



VIRTUAL XIV TTMD INTERNATIONAL HVAC&R TECHNOLOGIES SYMPOSIUM

1-4
JUNE
2020

Registration: www.canliyayin.com/ttmd



LIVE STREAMING

PROGRAM

www.ttmd.org.tr/2020symposium

symposium@ttmd.org.tr



VIRTUAL 14TH TTMD INTERNATIONAL HVAC&R TECHNOLOGIES SYMPOSIUM

01 June 2020 Monday

TURKISH TIME 13:00 | GMT +03:00

Chair: Murat Çakan; **Co-chairs:** Kemal Gani Bayraktar, Ziya Haktan Karadeniz

13.00- 14.40 Session-1, Opening

13.00-13.10 **Opening Remarks;** Murat Çakan, Kemal Gani Bayraktar

13.10-13.40 Global energy picture after Covid-19; Fatih Birol

13.40-14.10 Data use in real Estate: indoor environmental quality and building performance : translation into financial value; Frank Hovorka

14.10- 14.40 The need for adaptation options in a warmer urban climate; Levent Kurnaz

14.40-15.00 **Break**

15.00- 16.50 Session-2, Microclimate and Building Interactions

15.00-15.30 Assessing Urban Heat Islands: Stakes and recent advances in design solutions and technology; Francis Allard

15.30- 16.00 Appropriate heat stress indices and micro scale models for applications in urban studies
Andreas Matzarakis

16.00-16.30 Urban green spaces versus urban built environment from the perspective of human thermal sensation. Modeling against mobile measurements; Panagiotis Nastos

16.30-16.50 Urban Heat Island Effect on Building Energy Consumption and Urban Environmental Comfort; Mustafa Leblebici

16.50-17.10 **Break**

17.10- 18.40 Session-3, PANEL-1; Urban Heat Island

Moderator: Francis Allard

Speakers: Andreas Matzarakis, Panagiotis Nastos, Yunus Arkan

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VIRTUAL 14TH TTMD INTERNATIONAL HVAC&R TECHNOLOGIES SYMPOSIUM

02 June 2020 Tuesday

TURKISH TIME 13:00 | GMT +03:00

Chair: Murat Çakan; **Co-chairs:** Kemal Gani Bayraktar, Gülsu Ulukavak Harputlugil

13.00 - 14.50 Session-4, Outdoor and Indoor Environmental Quality

13.00-13.30 The value chain of Indoor Environmental Quality; *Jaap Hogeling*

13.30- 14.00 The impact of pollution on Lung Health; *Hasan Bayram*

14.00-14.30 Impact of emerging smart technologies on building performance management and its impact on the quality of our indoor environments; *Ivo Martinac*

14.30-14.50 CFD Analysis of Jet Injection Method for Antibacterial Coating in Ventilation Ducts
Kenan Kaya

14.50-15.00 **Break**

15.00 - 16.50 Session-5, Modelling Tools and Simulations

15.00-15.30 Intelligent computing for building performance analysis; *Pieter de Wilde*

15.30- 16.00 Building Performance Simulation: Challenges and opportunities of IBPSA in a changing world
Lori McElroy

16.00-16.30 Application of machine learning models to HVAC systems; *Cheol Soo Park*

16.30- 16.50 Conceptual framework for an approach for simulation in support of the Net -Zero Water Buildings (NZWB); *Timuçin Harputlugil*

