



# PROGRAMME BOOK

**6. EUROPEAN CONFERENCE on RENEWABLE ENERGY  
SYSTEMS**

**&**

**IESRES PROJECT WORKSHOP**

**ECRES**

**25-27 June 2018**

**ISTANBUL / Turkey - Türkiye**

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24 June 2018 Sunday

12:30-17:00 On-desk Registration

25 June 2018 Monday

**Opening Session Hall A**

09:00 - 09:15 "Welcome talk", Prof. Dr. Erol Kurt (Head of the organizing committee)

09:15 - 09:30 Opening Talk from the Rectorship of Marmara University

**09:30 – 10:30 MEHTERAN (OTTOMAN EMPIRE MILITARY BAND) SHOW**



**Hall A Parallel Session 1 HYDROGEN PRODUCTION AND COMBUSTION**

**Chairman: Prof. Dr. Rabah GOMRI & Prof. Dr. Quang Khanh Tran**

10:30-10:45 ID90 Solar Energy used for multiphase Cracking of Methane for Hydrogen Production

10:45-11:00 ID139 The combustion characteristics and performance evaluation of hydrogen addition to various fuels in a premixed burner

11:00-11:15 ID395 Production of Hydrogen Rich Gas from Sugar Beet Pulp by Gasification

**Hall B Parallel Session 1 SOLAR ENERGY**

**Chairman: Assoc. Prof. Dr. Berrah Smail & Dr. Nazmul Huda**

10:30-10:45 ID91 Removal of Maxilon Red dye by adsorption and photocatalysis: Optimum conditions, equilibrium and kinetic studies

10:45-11:00 ID47 Experimental and numerical investigations of prototype solar chimney power plant- case of Aswan-Egypt

11:00-11:15 ID86 Techno-Economic Analysis of a Hybrid Solar Thermal System in Australia's Domestic Market

**Hall C Parallel Session 1 DRYERS AND HEATERS**

**Chairman: Prof. Dr. Wail Al-Rifaie & Assoc. Prof. Dr. Ali Ahmadian**

10:30-10:45 ID390 Efficiency of a solar dryer with thermal storage by rock salt and by pebble bed

10:45-11:00 ID449 Multivariable modeling of an innovative hybrid solar-gas dryer based on nonlinear least squares methods

11:00-11:15 ID448 Optimization of main geometric parameters of solar air heaters based on energy balance

11:15-11:30 COFFEE BREAK

**Hall A Parallel Session 2 BIOMASS & BIODIESEL**

**Chairman: Prof. Dr. Quang Khanh Tran & Assist. Prof. Dr. Zuhair Akyürek**

11:30-11:45 ID117 Thermodynamic optimization of methanol steam reforming for HT-PEMFC grade hydrogen production based on Aspen Plus Software

11:45-12:00	ID118 Thermodynamic modelling of oxy-reforming and oxy-steam reforming of biogas by using Aspen Plus: An optimization study by RSM	
12:00-12:15	ID229 Investigation of Hydrogen Usage on Combustion Characteristics and Emissions of A Spark Ignition Engine	
12:15-12:30	ID440 Assessment of biogas potential from animal manure in mediterranean region of turkey	
12:30-12:45	ID404 Bio Gas Holder HAZOP Study & Semi Quantitative Fire Risk Assessment of Organic Matter - Keys for Fire Accident Prevention in Bio Mass Plant	
12:45-13:00	ID71 On the development of Nozzle reactor for fast hydrothermal liquefaction of biomass	
<b>Hall B Parallel Session 2 SOLAR SYSTEMS OPTIMISATION</b>		
<b>Chairman: Prof. Dr. Rachid CHENNI &amp; Assoc. Prof. Dr. Emre Arslan</b>		
11:30-11:45	ID281 Energy management of stand-alone hybrid power system by fuzzy logic	
11:45-12:00	ID69 Predicting global solar radiation using support vector regression integrated with firefly optimization algorithm	
12:00-12:15	ID383 3-E Analysis of a Solar Powered Regenerative Reheat Rankin Cycle	
12:15-12:30	ID163 Design and testing of a novel multi-pass solar air collector with perforated fins	
12:30-12:45	ID165 Designing of a novel solar assisted heat pump system with modification of thermal energy storage	
12:45-13:00	ID130 A Review of The Use of Solar Energy in Ships	
<b>Hall C Special Session 1 Uncertainty Management in Renewable Energy Integrated Systems</b>		
<b>Chairman: Prof. Dr. Behnam Mohammadi-ivatloo</b>		
11:30-11:45	ID105 Stochastic security-constrained generation scheduling with hydrogen storage system, hourly demand response, and a high penetration of wind energy	
11:45-12:00	ID99 Optimal sizing of DG units for improving voltage stability and reliability of micro-grid considering uncertainty of renewable energy resources	
12:00-12:15	ID100 Solar Irradiance Forecasting Based on the Combination of Radial Basis Function Artificial Neural Network and Genetic Algorithm	
12:15-12:30	ID104 Integration of power to gas technology in IGDT-based robust co-optimization scheduling of electricity and natural gas networks considering natural gas storage system	
12:30-12:45	112 Robust Stochastic Optimal Short-term Generation Scheduling of Hydrothermal Systems in Deregulated Environment	
12:45-13:00	ID288 Risk-based scheduling of smart home using information gap decision theory	
<b>Hall D Parallel Session 2 ENERGY SYSTEMS CONTROL</b>		
<b>Chairman: Assoc. Prof. Dr. Sertaç Bayhan &amp; Prof. Dr. Mordojou Mourad</b>		
11:30-11:45	ID56 An Improved SIC-MOSFET Gate Driver Circuit Controlled By dsPIC33FJ256GP710A	
11:45-12:00	ID82 Modeling and optimal gain tuning of PI speed controller for BLDC motor using PSO technique	
12:00-12:15	ID138 An energy-management system of a standalone photovoltaic EV charging station	
12:15-12:30	ID144 Robust scheduling of smart home with heating load and storage with plug-in electric vehicle battery energy storage and photovoltaic array	
12:30-12:45	ID160 Heat exchanger system control using a single memory neuron trained by the Dragonfly algorithm	
12:45-13:00	ID177 Frequency Determination of Self-Oscillations in On-Off	

