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and Environment Symposium

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14th International Exergy, Energy, and Environment Symposium (IEES-14)

Istanbul, Turkey, 24-27 December, 2023

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Symposium Program

IEEEES-14

December 24, 2023

Piri Reis University Sea Campus B block

10:30	Registration	Piri Reis University, B Block
		Chair: Dr. M.Ziya Sogut
		Preparing of wall paper presentation
13:45 - 15:15	Wall Presentations	<p>Cemil Koyunoğlu, Mustafa Tolay "Kinetic Analysis and Simulation of Rice Husk Char Gasification in H₂O and CO₂ Atmospheres for Enhanced Syngas Production"</p> <p>Yorken Chrisha C., Abhilash Suryan, Suresh Lal S R, Prasanth P Nair "Analysis of Wind Flow around Major Buildings in an Academic Campus in India"</p> <p>Demet Yılmaz, Sennur Alay Aksoy "Integrating Phase Change Materials (PCMs) Into Cotton Ring Spun Yarn Structure For Thermo-Regulating Function"</p> <p>Sevinç Sırdaş, Kemal Ege Sural "Evaluation of Wind Energy and Atmospheric Stability in Edincik"</p> <p>Gökhan Sefer, Süleyman Karsli "Numerical Investigation of the Effect of Forced Air/nanofluid Pairs on Pv/t System Performance"</p> <p>Sevinç Sırdaş, Oguzhan Arabaci "Effects of Climate Change and Global Oscillations on Precipitation Variability"</p> <p>Mahdi Mokrane, Maamar Ouali, Ferhat Yah, Mohamed Ali Djebiret, Ali Tetbirt, Mohand Berdja "Enhancing Household Refrigerator Efficiency through the Integration of Phase Change Materials: An Experimental and Statistical Analysis"</p> <p>Ferhat Djawad, Nibou Djamel, Hadj Mekatel, Amokrane Samira "Adsorption of Co (II) ions onto NaX and NaA Zeolites"</p>

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December 25, 2023

Piri Reis University Sea Campus, B Block
(Program Presenter: Dilara Narin)

08:00-09:00	Registration	
09:00- 09:15	Opening Ceremony; Performer :.....	
09.15 – 09:30	09:15-09:20	Dr. M.Ziya Sogut (Symposium Chair)
	09:20-09:30	Dr. Nafiz Arıca (Rector of Piri Reis University)

KEYNOTE TALK -1

09:30 - 11:00	Session Chair: Dr. Yunus Çengel	
	Keynote Talk 1	Dr. İbrahim Dinçer "The Role of Exergy in Integrated Energy Systems"
	Keynote Talk 2	Dr. Mihri Özkan "Direct Air Capture of CO ₂ and Its Use for Synthetic Aviation Fuels: The Promise of Greener Skies"

11:00-11:30

Coffee Break

11:30-13:00

KEYNOTE TALK -2

11.30 - 13.00	Session Chair: Dr. Arif Hepbaşlı	
	Keynote Talk 3	Dr. Donghai Wang "Development and Application of Functional Materials for Next-Generation Electrochemical Energy Storage Technologies"
	Keynote Talk 4	Dr. Cengiz Özkan "Prospects in Global Vehicle Electrification Over the Next Decade"

13:00-14:00

Lunch / Coffee Break

14:00-15:00

Sectorial Session (Seminar 1)

14.00 - 15.00	Session Chair: Dr. Murat Koray	
	14:00-14:10	Heliplat
	14:10-14:20	GİSBİR
	14:20-14:30	STM
	14:30-14:40	Artı Denizcilik
	14:40-14:50	Vizyon Inovatif Yalıtım
	14:50-15:00	TMS Group

Technical Session-1 (Room 1)		
14:00 - 15:30	Energy Systems and Technologies: PV & Solar-Based Systems	Session Chair: Dr. Cüneyt Ezgi
		Davut Ertekin, Eren Küpcü Active Balancing with Bidirectional Energy Transfer: A Flyback Converter Solution for Lithium-Ion Cells
		Houda Tassoult, Mezidi Ahmed Applications of Fresnel Concentrated Solar Power System and their Impact Towards Environment
		Abdullah Muratoğlu Re-defining and Conceptualizing the Energy Footprint as a Standalone Indicator
		Oya Bakar, Barış Yılmaz, Murat Uysal Experimental and Numerical Analysis on Prismatic LFP Battery Surface Temperature Distribution
		Nazım Taş, Ayşegül Abusoğlu Assessment of the Effect of Lint Accumulation in the Heater Channel on the Performance of the Water Cooled Washing Drying Machines in Different Operating Conditions
Technical Session-2 (Room 2)		
14:00 - 15:30	Energy & Exergy Analysis and Applications	Session Chair: Dr. Hadi Genceli
		Tunahan Akış, Mehmet Akif Ezan, Nuri Kayansayan, Önder Kızıllan, Çağla Cergibozan, Can Özgür Çolpan Development of a Dynamic t-CO ₂ Rankine Cycle Model with Heat Recovery System for Daily-Based Performance Assessment
		Maryam Karami, Seyedeh Somayeh Nasiri Gahraz A Year-round Dynamic Simulation of a Solar Trigeneration System in Hot and Humid Climate
		İbrahim Karacaylı, Lutfiye Altay, Arif Hepbasli Exergy-Based Performance Assessment of an Ejector-Enhanced Auto-Cascade Refrigeration Cycle

