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24.03.2021 (DAY 1)

		Welcome Remarks		
Start	End			
9:30	9:40			Prof. Burhan ÇUHADAROĞLU (Conference Chairman)
9:40	9:50			Prof. Hamdullah ÇUVALCI (President of KTU)
9:50	10:00			Prof. Gençağ PÜRÇEK (Dean of School of Engineering)
10:00	10:10			Dr. M. Suat HACISALİHOĞLU (Chairman of the Trabzon Chamber of Commerce and Industry)
10:10	10:40	Keynote Speaker-1 : Professor Frede Blaabjerg "Wind Power – A technology enabled by power electronics"		
10:40	10:45	Break		
Parallel Session-1				
ROOM 1: Heat and Mass Transfer-I		ROOM 2: Energy Technologies-I	ROOM 3: HVAC Systems	
Session Chair: M.E. ARICI		Session Chair: C. TURHAN	Session Chair: A. DALOĞLU	
10:45	11:05	A comparative Analysis on Heat Pipe Heat Exchangers and Rotary Regenerative Heat Exchangers <i>KOZDEMİR, E. BÜYÜK ÖĞUT</i>	Electrochemical Characterization of Temperature Dependence of a Lithium-Ion Battery <i>O. B. SABAN, E. GÜZEL, M. F. SERİNCAN, M. A. ARSLAN</i>	Effect of Vertical Skirt on Airflow and Particle Distributions in an Operating Room A Numerical Study <i>A. AGIRMAN, Y. E. CETİN, M. AVCI, O. AYDIN</i>
11:05	11:25	Numerical Investigation of Flow and Heat Transfer in an Open Cavity <i>E. ÖZGİRGİN YAPICI, E. AYLİ, A. DENİZ</i>	Smart Thermos Design Integrated with Thermoelectric Module <i>E. ÖZTÜRK, A. HİNDİSTAN, K. YILDIZLI</i>	Investigation of BIM (Building Information Modeling) System in Terms of Pressure Energy Losses in Ventilation Systems <i>F. DEMİRTAŞ, C. DEMİRTAŞ</i>
11:25	11:45	An Experimental Study on Overall Heat Transfer Coefficient of Some Wall Brick Models <i>A. RAHMANPARAST, B. ÇUHADAROĞLU, F. E. KAN</i>	Calibration of a Low-Cost Globe Thermometer with Linear Comparative Calibration Method <i>M. F. ÖZBEY, C. TURHAN</i>	On the Use of Natural Ventilation System for Suction of Inhaled Gases in Production Lines for Improved Indoor Air Quality <i>O. KAYAPINAR, O. ARSLAN</i>
11:45	12:05	The Effect of the Various Arrangements of the Lithium-ion Battery Pack on the Cooling Performance <i>A. AKTÜRK, M. E. ARICI, F. E. KAN</i>	Development of a Novel Temperature and Relative Humidity Data Logger <i>A.Y. BAYHAN, C. TURHAN</i>	Air Conditioning System Design of a Archives Storage Facility in the Warm Climate Region <i>M. SUNMAN, O. AGRA</i>
12:05	12:10	Break		
Parallel Session-2				
ROOM 1: Heat and Mass Transfer-II		ROOM 2: Energy Technologies-II	ROOM 3: Wind Energy	
Session Chair: O. AYDIN		Session Chair: K. BİLEN	Session Chair: M. E. ŞAHİN	
12:10	12:30	Mixed Convection in a Vertical Parallel-Plate Microchannel with Viscous Dissipation Effect <i>A. N. ALTUNKAYA, M. AVCI, O. AYDIN</i>	Energy Efficiency Analysis of Turbocharges with Wastegate <i>K. BİLEN, T. TOPCU, D. HAYDARCIL</i>	Investigation of Vertical Axis Wind Turbines and Their Components Design <i>A. BOZTAŞ, O. DEMİRBAŞ, M. E. ŞAHİN</i>