	Control Systems	
<b>13:00-14:15 CONFERENCE PHOTO- 1 and LUNCH</b>		
<b>Hall A Invited Talk Session 1</b>		
<b>Chairman: Prof. Dr. Erol Kurt</b>		
14:15-15:00	<b>KEYNOTE</b> <b>From Smart Grid to Cyber-Physical-Social System in Energy</b>	<b>Prof. Dr. Yusheng XUE</b> State Grid EPRI / NARI, P. R. China
<b>Hall A Parallel Session 3 ENERGY EFFICIENCY &amp; OPTIMIZATION ISSUES</b>		
<b>Chairman: Assist. Prof. Dr. Mohammad Dehghani Saryazdi &amp; Prof. Dr. Youcef Soufi</b>		
15:00-15:15	209 Characteristics of Wind Power Generation in Jeju Island	
15:15-15:30	204 Modeling the interaction between domestic energy consumption and urban planning: A case study of Iran	
15:30-15:45	ID256 Multi-Objective Optimization of the Axial Fan Parameters	
<b>Hall B Parallel Session 3 MATERIAL CHARACTERIZATION</b>		
<b>Chairman: Assoc. Prof. Dr. Ihsan Ateya Erikat &amp; Prof. Dr. H. Hilal Kurt</b>		
15:00-15:15	ID442 An ab initio study of the structural magnetic and electronic properties of 3d and 4d transition metal on Ni(100) surface	
15:15-15:30	479 Electronic and Optical Properties of Fe-Doped Semi-insulating InP Semiconductor in a Plasma System	
15:30-15:45	480 The Influence of the He Plasma on a ZnSe Photodetector in an Infrared Converter	
<b>Hall C Parallel Session 3 ENGINES &amp; COMBUSTION</b>		
<b>Chairman: Assoc. Prof. Dr. Ahmet Necati Özsezen &amp; Assoc. Prof. Dr. Zahrul Mufrodi</b>		
15:00-15:15	ID103 Vibration and Noise Depending upon Engine Speed in a Diesel Engine Fueled with Biodiesel	
15:15-15:30	ID232 Effect of Different Levels of Ethanol Addition on Performance, Emission and Combustion Characteristics of A Gasoline Engine	
15:30-15:45	ID433 Performance and exhaust emissions characteristics investigation using B10 from bitter apple biodiesel in DI diesel engine	
<b>Hall D Parallel Session 3 TURBINES</b>		
<b>Chairman: Prof. Dr. Murat Kunalbayev &amp; Assist. Prof. Dr. Hasan Köten</b>		
15:00-15:15	ID78 Performance tests of francis type hydraulic turbines	
15:15-15:30	391 Performance prediction of tidal current turbine using coupled Fluid Structure Interaction modelling	
15:30-15:45	ID147 Recovery of a Vehicle's Energy Loss by the Wind Turbine	
<b>15:45-16:15 COFFEE BREAK</b>		
<b>Hall A Parallel Session 4 ENERGY &amp; EXERGY</b>		
<b>Chairman: Assist. Prof. Dr. Hasan Köten &amp; Prof. Dr. Murat Kunalbayev</b>		
16:15-16:30	ID 490 Investigation of the effect of the cooling water temperature on the thermal efficiency of a nuclear power plant	
16:30-16:45	ID26 Exergy Analysis of an Experimental Turbomachine Used in Missiles	
16:45-17:00	ID293 An investigation of an environment friendly organic rankine cycle (orc) energy recovery system based on a eco-friendly working fluid	
17:00-17:15	ID343 Computational investigation on the thermal stratification inside a solar hot water storage tank during discharging process	