Technical Session-3 (Room 3)		
14:00 - 15:30	Sustainability and Environmental Management: Fuels	Session Chair: Dr. Nader Javani
		Metin Gül, Ersin Akyüz Future Methanol Cost Projections in Specific Regions: A Comprehensive Study
		Aneesh Vasudev, Maciej Mikulski, Jari Hyvönen Effects of H ₂ Admixture on RCCI Combustion Dual-fuel Marine Engines: a Model-based Study
		Fathia Chekired Design and Implementation of Lighting and Household Loads Monitoring System based on Power Line Carrier Communication

		<p>Sabri Boulouma, Naoual Seddaoui, Rahmani Lazhar, Hocine Belmili, Boualem Bendib Implementation of Salp Swarm Algorithm for Optimal Energy Dispatching in Microgrids</p> <p>Ömer Faruk Güler Comparative Analysis of Energy Storage Methods for a Parabolic Through Collector Solar Power System</p> <p>Seyed Hamed Pour Rahmati Khalejan Comparative Evaluation of Solar Exergy Models for Various Regions in Turkey</p>
Technical Session-4 (Room 4)		
14:00 - 15:30	Green Transition and Decarbonization: Transportation Vehicles	<p>Session Chair: Dr. Elayaperumal Annamalai</p>
		<p>Halil Çeçen Review of the Current Developments About Reducement of the Greenhouse Gas Emissions from Maritime Activities According to Turkish Climate Change Bill</p>
		<p>Murat Ayar Investigating Fuel Consumption Disparities Between Nonstop and Connecting Flights</p>
		<p>Sinan Burhan, Kamil Erkan Investigation of the Relationship Between the Topography and the Fluid Circulation Depth on the Geothermal Systems of Central Anatolia Region</p>
		<p>Fazil Erinc Yavuz, Vasif Can Yildiran, Sebastian George Colleoni Numerical Investigation in a Dishwasher Hub: Reducing Pressure Difference and Pump Power</p>
		<p>Onur Otlu, Adnan Midilli, Zehra Yumurtacı A Strategy on Off-Shore Alternative Fuel Production</p>
Technical Session-5 (Room 5)		
		<p>Session Chair: Dr. Edwin Geo Varuvel</p>
		<p>Boubekeur Boudine, Imene Ameer, Miloud Sebais, Ouahiba Halimi, Zeineddine Ouili Fabrication and Photocatalytic Activity of Undoped and Mg Doped ZnO</p>
		<p>Hanane Aburideh Acetate Cellulose Modified Nanofiltration Membrane Efficacy and Performance</p>
		<p>Burak Vardar, Fazlı Okan Bovatekin, Yunus Mert Becermen, Okan Gök, Ersin Alptekin, Mehmet Akif Ezan, Aytunc Erek, Experimental Studies on Energy and Exergy-based Assessments of a Freezer</p>
		<p>Salih Bilgiç, Eren Cankılıç, Alper Gülmez, Okan Gök, Ersin Alptekin, Mehmet Akif Ezan, Aytunç Erek 3D Steady-State and Transient Numerical Studies of a Static Freezer</p>
		<p>Zahra Sadaoui, Noreddine Boudechiche, Ouiza Allalou, Assia Djebri The Improvement of the Mebeverine Hydrochloride Photocatalytic Degradation by Using Combined Activated Carbon/ZnO Under Sunlight</p>
15:30- 15:45 Coffee Break		
Technical Session-6 (Room 1)		
16:45 - 18:15	Energy Systems and Technologies:	<p>Session Chair: Dr. Ahmet Taşdemir</p>
	PV & Solar-Based Systems	<p>Muhammed Bozelli, Berk Kurt Investigation of Optimal Panel Angle for Denizli/Güney</p>

		Rabah Gomri Dissociation of Methane for Hydrogen Production in a Solar Reactor
		Hani Zeidan, Mustafa Esen Marti, Ebru Erunal Synthesis and Characterization of Novel CeO ₂ /SiO ₂ Composites and Their Use in Removal of Cationic and Anionic Dyes
		Mezidi Ahmed, Houda Tassoult, Bendjebbas Hichem The Management of Electrical and Thermal Energy in a House at Different Climates Algeria
		Hocine Belmili Smart Micro-grids as Improving Solution for Supplying Agriculture Farms
Technical Session-7 (Room 2)		
16:45 - 18:15	Energy & Exergy Analysis and Applications	Session Chair: Dr. Mohammad Hasan Khoshgoftar Manesh
		Atoui Sakina, Fouad Aissaoui, Amel Berkane, Mohammed Ayad Performance Improvement of Pv Generator Using a Sun Tracking System
		Arif Karabuga, Zafer Utlu Thermodynamic Analysis of the Parabolic Dish Collector-Based Hydrogen Production System
		Sümeyya Ayça, İbrahim Dinçer Life Cycle Analysis of Power Supply Selection for a Chloralkali Production Plant
		Aminu Yusuf, Sedat Ballikaya Photovoltaic-phase Change Materials-thermoelectric System Coated With Radiative Cooling
		Vasif Can Yildiran, Hasan Günes An Investigation of the Impact of the Cooling Air Diffusers on Drying Performance in a Condenser Tumble Dryer
Technical Session-8 (Room 3)		
16:45 - 18:15	Sustainability and Environmental Management: Fuels	Session Chair: Dr. Dogan Erdemir
		Kubilay Karayel, Ibrahim Dincer Capacity Potential and Cost Assessment for Hydrogen Production from Marine Sources
		Emine Sacha Nokay, Zeynep Durmuş Arsan Integration of Hydrogen Technologies into Buildings in Historic Urban Areas
		Edwin Geo Varuvel Analyzing the Lean Burn Combustion Stability by Hydrogen Induction in Gasoline Direct Injection Engine
		Kumaravel S, Saravanan C G, Premkumar P, Edwin Geo Varuvel, Manoj babu A, Elayaperumal A Study the Flame Characteristics of Gasoline Propanol Blends for SI Engine