12:30	12:50	Artificial Neural Networks For Drying Characteristics Determination An Application in Fluidized Bed Drying <i>A. YILDIRIM, H. ERGÖK, O. AĞRA</i>	Influences of Vanisperse in Negative Active Material on the Performance of Lead-Acid Battery <i>Y. SİRİN, Y. EYDEMİR, Ç. AYHAN, E. DEMİRÜREK, E. KOÇ</i>	Design of the Deformable Wind Turbine Blade to Keep Efficiency High <i>Y. GÜLTEKİN, E. KOÇ, T. YAVUZ</i>
12:50	13:10	Experimental Investigation Jet Flow with Different Aluminium Foam Receivers <i>B. ÖZŞAHİN, S. ÇALIŞKAN, K. BİLEN, F. GÜLER</i>	Turkey's Pumped Hydro Storage Status: Current Scheme and Potential <i>S.C. TOKER, G. SOYTÜRK, Ö. KIZILKAN</i>	Design and Aerodynamic Performance Analysis of Micro Wind Turbine Blade <i>K. KAYA, E. KOÇ</i>
13:10	13:30	Experimental Investigation of the Effects of Foam Heat Sinks on Heat Transfer in Cross Flow <i>S. ÇALIŞKAN, U. R. ŞAHİN, F. GÜLER, O. ÖZENÇ</i>	The Thermal Decomposition of the Liquid Hot Water & Alkali Pretreated Cotton Fiber <i>S. OZGÜL, G. KOÇAR</i>	The State of Energy in World and Turkey – Wind Energy <i>K. KAYA, E. KOÇ</i>
13:30	13:35	Break		
Parallel Session-3				
ROOM 1: Heat and Mass Transfer - Nanofluids		ROOM 2: Comput. Heat Transfer & Fluid Dynamics - I	ROOM 3: Heat Insulation - Power Plants and Power Generation	
Session Chair: İ. KURTBAŞ		Session Chair: T. BALI	Session Chair: H.K. ÖZTÜRK	
13:35	13:55	Mixed Convection in a Square Cavity Filled with Hybrid Nanofluid <i>B. ŞAHİN</i>	Numerical Investigation of the Effect of Obstacles Configuration in the Flow Channel on Heat Transfer <i>İ. KURTBAŞ, M. SENER, S. KIZILCAOĞLU, H. DURAN</i>	Optimization of Insulation Thickness for Pipes in a Low Temperature District Heating Network <i>M. TERHAN</i>
13:55	14:15	Investigation of Boiling Instability in Rectangular Spiral Mini Channel <i>M. SENER, İ. KURTBAŞ, S. KIZILCAOĞLU</i>	Effect of Magnetic Field on Flow and Heat Transfer in Hydrodynamically and Thermally Developing Couette-Poiseuille Flow Between Parallel Plates <i>E. YAĞCI, O. AYDIN, T. BALI</i>	Thermal Comfort Analysis of Historical Mosques. Case Study: The Ulus Mosque, Manisa, Turkey <i>Y. DİLİR, C. TURHAN, Z. D. ASLAN, G. G. AKKURT</i>
14:15	14:35	A Review of the Effects of Micro Fin Geometry and Alignment on Flow Boiling Characteristics in Microchannel Heat Sinks <i>B. MARKAL, B. KUL</i>	Numerical Investigation of Naturally Ventilated Facade with PCM Located in Mediterranean Region <i>S. BİRİNÇİ, M. SAGLAM, B. SARPER, M. Y. YAZICI, O. AYDIN</i>	Auxiliary Power Generation Design for Power Plants with Using Thermoelectric Generators <i>Ş. K. YENER, B. AKBOĞA, B. ÇETİN</i>
