrah Çetin Tarsus University, Turkey Neelam Qadeer, Salman Ali and Fabrizio Marignetti University of Cassino and Southern Lazio, Italy SMART26-11: <i>3D FEA-Based Investigation of PM Eddy-Current Loss of PMSMs: Comparison Between Inserted and V-Shaped Magnets</i> Asma Masmoudi and Ahmed Masmoudi University of Sfax, Tunisia SMART26-41: <i>On the Assessment of IMs Energy Efficiency Under Variable Coil-Phase Connection</i> Nour Zrida and Ahmed Masmoudi University of Sfax, Tunisia SMART26-60: <i>3D-FEA Based Investigation of the Iron Loss of Dually-Excited Claw Pole Machines: Comparison Between Two PM Excitations</i> Amina Ibala and Ahmed Masmoudi University of Sfax, Tunisia SMART26-69: <i>Rapid Modeling and Optimal Design of Permanent Magnet Linear Synchronous Motor</i> Jiayi Weng and Qinfen Lu Zhejiang University, China SMART26-77: <i>Pre-Design Sizing of a Disc-type Transverse Flux Permanent Magnet Machine: Application to In-Wheel Motors</i> Rabeb Rebhi and Ahmed Masmoudi University of Sfax, Tunisia

12H30-14H00	Lunch
14H00-16H00 Auditorium L	LS11: Lecture Special Session on Sustainable Buildings and Cities: Integrating Technology, Design, and Human Behavior (SS-SBC, Part 4) Chairs: Farah Al-Atrash (Jordan) and Maha Salman (UAE)
	SMART26-SS-SBC-11: <i>Smart AI-Based Road Accident Modelling and Prediction Using Adaptive Neuro-Fuzzy Inference Systems: Evidence from Jordan</i> Farah Al-Atrash and Murad Samhour German Jordanian University, Jordan SMART26-SS-SBC-22: <i>A GIS- and AI-Assisted Decision-Support Framework for Smart-City Waste Treatment and Circular Resource Recovery</i> Ahmad B. Albadarin, Haitham Albadareen and Omar Abulayla German Jordanian University, Jordan Khaled AlZawahreh the Hashemite University, Jordan SMART26-SS-SBC-19: <i>Energy Efficiency Evaluation and Design Optimization of a Chalet in Umm Qais Using DesignBuilder: A Simulation-Based Approach to Passive and Hybrid Strategies in Semi-Arid Climates</i> Tala Malkawi, Raya Al-Katawneh, Dania Al-Marafi and Rafat Al-Waked German Jordanian University, Jordan SMART26-SS-SBC-20: <i>How Design Students' Emotional Experiences Shape their Engagement by Maintaining Emotional Balance and Sustainability during their Design Journey</i> Hazar Taissier Marji and Tasneem Al-Omari German Jordanian University, Jordan Paul A. Rodgers and Ross Brisco University of Strathclyde, UK SMART26-SS-SBC-23: <i>Behavior of Two Stories Building on Expansive Soil Improved Granular Layer</i> Mounir Bouassida Consulting Office in Geotechnical Engineering Sergio A. Manigniavy University of Tunis El Manar, Tunisia

	SMART26-SS-SBC Closing: <i>Debriefing and Open Discussion</i> Farah Al-Atrash German Jordanian University, Jordan Janon A.W. Kadhim University Sacramento, California, USA Maha Salman Canadian University Dubai, UAE
14H00-16H20 Room H201	LS12: Special Session on High-Quality Electrical Machines and Advanced Drive Control for Electrified Transportation Applications (SS-ETA) Chairs: Hui Yang, Dawei Liang, Ya Li, Wei Liu, and Rui Tu (China)
	SMART26-SS-ETA-01: <i>Design and Analysis of Novel Asymmetric-Hybrid-Pole PM Machine Considering Magnetic-Axis-Shifting Effect</i> Hui Yang, Xunhui Cheng, Chuncheng Pu, Zhuoran Zhang, and Li Yu Nanjing University of Aeronautics and Astronautics, Nanjing, China Rui Tu Nanjing Institute of Technology, China Cunhao Rong and Heyun Lin Southeast University, China Zi Qiang Zhu Hong Kong Polytechnic University, China SMART26-SS-ETA-02: <i>Investigation of Remagnetization and Demagnetization Characteristics in Asymmetrical Magnetic Pole Variable Flux Memory Machines</i> Ya Li, Xinhao Wang, Runyu Wang, Yunlu Du, and Shichuan Ding Anhui University, Hefei, China SMART26-SS-ETA-03: <i>Influence of Different Interleaved Hybrid Permanent Magnet Arrangements on the Performance of Consequent-Pole Variable Flux Machines</i> Ya Li, Ziyi Yang, Runyu Wang, Yunlu Du, and Shichuan Ding Anhui University, Hefei, China SMART26-SS-ETA-04: <i>Online-Learning Predictive Current Control of Asymmetric Variable Flux Memory Machines Considering Multiple Magnetization States</i> Wei Liu, Jinhua Chen, and Chi Zhang Chinese Academy of Sciences, China Jiamou Zhang University of Chinese Academy of Sciences, China Liang Zou Shandong University, China