17:15-17:30	ID111 The Effect of Electromechanical Valve System on The Volumetric Efficiency of a Single Cylinder Gasoline Engine	
17:30-17:45	ID168 A Novel Integration of PCM with Wind-Catcher Skin Materials in Order to Increase Heat Transfer Rate	
17:45-18:00	ID80 The performance evaluation of Maximum Likelihood Method for calculating Weibull Distribution coefficients at different points	
<b>Hall B Parallel Session 4 ENERGY PLANNING</b>		
<b>Chairman: Assoc. Prof. Dr. Saeed Badshah &amp; Assoc. Prof. Dr. Erdal Irmak</b>		
16:15-16:30	ID403 Recombination of QA elements in nuclear R&D fields	
16:30-16:45	ID205 Contribution in Predicting the Remaining Useful Life in Abrupt Failures: Bearing case	
16:45-17:00	ID207 Study on a capacity factor of large-scale solar power plants in the Jeju Island	
17:00-17:15	ID212 Considering effectivity of the electricity pricing system for EV charging	
17:15-17:30	ID18 A comprehensive review of solar assisted heating ventilation and air conditioning systems	
17:30-17:45	ID434 A New Approach for Electricity Energy Generation from Waste Heat Energy: Battery Charger with Thermoelectric Generator	
17:45-18:00	436 Usage of the Nodal Pricing Technique in Electricity Market	
<b>Hall C Special Session 2 Uncertainty Management in Renewable Energy Integrated Systems</b>		
<b>Chairman: Prof. Dr. Behnam Mohammadi-ivatloo</b>		
16:15-16:30	231 Real-time Energy Scheduling of a Grid-Connected Microgrid utilizing Lyapunov Optimization Method with Battery and Renewable Generations	
16:30-16:45	373 Optimal Joint Stochastic and Robust Short-term Scheduling of Merchant Pumped Hydro Storage Producer Considering Uncertain Price and Rainfall	
16:45-17:00	454 Energy exchanging control in multiple microgrids with transactive energy management	
17:00-17:15	ID456 Implementation of the grid-interactive power generation for a hybrid system including a new permanent magnet generator and the solar panels with wind speed - dependent battery controller	
17:15-17:30	ID140 Effects of Voltage Dips on Single Phase Home Equipments	
17:30-17:45	ID106 Impacts of the geographical location on the performance of PV system - Skikda (Algeria) and Atbara (Sudan) case study	
17:45-18:00	ID295 Optimal Energy Management of Renewable Energy Based Microgrids Considering Uncertainties Associated with Power Market Price as Well as Renewable Generation Units	
<b>Hall D Parallel Session 4 BIOMASS &amp; ENVIRONMENTAL EFFECTS</b>		
<b>Chairman: Prof. Dr. Cigdem Gomec &amp; Assoc. Prof. Dr. Zahrul Mufrodi</b>		
16:15-16:30	ID122 Landfill Leachate grown microalgae to produce oils for biodiesel	
16:30-16:45	ID190 Sustainability assessment system by indicators for phoenicicole biomass energy recovery projects in an Algerian oasis	
16:45-17:00	ID11 An evaluation on potential energy of animal biomass in Turkey	
17:00-17:15	ID114 Direct liquefaction potential of balikesir olive baggasee	

17:15-17:30	ID371 Production of Bio-additive from glycerol and Acetic Acid Using Homogeneous and Heterogeneous Catalysts	
17:30-17:45	ID93 Effect of inoculum acclimation on energy recovery from anaerobic reactors digesting chicken manure	
17:45-18:00	ID83 Human Health Impacts of Australian Cobalt-Nickel-Copper Couple production	

**26 June 2018 Tuesday**

**Hall A Invited Talk Session 2**  
**Chairman: Prof. Dr. Mustafa Onat**

09:00-09:45	<b>KEYNOTE</b> Towards zero waste – challenges and solutions for sustainable development	<b>Assoc. Prof. Dr. Ilona Sárvári Horváth</b> Swedish Centre for Resource Recovery, University of Borås, Sweden
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**Hall A Parallel Session 5 Fuel-Cells & Converters**  
**Chairman: Assoc. Prof. Dr. Abdellatif Reama & Assoc. Prof. Dr. Evgenii Denisov**

09:45-10:00	ID57 Smart monitoring and controlling of three phase photovoltaic inverter system using LoRa technology	
10:00-10:15	ID468 PEM Fuel Cell Modules Associated with Hybrid Energy Storage System, Combining a Battery and Supercapacitor System, for Ship Applications	
10:15-10:30	ID235 Graphene Nanoplatelets Supported Platinum Nanoparticles as Electrocatalysts for PEM Fuel Cell Reactions	
10:30-10:45	ID145 Electrochemical noise analysis of PEMFC Stack	
10:45-11:00	ID325 Using of Sodium p-Toluenesulfonate As Additive For Positive Electrolyte of a Vanadium Redox Battery	
11:00-11:15	ID415 An investigation on Wind/PV/Fuel Cell/Battery hybrid renewable energy system for Nursing Homes in Istanbul	

**Hall B Parallel Session 5 HARVESTERS**  
**Chairman: Prof. Dr. Seong-bo Oh & Assoc. Prof. Dr. Zhivko Grozdev**

09:45-10:00	ID43 Detection of attacks on wireless sensor network using genetic algorithms base on fuzzy	
10:00-10:15	ID143 Topology Optimization of Substrate and Piezo Material for Piezoelectric Energy Harvester with Low and Wideband Resonant Frequency	
10:15-10:30	ID260 Electricity Production From Wind Energy By Piezoelectric Material	
10:30-10:45	ID285 A photovoltaic and piezoelectric wind energy harvester using hybrid batteries and a smart charging circuit	
10:45-11:00	ID290 Piezo-Actuated Common Rail Injector Structure and Efficient Design	
11:00-11:15	ID369 Analytical and experimental studies on a new linear energy harvester	

**Hall C Special Session 3 Advances in Wind, Photovoltaic and Harvesting Systems**  
**Chairman: Prof. Dr. Jose Manuel Lopez Guede**

09:45-10:00	ID301 VG modeling by a source term model on a DU97W300 airfoil	
10:00-10:15	ID300 AEP increase due to flow control devices implementation on a 5MW offshore wind turbine	
10:15-10:30	ID314 Mechatronic modeling of the power train of a 100 Kw wind	