14:35	14:55	Adaptation of the Touhami et al. Correlation for Pool Boiling Outside a Horizontal Tube at Subatmospheric Pressures <i>T. BAKI, D. NEHARI</i>	Numerical Investigation of the Effect of Air Velocity on Heat Transfer to Heat Sink in Thermoelectric Modules <i>S. ÖZBEKİAŞ, B. TOPAL, B. SUNGUR</i>	Comparative Thermodynamic Analysis of Organic Rankine Cycle with Different Working Fluids <i>O. ARSLAN, İ. CEYLAN</i>
14:55	15:00	Break		
15:00	15:30	Keynote Speaker-2 : Professor Birol KILKIS "Exergy Solutions in Energy and Global Warming Dilemma"		
15:30	15:35	Break		
Parallel Session-4				
ROOM 1: Thermodynamics-I		ROOM 2: Comput. Heat Transfer and Fluid Dynamics II	ROOM 3: Global Warming and Environmental Pollution	
Session Chair: A. GÜNGÖR		Session Chair: T. YAVUZ	Session Chair: B. ÇUHADAROĞLU	
15:35	15:55	The Performing of Thermodynamic Analysis of R134a Refrigerant and Alternative Refrigerants on Their Application Areas <i>O. F. SEL, O. HACIHAFIZOĞLU, Ü. AYBEK, A. CIHAN</i>	Numerical Analysis of Aerodynamic and Aeroacoustic Characteristics of Subsonic Rectangular Cavity with Different Aspect Ratios <i>E. KOCAK, E. AYLİ, H. TURKOĞLU</i>	Geopolymer Cement Production in the Struggle to Global Warming <i>S. ÖZEN</i>

15:55	16:15	Development and Thermodynamic Analysis of a Hybrid Evaporative Evaporator Air Cooling System <i>F. ÖZDEMİR, A. GÜNGÖR</i>	A New Vortex Preventing Element Design for Francis Turbines and Comparison of Different Geometric Shapes <i>D. S. SEMERCİ, T. YAVUZ</i>	Sustainable Phytoremediation with Energy Crops in Turkey <i>B. BAŞTABAK, E. GÖDEKMERDAN, G. KOÇAR</i>	
16:15	16:35	Performance Prediction of a Two-Bed Adsorption Chiller Using the Silica Gel Water Working Pair Considering the Effect of Hot and Cold Water Temperatures <i>T. U. ERKEK, A. M. S. SHAKIR, M. W. K. JABER, A. GÜNGÖR</i>	Design and Prototyping of Air-to-Ground Smart Fire Extinguisher Ammunition <i>M. TOPTAŞ, M. YILMAZ</i>	Türkiye Şartlarında Fitoremediasyon Tekniğinde Kullanılan veya Kullanılma Potansiyeli Olan Bazı Bitkiler <i>E. YILMAZ, O. KILIÇ, M. ZAFAR, M. AHMAD</i>	
16:35	16:55	Termodynamic Investigation of Flat Plate Collector <i>A. B. GÜNDÜZ ALTIOKKA, A. MAVİ, O. ARSLAN</i>	Modelling and Performance of a Thermoelectric Refrigerator <i>H. KEPEKİ, E. KOSA, C. EZGI</i>	Nanoakışkan Kullanılan Parabolik Oluk Tipi Güneş Kolektörü Organik Rankine Çevriminin Teorik Modellemesi ve Sistem Parametrelerinin İncelenmesi <i>E. KIRTEPE, O. E. TURGUT</i>	
16:55	17:00	Break			
Parallel Session-5					
ROOM 1: Thermodynamics-II		ROOM 2: Comput. Heat Transfer & Fluid Dynamics-III	ROOM 3: Cooling Technologies		
Session Chair: Z. YUMURTACI		Session Chair: E. BUYRUK	Session Chair: M. AVCI		
