

**GCGW2023 - FINAL PROGRAMME**

**Time Day 1 - Wednesday 14th June 2023**

<b>Registration</b>				
Main Conference Hall <i>(registration will be open from 09:00 - 18:00 Wednesday 14th June)</i>				
<b>Opening Remarks: Professor Zafer Utlu</b>				
<b>Short Remarks: Professor Ibrahim Dincer</b>				
<b>Music Recital</b>				
Main Conference Hall				
<b>Group Photo</b>				
Main Conference Hall				
<b>Tea Break</b>				
Main Conference Hall				
<b>Keynote Speaker: Prof. Dr. Seeram Ramakrishna</b>				
<b>Title: Role of Circular Economy in Net Zero Transition</b>				
<b>Keynote Speaker: Prof. Dr. Mihri Ozkan</b>				
<b>Title: Carbon capture and emission reduction via electric vehicles help to tackle climate change</b>				
<b>Sponsors' speeches -RePG Energy</b>				
<b>Buffet Lunch</b>				
<b>Keynote Speaker: Prof. Dr. Cengiz S. Ozkan</b>				
<b>Title: Role of Energy Storage in Electrification of Economy and Sustainability</b>				
	<b>Session 1</b>	<b>Session 2</b>	<b>Session 3</b>	<b>Session 4</b>
	<b>Renewable Energies and Sustainable</b>	<b>Global Warming and Environment</b>	<b>Digitalization/Policies, Management and Economics</b>	<b>Analysis</b>
	<b>Chair: Nader JAVANI</b>	<b>Chair: Moslem Sharifshourabi</b>	<b>Chair: Hafiz Muhammad Rizwan</b>	<b>Chair: Aleksandr Pauluchenka</b>
08:00-10:00	#7 "A comprehensive review of the impact of feedstock chosen in the pyrolysis process on the emissions of raw turbine engines"	#6 "Temperature change of a vehicle battery during the driving cycle"	#14 "Secapsoft software for decision making based on data analytics and carbon reduction"	#10 "Gravitational Water Vortex Heat Exchanger as a Waste Heat Recovery Unit"
10:00-10:10	#11 "Wind and solar-based energy system with hydrogen and battery storages and heat pump for sustainable communities"	#33 "Environmental Impact Assessment of a New Multigenerational System"	#26 "Confidence-Based Regression with Energy-Based Models in Deep Learning"	#17 "Dynamic thermal modeling of a greenhouse with heating, cooling and ventilation system"
10:10-10:25	#27 "Feasibility and comparison of using an integrated solar-base system for a sample residential building in different cities of Russia"	#59 "Green future transport"	#110 "The effect of generative ai on the digitization of the energy sector"	#22 "Controller design that provides lighting automation for energy efficiency in buildings"
10:25-10:40	#36 "Technical assessment of chp system integrated with carbon capture and utilization technology"	#63 "Energy efficiency evaluation and forecasting of the suscep ports to address climate change concerns: a data-driven decision model"	#45 "Economic growth and sustainability: debating the pros and cons of degrowth and green growth"	#44 "Exergy analysis of different fuel blends powered compression ignition engine - a review"
10:40-10:45	#58 "Experimental investigations to reduce CO2 emission in a single cylinder CI engine using waste plastic oil blend combined with lemon peel oil"	#93 "Assessing the impact of climate change on soil moisture and soil erosion in northwest morocco based on nuclear techniques (CAESIUM-137)"	#89 "Using artificial intelligence algorithms for solar energy prediction"	#118 "Hydrogen production from geothermal energy"
10:45	Topkapı	Boğaziçi	Taksim	Haliç
<b>Tea Break</b>				
Venue				
	<b>Session 5</b>	<b>Session 6</b>	<b>Session 7</b>	<b>Session 8</b>
	<b>Renewable Energies and Sustainable</b>	<b>Global Warming and Environment</b>	<b>Digitalization/Policies, Management and Economics</b>	<b>Analysis</b>
	<b>Chair: Nurdan Yıldırım</b>	<b>Chair: Ebru Hancıoğlu</b>	<b>Chair: Nilvan Sumter Eroglu</b>	<b>Chair: Mehmet Ziya Sığdır</b>