	turbine	
10:30-10:45	ID299 Challenges of digital industrial furnaces for energy efficiency using syngas from biomass	
10:45-11:00	ID303 Innovative geometries for underwater piezoelectric energy harvester	
11:00-11:15	467 LIDAR technology for wind energy assessment	
<b>Hall D Parallel Session 5 OPTIMIZATION IN MECHANICAL ENGINEERING</b>		
<b>Chairman: Assist. Prof. Dr. Negin Maftouni &amp; Prof. Dr. Murat Kunalbayev</b>		
09:45-10:00	ID6 Optimal PMU placement for fault detection in wide area monitoring systems	
10:00-10:15	ID119 Experimental Investigation on the Effects of Kaolin/Deionized Water Nanofluid Usage in a Plate Type Heat Exchanger	
10:15-10:30	ID120 Experimental and Numerical Analysis of the Influences of TiO <sub>2</sub> -Containing Nanofluid Utilization on Heat Transfer Enhancement of a Plate Heat Exchanger	
10:30-10:45	ID55 Possibility of Cooling Dam Lake Water by Using Solar Energy for Growing Trout Fish	
10:45-11:00	217 Investigation shaft speed on off-design performance and efficiencies of a turbofan engine	
11:00-11:15	469 Potential of Earth-air Heat Exchanger Combined to Air to Air Heat Pump Systems for Heating of buildings	
<b>11:15-11:30 COFFEE BREAK</b>		
<b>Hall A Parallel Session 6 ELECTRICAL MACHINES &amp; DRIVES</b>		
<b>Chairman: Assoc. Prof. Dr. İsmail Kiyak &amp; Assoc. Prof. Dr. Ridha Kelaiaia</b>		
11:30-11:45	ID322 Sky Conditions Classification Using Support Vector Machines	
11:45-12:00	ID141 Input Output feedback linearization Control for Water Pumping System fed by MPPT FUZZY-LOGIC PV Source	
12:00-12:15	ID142 MPPT FUZZY-LOGIC Photo voltaic Sourced Voltage Based Backstepping Controlled Drive for Water Pumping System	
12:15-12:30	242 Voltage Regulation of Self-Excited Induction Generator using STATCOM for Wind Energy Application	
12:30-12:45	ID192 Investigation of low voltage ride through of wind permanent magnet synchronous generator with the help of STATCOM	
12:45-13:00	ID287 Mathematical model for investigation of low voltage ride through of wind permanent magnet synchronous generator with the help of STATCOM	
<b>Hall B Parallel Session 6 RF HARVESTERS AND PIEZO-STRUCTURES</b>		
<b>Chairman: Assoc. Prof. Dr. Şölen Kınayyığıt &amp; Assoc. Prof. Dr. Merih Palandoken</b>		
11:30-11:45	ID289 A Novel Meander Line Integrated E-shaped Rectenna for Energy Harvesting Applications	
11:45-12:00	ID297 A Novel Hybrid Energy Harvester System: Combination of Rectenna and Piezoelectric	
12:00-12:15	ID429 A Novel Compact Microstrip Antenna for GSM900 Band RF Energy Harvesting Applications	
12:15-12:30	ID423 A wideband RF energy harvester to supply sensors	
12:30-12:45	ID424 Efficiency comparison of voltage multipliers for RF energy harvester devices	
12:45-13:00	ID426 Taguchi Design of PZT-Based Piezoelectric Cantilever Beam with Maximum and Robust Voltage for Wide Frequency Range	
<b>Hall C Parallel Session 6 CONTROL TECHNIQUES</b>		



<b>Chairman: Prof. Dr. Tang Yi &amp; Assoc. Prof. Dr. Sertac Bayhan</b>		
11:30-11:45	ID214 Adaptive Control Strategy with Saturation Management of Designed Standalone Photovoltaic-Battery Power Generation Systems: Rural Electrification Systems for South Mediterranean Countries	
11:45-12:00	ID452 Design and Technical Analysis of a Two-Terminal Voltage Source Converter based HVDC System	
12:00-12:15	ID385 Takagi Sugeno Fuzzy modeling of an indirect hybrid solar-electrical dryer	
12:15-12:30	ID460 Design and implementation of a rotational speed controller for a contactless piezoelectric wind energy harvester	
12:30-12:45	ID486 Two-Stage Reactive Power and Voltage Control Strategy for PV Power Plants Based on Variable Droop Control	
12:45-13:00	ID397 Dual-Mode Model Predictive Control for Distributed Generators in AC Microgrids	
<b>Hall D Parallel Session 6 ENERGY EFFICIENCY &amp; PLANNING</b>		
<b>Chairman: Assist. Prof. Dr. Burak Akin &amp; Dr. Monem Beitelmal</b>		
11:30-11:45	ID208 Utilization rate of solar power plants during winter and summer electric power peak times in Jeju Island	
11:45-12:00	ID202 Study on microgrids of consisting of photovoltaic and diesel generations at border checkpoint camps in Mongolia	
12:00-12:15	ID150 Statistical and Economic Analysis of Karabük Kahyalar (KARES) Wind Data	
12:15-12:30	ID180 Life cycle assessment of CO <sub>2</sub> capture for further reuse as sodium carbonate	
12:30-12:45	ID213 Estimating CO <sub>2</sub> emission reduction according to renewable energy use in Jeju Island	
12:45-13:00	ID267 Optimal Scheduling of Air Conditioning Energy Demand with Solar Photovoltaic Power Profile in a Building	
<b>13:00-14:15 CONFERENCE PHOTO- 2 and LUNCH</b>		
<b>Invited Talk Session 2 Hall A</b>		
<b>Chairman: Prof. Dr. Erol Kurt</b>		
14:15-15:00	<b>KEYNOTE</b> Robot Applied Floor Insulation	<b>Prof. Dr. Peter Childs</b> Head of School, Dyson School of Design Engineering, Imperial College London, UK
<b>Hall A Parallel Session 7 SEMICONDUCTING MATERIALS</b>		
<b>Chairman: Prof. Dr. Yasemin Çiftçi &amp; Prof. Dr. H. Hilal Kurt</b>		
15:00-15:15	ID226 Simulation of solar cells based on Cu <sub>2</sub> ZnSn(SySe <sub>1-y</sub> ) <sub>4</sub> absorber and alternative buffer materials	
15:15-15:30	ID154 How should the effective hydrogen passivation of defects in silicon wafers be achieved using lasers?	
15:30-15:45	ID148 Hydrogen Storage on Li-decorated YCrB <sub>4</sub> -type Graphene Allotrope	
<b>Hall B Parallel Session 7 PYROLYSIS TECHNIQUE</b>		
<b>Chairman: Prof. Dr. Khanh-Quang Tran &amp; Assist. Prof. Dr. Zuhail Akyürek</b>		
15:00-15:15	ID65 RDF and its major component thermal degradation analysis to develop gasification technology	
15:15-15:30	ID70 Characterization and pyrolysis kinetics of Thai Napier grass and agricultural residues	
15:30-15:45	ID49 Utilization of waste polyethylene pyrolysis oil as partial substitute for diesel fuel in a DI diesel engine	