	SMART26-SS-ETA-05: <i>A Novel Hybrid-Displacement-Rotor Variable Flux Memory Machine</i> Rui Tu Nanjing Institute of Technology, China Zhiying Zhu Tsinghua University, Beijing, China Hui Yang, Xunhui Cheng, Zhuoran Zhang, and Li Yu Nanjing University of Aeronautics and Astronautics, China Yi Su China Southern Power Grid Company, China Shuhua Fang and Heyun Lin Southeast University, China SMART26-SS-ETA-06: <i>Comparison of Series-Magnetic-Circuit Variable Flux Memory Machines with Different Dual-Layer PM Arrangements</i> Rui Tu Nanjing Institute of Technology, China Zhiying Zhu Tsinghua University, Beijing, China Hui Yang, Xunhui Cheng, Zhuoran Zhang, and Li Yu Nanjing University of Aeronautics and Astronautics, China Yi Su China Southern Power Grid Company, China Shuhua Fang and Heyun Lin Southeast University, China SMART26-SS-ETA-07: <i>Novel Phase Offset Method for Cogging Torque Reduction in Vernier PMSM</i> Xu Tian, Z. Q. Zhu, Jinya Chen, Hao Xu, and Shiyun Li Hong Kong Polytechnic University, China
14H00-16H00 Room H203	LS13: Lecture Session on Leadership, Social and Ethical Roots within Sustainability Frameworks Chairs: Hania G. El-Kanj (Kuwait) and Alessandra Sannella (Italy)
	SMART26-56: <i>Hybrid Social Infrastructures for One Health Mobility Transitions: A Transdisciplinary Framework for Social Adaptation, Justice and Inclusive Governance</i> Alessandra Sannella, Diego Ferrazza, Iride Martellini and Fabrizio Marignetti University of Cassino and Southern Lazio, Italy Piergiacomo Cancelliere Comando VV.F. di Latina, Corpo, Italy

	SMART26-61: <i>From Data to Decision: AI-Enabled Wearable Biosensors for Real-Time Occupational Health Monitoring</i> Islam Asem Salah Abusohyon, Massimo Caruso, Giuseppe Aiello and Rosario Miceli University of Palermo, Italy SMART26-65: <i>The Political Economy of Crisis-Induced Energy Legislation: Crisis Archetypes, Legislative Response Speed, and the Structural Determinants of Regulatory Reform in Germany, Jordan, and Brazil</i> Ahmad Alshwawra German Jordanian University, Jordan Celma de Oliveira Ribeiro and Erik Eduardo Rego Universidade de São Paulo, Brazil SMART26-67: <i>Techno-Economic and Risk-Based Assessment of Renewable Energy Integration Pathways for Sustainable Urban Development in NEOM City, Saudi Arabia</i> Noura M. Karray, Adel Ben Hamed and Mounir Bouzguenda King Faisal University, KSA SMART26-73: <i>Assessing the Mobility Carbon Footprint of the German Jordanian University: Commuting, Fleet Operations, and Institutionally Mandated Air Travel</i> Omar Q. AlHalleeq, Osama Saadeh and Omar Albatayneh German Jordanian University, Jordan SMART26-75: <i>Modeling Adaptive Decision-Making in Bus Rapid Transit Systems: An Agent-Based Simulation of Stop-Skipping and Passenger Behavior Dynamics</i> Safwan Altarazi and Ibrahim Ablan German Jordanian University, Jordan Maram Shqair Auburn University, USA
14H00-16H20 Room H205	LS14: Lecture Session on SMART Grids: Techno-Economic Assessment and Optimization Challenges Chairs: Alexander Adams (Germany) and Benedikt Schmuelling (Germany)
	SMART26-53: <i>Biomass-Geothermal Hybrid Energy Production: A Review of Challenges in Optimization Using AI and Machine Learning</i> Rand A. Bushnaq, Ala'a M. Bani Khalid, Baraa'h H. AlShira'h and Ghassan M. Tashtoush Jordan University of Science and Technology, Jordan