Technical Session-9 (Room 4)

16:45 - 18:15	Green Transition and Decarbonization: Transportation Vehicles	Session Chair: Murat Emre Denir
		Cengizhan Gök, Selcuk Ekici, Ozgur Balli, Tahir Hikmet Karakoc Hydrogen as the Fuel of the Future and Hydrogen-powered Aircraft
		Assem Abdurakhmanova, Ibrahim Dincer Potential Use of Hydrogen Pentoxide and Hydrogen Peroxide in Transportation Sector: an LCA Study
		Tarek Ibnou Ziad Berrama, Mohamed Ait Oumeraci, Feriel Sahoui, Hayet Tizi Green synthesis of ZnO Nanoparticles for effective photocatalytic degradation of Malachite Green under UV light and Sun-light: a comparative study

Technical Session-10 (Room 5)

16:45 - 18:15	Energy Efficient materials	Session Chair: Dr. Murat Uyar
		Lekshmi Priya J, Abhilash Suryan, Prasanth P Nair A Computational Investigation, Into the Leakage and Dispersion of Hydrogen, in Enclosed Areas
		Sadek Igoud, Belgassim Boutra, Iamine Aoudjit, Aicha Sebti, Fatiha Souahi, Chems-Eddine Chitour, Djamel Zeriri, Amel Mameche Experiments Review of Solar Wastewater Treatment (SOWAT)

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December 26, 2023

Piri Reis University Sea Campus, B Block
(Program Presenter: Dilara Narin)

KEYNOTE TALK

09.00 – 10:30	Session Chair: Dr. Ali Cemal Benim	
	Keynote Talk 5	Dr. Abdul-Ghani Olabi (Online) "Digital Twin & Artificial Intelligent for Renewable Energy & Energy Storage Systems"
	Keynote Talk 6	Dr. Yunus Çengel "Energy and Exergy Efficiencies of Geothermal Power Plants"

10.30 – 11:00

Coffee Break

INVITED TALK

11:00- 12:30	Session Chair: Dr. Özgür Çolpan	
	Invited Talk 1	Dr. Adnan Midilli
	Invited Talk 2	Dr. Ali Cemal Benim
	Invited Talk 3	Dr. Birol Kılıç-Online

12:30-13:00

Sectorial Session-2 (Room-1)

12.30 - 13.00	Session Chair: Dr. Oktay Çetin	
	12:30-12:40	Hydroworks Mühendislik
	12:40-12:50	Seapower Electrical Systems
	12:50-12:55	Berkin Engineering
	12:55-13:00	Alfa Laval
	13:00-13:10	Yaf Diesel

12:30-13:00

Wall Paper Presentation

12:30-13:00	Session Chair: Dr. M. Ziya Sogut	
	Fatih Özcan, Muhsin Kilic "Prediction of Thermodynamic Properties for Compressed Natural Gas Mixtures"	
	Gözde Nalçacı, Gamze Nalçacı "Retrofitting Office Buildings on Global Warming Case Study: Turkey"	
	Halil Çeçen "Assessment of the Current Developments Regarding the Reduction of Maritime Transport CO2 Emissions Within the Framework of the Acquis Communautaire"	
	Chekirou Wassila, Nahman Boukheit, Ahcene Karaali "Effect of Adsorbent/adsorbate Working Pairs on Solar Adsorption Cooling Performance's"	
	Hocine Guellil, Korti Abdel Illah Nabil "Effects of Distance and Absorber Shape on the Energetic and Exergetic Performance of a Solar Collector"	
Mekatel Elhadj, Belmedani Mohamed, Bentaieb Nouredine "A New Heterosystem ZnO/NaX Zeolite for the Removal of Blue Basic Dye 41 by Photocatalysis Under Solar Irradiation"		
Büşra Namaldı Kömürcü, Muhammet Çelik, Gülşah Elden, Mustafa Serdar Genç Thermal Analysis for Different Discharge Rates in A Li-Ion Battery Package		
Hafida Lebik, Rafik Elhadi, Sarah Mahidine, Wassila Yazid, Sarah Djelti Electrochemical Disinfection of Secondary Effluent Using a Low Cost Stainless Steel Electrodes		

13:00-14:00

Lunch / Coffee Break

Technical Session-11 (Room 1)

14:00 - 15:00	Energy Systems and Technologies: PV & Solar Based Systems	Session Chair: Dr. Houda Tassoult
		Abdel Illah Nabil Korti, Hocine Guellil An Effective Moisture Diffusivity of a Hybrid Double Pass Collector-Solar Dryer For Tomato Slices Drying
		Fathima Ancy M, Abhilash Suryan, Prasanth P Nair, Sriram Chandran R Evaporative Cooling of Solar Photovoltaic Panels: a Computational Study
		Taha Buğra Sari, Orçun Şenler, Murat Mustafa Savrun Power Grid Schemes of Marine Vehicles with Electric Propulsion
		Mehmet Gursoy, Ibrahim Dincer An Assessment of A Novel Hybrid Photoelectrochemical-Conventional Hydrogen Generator

Technical Session - 12(Room 2)