11:00-11:40	#29 "Optimization and development of a water-energy-carbon nexus model: a techno-economic analysis"	#112 "A study on global warming effect of Gas Turbine Power Generation Process"	#92 Optimization of carbon trading and renewable energy management by using blockchain technology and artificial intelligence"	#48 "Transformation of a touristic facility to cogeneration system and thermoeconomic analysis"
11:40-12:20	#55 "Techno-economic and environmental analysis of the integration of solar tracked or fixed-tilt photovoltaic power plants to open coal"	#43 "Assessment of environmental protection costs within the framework of global warming"	#98 "Confidence-Based Regression with Energy-Based Models in Deep Learning"	#64 "Energy, Exergy and Emission Performance Prediction of the Hydrogen-Fueled Scimitar Engines with Machine Learning Methods"
12:20-12:35	#46 "Plastic recycling in a R&D office: recycling of plastic waste as granules and fibre"	#40 "Ecospace program as the transition of civilization to the natural path of technocratic development"	#104 "The geostrategic and economic impact of Türkiye's hydrogen energy vision on Europe"	#67 "Machine learning methods for the prediction of CO2 emissions in spark-ignition engines"
12:35		#23 "Ust biosphere technologies for solving global environmental problems"	#129 "Holistic chain management of environment, matter, energy and processes with artificial intelligence for sustainable tourism industry"	#68 "Sustainability: technological development, growth and environmental pollution"
13:30-14:10	Topkapı	Boğaziçi	Taksim	Haliç
<b>Close</b>				

Time	Day 2 - Thursday 15th June 2023			
09:30-10:10	<p>Keynote Speaker: Prof. Dr. Olcay Unver  <b>Title: WATER MANAGEMENT FOR A SUSTAINABLE AND CLIMATE-RESILIENT FUTURE</b></p>			
10:10-10:40	<p>Keynote Speaker: Prof. Dr. Kiril Hristovski  <b>Title: REAL-TIME MONITORING OF ENVIRONMENTAL POLLUTION AND CARBON SEQUESTRATION USING MICROBIAL POTENTIOMETRIC SENSORS</b></p> <p>Venue: Small Conference Hall</p>			
10:40	<b>COMFORT BREAK</b>			
	<b>Session 9</b>	<b>Session 10</b>	<b>Session 11</b>	<b>Session 12</b>
	<b>Renewable Energies and Sustainable</b> Chair: <b>Sahver Omerakı Cakirdekci</b>	<b>Global Warming and Environment</b> Chair: <b>Ali Ayatı</b>	<b>Renewable Energies and Sustainable</b> Chair: <b>Nurdan Yildirim</b>	<b>Analysis</b> Chair: <b>Mahdi Deymi-Dashtebayaz</b>
10:45-12:30	<p>#60 "Effects of green finance on renewable energy generation in Turkey"</p> <p>#66 "Reduction of CO2 emissions and combustion stability in lean limits by optimizing the engine spark timing for hydrogen induction in gasoline"</p> <p>#75 "Sustainable formic acid production from CO2: a life cycle assessment analysis"</p> <p>#71 "Investigation of hydrogen production potential based on an ocean thermal energy conversion plant; thermodynamic performance"</p> <p style="text-align: center;">Topkapı</p>	<p>#108 "MoF-doped mxene for CO2 adsorption"</p> <p>#39 "An environmental impact comparison of thermochemical cycles and steam methane reforming for hydrogen production processes"</p> <p>#123 "Investigating the impact of green certificate campus implementation on greenmetric in university campuses"</p> <p>#56 "The use of enhanced carbon nanotubes (CNT AND CNT/PVA) obtained from composite packaging wastes as carbon dioxide adsorbent"</p> <p>#74 "Investigation of Life Cycle Assessment for Rural Wastewater Treatment Plants"</p> <p style="text-align: center;">Boğaziçi</p>	<p>#50 "Characterization of carbon nanotube enhanced composite phase change material derived from waste ldpd"</p> <p>#115 "System design for green power generation with piezoelectric materials"</p> <p>#105 "Thermal storage units as a peak shaving product for energy and building sector integration"</p> <p>#97 "Surface plasmon resonance-mediated optical tunability and photocatalytic activity in Ag-DECORATED Cd0.5Zn0.5S Photocatalysts"</p> <p>#101 "Performance evaluation