<b>Hall C Parallel Session 7 NANOSTRUCTURES &amp; CHARACTERIZATION</b>		
<b>Chairman: Prof. Dr. Eel-Hwan Kim &amp; Dr. Mohamed Redda Boudchicha</b>		
15:00-15:15	ID273 Frequency Dependent Dielectric Properties of Atomic Layer Deposition Grown Zinc-Oxide based MIS Structure	
15:15-15:30	ID15 Performance optimization of heterojunction solar cells InGaP / GaAs Using Silvaco-Tcad	
15:30-15:45	ID88 Cu <sub>2</sub> O/Cu <sub>2</sub> S core shell nanoparticle decoration of defected graphite for water splitting	
<b>Hall D Parallel Session 7 ENERGY &amp; ENVIRONMENT</b>		
<b>Chairman: Prof. Dr. Jolanta Januteniene &amp; Prof. Dr. Gae-Myoung Lee</b>		
15:00-15:15	ID489 Household waste recognition adapting learning techniques in the recognition system with ultrasound and color sensors	
15:15-15:30	ID329 Use of Activated Carbon from agro-food solid waste for the Removal of water pesticide pollutants	
15:30-15:45	ID401 Impact of food waste addition to municipal wastewater on environmental infrastructure	
<b>15:45-16:15 COFFEE BREAK</b>		
<b>Hall A Parallel Session 8 PHOTOVOLTAICS &amp; GRID CONNECTION</b>		
<b>Chairman: Prof. Dr. Bünyamin Tamyürek &amp; Dr. Farhad Nazari-Heris</b>		
16:15-16:30	ID319 Low Cost LED Based Solar Simulator with Variable Spectrum Controller	
16:30-16:45	ID413 Improving photovoltaic panel performance using a flipping technique	
16:45-17:00	ID457 Effect of aging and environmental factors on performance of thin film photovoltaic modules: a comparative analysis	
17:00-17:15	ID309 Portable Mobile Phone Charger Design with Photovoltaic Battery	
17:15-17:30	ID458 Design and analysis of a micro grid system using HOMER software: Eskisehir Osmangazi University example	
<b>Hall B Parallel Session 8 HYBRID SYSTEMS</b>		
<b>Chairman: Prof. Dr. Jalal Faraj &amp; Prof. Dr. Rachid Chenni</b>		
16:15-16:30	ID258 Determination of the optimum hybrid renewable power system for Marmara University Goztepe Campus	
16:30-16:45	ID3 Demand Response and Optimal Sizing of Hybrid Renewable Energy Systems	
16:45-17:00	ID341 A new approximation based nonlinear controller for a hybrid wind energy system	
17:00-17:15	ID186 Economic Scheduling of Hybrid Microgrid using planned management scheme	
17:15-17:30	ID336 A Hybrid Control Strategy for Photovoltaic Emulator in Partial Shadow Conditions Using dSPACE Controller	
<b>Hall C Parallel Session 8 POWER OPTIMIZATION</b>		
<b>Chairman: Assoc. Prof. Dr. Sertaç Bayhan &amp; Assoc. Prof. Dr. Emre Arslan</b>		

16:15-16:30	ID431 MPPT controlled DC-DC converter design and application for three stages battery charger	
16:30-16:45	ID444 PV based Field Oriented Control of PMSM Motor of a Washing Machine	
16:45-17:00	ID453 Modeling and Control of Photovoltaic System	
17:00-17:15	ID484 Review on Vehicle-to-Grid Systems: Benefits, Challenges, Interaction with Smart Grid Issues	
17:15-17:30	ID405 Performance Analysis of Earth Air Heat Exchanger Coupled to a V-Grooved Solar Air Collector	
17:30-17:45	ID257 Performance Analysis of the Axial Fan within a Multi-Dimensional Framework	

**Hall D Special Session 4**  
**Power Electronics in Renewable Energy Systems**  
**Chairman: Prof. Dr. Jose Manuel Lopez Guede**

16:15-16:30	ID483 Fuel Cell (FC) Hybrid Power System with mitigation of the load demand variability by the FC air flow control	
16:30-16:45	ID124 Hydrogen fuel cell electric vehicles and battery electric vehicles: monitoring scientific and technological trends	
16:45-17:00	ID298 MPC as a strategy for the achievement of nZEBs	
17:00-17:15	ID316 Panel temperature based MPPT algorithm stability analysis	
17:15-17:30	ID304 Understanding the relation between energy consumption and development during the Global Financial Crisis in Europe within Footprint accounting	
17:30-17:45	ID472 Efficient neural model of a commercial PEM Fuel Cell	
17:45-18:00	ID473 Wind Turbine Yaw Control with Reinforcement Learning based techniques	