14:00 - 15:00	Energy & Exergy Analysis and Applications	Session Chair: Dr. İsmail Ekmekçi
		Uğur Demir Evaluation of Operational Factors for The Energy Efficiency Optimization of High-Speed Roro Vessels by Trim Optimization
		Gülçin Yıldırım Çimşir, Tuba Okutucu Özyurt COP Improvement of Solar Assisted Absorption Refrigeration Systems
		Melchiorre Casisi, Mauro Reini, Emanuele Nadalon, Ronelly De Souza Exergy Analysis Of A Carnot Battery With Variable Ambient Conditions
		Ahmad Zikri, Muhsin Kilic, Fatih Özcan Thermodynamic Analysis of Desalination System on Combined Cycle Power Plants Through Throttling Process Method by Using a Vapor Compressor

Technical Session-13 (Room 3)

14:00 - 15:00	Sustainability and Environmental Management: Waste Solid Recycle	Session Chair: Dr. Belmedani Mohamed
		Duygu Erten Insights Into a Sustainable Campus: Pir İ Reiş University
		Haider Muften Object segmentation in thermal images using YOLOv8
		Elangkathir V., Premkumar P., Saravanan C. G., Manoj Babu A., Rajkumar P. Conversion of Waste Thermocol Into Energy-Rich Fuel by Utilizing Catalytic Cracking Process Using as Fly Ash Catalyst
		Cemil Koyunoğlu, Fevzi Yaşar Impact of Reaction Parameters on Biodiesel Yield and Fuel Characteristics: A Case Study on Algal Oil

Technical Session-14 (Room 4)		
14:00 - 15:00	Energy Systems and Technologies: Renewable Sources	Session Chair: Dr. Nurdan Yıldırım
		Mine Sertsöz Parameters of Renewable Energy Usege in Rail Systems
		Hüseyin Gençer Multi-Objective Optimization in Container Port Operations
		Mehmet Ölmez, İbrahim Arı, Gülfem Tuzkaya Energy Storage and Renewable Capacity: Implications for Power Market Prices
		Muhammad Ishaq, İbrahim Dinçer Exergy and pinch analyses for integration of Cu-Cl cycle with solid oxide fuel cell
		Mehmet Furkan Koparan, Mehmet Akif Ezan, Okan Gök, Ersin Alptekin, Aytunç Erek Preliminary Study on a Transient Freezer Model with PCM
Technical Session-15 (Room 5)		
14:00 - 15:00	Energy efficient materials	Session Chair: Dr. Can Coşkun
		Puttapati Sampath Kumar, Dinesh Bejjanki Novel Synthesis of Mxene/ MgO/Few Layered Graphene Nanocomposite
		Bekhedda Keira Opto-electronic Study of the Silicon Nitride Doped Cerium Thin Films Deposited by Evaporation
		Özüm Çallı, Vedagiri Praveena, Edwin Geo Varuvel "Combined Effects of Nozzle Hole Variation and Piston Bowl Geometry Modification on Performance Characteristics of a Diesel Engine with Energy and Exergy Approach"
		Zafer Metin Ataş, Gizem Başaran Dindaş, Hüseyin Cengiz Yatmaz Development of Metal Loaded Minerals as Heterogeneous Catalysts for the Degradation of Dye Solutions
		Hazal Gergeroglu, Mato Knez, Mehmet Ziya Sogut Fabrication of a Graphene-based Nanohybrid Interlayer for Improved Li-S Cells via Atomic Layer Deposition
Technical Session-16 (Room 1)		
14.00- 15.00	Energy Systems and Technologies:	Session Chair: Dr. Orhan Özgür Aybar
		Yusuf Taha Ismailoglu, Deniz Ulusarslan Theoretical Investigation of Solar Energy-Assisted Cooling in Refrigerated Trailers
		Mohammad Hasan Khoshgoftar Manesh Techno-Economic Assessment of Integrating of Solar Tower Power Plant and MED Desalination for Combined Power and Freshwater Production in Babylon Region
		Zergane Said, Amar Berkache, Guesmla Seyfeddine The Location of Wind Turbines in a Wind Farm in the Atmospheric Boundary Layer
Technical Session-17 (Room 2)		
		Session Chair: Dr. Hocine Belmili

