



2021

PEPM Hybrid Conference AGENDA



Powered by Organizing Committee

Conference flow

Friday, September 17

14:00 – 18:00 Conference Registration

19:30 – 23:00 Welcome cocktail ([Holiday house Sozopol](#))

Saturday, September 18

9:00 – 12:00 Conference Registration

10:00 – 10:30 Opening Ceremony
Prof. Totyo Totev, Conference Chairman

10:30 – 12:00 A Word from the Sponsors

12:00 – 13:30 Lunch break (on your own)

Saturday, September 18 Attendance session (Conference Hall)

Session Chairman: Prof. Dr. Totyo Totev

13:30 – 13:40

ID 34: Optimization of the distance between the rows in solar collectors' arrays

Merima Zlateva

13:40 – 13:50

ID 36: An approach for reducing the air conditioning costs in office buildings in Vietnam

Momchil Vassilev; Van Hung Tran; Thanh Nhan Phan; Nikola Kaloyanov

13:50 – 14:00

ID 15: Verification and validation of a new CFD model of fixed regenerator for heat recovery from air

Angel Penev; Lyubomir P. Tsokov; Momchil Vassilev

14:00 – 14:10

ID 33: Mathematical models of the energy characteristics of a backpressure steam turbine based on a simulation study

Kaloyan Hr Hristov

14:10 – 14:20

ID 38: Thermal-hydraulic analysis of a VVER-1000 core in MSLB conditions

Ivan G Spasov

14:20 – 14:30

ID ...: Modeling of unbalanced regenerators for recovery of waste heat from air: a modern overview

Angel Penev

14:30 – 14:40

ID ...: Influence of the return network water temperature on the production of heat and electricity from an backpressure steam turbine installation

Ivan Genovski, Kaloyan Hristov

14:40 – 15:00

Coffee Break

15:00 – 15:10

ID 29: Modelling indoor pollutant distribution via passive scalar and virtual box approach

Georgi Pitchurov; Detelin Markov; Iskra S. Simova; Rositsa Velichkova; Peter Stankov; Radostina A. Angelova

15:10 – 15:20

ID 31: Design and constructive – technological development for children’s art clothing

Radka Atanasova; Magdalena Pavlova; Monika Merkova

15:20 – 15:30

ID 46: Application of ICT in the Online Education of Apparel Design and Production within the framework of ICT-TEX project

Hassan Saeed; Yordan Kyosev; Radka Atanasova; Angel K Terziev; Carla Hertleer

15:30 – 15:40

Session discussions

19:30 – 23:00

Gala dinner ([Hotel Selena](#))

Sunday, September 19 Online session (Virtual session 1)

Web link: [Joint the Virtual session 1 here](#)

Session Chairman: Prof. Dr. Gabriel Negreanu

Topic: *Thermal Equipment*

10:00 – 10:15

ID 7: Comparative analysis between methane and hydrogen regarding ignition and combustion in diffusive mode

Gabriel P Negreanu; Lucian Mihăescu; STANCIU Dorin; Gheorghe Lazaroiu; Ionel Pisa

10:15 – 10:30

ID 20: Energy and economic analysis of an ORC combined to steam boiler

Mocanu Gabriel; Ion V. Ion; Cristian C Iosifescu; Florin Popescu

10:30 – 10:45

ID 22: Air-to-water heat pump assessment: Part 1 – Experimental setup

Nadezhda Doseva, Daniela Chakyrova, Svetoslav Stoianov, and Iliya Hadhidimov

10:45 – 11:00

ID 28: Air-to-water heat pump assessment: Part 2 – Exergetic and exergoeconomic analyses

Nadezhda Doseva, Daniela Chakyrova

11:00 – 11:15

ID 37: Comparative technical and economic analysis of innovative methods for waste heat recovery from flue gases for boiler type BKZ 220-100

Hristo Beloev, Iliya Iliev, Angel Terziev, Andrey Kibarin, Madina Aliyarova

11:15 – 11:30

ID 35: An experimental study for drying *Pisum sativum* on an electric dryer and a heat pump dryer

Merima Zlateva; Thanh Nhan Phan; Van Hung Tran; Nikola Kaloyanov

11:30 – 11:45

ID 40: Influence evaluation of the ship propulsion system on the energy efficiency for small, medium and large container vessels

Viktor Kr. Nikiforov

11:45 – 12:00

ID 41: Impact study of the fuel type used on the energy costs values and harmful emissions generation

12:00 – 12:15

Viktor Kr. Nikiforov

Session discussions

12:15 – 13:30

Lunch (on your own)

Sunday, September 19 Online session (Virtual session 2)

Web link: [Joint the Virtual session 2 here](#)

Session Chairman: Assoc. Prof. Dr. Martin Ivanov

Topic: *Thermodynamics, Heat and Mass Transfer, Building Efficiency Improvements and HVAC systems*

13:30 – 13:45

ID 8: Modelling and numerical simulation of fire in a coffee storage hall

Nina Penkova; Kalin S Krumov; Boian M Mladenov; Yordan Stoyanov

13:45 – 14:00

ID 42: The influence of the structure of laminar flows on the characteristics of equipment

Vasyl Arsirii; Oleg V Kravchenko; Bohdan SAVCHUK; Olena ARSIRII

14:00 – 14:15

ID 11: Heat transfer in outer walls with layers of different density

Andrey Rymarov; Dmitriy Titkov

14:15 – 14:30

ID 43: Modelling and numerical simulation of the transport phenomena in water thermal energy storage tanks

Nikola Kaloyanov; Rosen Tsekov; Nina Penkova

14:30 – 14:45

ID 1: Possibilities for obtaining pellets by single-screw extrusion of biomass from black pine (pinus nigra arn.)