**19:00 GALA DINNER on the BOAT & BOSPHORUS SEA TOUR**



**27 June 2018 Wednesday**

**Hall A Parallel Session 9 POWER ELECTRONICS**  
**Chairman: Prof. Dr. Mustafa Onat & Assoc. Prof. Dr. Emre Arslan**

09:00-09:15	ID135 Method proposal for efficiency improvement in wireless energy power transfer system with two inductive coupled resonator coils	
09:15-09:30	ID164 Fault Detection of Short-Circuit in the Back-to-Back Power for Wind Turbine Systems Based Doubly Fed Induction Generator	
09:30-09:45	ID187 Design and Implementation of Modified Cuk-Boost Fused converter for sustainable energy system	
09:45-10:00	ID191 Minimization of the volume and switching losses of Boost converters	
10:00-10:15	ID284 Fault diagnosis in photovoltaic systems by structured residues	
10:15-10:30	ID474 Comparative Investigation of Effects of Inrush Currents on Switching Components of Energy Efficient Lighting Elements	

**Hall B Special Session 4 Energy Materials: Production and Characterization**  
**Chairman: Prof. Dr. Shadia Ikhmayies & Assoc. Prof. Dr. Yasemin Çiftçi**

09:00-09:15	ID12 Synthesis and characterization of organic-inorganic lead halide perovskite thin films for photovoltaic applications	
09:15-09:30	ID22 Minimization of reflection losses in the solar cell configuration with a photon conversion system	
09:30-09:45	ID315 HIT Silicon Solar Cell: One-dimensional numerical modeling assimilation	
09:45-10:00	ID157 Analysis of thermal stresses in high-absorbing thin-film semiconductors during laser processing	
10:00-10:15	ID291 Determination of Nanostructure Photovoltaic Properties	
10:15-10:30	ID170 Exploration of thermoelectricity in NaScGe Half Heusler compound: A first principle study	

**Hall C Parallel Session 9 NANOMATERIALS**  
**Chairman: Assoc. Prof. Dr. HADJI Souad & Assoc. Prof. Dr. İsmail Kiyak**

09:00-09:15	ID17 Structural and dynamical properties of cubic antiperovskite BiNCa <sub>3</sub> compound.	
09:15-09:30	ID42 Heat Resistance of Nano Cement Mortar	
09:30-09:45	ID51 Structural and electrical study of Au <sub>3</sub> Cu thin films for use as a back contact in solar cells	
09:45-10:00	ID367 The performance of sulphur doped activated carbon supercapacitors prepared from waste tea	
10:00-10:15	ID189 Deposition Conditions of TiO <sub>2</sub> Film Grown by Atomic Layer Deposition	
10:15-10:30	ID378 The System Design of Photovoltaic Supported Light Pipe & LED Hybrid Illumination	

**10:30-11:00 COFFEE BREAK**

<b>Hall A Parallel Session 10 POWER ELECTRONICS</b>		
<b>Chairman: Assoc. Prof. Dr. Erdal Irmak &amp; Prof. Dr. Mordjou Mourad</b>		
11:00-11:15	ID318 Rooftop Solar Power Plant Based Electric Vehicle Charging Station	
11:15-11:30	ID337 Voltage Control Of Three Phase Grid Connected Inverter in Smart Building	
11:30-11:45	ID338 Analysis of Output Voltage of Voltage Source Inverter with Dynamic Load	
11:45-12:00	ID485 Artificial Neural Network Based Estimation of the Output Ripple of the DC-DC Boost Battery Charger for EVs	
12:00-12:15	ID137 A fault tolerant strategy for photovoltaic fed three-level boost dc-dc converter	
12:15-12:30	ID219 Behavior Analysis Of Asynchronous Wind Turbine In Presence Of Static Synchronous Compensator Operating With Fuzzy Logic Voltage Controller	
12:30-12:45	ID326 An Intelligent Method to Detect Voltage Interruptions in Microgrids	
12:45-13:00	ID435 Application of MPPT Controlled Boost Converter for Photovoltaic Systems	
<b>Hall B Parallel Session 10 CONTROL TECHNIQUES</b>		
<b>Chairman: Prof. Dr. Rachid Chenni &amp; Prof. Dr. Youcef Soufi</b>		
11:00-11:15	ID132 Design of Output Feedback Sliding Mode Controller for SEPIC Converter	
11:15-11:30	ID220 Design of a rotational speed observer for permanent-magnet synchronous generator, application on wind electric water pumping system	
11:30-11:45	ID166 A FUZZY LOGIC CONTROL STUDY FOR THE MITIGATION OF POWER FLUCTUATIONS IN THE WIND TURBINES	
11:45-12:00	ID265 Constant Temperature Control with a Fast Transient Response for a Gel Card Incubator	
12:00-12:15	ID320 Comparison Study of An In-Wheel BLDC Motor for Light Electric Vehicle Propulsion Using MATLAB/Simulink	
12:15-12:30	ID75 A Tuning Method for PID Controller for an Integrating System with Time Delay	
12:30-12:45	ID178 High performance PMSM using mechanic speed and position sensor-less backstepping control with extended Kalman filter prediction	
12:45-13:00	ID334 Analysis Of Power LED Driving Circuits, Simulation Comparisons And One Application of Isolated LED Driver Circuit	
<b>Hall C Parallel Session 10 MATERIAL CHARACTERIZATION</b>		
<b>Chairman: Prof. Dr. Shadia Ikhmayies &amp; Prof. Dr. Hakan Ateş</b>		
11:00-11:15	ID92 Experimental investigation of thermal and hydraulic performance of a plate heat exchanger using Al <sub>2</sub> O <sub>3</sub> nanofluid	
11:15-11:30	ID462 Cogging torque reduction by using the skewing and separated magnet techniques	
11:30-11:45	ID238 Effects of Temperature and Frequency on Capacitance and Conductance Characteristics of Zinc-Oxide based MIS-Structure	
11:45-12:00	ID240 Designing an LED Incapacitator	
12:00-12:15	ID392 First principles calculations of the energetic, structural, electronic, and magnetic properties of Fe/Ir(100) system	
12:15-12:30	ID459 Energy Distributions and Radiative Features In An Inertial Electrostatic Confinement Device	
12:30-12:45	ID487 Effect of the Deposition Temperature on the Optical Parameters of Thermally Evaporated CdTe Thin Film	
12:45-13:00	ID488 Spray-Deposited ZnO Micro/Nano Coral Reefs on	