15:00 - 16:00	Energy & Exergy Analysis and Applications	Edwin Geo Varuvel Investigation on Combustion, Performance and Emission Characteristics of Waste Cooking Oil – Diesel Blends With Hydrogen in CI Engine – a Dual Fuel Approach
		Lyes Nasserı, Zouhira Hireche, Djamel Eddine Ameziani LBM Simulation of Thermal Comfort in a Room Cooled by Displacement Ventilation: Effect of Inlet-outlet Layouts
		Murat Koseoglu, İsmail Özdemir The Usage of Electric Transport Vehicles in the Logistics Industry
		Mehmet Akman, Selma Ergin Energetic and Exergetic Analysis of a Marine-Type ORC WHRS Using Zeotropic Mixtures
		Fatih Özcan, Muhsin Kılıç Dynamic Modeling of a Compressed Natural Gas Refueling Station
Technical Session-18(Room 3)		
15:00 - 16:00	Sustainability and Environmental Management: Waste Solid Recycle	Session Chair: Dr. Fatih Yılmaz
		Rukiye Öztekin, Delia Teresa Sponza Removals of Some High- and Low-Density Polyethylene (HDPE and LDPE), Polypropylene (PP), and Polyvinyl chloride (PVC) Microplastics Using Some Microalgae Types and Energy Recovery
		İsmail Ekmekci, Nagihan Ersoy A Study on the Elimination of Heavy Metal Pollution with Soma Thermal Power Plant Fly Ash
		Muhammed Baştuğ, Hatice Eser Ökten, Hale Demirtepe Heavy Metal Phytoremediation Using Energy Crops in Surface Soil of an Industrial Zone
		Abdelatif Takilalte Machine Learning Techniques for Forecasting Daily Global Solar Radiation Ahead
Technical Session-19 (Room 4)		
15:00 - 16:00	Energy Systems and Technologies: Renewable Sources	Session Chair: Dr. Duygu Erten
		Merve Altuntas, Dogan Erdemir, Sebahattin Unalan Thermodynamic Performance Analysis of Different Phase Change Materials for Cold Thermal Energy Storage
		Cihan Emre Şahin, Murat Emre Demir Harnessing Wind Energy: Solid Sails in Maritime Transport for Sustainable Energy Utilization
		Hakim Merarda Simulation of Wind Loads for a Medium-sized Hexagonal Heliostat
		Nazlı Deniz Ünal, Mustafa Yılmazoğlu Investigation of the Effects of Heat Pump Applications on Cultural Heritage Buildings: A Case Study on Gazi University Rectorate Building
		Mine Sertsöz, Ali Burak Göğebakan Hydrogen Energy in Transportation Vehicles
Technical Session-20 (Room 5)		
15:00 - 16:00	EnergyEfficient materials	Session Chair: Dr. Şebnem Helvacioğlu
		Erol Pehlivan, Elif Gezginci, Busra Ozkok Green Synthesis of Encapsulated Nano Silver Biochar Composite for Malachite Green Removal from Aqueous Solution: Novel Synthesis and Optimization
		Elayaperumal A, Subaash R, Karthikeyan M, Saravanan C G An Experimental Investigation on the Tribological Behaviour of Electroless NiP-MoS ₂ -Gr Composite Coatings

		<p>Samet Acar A Short Review on Current Characterization Techniques of Hydrogen Embrittlement in Metals</p> <p>Saadallah Soror, Hamamda Smail, Bouleklab Mohamed Cherif Structural and Thermal Characterization of Nanocomposites Based on Multi-walled Carbon Nanotubes (MWNT) and Polyethylene</p>
Technical Session-21 (Room 1)		
16:30 - 17:45	Energy Systems and Technologies: Renewable Sources	<p>Session Chair: Dr. Edwin Geo Varuvel</p>
		<p>Ömer Faruk Güler Greenhouse Heating with Low Enthalpy Solar and Geothermal Energy</p>
		<p>Ozan Gül Examination of the Impact of Renewable Energy Sources on Line Losses in a 14-Bar System</p>
		<p>Alkın Erdal Demirhan, Murat Emre Demir, Omer Kemal Kinaci Development of a VIV System for Hydrokinetic Energy Harvesting and Pumped Hydro Storage</p>
		<p>Benziada Mébrouk The Hot Springs of Central Northern Algeria: Hydro Geochemical and Therapeutic Aspects example: Project Geothermal Power Plant in Region of Hammam Righa</p>
		<p>Hilal Akci, Ibrahim Dincer Development of Electrolytic Cation Exchange Reactor Module for Generation of Hydrogen Gas Using Ocean Water</p>
Technical Session -22(Room 2)		
16:30 - 17:45	Energy & Exergy Analysis and Applications	<p>Session Chair: Dr. Mehmet Akman</p>
		<p>Sera Ayten Çetinkaya, Mehmet Akif Ezan, Mustafa Umut Karaoğlan, Can Ozgur Colpan Analysis of Thermally Coupled Fuel Cell and Metal Hydride Hydrogen Storage Tank System for Lightweight Vehicles</p>
		<p>Rinat Zhanbayev Demeoeconomics: the Relationship Between Energy and Demoethical Values</p>
		<p>Ramsagar Vooradi, Shailesh Singh Sikarwar, Venkata Suresh Patnaikuni, Manohar Kakunuri Energy and Exergy Analysis of CLC Based Biomass Fired Power Plant With Different Oxygen Carriers</p>
		<p>Samiye Adal, Zafer Erbay Assesment of The Life Cycle And Energy, Exergy Use of Various Tomato Products Supply Chain in The Food Sector Under Various Improvement</p>
		<p>Nurdan Yildirim, Arif Hepbasli Exergy-based Performance Analysis and Assessment of Geothermal District Cooling Systems</p>
Technical Session -23(Room 3)		
16:30 - 17:45	Sustainability and Environmental Management: Climate Change	<p>Session Chair: Dr. Hazal Gergeroğlu</p>
		<p>Can Coskun, Görkem Berkay Ergeç, Didem Sena Aksu, Zuhul Oktay Simplified Method for Predicting Hourly Global Solar Radiation Distribution</p>
		<p>Kacem Gairaa, Mouloud Guermoui, Sabrina Boualit, Said Benkacali Contribution of CEEMDAN Decomposition in Enhancing the Forecast of Short-term Global Solar Irradiation</p>

		Sevinc Sirdas, Kemal Ege Sural Global Warming and Thunderstorms in South Aegean Region of Turkiye
		Salah Bezarı, Adda Asma, Azzedine Boutelhig, Kaddour Abdelmadjid Forecast Of Global Solar Radiation On A Horizontal Surface By Artificial Neural Network In A Greenhouse System

Technical Session-24 (Room 4)