	SMART26-25: <i>An Experimental Study of Peer-to-Peer Energy Trading in Existing Photovoltaic Systems in the Kingdom of Saudi Arabia</i> Mohammed Ali Al Hussaini, Mounir Bouzguenda, and Mohammed A. Al Aqil King Faisal University, KSA SMART26-36: <i>Techno-Economic Optimization of Solar PV, Wind, and Battery Storage for the Al-Uwayqilah Smart Grid in Saudi Arabia</i> Ahmad H. Alanazi and Mounir Bouzgenda King Faisal University, KSA SMART26-44: <i>System-Level Modeling and Simulation of Renewable Energy-Based Power Supply for Stationary and Dynamic Wireless Charging Infrastructure</i> Mouna Chalouchi, Abdelilah El Hamdaoui, Abdallah Mostafa, Amelie David, Heiko Fechtner and Benedikt Schmuelling University of Wuppertal, Germany SMART26-46: <i>Techno-Economic and Spatial Feasibility Assessment of Hybrid Renewable Energy Systems for Hawar Island, Bahrain</i> Nazar A. Bucheer, Maamar Taleb and Salwa Baserrah University of Bahrain, Bahrain SMART26-49: <i>PyBaMM-Based Simulation of Lithium-Ion Battery-Cell Behavior and Degradation under Conductive and Dynamic Wireless Charging Scenarios</i> Abdallah Mostafa, Mouna Chalouchi, Amelie David, Heiko Fechtner and Benedikt Schmuelling University of Wuppertal, Germany SMART26-50: <i>Smart Hybridization of Geothermal Power and Mineral Extraction: A Kenyan Rift Valley Case Study for Resilient Smart Grids</i> Charles Osango and Susan Nasimiyu Masafu Drillers Professionals Training Institute, Kenya
16H00-16H30	Coffee Break

16H30-18H50 Room H201	LS15: Special Session on Advanced Electrical Machines and Drive Systems: Design, Reliability and Thermal Management (SS-AEMD) Chairs: Shuangxia Niu, Wu Liao, Ji Zhang, and Dawei Liang (China)
	SMART26-SS-AEMD-01: <i>Non-Zero-Order Vibration Mode Suppression of Low-Pole-Number Switched Reluctance Machines Based on Spatially Distributed Forces</i> Hao Xu, Zi Qiang Zhu, Hao Rui Ge, Jin Ya Chen, and Shi Yun Li The Hong Kong Polytechnic University, China SMART26-SS-AEMD-02: <i>Zero-Order Vibration Mode Suppression of High-Pole-Number Switched Reluctance Machines Based on Temporally Concentrated Forces</i> Hao Xu, Zi Qiang Zhu, Hao Rui Ge, Jin Ya Chen, and Shi Yun Li The Hong Kong Polytechnic University, China SMART26-SS-AEMD-03: <i>Comparison of Electromagnetic and Vibration Characteristics of Switched Reluctance Machines with Different Stator/Rotor Pole Numbers</i> Hao Xu, Zi Qiang Zhu, Hao Rui Ge, Jin Ya Chen, and Shi Yun Li The Hong Kong Polytechnic University, China SMART26-SS-AEMD-04: <i>Design and Optimization of a Dual-Rotor Toroidal Winding Flux-Modulated PM Motor</i> Kangshuo Zhao, Zhenghao Li, Mingyuan Jiang, and Shuangxia Niu The Hong Kong Polytechnic University, China SMART26-SS-AEMD-05: <i>A Novel Dual-PM Yokeless-Stator Dual-Rotor Motor with Improved Working Harmonics</i> Kangshuo Zhao, Zhenghao Li, Mingyuan Jiang, K. C. Wong, and Shuangxia Niu The Hong Kong Polytechnic University, China SMART26-SS-AEMD-06: <i>Optimized SVM with CSLPSO for Parallel AC-DC Converters of Power Generation System under Open-Circuit Faults</i> Chuandong Shi, Wu Liao, Sheng Huang, Yunzhe Xiao, and Shoudao Huang Hunan University, China SMART26-SS-AEMD-07: <i>Analysis of Slot-Integrated Oil-Cooling Channel Topologies for PMSMs</i> Yachao Liu, Liyu Zheng, Bo Ma, Sheng Huang, Xiaohui Huang, and Ji Zhang Hunan University, China