	Glass Substrates	
<b>13:00-14:15 LUNCH</b>		
<b>Hall A Parallel Session 11 TECHNO - ECONOMICAL ANALYSES</b>		
<b>Chairman: Prof. Dr. Young Gyu Jin &amp; Prof. Dr. Turhan Koyuncu</b>		
14:15-14:30	ID155 Climatic conditions influence on flashover occurrence in Algiers region HV overhead lines	
14:30-14:45	ID10 Seasonal generation of a grid connected PV power plant	
14:45-15:00	ID171 Accurate scale modeling of dynamic behavior of large wind turbines on a Wind Turbine Emulator	
15:00-15:15	ID283 Sensitivity Analysis of Economically Optimal Capacity for a Residential PV-Battery System	
15:15-15:30	ID286 The cost of electromechanical equipment in a small hydro power storage plant	
15:30-15:45	ID181 Dual Axis Solar Tracking System with PLC without Any Sensor	
<b>Hall B Parallel Session 11 ENERGY STORAGE &amp; WIND ENERGY</b>		
<b>Chairman: Prof. Dr. Metatla Abderrezak &amp; Prof. Dr. Şafak Sağlam</b>		
14:15-14:30	ID176 Implementation of Extended Kalman Filter for Accurate State of Charge Estimation	
14:30-14:45	ID210 Recent status of EV charging infrastructure in Jeju Island	
14:45-15:00	ID335 Optimization of offshore wind farm cable layouts	
15:00-15:15	ID41 The Effect of Aspect Ratio on Aerodynamic Performance and Flow Separation Behavior of a Model Wing Composed from Different Profiles	
15:15-15:30	ID305 Characteristic Analysis on various structure topology of a 10-MW class HTS generator for wind power	
15:30-15:45	ID481 Electromagnetic Design of a New 3 kW Axial Flux Permanent Magnet Generator	
<b>Hall C Parallel Session 11 ISSUES IN MECHANICAL ENGINEERING</b>		
<b>Chairman: Prof. Dr. Murat Kunalbayev &amp; Prof. Dr. Metin Gençten</b>		
14:15-14:30	ID8 The impact of building morphology on energy performance	
14:30-14:45	ID313 Thermal Investigation of a Geothermal Coaxial Borehole Heat Exchanger under Thermal Interferences	
14:45-15:00	ID146 The effect of solar steam hardening on concrete for prefabricated buildings	
15:00-15:15	ID425 Use of insulation and phase change material in building structures – Experiments and analysis	
15:15-15:30	ID312 Computation of heat quantity, thermal detector filling coefficient and performance of single circuit solar system with thermo siphon circulation	
15:30-15:45	ID311 Theoretical and mathematical analysis of double-circuit solar station with thermo siphon circulation	
<b>15:45-16:15 COFFEE BREAK</b>		
<b>Hall A Special Session 12 FLUID DYNAMICS AND GEOTHERMALS</b>		
<b>Cahirman: Prof. Dr. Metin Gençten &amp; Assoc. Prof. Dr. Negin Maftouni</b>		
16:15-16:30	ID40 Experimental and Numerical Investigation of Aerodynamic Performance and Flow Separation of a Model Wing Composed from Different Profiles	

16:30-16:45	ID445 The Main Geothermal Reservoirs in the South Algeria and their Interest for Local Economic Development	
16:45-17:00	ID333 Numerical Study of Shrouded Wind Turbine	
17:00-17:15	ID48 Parametric study of MED-TVC desalination unit	
17:15-17:30	ID136 The effect of piston bowl geometries of Direct Injection Diesel Engines on emission and combustion characteristics	
<b>Hall B Parallel Session 12 OPTIMIZATION &amp; ENVIRONMENTAL ISSUES</b> <b>Chairman: Prof. Dr. Jolanta Januteniene &amp; Dr. Souad Zighmi</b>		
16:15-16:30	ID96 Modeling and optimization of the cultivation systems of seaweeds for renewable energy by ANN technique	
16:30-16:45	ID292 A comparative CFD analysis of NACA0012 and NACA4412 airfoil	
16:45-17:00	ID95 Experimental exploitation of solar energy for drying peanut from Algeria, and production of renewable biofuel	
17:00-17:15	ID73 Thermal comfort of semi-underground room in hot climate	
17:15-17:30	ID342 Waste energy recovery from the silencer of a gasoline vehicle using thermoelectric generators	
<b>Hall C Parallel Session 12 MACHINES &amp; OPTIMIZATION</b> <b>Chairman: Prof. Dr. Eleonora Guseinoviene &amp; Assoc. Prof. Dr. Tahar Boukra</b>		
16:15-16:30	ID275 Fault classification in the induction motor by the support vector machine	
16:30-16:45	ID363 Selecting Optimal Grid Integration Point of DFIG Wind Turbines: A Case Study	
16:45-17:00	ID278 Modeling and Design of Azimuth-Altitude Dual Axis Solar Tracker for Maximum Solar Energy Generation	
17:00-17:15	ID482 Case study of small electric ship energy consumption with power supply capacity estimation	
<b>17:30 CLOSING SESSION &amp; DELIVERY OF BEST PAPER AWARDS</b>		