16:30 – 17:45	Energy Systems and Technologies	Session Chair: Dr. Murat Köseoğlu
		Mikail Rıza Onat, Murat Emre Demir Techno-economic Analysis of the Distribution Network for the European Market of Green Ammonia Produced From Offshore Wind Farms to Be Installed Off the Coast of Northern Europe
		Fatih Bouzeffour Performance Study of a Desiccant Dehumidification Wheel
		Oktay Cetin, Mehmet Ziya Sogut, Funda Yercan, Assesment of Environmental Pollution Entropy-based Approach of Container Ships in the Ice-covered Arctic Waters
		Hüseyin Gençer Goal Programming-Based Bi-Objective Optimization Model in Empty Container Logistics

Technical Session-25 (Room 5)

16:30 - 17:45	Energy efficient materials	Session Chair: Dr. Elayaperumal Annamalai
		Daining Fang, Zeang Zhao, Weili Song Smart Energy Materials: From 3D to 4D Printing
		Sarath Babu Anne, Kamala Thota, Manohar Kakunuri, Ramya Araga Polystyrene ZIF-8 Metal-Organic Framework Composite Nanofibrous Membrane for Oil/Water Separation
		Kiran Donthula, Ramya Araga, Manohar Kakunuri, Naresh Thota Hierarchically Structured Carbon Nanofibers With Embedded MXene and Coated With Cobalt Oxide as a High-performance Electrode for Supercapacitors
		Idriss Hadj Mahammed, Kacem Gairaa, Amor Fezzani, Antar Beddar Power Outputs Prediction for Polycrystalline Silicon Pv Module Technology Based on ANN Approach

IEEES-14

December 27, 2023

Piri Reis University Sea Campus, B Block
(Program Presenter: Dilara Narin)

KEYNOTE TALK		
09.30 – 10:15	Session Chair: Dr. Zafer Utlu	
	Keynote Talk 7	Dr. Arif Hepbaşlı “Exergy Management Matrix: Proposal and an Acrostic Approach”
INVITED TALK		
10:20 – 11:30	Session Chair: Prof. Dr. Chekirou Wassila	
	Invited Talk-4	Dr. Levent Kurnaz
	Invited Talk- 5	Dr. Derek Baker
11:30 – 12:00 Coffee Break		
12:00-13:30 Sectorial Session-3 (Room1)		
12.00 - 13.10	Session Chair: Dr. Murat Koray	
	12:00-12:10	PLT Mühendislik
	12:10-12:20	BMA Technology
	12:20-12:30	BTM Co.
	12:30-12:40	COLREG
	12:40-12:50	MAR-CA
	12:50-13:00	Atomar Denizcilik ve Taşımacılık
	13.00-13:10	Oceanist Engineering
12:30-13:00 Wall Paper Presentation		
	Session Chair: Dr. Ozan Gül	
	Mohammad Hasan Khoshgoftar Manesh "Proposed an Innovative Polygeneration Structure for Power, Cooling, Heating, Fresh Water, Hydrogen, Carbone Dioxide and Ethanol Production"	
	Nurdan Akdemir, Yunus Babacan " Smart Greenhouse System and Control of Necessary Parameters for Accelerating Plant Growth-III"	
	Ozan Gül "Examination of the Impact of Electric Vehicles on the 14-Bar System's Line Losses"	
	Abdesselam Bouloufa, Rania Mahdadi, Aissa Bouchelaghem "SnO2:F Transparent Conducting Oxide Properties Thin Film for Perovskite Solar Cell "	
	Chekirou Wassila, Nahman Boukheit, Ahcene Karaali "Thermodynamic and parametric analysis of a double adsorptive solar cooling cycle"	
	Toufik Smail, Sabri Boulouma, Nawel Seddaoui, Hechemi Rahmani "Robust Grid Synchronization PLL Algorithms for Harmonic Distorted and Unbalanced 3-Phase Grid conditions"	
	Mehmet Ziya Sogut, Oral Erdoğan “Assessment of the Economic and Environmental Impacts of Circular Processes in Green Port Transition and Entropy Management”	
Omar Alharasees, Utku Kale “Hydrogen-Powered Aviation: Shaping Sustainable Future Skies”		
13:00-14:00 Lunch / Coffee Break		
Technical Session-26 (Room 1)		
	Session Chair: Dr. A.Sarath Babu	

14:00 - 15:00	Energy Systems and Technologies	Emre Mandev, Mehmet Akif Ceviz, Ali Çelik, Burak Muratçobanoğlu, Faraz Afshari Sustainable Solar Energy: Repurposing Discarded Materials in Parabolic Concentrator Fabrication
		Enver Yalçın, Ali Oral, Can Tuncer, Salih Aksu, Sakıp Tüzköz Sustainable Efficiency based Development of A Painting Robot Machine Simulating Operator Movements for Wind Turbine Tower Painting Process
		Fatih Yılmaz, Murat Ozturk, Resat Selbas Design and Analyses of Double Flash Geothermal Power Plant Combined With Reheat-transcritical CO2 Rankine Cycle for Power, Hydrogen, Hot Water, and Freshwater Generation
		Tuba Tezer An Uninterrupted Hydrogen and Wind - Solar Renewable Energy System Design and Multi-objective and Multi-constrained Optimization Approach for Hybrid Renewable Energy Systems

Technical Session -27 (Room 2)

14:00 - 15:00	Energy & Exergy Analysis and Applications	Session Chair: Dr. Ramsagar Vooradi
		Tayfun Tanbay, Ahmet Durmayaz Impact of Natural Gas Composition on the Energy-Exergy-Environmental Performance of a Combined Cycle Power Plant
		Malika Ouagued Sizing and Performance Evaluation of Photovoltaic System Coupled With Electrolyzer Hydrogen Production
		Özlem Boydak, Ismail Ekmekci, Mustafa Yılmaz Thermodynamic Analyses Of A Organic Rankine Cycle (ORC) With Working Fluids R245FA, R245CA And R1233ZD In A Multigenerational Hybrid System
		Dogukan Mızrak, Yağmur Nalbant Atak, Anil Erdogan, Can Ozgur Colpan Performance Assessment of Power and Synthetic Methane Production from Geothermal Energy