of geothermal assisted VAC system with LiBr-H2O for residential cooling"</p> <p style="text-align: center;">Taksim</p>	<p>#85 "Determination of electricity, heating-cooling and hydrogen production performance by using externally fired gas turbine flue gas in turbine-bleeding regeneration SRC, ORC, Li-Br/H2O absorption chiller and electrolysis unit"</p> <p>#86 "Thermo-economic analysis of green hydrogen production using diesel engine at different loads of exhaust waste heat in SRC and ORC-IHE with zeotropic and low GWP fluids integrated with thermoelectric generators"</p> <p>#87 "Investigation of exergetic and environmental performance of freezing food considering cryogenic cooling"</p> <p>#52 "Net zero energy building in the United Arab Emirates: Life cycle assessment of global warming potential"</p> <p style="text-align: center;">Haliç</p>
12:30-13:30	<b>Buffet Lunch</b>			
	<b>Session 13</b>	<b>Session 14</b>	<b>Session 15</b>	<b>Session 16</b>
	<b>Renewable Energies and Sustainable</b> Chair: <b>B. Koray Tuncaip</b>	<b>Global Warming and Environment</b> Chair: <b>Meltem Vatan</b>	<b>Renewable Energies and Sustainable</b> Chair: <b>Neslihan Colak Gunes</b>	<b>Analysis</b> Chair: <b>Ozum Calli</b>
13:30	<p>#77 "Remote sensing technologies for renewable energy management"</p> <p>#79 "Butyrate generation during the fermentation of bio-hydrogen as a green chemical"</p> <p>#82 "Development of phase change material microcapsules and composites using a green method"</p> <p>#57 "A lesson proposal for using the circular economy in design education"</p> <p style="text-align: center;">Topkapı</p>	<p>#25 "The effect of the construction industry on global warming and solution suggestions"</p> <p>#34 "Minimization of greenhouse gas emissions from groundwater treatment using biochar derived by solar pyrolysis in compliance with EU green deal"</p> <p>#53 "Environmental comparison of different coal-fired technologies used by thermal power plants via life cycle assessment"</p> <p>#102 "Environmental impact investigation of using hydrogen sulfide and waste-based hydrogen in blending with black sea natural gas"</p> <p style="text-align: center;">Boğaziçi</p>	<p>#72 "Performance analysis of a biomass-based Brayton and supercritical- CO2 integrated power plant"</p> <p>#70 "Environmental Effects of Pretreatment Processes Applied to Cotton Fabrics"</p> <p>#119 "Evaluating the impact of solar energy systems on exergy efficiency and carbon footprint in extra virgin organic olive oil production"</p> <p>#18 "A life cycle assessment study for sustainable denim fabric production"</p> <p style="text-align: center;">Taksim</p>	<p>#94 "Determinants of the countries' performances regarding climate change"</p> <p>#96 "Assessment of environmental impact of irreversibility in a cooling section of dry-type cement production plant"</p> <p>#69 "Retrofit scenarios for overheating problem of a studio-type housing in the mediterranean climate"</p> <p>#114 "A Comparative Study for Electrical Energy Forecasting Using Random Forest and Decision Tree Methods"</p> <p style="text-align: center;">Haliç</p>
	<p>Poster session: #4 "Numerical investigation of hybrid thermal photovoltaic system performance for ship propulsion in Arabian Gulf"</p> <p>#28 "Navigating toward sustainability: impact of using marine pilots in ports sustainability"</p> <p>#31 "Energy efficiency and solar energy impelination opportunities for dairy farms"</p> <p>#78 "Comparison of traditional and innovative thermal insulation materials in terms of energy efficiency"</p> <p>#84 "Preparation of microcapsules containing phase change materials for passive cooling in computers"</p> <p>#109 "Simulation-based study of natural gas to hydrocarbon liquids (gH) process using fischer-tropsch synthesis: a case study of neem field in western Sudan"</p> <p>#111 "Photocatalytic reduction of carbon dioxide into methanol over copper based metal organic framework"</p> <p>#116 "Solar radiation and energy efficiency: analyzing the impact on cooling and heating in different climatic regions"</p> <p>#127 "The effects of global warming and climate change on human health"</p>			