17:00	17:20	Performance Analysis of Solar and Geothermal Energy Powered Kalina Cycle <i>M. S. ACAR, O. ARSLAN</i>	Effects of Injection and Suction Through a Perforated Circular Cylinder on Some Thermo-Fluid Parameters <i>M. E. VAKHSHOURI, B. CUHADAROĞLU</i>	Experimental Investigation of the Pulsating Heat Pipes Having Larger Flow Sections in the Evaporator Region <i>A. CANDERE, B. MARKAL, O. AYDIN, M. AVCI</i>	
17:20	17:40	Comparative Techno-economic-environmental Assessment of Biomass Fuelled Integrated Energy Systems <i>P. HEIDARNEJAD, H. GENCeli, Z. YUMURTACI</i>	A Numerical Study on Phase Change Material Integrated Borehole Heat Exchanger <i>N. Y. ÇAM, M. A. EZAN, L. BİLİR</i>	Heat Transfer and Thermal Management of Lithium-Ion Battery Pack System with Forced Air Convection <i>I. HOŞ, G. TÜRKAKAR</i>	
17:40	18:00	Thermodynamic Analysis of Automobile Brake System <i>A. MAVİ, A. B. GÜNDÜZ ALTIOKKA, O. ARSLAN</i>	Validation Study of a Naturally Ventilated Solar Facade <i>B. SARPER, S. BIRİNÇİ, M. SAGLAM, O. AYDIN</i>	Superelastic Properties of NiTi for new generation cooling technologies <i>S. ÖZKAN, E. DEMİRTAŞ, G. DURAK YÜZÜAK, E. YÜZÜAK</i>	
18:00	18:20	ORC Sistemlerinde Kullanılan n-Pentane Akışkanının Pompa Sıkıştırma Oranının Termodinamik Verimlere ve Ekseri Yiğimina Etkisi <i>M. ALTINKAYNAK</i>	CFD Analysis of Fluid Passing Through Venturimeter <i>C. KISTAK, F. ÖZGEN</i>	Elastocaloric Properties of the Optimized Ni-Ti Alloy <i>G. DURAK YÜZÜAK, E. YÜZÜAK</i>	
End of Day 1					

25.03.2021 (DAY 2)

Start	End			
9:00	9:10	Second Day Welcome Assoc. Prof. Ömer Necati CORA (Co-Chairman)		
9:10	9:40	Keynote Speaker-3 : Professor Orhan DURGUN "Dünya'da ve Türkiye'de Enerji Üretiminin Güncel Durumu ve Türkiye için Çözüm Önerileri"		
9:40	9:45	Break		
Parallel Session-6				
ROOM 1: Fuels and Combustion - Exergy		ROOM 2: Solar Energy-I	ROOM 3: Fuel Cells - Wind Energy - Solar Energy	
Session Chair: Z. SAHİN		Session Chair: N. ÇELİK	Session Chair: M. ÖZBEY	
9:45	10:05	Second Law Analysis of Novel Fractal Structure Heat Exchanger <i>A. B. ÇOLAK, I. KOTÇIOĞLU, O. ARSLAN</i>	Dynamical Simulation of a Flat Plate Solar Collector System under Hot and Humid Climatic Conditions <i>A. YUMUŞAK, H. GENCeli, M. ASKER</i>	Development of a Dynamic System-Level Thermodynamic Model of Solid Oxide Fuel Cell (SoFC) Integrated Gas Turbine (Gt) Power Plant <i>M. B. KAYA, A. C. INCE, F. BEDİR, M. F. SERİNCAN</i>
10:05	10:25	Engine Performance and Exhaust Emissions of a Spark Ignition Engine Operating on 2.5 % N-Butanol/Gasoline Blend and 2.5 % N-Butanol/Gasoline Blend with 9 % Water Injection to Intake Air <i>Z. SAHİN, O. N. AKSU, C. BAYRAM</i>	Exergy Analysis of a Solar Power Plant and Comparison of Production Values with Software <i>B. GÜLMEZ, R. KÖSE, O. YOLCAN</i>	Thermal Expansion, Porosity, and Microhardness Properties of Solid Oxide Fuel Cell Metallic Interconnects Manufactured by Powder Metallurgy Approach <i>A. TOPCU, O. F. YALÇIN, B. ÖZTÜRK, Ö. N. CORA</i>