Technical Session-28 (Room 3)

14:00 - 15:00	Sustainability and Environmental Management: Bio-based Production	Session Chair: Dr. Mehmet Akman
		Burcu Kiren, Esin Varol Co-Pyrolysis of Walnut Shell and Waste Rubber Blend to Produce Sustainable Bio-based Materials
		Naresh Thota, Chandra Prakash Gupta Natural Gas Production by Anaerobic Digestion Process From Different Food Wastes: a Simulation Study
		Muhammed Budak, Canan Ağlan Biogas Renewable Energy: Conversion of Solid Waste to Energy in The Marmara Region
		Nicholas Melenek, Murilo Rampi, Gabriela Conon, Anne Oliveira, André Mariano, Vanessa Kava, José Vargas Microalgae Derived Biostimulants for Sustainable Agriculture Exergoeconomic Analysis

Technical Session-29 (Room 4)

14:00 - 15:00	Green Transition and Decarbonization	Session Chair: Dr. Ergün Demirel
		Mümine Gerçek Şen Shading Strategies as Energy Efficient Retrofit Measures in Residential Buildings: Implementations for Adaptation to Future Climate Change

		<p>Ozan Gül Examination of The Impact Of Electric Vehicle and Cryptocurrency Mining Operations On Line Losses in a 14-Bar System With Renewable Energy Sources</p> <p>Anatolii N Startsev Hydrogen Sulfide H₂S – For The Service Of Humanity!</p>
Technical Session-30 (Room 5)		
14:00 - 15:00	Sustainability and Environmental Management: Bio-based Production	<p>Session Chair: Dr. Sevinç A. Sırdaş</p>
		<p>Gamze Nalçacı PV Parameter Estimation Using Remora Optimization Algorithm</p>
		<p>Benmouhoub Dahbia Numerical Study of Nanofluid Slot Jet Impinging on a Moving Wall</p>
		<p>Rabah Gomri, Nadim Karoune Study of Boiling Heat Transfer Coefficient During Evaporation of CO₂</p>
		<p>Onder Kızıllan, Gamze Soy Turk Thermodynamic Analysis Of Multi-Energy Integrated System Combining Geothermal, Green Hydrogen, and Cold Energy Storage</p>
Technical Session -31 (Room 1)		
15:00 - 16:00	Energy Systems and Technologies	<p>Session Chair: Dr. Murat Koray</p>
		<p>Murat Beydilli, Veli Çıtanak, Ali Durusu Irradiation Estimation and Pv Module Detection From Satellite Imagery and Aerial Photography</p>
		<p>Maamar Hamdani Assessing the Effectiveness of Bioclimatic Strategies in Improving Thermal Comfort and Reducing Energy Consumption in a House Located in a Desert Climate</p>
		<p>Rahul Sharma, Dibakar Rakshit, Jay Dhariwal Effect of Integrating Roof Glazing on the Illumination and HVAC Demands of a Building</p>
		<p>Burak Muratçobanoğlu, Faraz Afshari, Mehmet Akif Ceviz, Emre Mandev Drying Vegetables Using Solar Still Systems and Integrated Multipurpose Approaches</p>
Technical Session-32(Room 2)		
15:00 - 16:00	Energy & Exergy Analysis and Applications	<p>Session Chair: Dr. Fatih Yılmaz</p>
		<p>Rania Hammemi, Haythem Sahli, Mouna Elakhdar Exergoeconomic Analysis of a New Refrigeration System with Two-Phase Ejector and Parallel Compression Using Hydrocarbon as a Refrigerant</p>
		<p>Zehra Sakıncı, Abdullah Muratoğlu, Mehmet İshak Yüce Energy Footprint of Gypsum Plasterboard Production Plant</p>
		<p>Selim Can Bozkır, Yiğithan Çalı The Refrigerant Amount Optimization Study for the Household Refrigerator Performance</p>

		Fatih Yilmaz, Murat Ozturk, Resat Selbas Energetic and Exergetic Performance Analysis of the Solar Tower-based Integrated Plant Combined With Helium-based Brayton Cycle and HTSE for Power and Hydrogen Generation
Technical Session-33 (Room 3)		
15:00 - 16:00	Green Transition and Decarbonization: Policies & Strategies	Session Chair: Dr. Önder Kızılkın
		Aysegul Goren, Ibrahim Dincer, Ali Khalvati Design of an Electro Bio-membrane Reactor for Simultaneous Biohydrogen Production, Desalination, and Bacterial Energy Generation
		Gamze Soy Turk, Onder Kizilkan Conceptual Design and Analysis of A Solar Energy Based Multi-Generation System With Helium Gas Cycle, Green Ammonia and Hydrogen Production
		Chaimae Younes Desalination Efficiency: Innovative Integration of Absorption with Reverse Osmosis and Thermal Vapor Compression
		Duygu Ülker, Serap Goksu Assessing the Bileteral Impacts in a Changing Climate in terms of Shipping Sector

