

## PARALLEL SESSIONS 4 (HALL: SELİMİYE)

### Advanced Energy Systems

<b>15:00 – 15:15</b> EVT-02 "PREDICTIVE CO-OPTIMIZATION OF ENERGY AND THERMAL MANAGEMENT IN HEAVY-DUTY FUEL CELL VEHICLES" Dominik Köppel, Maximilian Bömerl, Stefan Jakubek, Christoph Hametner
<b>15:15 – 15:30</b> FCT-01 (Online) "MULTIFUNCTIONAL CE-DOPED LANIO <sub>3</sub> PEROVSKITE FOR DIRECT AMMONIA-FUELED SOLID OXIDE FUEL CELLS" Ysa Francine N. Perez et al.
<b>15:30 – 15:45</b> REP-03 (Online) "DESIGN OF A RENEWABLE ENERGY AND WASTE MANAGEMENT SYSTEM FOR HYDROGEN, FRESH WATER AND OXYGEN PRODUCTION" Ayse Sinem Meke, Ibrahim Dincer and Ali Khalvati
<b>15:45 – 16:00</b> PVT-02 (Online) "THERMAL MANAGEMENT OF PV PANELS USING MACHINE LEARNING FOR OPTIMAL PCM TYPE AND THICKNESS SELECTION" Wisam K. Hussam et al.
<b>16:00-16:15</b> RES-04 (Online) "DESIGN OF A HOLISTIC ENERGY SYSTEM FOR INUIT OFF-GRID COMMUNITIES" Yasmin Hafez, Ibrahim Dincer
<b>16:15-16:30</b> BIO-02 (Online) "EFFECT OF BIOMASS TYPE ON ELECTROCHEMICAL BEHAVIOR OF FESO <sub>4</sub> .7H <sub>2</sub> O ACTIVATED <b>BIOCHARS</b> " Ayca Capoglu, Ibrahim Dincer
<b>16:30 – 16:40</b> Questions
<b>19:00 GALA DINNER</b>

## WEDNESDAY – JUNE 3, 2026 (GRAND PASHA HOTEL)

**9:00 – 9:30** Invited Lecture – 3 (Hall: YILMAZ BALCI)

**Prof. Dr. Adnan Midilli**

Istanbul Technical University, Türkiye

Title: Exergy-Oriented Solution Strategies for Scaling Hydrogen Energy Systems

**9:30 – 10:00** Invited Lecture – 4 (Hall: YILMAZ BALCI)

**Assoc. Prof. Dr. Amela Ajanovic**

Vienna University of Technology, Austria

Title: Electric Vehicle Markets: Trends, Challenges and Opportunities

**10:00 – 10:30 Coffee Break**

## WEDNESDAY – JUNE 3, 2026 (GRAND PASHA HOTEL)

**10:30-12:00 DISCUSSION PANEL (HALL: YILMAZ BALCI)**

Discussion Topic:

*Solar Energy Transition on Islands: Implications for Cyprus*

- Prof. Dr. Ibrahim Dincer, Ontario Tech University, Canada
- Prof. Dr. Reinhard Haas, TU Wien (Vienna University of Technology), Austria
- Prof. Dr. Mustafa Dağbaşı, Cyprus International University
- Prof. Dr. Halil Guven, San Diego State University
- Assoc. Prof. Dr. Amela Ajanovic, Vienna University of Technology
- Samer Zawaydeh, (AEE) Al Hussein Technical University

*Moderator: Prof. Dr. Uğur Atikol, Eastern Mediterranean University*

**12:00-12:30 CLOSURE**

### Organizers



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## 17th International Exergy, Energy and Environment Symposium (IEEES-2026) 1 - 3 June 2026 | Nicosia – North Cyprus