10:25	10:45	Theoretical Investigation of Engine Performance and Exhaust Emissions in Ethanol-fueled Dual-plug SI Engine <i>L. ALTIN, A. BİLGİN, İ. SEZER</i>		Wind Energy Potential Assessment of Susurluk Region in Balıkesir <i>A. DÜZCAN, Y. A. KARA</i>
10:45	11:05	Sesame Harvesting Waste: Thermal Characterization and Conversion for Biofuel and Biochar Production <i>E. GÖDEKMERDAN, B. BAŞTABAK, G. KOÇAR</i>		Potential for the Use of Solar Energy in the Food Industry <i>D. BAYANA, F. İÇİER</i>
11:05	11:10	Break		
11:10	11:40	Keynote speaker-4 : Assoc. Prof. Barbaros ÇETİN "Grooved Heat Pipes: Modeling, Experimentation and Applications"		
11:40	11:45	Break		
Parallel Session-7				
ROOM 1: Solar Energy-II		ROOM 2: Energy Management - Occupational Health and Safety in Energy Sector	ROOM 3: Fluid Mechanics-I - Cooling Technologies	
Session Chair: K. KAYGUSUZ		Session Chair: M. YILMAZ	Session Chair: O. TURAN	
11:45	12:05	Artificial Neural Network Modeling of Parabolic Trough Type Solar Thermal Power Plant <i>D. KILIÇ, O. ARSLAN</i>	Effect of Collection Tank Level on Energy Consumption of Lifting Pumps in Drinking Water Distribution Systems <i>U. SEKMEK, M. YILMAZ, Ö. ÖZDEMİR, A. INCE</i>	Numerical and Experimental Investigation of Air Injection Process with Venturi Pipe Part <i>Ö. F. CAN, T. BAĞATUR, N. ÇELİK</i>
12:05	12:25	Analysis and Design of a Cooling Channel for a Photovoltaic Panel <i>Z. ÖZCAN, M. GÜLGÜN, E. SEN, N. Y. ÇAM, L. BİLİR</i>	Lead Acid Batteries for Micro Hybrid Electrical Vehicles – Influence of Different Type Expanders on the Performance of the Negative Plates <i>Y. SİRİN, Y. EYDEMİR, Ç. AYHAN, E. DEMİRYÜREK, E. KOÇ</i>	An Energy Efficient Mixed Flow Submersible Pump Design and Computational Fluid Dynamic Processes in a Case Study 7" 110 m3h <i>M. AKDEMİR, M. C. ÇAKMUR</i>
12:25	12:45	Collaborating Sharring Decentralized Solar Energy System in Pakistan <i>S. M. K. SHAH, R. TANZEEL</i>	Ship Energy Efficiency Analysing Approaches: A Case Study <i>O. YILMAZ, T. UYANIK, Y. ARSLANOĞLU</i>	Analysis and Design of an Air to Air Heat Exchanger Used in Energy Recovery Systems <i>H. Ü. ELMACIOĞLU, İ. ÖZSEVGİ, C. KOCABIYIK, N. Y. ÇAM, L. BİLİR</i>
12:45	13:05	Design and Analysis of Evacuated Tube Solar Collector Integrated Supercritical Brayton Cycle for Low-Temperature Applications <i>G. SOYTÜRK, S. C. TOKER, Ö. KIZILKAN</i>	Rüzgar Enerji Santrallerinde İş Sağlığı ve Güvenliği <i>S. ŞİMŞEK, F. DOĞAN</i>	Magnetic Refrigeration Technology and Applications <i>A. ZAIM, H. ARAS</i>
13:05	13:10	Break		
Parallel Session-8				
ROOM 1: Solar Energy-III		ROOM 2: Energy Management - Hydrogen Energy	ROOM 3: Fluid Mechanics-II - Comp. Heat and Mass Trans.	