16H30-18H30 Room H203	LS16: Special Session on Next-Generation EV Charging: WPT, Power Electronics and Grid Services (SS-EVC) Chairs: Michela Longo (Italy) and Cristian Giovanni Colombo (Italy)
	SMART26-SS-EVC-01: <i>Physics-Based Simulation Model for Energy Consumption and State of Charge Estimation in Electric Mountain Bikes</i> Gianluca Canali, Andrea Di Martino, and Michlea Longo Politecnico di Milano, Italy SMART26-SS-EVC-02: <i>Impact of Real-World Driving Profiles and Auxiliary Loads on Electric Urban Bus Energy Consumption</i> Sofia Borgosano and Michela Longo Politecnico di Milano, Italy Md. Rifat Hazari and Chowdhury Akram Hossain American International University-Bangladesh, Bangladesh SMART26-SS-EVC-03: <i>Energy and Operational Performance Assessment of Electric Bus Fleets under Smart Charging and Photovoltaic-Assisted Depot Operation</i> Sofia Borgosano and Michela Longo Politecnico di Milano, Italy Angel Navarro-Rodriguez, Carlos Gomez-Aleixandre, and Pablo Arboleya University of Oviedo Campus de Viesques, Spain SMART26-SS-EVC-04: <i>Electromagnetic Cross-Coupling Assessment of Adjacent EV Wireless Charging Bays</i> Cristian Giovanni Colombo and Michela Longo Politecnico di Milano, Italy Alicia Triviño University of Malaga, Spain SMART26-SS-EVC-05: <i>Forecast-Driven Hybrid DNN–PSO Energy Management for a Grid-Connected PV–Battery Microgrid</i> Ramia Ouederni University of Carthage, Tunisia Adel Mellit University of Jijel, Algeria Lassaad Sbita University of Gabes, Tunisia Michela Longo, Jinfei Han, and Emanuele Ogliari Politecnico di Milano, Italy

	SMART26-SS-EVC-06: <i>Route-Based Energy Analysis and Static Wireless Charging Infrastructure Sizing for an Urban Electric Bus Route</i> Federico Gatti, Tommaso Cartasegna, Andrea Azzani, Andrea Bartolini, Nicoletta Matera and Michela Longo Politecnico di Milano, Italy Cancan Rong Huazhong University of Science and Technology, China
16H30-17H30 Room H205	LS17: Lecture Session on Electric Machine Design, Modelling, and Features Investigation: Integration in Sustainable Applications (Part 2) Chairs: Chuandong Shi (China) and Imen Abdennadher (Tunisia)
	SMART26-21: <i>End Effect Analytical Modelling of Tubular Linear IPM Machines</i> Amal Souissi and Imen Abdennadher University of Sfax, Tunisia SMART26-86: <i>Electromagnetic and Thermal Analysis of SPM In-Wheel Motors</i> Nejib Rahmouni, Amal Souissi and Imen Abdennadher University of Sfax, Tunisia SMART26-87: <i>Design and Sizing of a Hybrid Excited Synchronous Machine</i> Moez Chaker and Imen Abdennadher University of Sfax, Tunisia
16H30-18H30 Auditorium L	LS18: Lecture Special Session ODYSSEV Chairs: Shiori Idaka (Germany) and Munaf Rahimo (Switzerland)
	SMART26-ODYSSEV-01: <i>Adjustable Hybrid Switch inverter for EV application</i> Renato Minamisawa University of Applied Sciences and Arts Northwestern, Switzerland SMART26-ODYSSEV-02: <i>Optimal Reliability-aware Current Sharing in Adjustable Hybrid Switch (AHS) Power Converter</i> Silvia Mastellone University of Applied Sciences and Arts Northwestern, Switzerland SMART26-ODYSSEV-03: <i>Modelling the Peak Circulating Current in Parallel-Interleaved Two- and Three-Level VSIs</i> Thiago Batista Soeiro University of Twente, The Netherlands

	SMART26-ODYSSEV-04: <i>Application Readiness Map for Wide Band Gap Semiconductors in Electric Vehicles</i> Markus Thoben TU. Dortmund, Germany SMART26-ODYSSEV-05: <i>Advances in Power Semiconductor Technologies for High Power Electrical Vehicle Applications</i> Munaf Rahimo MTAL GmbH, Germany SMART26-ODYSSEV-06: <i>Hygrothermal Cycling of Resin-Encapsulated Power Modules</i> Christian Zorn Mitsubishi Electric Europe B.V., Germany University of Bremen, Germany

21H00

Conference Dinner



Amman by night, a vibrant mosaic!

Day 3: Wednesday, October 21

9H00-10H00 Auditorium L	Plenary Session 3 SMART26-PS3: <i>Variable Flux Permanent Magnet Machines: Recent Developments, Future Trends, and Applications</i> Hui Yang Nanjing University of Aeronautics and Astronautics, China Chairs: Imen Abdennadher (Tunisia) and Shiori Idaka (Germany)
10H00-10H30	Coffee Break
10H30-11H30 Auditorium L	Plenary Session 4 SMART26-PS4: <i>From the Human Step to Artificial Intelligence: The Revolution of Movement</i> Michela Longo Politecnico di Milano, Italy Chairs: Aameena Al Sumaiti (UAE) and Alexander Adams (Germany)
11H30-12H30 Auditorium L	Plenary Session 5 SMART26-PS5: <i>Power Electronics Beyond Power Conversion</i> Marco Lisierre Christian Albrechts University of Kiel, Germany Chairs: Shiori Idaka (Germany) and Stephan Frei (Germany)
12H30-14H00	Lunch
14H00	Award Remit Ceremony and Closing 