14:45	<b>Tea Break</b>			
	<b>Session 17</b>	<b>Session 18</b>	<b>Session 19</b>	<b>Session 20</b>
	<b>Renewable Energies and Sustainable</b> Chair: <b>Ahmet Durmayaz</b>	<b>Global Warming and Environment</b> Chair: <b>Eralp ÖZİL</b> Paris Agreement, COP 27, IPCC Synthesis Report, UN 2030 sustainability platform, and local governments in Turkey	<b>Renewable Energies and Sustainable</b> Chair: <b>Yeliz Konuklu</b>	<b>Renewable Energies and Sustainable</b> Chair: <b>Melik Ziya Yakut</b>
15:00	<p>#24 "Recycling perovskite materials for sustainable solar technologies: Recovery of high cost Ito substrates"</p> <p>#88 "Investigation of O2 ratios on structural and optical properties of Ito films for high-efficiency silicon heterojunction solar cells"</p> <p>#100 "A study on green hydrogen production potential in Canada"</p> <p style="text-align: center;">Topkapı</p>	<p>#124 "A case study of carbon footprint measurement in university campus"</p> <p>#61 "Calculation of the footprint of a local government in Turkey: The case of Seydikemer district"</p> <p>#62 "Estimation of the cost of converting all road transportation vehicles in Turkey to net zero emitting electrical vehicles by 2035"</p> <p>#65 "Eco friendly production options in sanitary ware industry: Carbon footprint and sustainability approach"</p> <p style="text-align: center;">Boğaziçi</p>	<p>#83 "Humic acid based phase change material microcapsules for thermal energy storage"</p> <p>#54 "A Study of Hydrogen Production Potential via Iron-Chlorine (Fe-Cl) and Magnesium Chloride (Mg Cl) of the A Fusion Reactor"</p> <p>#18 "Life cycle assessment of different energy sources for municipal gasification system"</p> <p>#51 "Graphene nanosheet synthesis from waste plastics via pyrolysis"</p> <p style="text-align: center;">Taksim</p>	<p>#120 "Enhanced exergetic performance of a geothermal-based organic rankine cycle through employing partially evaporated working fluid"</p> <p>#121 "Evaluation of inverter types used in solar energy systems with multi-criteria decision making (MCDM)"</p> <p>#122 "Evaluation of solar based green hydrogen production technologies with multi-criteria decision making (MCDM)"</p> <p>#38 "Reduction of energy costs from groundwater treatment using biochar application in terms of water-energy nexus: Development of energy cost indicator"</p> <p style="text-align: center;">Haliç</p>
16:45	<b>Tea Break</b>			
17:00-17:30	<p>Keynote Speaker: Prof. Dr. Birol Kilikis  <b>Title: Micro Fuel Cells for Combined Heat and Power in the Quest of Decarbonization versus Complete Electrification in EU Countries</b></p> <p>Venue: Small Conference Hall</p>			
18:30	<b>Leaving by buses for the gala dinner</b>			
22:00	<b>Gala Dinner &amp; Awards Ceremony</b>			
	<b>Close</b>			

Time	Day 3 - Friday 16th June 2023			
09:30	Keynote Speaker: Prof. Dr. Sandro NIZETIC Title: The role of Photovoltaic Technologies in Energy Transition			
10:10	Keynote Speaker: Prof. Dr. Abdul-Ghani OLABI Title: Digital Twin & Artificial Intelligent for Renewable Energy & Energy Storage Systems Venue: Small Conference Hall			
10:40	COMFORT BREAK			
	<b>Session 21</b>	<b>Session 22</b>	<b>Session 23</b>	<b>Session 24</b>
	<b>Renewable Energies and Sustainable</b>	<b>Global Warming and Environment</b>	<b>Renewable Energies and Sustainable</b>	<b>Renewable Energies and Sustainable</b>
	Chair: Salahaddin Bendak	Chair: Meltem Vatan	Chair: Mohammed Alfatih Salah Hamza Hamid	Chair: Secil Pelin Aka