Session Chair: Y. ARSLANOĞLU		Session Chair: E. F. KENT	Session Chair: L. NAMLI	
13:10	13:30	Experimental Investigation of Thermal Gain in PV Panels <i>H. DUMRUL, S. YILMAZ</i>	Parametric Analysis of a Plate, Finned and Cross Flow Heat Exchanger for Heat Recovery in Buildings <i>S. TEKİN, G. TÜRKAKAR</i>	Investigation of Flow Field Characteristics of Synthetic Jet Driven by Half Sinusoidal Signal <i>M. Y. BAYAT, M. SARIOĞLU, Y. E. AKANSU</i>
13:30	13:50	Following the Balloon Temperature of a Solar Water Heater Installed in Oran, Algeria <i>T. BAKI, M. TEBBAL, H. BERREBAAH</i>	An Ore Enrichment Plant, The Effect of Operation Optimization of Operators on Production and Energy Efficiency <i>E. BULAT, C. AYGÜN</i>	Bubble Pump Design and Performance Analysis <i>A. DALLOUL, M. ÖZBEY</i>
13:50	14:10	Bidirectional Flyback Based Differential Power Processing Converter for Photovoltaic Applications <i>E. KARAKAŞ, Y. ÖNER, S. KESLER</i>	Exergy and Thermoeconomic Analyses of Solar Hydrogen Production and Liquefaction Process <i>T. KOYUN, E. F. KENT</i>	Numerical Investigation and Optimization of the Effect of Heat Transfer and Pressure Drop on the Circuit in Finned Tube Heat Exchangers <i>A. YILDIRIM, Ş. Ö. ATAYILMAZ</i>
14:10	14:30	A Machine Learning Approach for Solar Power Plant Electrical Power Estimation <i>T. UYANIK, O. YILMAZ, Y. ARSLANOĞLU</i>	Hidrojen Tedarik Zinciri ve Türkiye Örneği <i>A. ERDOĞAN, E. GEÇİCİ, M. G. GÜLER</i>	Investigation of Air Flow Inside an Airplane Passenger Cabin <i>L. BİLİR, H. ÇELİK, M. B. ÖZERDEM</i>
14:30	14:35	Break		
14:35	15:05	Keynote speaker-5 : Assoc. Prof. Hafız Ali "Surface condenser: Heat transfer"		
15:05	15:10	Break		
Parallel Session-9				

		ROOM 1: Solar Energy-VI	ROOM 2: POSTER SESSION	ROOM 3: Energy Technologies-III
		Session Chair: C. DEMIRTAŞ	Session Chair: F.E. KAN	Session Chair: Ö.N. CORA
15:10	15:30	State of the Art Review on the Cu(InGa)Se2 Thin-film Solar Cells M. A. OMID, Ö. N. CORA		Thermoelectric Thin Film Modules S. ÖZKAN, G. DURAK YÜZÜAK, E. YÜZÜAK
15:30	15:50	A Study of the Effect of Baffles Inside Solar Collector B. GÜLMEZ, A. B. AKSOY	Sensorless Flow Rate and Total Head Measurement of Centrifugal Pumps Operating with Variable Frequency Drive E. KARAKAŞ, Y. ÖNER, S. KESLER	Indigenous Oil Yielding Plants as Energy Sources in Pakistan M. ZAFAR, M. AHMAD, Ö. KILIÇ, S. SULTANA, J. ZAHOOR, E. YILMAZ
15:50	16:10	Analysis of 100 kW Solar Photovoltaic Power Plant Which Can Be Installed In Trabzon R. KÖSE, A. B. AKSOY, B. GÜLMEZ, O. O. YOLCAN	Thermal Power Plant Emissions and Emission Prevention Studies in Turkey H. ERGÖK, A. YILDIRIM	RF Sputtered TiO2 Thin Films with Various Deposition Conditions for Triboelectric Friction Layer G. DURAK YÜZÜAK, S. ÖZKAN, E. YÜZÜAK
16:10	16:30	Important Parameters in Solar Power Plant Installation and Analytical Hierarchy Process B. GÜLMEZ, R. KÖSE, O. O. YOLCAN	Solar Powered Cooler Design H. KORKMAZ, M. E. GAZI, Ö. N. CORA	Comparative Environmental Sustainability of Two Different Sizes of Wind Turbines B. A. TÜRKmen
Closing Remarks & Farewell				