**SUNDAY – MAY 31, 2026 (HOTEL SUN – ROOF BAR)**

20:00 WELCOME RECEPTION

## MONDAY – JUNE 1, 2026 (GRAND PASHA HOTEL)

**8:00 – 9:00** Registration

Hall: YILMAZ BALCI

**9:00 – 9:07** Welcome Speech

**Prof. Dr. Uğur Atikol (Conference Chair)**

**9:07 – 9:15** Rector of EMU

**Prof. Dr. Hasan Kılıç**

**9:15 – 9:30** Speech of the President of TRNC

**Tufan Erhürman**

**9:30 – 10:15** Keynote Lecture – 1

**Prof. Dr. İbrahim Dinçer**

Ontario Tech University, Canada

Title: Alternative Energy and Exergy Dimensions

**10:15 – 11:00** Keynote Lecture – 2

**Prof. Dr. Fariborz Haghighat**

Concordia University, Canada

Title: Integration of Energy Storage with Buildings - Managing Energy Demand and Emissions

**11:00 – 11:30 Coffee Break**

## PARALLEL SESSIONS 1 (HALL: YILMAZ BALCI)

### Energy Storage

**11:30 – 11:45** EST-02 "THERMAL ANALYSIS OF A VANADIUM REDOX FLOW BATTERY WITH A GRADED POROSITY ELECTRODE" Phil-Jacques Alphonse, Mert Taş, Gülşah Elden

**11:45 – 12:00** MSC-03 "ELECTROLYSIS-BASED HYDROGEN AND AMMONIA AS ELEMENTS OF SUSTAINABLE AGRICULTURAL INTENSIFICATION IN SUB-SAHARAN AFRICA" Andreas Stamm, Christine Bosch

**12:00 – 12:15** EST-04 "COMPARATIVE PERFORMANCE ASSESSMENT OF EAF SLAG AND SINTERED ORE AS PACKED-BED THERMAL ENERGY STORAGE FILLERS FOR ORGANIC RANKINE CYCLE WASTE HEAT-TO-POWER CONVERSION" David Ogbemudia, Keyvan Bauloulli, Berke Eyyamoglu

**12:15 – 12:30** EST-07 "AN EXPERIMENTAL INVESTIGATION OF CHARGING TEMPERATURE EFFECTS ON THE ENERGY PERFORMANCE OF A PUMICE-CACL<sub>2</sub> COMPOSITE THERMOCHEMICAL MATERIAL" Asli Akyol Inada, Devrim Aydin, Yuehong Su, Saffa Riffat

**12:30 – 12:40** Questions

**MONDAY – JUNE 1, 2026 (GRAND PASHA HOTEL)****PARALLEL SESSIONS 1 (HALL: SELİMİYE)**

## Hydrogen Production

**11:30 – 11:45** HES-02 "EXPLORING THE CHALLENGES OF DEVELOPING LOW-EMISSION HYDROGEN PRODUCTION TECHNOLOGIES IN TÜRKİYE: A PESTEL PERSPECTIVE"  
Melisa Öztekin Pala, Ece Oyan

**11:45 – 12:00** EST-03 (Online) "A LEARNING-FREE EXPLAINABLE INTELLIGENT AGENT FOR REAL-TIME HOME MANAGEMENT WITH PHOTOVOLTAIC AND BATTERY STORAGE"  
Ozan Gül

**12:00 – 12:15** HES-03 (Online) "EXPERIMENTAL ASSESSMENT OF TITANIA AND FERRIC OXIDE-BASED CATALYSTS FOR PHOTOCATALYTIC HYDROGEN PRODUCTION"  
Mohamad Ayoub, Ibrahim Dincer

**12:15 – 12:30** HES-04 (Online) "GREEN BIOELECTROLYTE DERIVED FROM TEA WASTE FOR HYDROGEN PRODUCTION USING ACIDIC WATER ELECTROLYSIS"  
A. Yagmur Goren, Ibrahim Dincer

**12:30 – 12:40** Questions

**12:40 – 14:00 Lunch Break**

Hall: YILMAZ BALCI

**14:00-14:30** Invited Lecture-1

Prof. Dr. Arif Hepbaşı, Yaşar University, Türkiye  
Title: Towards Exergy-Oriented Sustainable Cities: Integrating BIM, LEED, and SECAP through ISO 37120