Technical Session-34 (Room 4)		
15:00 - 16:00	Energy Efficient materials	Session Chair: Dr. Hüseyin Gencer
		Ahmet Kilicaslan, Aysegul Goren, Ibrahim Dincer, Ali Khalvati Simultaneous Biohydrogen Production from Energetic Poplar and Waste Minimization Using Membraneless Microbial Electrolysis Cell
		Taha Aydın, Hadi Genceli, Parisa Heidarnejad Comparison study of four typical ORC configurations integrated with hydrogen production unit for the exploitation of medium temperature geothermal sources
		Emir Ejder, Hasan Göler, Ergün Demirel Impact of Biofuels on Maritime Decarbonization and Vessel Performance
		Murat Koseoglu, S. Atalay Keleştemur, Güldem Elmas, İsmail Özdemir Analysis of Cyber Risk Management Frameworks for The Maritime Industry

Technical Session-35 (Room 5)		
15:00- 16:00	Energy Systems and Technologies	Session Chair: Dr. Zhanbayev Rinat
		Aissa Mohamed Comparative Study Between Two Greenhouses with Different Covering Methods
		Cüneyt Ezgi Thermodynamic Analysis of Ocean Thermal Energy Conversion-Driven Power Production for LNG-Fuelled Ships
		Murat Emre Demir, Hamza Salih Erden Heat Recovery and Passive Cooling Applications with Thermoelectric Materials in Data Centers

16:00-16:30		Coffee Break
Technical Session-36 (Room 1)		
16:30 - 17:30	Energy Systems and Technologies: Battery & Electricity Based Systems	Session Chair: Dr. Tayfun Tanbay
		Cemil Koyunoğlu, Tamer Çınar Exergy-Based Analysis of Polymer Recycling in the Automotive Sector
		Muhammet Sefa Odabaşı, Berkay Tahirağaoğlu, Gökhan Sevilgen A Study in The Comparison of Battery Parameters of an Electric Bus According to Passenger Occupancy
		Praveen Kumar Bommineni, Venkata Suresh Patnaikuni, Snigdha Saha 3-D Numerical Analysis of Vanadium Redox Flow Battery with Serpentine Flow Field
		Gamze Nalçacı Comparison of Lithium-Sulfur and Lithium Iron Phosphate Batteries for Present and Prospective Battery Management System of Electric Vehicles

Technical Session-37 (Room 2)		
16:30 - 17:30	Energy & Exergy Analysis and Applications	Session Chair: Dr. Hadi Genceli
		Gülcan Koca A Case Study for Marmara Region: Energy and Efficiency Analysis for SMR and Solar PTC Hybrid System
		Uğur Kaçan The Intersection of Gastronomy and Climate Change: Exploring The Role of Culinary Arts in Reducing Environmental Impact
		Doğan Erdemir, İbrahim Dincer A Novel Approach for Estimating Chemical Exergy Values of Biomass Mixtures Using Artificial Neural Networks
		Mohammad Hasan Khoshgoftar Manesh Thermodynamic, Exergy, and Environmental Analysis of an Aircraft Turbofan Engine

Technical Session-38 (Room 3)		
16:30 - 17:30	Sustainability and Environmental Management: Water Treatment	Session Chair: Dr. Anatolii N Startsev
		Moslem Sharifishourabi, İbrahim Dincer, Atef Mohany Integrating Ultrasound Technology for Wastewater Treatment and Hydrogen Production into an Energy System: Analysis and Assessment
		Duygu Ülker Waste Management on Oil Spill Emergency Response in Turkish Coastal Waters
		Emre Mandev, Mehmet Akif Ceviz, Burak Muratçobanoğlu, Faraz Afshari Distilled Water Production with Solar Stills: Exploring the Impact of Salt Concentration in the Basin on Productivity
		Azzedine Boutelhig, Aissa Mohamed, Salah Bezari Geospatial Management of Water Supply in Algerian Territory, Based on the Water Stress Indicator analysis

Technical Session-39 (Room 4)

16:30 - 17:45	Green Transition and Decarbonization: Policies & Strategies	Session Chair: Dr. Lyes Nasser
		Yasir Ahmed Solangi, Du Jianguo Examining the Renewable Energy Policies and Strategies for Sustainable Development in China
		Ben Baby, Marco Beccali, Marco Ferraro Hydrogen Economy and Policies: Lessons Learned and Future Directions
		Halil Çeçen Decarbonisation Targets and Actions in Turkish Maritime Sector Within the Framework of the Financing Agreement for the Annual Action Plan in favor of Türkiye for 2021
		Ceren Şengül, Mustafa Yılmazoğlu Projections for Türkiye's Net Zero Carbon Target by 2053
		Melda Carpinlioglu Need of a Policy and Strategy on Intelligence versus Artificial Intelligence in Engineering Education?

Technical Session-40 (Room 5)

16:30 - 17:45	Energy Efficient materials	Session Chair: Dr. Murat Emre Demir
		Gülşen Akın Evingür, Büşra Osma Thin Films in Solar Cell Applications
		Merve Yılmaz, Erkan Dursun, Zehra Karagöz, Nazmi Ekren, Oğuzhan Gündüz Efficiency Increasing Coatings on Photovoltaic Panels (PV)
		Salima Laouar Numerical Study on the Effect of Microencapsulated Phase Change Materials in Building Walls
		Emrehan Gürsoy, Engin Gedik Entropy Generation Induced by AC and DC Magnetic Fields on MWCNT-Fe ₃ O ₄ /Water Hybrid Nanofluid Flowing in U-tube
		Mehmet Akman, Bülent İbrahim Turan, Ahmet Taşdemir, Mehmet Ziya Sogut A Conceptual Framework for Energy-Efficient Design of Bulk Carriers
Closing Remarks		