16.50-17.10 **Break**

17.10 - 18.30 Session-6, PANEL-2, Perspective of Commissioning

Moderator: Emre Özmen

Speakers: Atilla Karabulut, Sarven Çilingiroğlu, Azemet Candemir

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VIRTUAL 14TH TTMD INTERNATIONAL HVAC&R TECHNOLOGIES SYMPOSIUM

03 June 2020 Wednesday

TURKISH TIME 13:00 | GMT +03:00

Chair: Murat Çakan; **Co-chairs:** Neşe Ganiç, Ece Kalaycıoğlu

13.00- 15.00	Session-7, Low Carbon Future
13.00-13.30	Post Covid Sustainability Efforts: the role of energy efficiency and renewables <i>Oğuz Can</i>
13.30-14.00	Digitalisation in district energy systems; <i>Miha Bobic</i>
14.00-14.30	New trends in thermal energy storage for buildings; <i>Halime Paksoy</i>
14.30-15.00	District Energy Network balancing and optimization; <i>Dmitry Bochkalov</i>
15.00 -15.20	Break
15.20- 17.20	Session-8, Regulatory Framework
15.20-15.50	Nearly zero energy buildings and EPBD implementation in EU; <i>Jarek Kurnitski</i>
15.50-16.20	Rolling out EPB standards in Europe and beyond; <i>Jaap Hogeling</i>
16.20-16.50	Arab AC and Refrigeration Code for Energy Efficient Buildings; <i>Essam Khalil</i>
16.50- 17.20	The Romanian energy performance certificate according to the new set of EPB standards <i>Cătălin Lungu</i>
17.20-17.40	Break
17.40 - 19.10	Session-9, Renewable Energy
17.40-18.10	The role of renewable energy in heating sector; <i>Değer Saygın</i>
18.10-18.40	Renewable energy using innovative approaches; <i>Stephen Roosa</i>
18.40-19.10	Perspectives of Renewable Heat Preparation; <i>Klaus Vajen</i>

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VIRTUAL 14TH TTMD INTERNATIONAL HVAC&R TECHNOLOGIES SYMPOSIUM

04 June 2020 Thursday

TURKISH TIME 13:00 | GMT +03:00

Chair: Murat Çakan; **Co-chair:** Ahmet Arisoy

13.00- 14.15	Session-10, Solar Decathlon Competitons
13.00-13.30	"The first Solar Decathlon in Africa integrated in the research platform Green & Smart Building Park in Morocco"; <i>Badr Ikken</i>
13.30-14.00	Solar Decathlon Europe – Energy Engineering Experiences and Perspectives for SDE21 in Germany; <i>Karsten Voss</i>
14.00-14.15	Architecture design and Energy Performance of TDART house for the Solar Decathlon Africa Competition 2019; <i>Ahachad Mohammed</i>
14.15- 15.00	Session-11, Energy Efficient Buildings and Systems
14.15-14.30	Introduction of Air Handling Units on the European Product Database for Energy Labelling (EPREL); <i>Hüseyin Yüksel</i>
14.30- 14.45	Evaluation of building envelope performance constructed with phase- change materials in terms of heating energy consumption; <i>Eda Köse</i>
14.45-15.00	Innovative Air Conditioning System and Integrated Air Distribution Channel Design for Greenhouse Air Conditioning; <i>Başak Dere</i>
15.00-15.15	Break
15.15- 17.00	Session-12, Resilient HVAC Equipment and System Solutions-I
15.15-15.30	Water efficient technologies for sustainable hotels: The house residence Bomonti sample <i>Gözde Çakır Kiasif</i>
15.30- 15.45	Energy Efficient TIER IV Data Center Design and CFD Analysis of a Rack Layout <i>M. Zeki Yılmazoğlu</i>
15.45-16.00	Investigation of the Effect of Design and Operating Parameters of Heat Exchangers on Annual Energy Consumption for an AHU; <i>Mete Özşen</i>
16.00-16.15	System Analysis of Double Rotary Heat Wheel Air Handling Unit; <i>Murat Özer</i>
16.15-16.30	An Approach to Use of High Pressure Water Mist System for Continuous Operation <i>Arda Aytuğlu</i>
16.30-16.45	CFD Simulation of room heating by a panel radiator; <i>Bülent İmamoğlu</i>
16.45-17.00	A study on the determination of hydrodynamic and thermodynamic parameters in a water collector; <i>Melih Meriç</i>
17.00-17.15	Break

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Chair: Murat Çakan; **Co-chair:** Ahmet Arısoy

17.15- 18.00

Session-13, Resilient HVAC Equipment and System Solutions-II

17.15- 17.30

Comparison of mechanical systems in commissioning process; *Berk Kurtuluş*

17.30-17.45

Investigation of Electrostatic Filter Usage and Feasibility in Air Handling Units
Süleyman Kavas

17.45-18.00

Investment comparison of plastic and metal pipe systems used at cooling systems in terms of energy consumption; *Bülent Bıdı*

18.00-18.15

F gas Regulation, Kigali Amendment and Future of Turkish HVAC-R Industry
Andaç Yakut

18.15- 18.45

Closing Session

18.15- 18.45

Closing remarks; *Ahmet Arısoy, Murat Çakan, Kemal Gani Bayraktar*

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