14:30 – 15:00 Coffee Break

**PARALLEL SESSIONS 2 (HALL: YILMAZ BALCI)**

## Cooling Energy for Buildings

**15:00 – 15:15** BES-01 "TWO DECADES OF RESEARCH ON ENERGY EFFICIENCY IN BUILDINGS: A BIBLIOMETRIC AND KEYWORD CO-OCCURRENCE ANALYSIS (2005-2025)"  
Manta Marcelinus Dakyen, Murat ENERGY Özdenefe, Mustafa Dağbaşı

**15:15 – 15:30** BES-02 "THE IMPACT OF MATERIAL USE ON THERMAL COMFORT: A CASE STUDY OF HOUSING RENOVATION IN GHARDAÏA, ALGERIA"  
Younes Boukhari, Harun Sevinç

**15:30 – 15:45** BES-04 "DYNAMIC SIMULATION OF A SOLAR ASSISTED COOLING SYSTEM FOR RESIDENTIAL PURPOSE IN THREE CITIES IN TURKEY"  
Oluwaponmile David Alao, Muhammad Abid, Mustafa Dagbasi

**15:45 – 16:00** ENV-01 "THE RELATIONSHIP BETWEEN DECARBONIZATION AND EXERGY IN THE TRANSPORTATION SECTOR IN TURKEY"  
Büşra Selenay Önal, Zafer Utlu

**16:00 – 16:15** "INTELLIGENT SOLAR AIR CONDITIONER FOR A SUSTAINABLE GRID DEVELOPED BY ACS"  
Onur Aykut

**16:15 – 16:25** Questions

**PARALLEL SESSIONS 2 (HALL: SELİMİYE)**

## Advanced Energy Systems

**15:00 – 15:15** MSC-05 "INTEGRATING ENERGY, EXERGY, AND ENTROPY INTO NATIONAL POLICY AND PROCESS OPTIMIZATION: A THERMODYNAMIC PERSPECTIVE ON SUSTAINABLE DEVELOPMENT"  
Nurdan Güven, Zafer Utlu

**15:15 – 15:30** HES-05 (Online) "AN INTEGRATED HYDROGEN PRODUCTION AND ENERGY RECOVERY SYSTEM FOR WASTEWATER TREATMENT PLANTS"  
Ahmet Faruk Kilicaslan, Ibrahim Dincer

**15:30 – 15:45** HES-06 (Online) "INVESTIGATION OF HYDROGEN PRODUCTION AND SODIUM HYPOCHLORITE FORMATION IN A GRANULAR ACTIVATED CARBON-BASED NaCl ELECTROLYSIS SYSTEM"  
Sevde Elmali, Ibrahim Dincer

**15:45 – 16:00** EST-05 (Online) "COMPUTATIONAL THERMODYNAMIC AND DFT ANALYSIS OF A LANTHANUM MANGANITE-BASED REDOX CYCLE FOR THERMOCHEMICAL ENERGY STORAGE"  
Rahul R. Bhosale

**16:00 – 16:15** EST-06 (Online) "THERMOCHEMICAL ENERGY STORAGE USING CALCIUM FERRATE: THERMODYNAMIC AND DFT ANALYSIS"  
Rahul R. Bhosale

**16:15 – 16:25** Questions

**TUESDAY – JUNE 2, 2026 (GRAND PASHA HOTEL)**

**9:00 – 9:45** Keynote Lecture – 3 (Hall: YILMAZ BALCI)

**Prof. Dr. Reinhard Haas**

Vienna University of Technology, Austria  
Title: Energy Economic Prospects for Green Hydrogen in Europe

**9:45 – 10:30** Keynote Lecture – 4 (Hall: YILMAZ BALCI)

**Prof. Dr. Feridun Hamdullahpur**

University of Waterloo, Canada  
Title: Re-imagining Future Energy Systems Through Design, Evaluation and Governance Perspectives

**10:30 – 11:00** Coffee Break

**PARALLEL SESSIONS 3 (HALL: YILMAZ BALCI)**

## Renewable Energy

**11:00 – 11:15** REP-01 "ENERGY AND EXERGY ASSESSMENT OF A SOLAR PTC-DRIVEN POLYGENERATION SYSTEM FOR POWER, COOLING, FRESHWATER AND HYDROGEN PRODUCTION"  
Berke Eyyamoglu et al.