Apostol Simitchiev

14:45 – 15:00

ID 2: Thermodynamic and kinetic parameters of biomass from black pine (pinus nigra arn.)

Stanislava Tz. Tasheva

15:00 – 15:15

ID 3: Investigating the kinetics at low temperature heatpump drying and conventional drying of osmotic dehydrated blueberries

Hristo Hristov

15:15 – 15:30

Session discussions and Coffee break

Topic: *Fundamental and Applied Fluid Mechanics, Hydraulic and Pneumatic Drive and Control Systems*

15:30 – 15:45

ID 32: Parameters influencing the droplet formation in a focusing microfluidic channel

Grigorov, Jordan A. Denev, Boris Kirov and Vassil Galabov

15:45 – 16:00

ID 13: GA-tuning of Multivariable PID Controller for Electrohydraulic Load-Sensing Servo System

Alexander St. Mitov; Tsonyo Slavov; Jordan Kralev; Ilcho Angelov

16:00 – 16:15

ID 18: Reduction of the Battery Capacity of Hybrid Electric Vehicle with the Help of Electrically Assisted Turbocharger

Ivaylo Stoyanov; Milen Mihaylov; Teodor B. Iliev (University of Ruse)

16:15 – 16:30

ID 24: Modularity Design of the Bamboo Plastic Fiber Forming Machine

Nguyen Thanh Nam ; Nguyen Hoang Hiep, Vinh Long

16:30 – 16:45

ID 27: Modularity design of instant coffee powder packaging machine

Svetlin Antonov; L. K. Dien

16:45 – 17:00

Session discussions. Closing of panel

Sunday, September 19 Online session (Virtual session 3)

Web link: [Joint the Virtual session 3 here](#)

Session Chairman: Assoc. Prof. Dr. Angel Terziev

Topic: *Renewable energy technologies; Hydraulic and pneumatic machines and equipment*

13:30 – 13:45

ID 9: Assessing the diversification of energy mix with the methods of entropy and hierarchy of information

Iliyan I Petrov

13:45 – 14:00

ID 12: Renewable energies projects selection: block criteria systematization with AHP and Entropy-MOORA methods in MCDM

Iliyan I Petrov

14:00 – 14:15

ID 26: A design of solar battery cleaning system by modularity method

Svetlin Antonov; L. K. Dien

14:15 – 14:30

ID 10: Investigations of a vertical axis wind turbine with frontal cylindrical guide vane unit

Rossen Sashov Iliev

14:30 – 14:45

ID 25: A research on the formability and springback phenomena of pvc sheet in single point incremental forming (spif) technology

Nguyen Thanh Nam; Nguyen Hoang Hiep, Vinh Long; Nguyen Tan Hung; Tran Trong Hy

14:45 – 15:00

ID 17: Design of direct acting differential pressure control valve test bench.

Ognyan Bekriev ; Radoslav Asenov

15:00 – 15:15

ID 19: Experimental study of the accuracy of measuring of a central water meter

Aleksandar Stanilov

15:15 – 15:30

ID 21: CFD analysis of the behavior of a submersible vehicle in multiple flow directions and elevator and rudder fin configurations

Georgi Todorov; Konstantin Kamberov; Blagovest N. Zlatev

15:30 – 15:45

ID 4: Operating stress of photovoltaic panels

Ivaylo Stoyanov; Teodor B. Iliev

15:45 – 16:00

Session discussions and Coffee brake

Topic: *Design and Technologies for Clothing and Textiles*

16:00 – 16:15

ID 46: Application of ICT in the Online Education of Apparel Design and Production within the framework of ICT-TEX project

Hassan Saeed, Yordan Kyosev, Radka Atanasova, Angel Terziev, Carla Hertleer

16:15 – 16:30

ID 30: Modification of Leather Surface Using Low-Pressure Plasma and Antimicrobial Reagent

Sanja Ercegovic; Jadranka Akalović; Tomislav Ivanković; Anja Ludaš; Katarina Ištef

16:30 – 16:45

ID 16: Tangram based technology for clothing design

Boryana G Georgieva-Gushtanova

16:45 – 17:00

ID 23: Methods for personal cooling in hot environment used in clothing and wearables

Atanas Vasilev; Radostina A. Angelova; Rositsa Velichkova

17:00 – 17:15

ID 39: Development of boutique denim clothing by the "upcycling" method

Magdalena Pavlova

17:15 – 17:30

Session discussions. Closing of panel

Poster session, September 19 **Hall conference**

Session Chairman: Assoc. Prof. Dr. Merima Zlateva

Topic: *Renewable energy technologies*

10:00 – 17:30

ID 45: Determination of the optimal air-fuel ratio for upgraded biogas engine operation

Radostin Dimitrov, Penka Zlateva

10:00 – 17:30

ID 44: Electronic measuring system design for photovoltaic panels analysis

Krastin Yordanov; Iliya Hadzhidimov; Penka Zlateva