10:50	#21 "Sustainability relevance in micro-volume housing"  #73 "Water footprints in denim production"  #32 "Performance of 3d electrodes fabricated from TiB2/Graphene/Carbon nanofiber composites in hydrogen evolution reaction"  #38 "Reduction of energy costs from groundwater treatment using biochar application in terms of water-energy nexus: Development of energy cost indicator"  Topkapı	#12 "Analyzing fast fashion retailers' efforts to reduce carbon footprint: The case of h&m and lc waikiki"  #47 "Planning ports in changing climate - sea level rise and floating ports"  #8 "Evaluation of environmental impacts of hydrogen production technologies: Biomass, water, and fossil fuel"  #9 "Examining the impact of global climate change on women in terms of health inequity"  Boğaziçi	#5 "A comparative study of alternative fuels for reducing marine emissions: Environmental, technical, and economic assessment"  #90 "From sunlight to clean energy: harnessing plasmonic Ni nanoparticles and MoS2 for sustainable hydrogen generation in CoXZn1-xS"  #80 "The effects of calcium carbonate on hydrogen and butyrate production"  #1 "Parabolic trough solar collector assisted hydrogen production"  Taksim	#128 "Forecasting wind power generation using machine learning algorithms"  #81 "Sustainable Thermal Desalination and Hydrogen Production: An Analysis of a Renewable-Based Energy System from a Thermodynamics Perspective"  #95 "Development and analysis of a multi-rotor wind turbine and solar energy-based integrated system for rural electrification"  #103 "Performance assessment of a solar and biomass-based energy system having metal hydride-based thermal compressors"  Haliç (Online)
12:00	Tea Break			
	<b>Session 25</b>	<b>Session 26</b>	<b>Session 27</b>	<b>Session 28</b>
	<b>Renewable Energies and Sustainable</b>	<b>Global Warming and Environment</b>	<b>Global Warming and Environment</b>	<b>Analysis</b>
	Chair: Nader JAVANI	Chair: Mohammed Alfatih Salah Hamza Hamid	Chair: Adnan Midilli	Chair: Altrezs SOURI
12:15	#42 "Exergoenvironmental assessment of a high-temperature based geothermal system: A case study"  #99 "A geothermal energy-based thermochemical cycle integrated with a cement factory for carbon capture for methane production"  #13 "Investigation of the effects of global warming in the Meriz basin with the innovative Şen test"  #136 "Experimental investigation and analysis of domestic cooktop burners with different natural gas-hydrogen mixtures"  Topkapı	#91 "Investigation of the effect of solar radiation on optimum insulation thickness"  #106 "Metal organic frameworks loaded membrane for microbial fuel cell application"  #113 "A study on global warming effect of Combined Cycle Power Generation Process"  #107 "Education on Metaverse Platforms Effects on CO2 Footprint Reduction: Istanbul School of Metaverse Case"  Boğaziçi	#132 "The role of hydrogen in reducing global warming effects"  #117 "Use of the fallout radionuclides technique for soil erosion assessment in northwest Morocco and southwest Türkiye: Comparative study"  #49 "General planetary transport system is the tool of non-rocket space industrialization to prevent planetary ecological-resources"  #131 "In the quest of decarbonization: combined heat and power versus heat pumps in electrification strategies"  Taksim	#126 "TURKEY'S changing roles in the geopolitics of energy transport: A discursive approach"  #130 "Thermodynamic analysis of geothermal power plant assisted organic Rankine cycle with ANN approach"  #35 "Machine learning-based classification approach for improving renewable energy management in IoT-based smart grids"  #41 "Optimal Design and Performance Evaluation of an Off-Grid PV System: A Case Study in Bebel, Iraq"  Haliç
13:15	Closing Ceremony & Announcement & Buffet Lunch Venue: Topkapı			