**11:15 – 11:30** RES-02 "WAVE ENERGY CHALLENGES IN THE MEDITERRANEAN SEA"  
Salih E. Uzun, Uğur Atikol

**11:30 – 11:45** RES-03 "SUSTAINABLE ENERGY DEVELOPMENT AND POLICY CHALLENGES: THE CASE OF KANO STATE"  
Abubakar Yahuza Ado, Meliz Hastunç

**11:45 – 11:55** Questions

**PARALLEL SESSIONS 3 (HALL: SELİMİYE)**

## Miscellaneous

**11:00 – 11:15** BIO-01 "POTENTIAL OF BIOGAS PRODUCTION USING ANIMAL WASTE IN POWER SECTOR: AN ENERGY AND EXERGY ANALYSIS"  
Ibrahim Modibbo Ahmed, Ertan Akun, Rena Kidak

**11:15 – 11:30** CRB-01 "FIELD-BASED SCREENING CRITERIA FOR CO<sub>2</sub> STORAGE IN ONSHORE SALINE AQUIFERS: A COMPARATIVE REVIEW OF SIX PROJECTS"  
Haris Nusrat, Gamze Ipek

**11:30 – 11:45** MSC-02 "NANOFLUIDS AND HYBRID NANOFLUID CONVECTION HEAT TRANSFER IN A TUBE"  
Amirreza Radmanesh, Nihad Dukhan

**11:45 – 11:55** Questions

**11:55 – 14:00 Lunch Break**

Hall: YILMAZ BALCI

**14:00-14:30** Invited Lecture-2**Prof. Dr. Tanay Sıdkı Uyar**

Istanbul Gedik University, Türkiye  
Title: Frontier Agriculture: A village WEF demonstration project of Renewable Energy Association EROSOLAR Türkiye

14:30 – 15:00 Coffee Break

**PARALLEL SESSIONS 4 (HALL: YILMAZ BALCI)**

## Miscellaneous

**15:00 – 15:15** UTL-01 "AN EMPIRICAL ANALYSIS OF POWER INTERRUPTIONS AND DEMAND STRESS IN AN ISOLATED ISLAND POWER SYSTEM: EVIDENCE FROM NORTH CYPRUS"  
Quadri Yinka Quadri, Victor Ayodeji Oluwasusi

**15:15 – 15:30** FOR-01 "DEEP LEARNING-BASED WEATHER FORECASTING FOR PAKISTAN"  
Ebad Ul Haq et al.

**15:30 – 15:45** PVT-01 "PASSIVE COOLING OF PHOTOVOLTAIC CELLS USING CARBON NANO FIBER ENHANCED PHASE CHANGE MATERIAL"  
Hussain Shawish, Murat Özdenefe

**15:45 – 16:00** EVT-01 "ELECTRIC VS FUEL: NIGERIA'S WELL TO WHEEL VEHICLE STUDY"  
Christopher Nwachinemelu, Meliz Hastunç

**16:00-16:15** BES-03 "FROM "BLUEPRINT" TO "GREEN PRINT" NEW URBAN AGENDA: FOR SUSTAINABLE SOCIAL HOUSING DEVELOPMENT IN YAOUNDÉ BASED ON THE UN SUSTAINABLE DEVELOPMENT GOALS"  
Erna Audrey Mangaleu Toukam, Harun Sevinç

**16:15-16:25** Questions