**POSTER SESSIONS (\*)**

<b>ALL POSTER PRESENTERS MUST BE BESIDE THE POSTER</b>		
<b>P1</b>	ID228 Frequency Dependent Effects Before and After Gamma-Ray Irradiation on Al/C24 H12 /p-Si MPS Structure	
<b>P2</b>	ID156 Semi-numerical analysis of pole arc offset impact on permanent magnets brushless DC motor performances	
<b>P3</b>	ID199 optimization and management energy of a hybrid system (wind/photovoltaic) for pumping system	
<b>P4</b>	ID372 Optimization of a photovoltaic pumping system by adaptive fuzzy logic	
<b>P5</b>	ID123 Validation of operating temperature models of PV module for a grid connected PV system in desert region of Algeria	
<b>P6</b>	ID200 InGaN alloy for photovoltaic application	
<b>P7</b>	ID382 Optimization of the energy distribution system in grid connected PV systems with storage for the improvement of the household self-consumption: Case of a solar home in Bou-Ismaïl, Algeria	
<b>P8</b>	ID21 Modeling and Optimization of Multijunction Solar Cells Based SiGe using AMPS-1D	
<b>P9</b>	ID350 Rheological study of carboxymethylcellulose suspension by using an expusion installation	
<b>P10</b>	ID351 Thermo-rheological study of carboxymethylcellulose suspension by using an expusion installation	
<b>P11</b>	ID427 Experimental Study of Underfloor Electrical Heating System with Integrated CO-PCM Plates	
<b>P12</b>	ID37 PV generator model for obtaining the I-V curve form any test condition: using Artificial neural network method	
<b>P13</b>	ID28 Advance Control of a Isofotón-75W Photovoltaic Module Under Matlab-Simulink	
<b>P14</b>	ID396 Performance evolution of a 10.5 kW rooftop grid-connected photovoltaic system in south of Algeria	
<b>P15</b>	ID340 Characterization of organic membrane used for water treatment	
<b>P16</b>	ID245 Study and modeling of a new optical transmitter	
<b>P17</b>	ID248 Study of techniques of realization of future all optical logics functions in broadband used SOA	
<b>P18</b>	ID29 Estimation the energy production of a 3KW photovoltaic installation	
<b>P19</b>	ID475 CFD Analysis of Flow Phenomena for Optimum Rotor Blades	
<b>P20</b>	ID414 Enhanced residential water heater: Experiments and analysis	
<b>P21</b>	ID368 Effects of transient conduction and rotating hollow cylinder on optimized operating conditions of the solar cooling by adsorption process.	
<b>P22</b>	ID370 Wind Energy for Hybrid Car	
<b>P23</b>	ID60 Feasibility study of Grid-connected Photovoltaic system for seawater desalination station in Algeria	



P24	ID45 Production of biodiesel from bioethanol using Algerian's carob	
P25	ID46 Impact of oxygen reducers on carbon steel corrosion under classical and developed methods	
P26	ID61 Three Phase Grid Connected Photovoltaic System Based Fuzzy Logic Controller Inverter	
P27	ID116 Direct torque Control Based on SVM-HYS Applied to the Induction Machine	
P28	ID262 Pinion gear fault detection of High speed wind turbine	
P29	ID247 Control in Stand-alone Wind Energy Conversion System Using Vector Control of DFIG	
P30	ID36 Removal of Cr (VI) from aqueous solution by electrocoagulation using a factorial design	
P31	ID158 Impact analysis of the decentralized generation integration in HTA networks, particularly on voltage drop	
P32	ID167 The Pressure Effects on Physical Properties of AlNi Compound in B2 Structure	
P33	ID169 A Theoretical Study of Pressure-induced Effects on Phase Transition and Elastic Properties of AsTh Compound	
P34	ID237 Frequency Dependent Dielectric Characteristics and Electrical Conductivity Behavior of Al/C24 H12/P-Si Structure	
P35	ID384 A new proposed topology for a hybrid power converter with battery storage system applied for solar pumping system desired for the region of Tindouf Algeria	
P36	ID182 Model predictive control for maximum power point tracking in photovoltaic system	
P37	ID34 Degradation of pharmaceuticals spiramycin and tylosin in aqueous solution by heterogenous photocatalysis : influencing factors	
P38	ID280 Extraction of photovoltaic cell parameters from an experimental InGaN (J-V) characteristic using genetic algorithms	
P39	ID455 The feasibility of geothermal energy utilization in areas around the Sabalan volcano, NW Iran	
P40	ID477 Cold Atmospheric Pressure He Glow Discharges	
P41	ID478 Hydrogen Discharges in a Microelectronic Device with GaAs Cathode	
P42	ID476 Temperature and time storage influences on the electret state stability of porous zeolite microstructure	
P43	ID149 The Thermodynamical Properties of AsPr via First Principles	
P44	ID151 High Pressure Physical Properties of AsPu Compound	
P45	ID317 Design of a Maximal Power Point Tracking System for a Piezoelectric Wind Energy Harvester	

(\*) 1. Since the Scientific Committee assigned for the poster evaluations will have questions and suggestions, please stand aside your poster at the poster session times.

2. All posters are exhibited on **26 - 27 June 2018 days between 15:00 – 17:30 at the foyer in front of Halls**. The international scientific committee will ask questions about your posters and evaluate them.

3. The preferred dimension for each poster should be 100 cm height and 60 cm width as also stated in web-site of the conference.

4. Please do not forget to get back your poster(s) on **27 August after 17:30**.



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