



Central European Symposium on Thermophysics (CEST 2024)

September 4th – September 6th, 2024, Aurora hotel, Miskolctapolca, Hungary

Conference programme

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Wednesday, September 4th, 2024

13:00 – 14:30 Conference registration

13:00 – 14:30 Lunch

14:50 Conference opening

15:00 Invited lecture (30 minutes)

chairman: Anton Trník

Ákos Lakatos

BUILDING APPLICATIONS OF AEROGEL-BASED THERMAL INSULATION MATERIALS

15:30 Lectures (4 × 20 minutes)

chairman: Anton Trník

Szabolcs Szekeres

EXAMINING CAPTURE VELOCITY IN LOCAL EXHAUST VENTILATION UTILIZING A PURPOSE-BUILT WORKSTATION

Attila Kostyák, Ferenc Kostyák, Ildiko Bodnar

HYGIENIC INVESTIGATION OF THE EVAPORATIVE COOLING SYSTEM INSTALLED IN AIR HANDLING UNITS

Jan Kočí, Tomáš Navara, Arsenii Trush, and Stanislav Pospíšil

INITIAL INVESTIGATION OF THE RELATIVE HUMIDITY EFFECT ON THE CONVECTIVE HEAT EXCHANGE USING FULL-SCALE WIND TUNNEL EXPERIMENTS

Petr Hotěk, Lukáš Fiala, and Robert Černý

THERMOELECTRIC PROPERTIES OF MULTIFUNCTIONAL METASHALE MORTAR WITH CARBON FIBER DUST

16:50 Coffee break (20 minutes)

17:10 Lectures (4 × 20 minutes)

chairman: Ján Ondruška

Goran Bulatović and Peter Bokes

FEM VERIFICATION OF NATURAL CONVECTION LOOP MODEL

Nenad Stepanić and Nenad Milošević

USING THE GUARDED AXIAL HEAT FLOW METHOD FOR HEAT FLUX METERS CALIBRATION

Peter Mihálka, Richard Slávik, Jakub Čurpek, Miroslav Čekon, and Peter Matiašovský

CYLINDRICAL HEAT TRANSFER MODEL FOR HONEYCOMB STRUCTURES WITH MICROENCAPSULATED PHASE CHANGE MATERIAL



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Václav Kočí, Robert Černý, Monika Kucerakova, Jiří Zelenka, Martin Drab, Stanislav Vratilav, Ladislav Kalvoda, and Igor Medved'

EVALUATION OF RADIONUCLIDES TRANSPORT PARAMETERS BASED ON TIME DEPENDENT CONCENTRATION PROFILES

19:00 Dinner

Thursday, September 5th, 2024

9:00 Invited lecture (30 minutes)

chairman: Zbigniew Suchorab

Ligia Moga

INNOVATIVE THERMALLY EFFICIENT MATERIALS FOR SUSTAINABLE BUILDING CONSTRUCTION

9:30 Lectures (4 × 20 minutes)

chairman: Zbigniew Suchorab

Jitka Krejsová, Lenka Scheinherrová, Jan Fořt, Jaroslav Pokorný, Pavla Rovnaníková

LIME-BASED HISTORIC PLASTERS CHARACTERIZATION: MINERALOGICAL COMPOSITION AND BINDER TO AGGREGATE RATIO

Martin Böhm, Jitka Krejsová, Vojtěch Pommer, Jiří Šál, David Javorský, David Všianský, and Robert Černý

THE USE OF LIGHT AND SCANNING ELECTRON MICROSCOPY FOR THE ANALYSIS OF HISTORICAL PLASTERS

Jaroslav Pokorný, Jan Fořt, Krejsová Jitka, Jiří Šál, and David Javorský

THE CHARACTERIZATION OF PROPERTIES OF HARD HISTORICAL RENDERS

Klára Kobetičová, Jakub Vrzáň, Zuzana Vidholdová, and Adéla Fraňková

COMPARISON OF THREE METHODOLOGIES FOR EVALUATING THE ANTIFUNGAL ACTIVITY OF CINNAMALDEHYDE

10:50 Coffee break (20 minutes)

11:10 Lectures (4 × 20 minutes)

chairman: Igor Medved'

Zbigniew Suchorab, Dominika Mikušová, Magdalena Paśnikowska-Lukaszuk, Paweł Juszczyński, and Anton Trník

THE USE OF SUPPORT VECTOR MACHINE LEARNING METHOD TO PREDICT MOISTURE OF BUILDING MATERIALS USING THE TIME DOMAIN REFLECTOMETRY



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Grzegorz Łagód, Robert Černý, Vaclav Koci, Magdalena Pilat-Rożek, Ewa Łazuka, Łukasz Guz, and Dariusz Majerek

THE MOLD INFESTATION OF BUILDINGS CLASSIFIED BY KOHONEN SELF-ORGANIZING MAPS WITH BOUNDARIES DETERMINED BY WARD CLUSTERING USING MULTIDIMENSIONAL DATA FROM GAS SENSORS

Przemysław Brzyski, Jakub Wankiewicz, Zbigniew Suchorab, and Igor Medved'

SELECTED PROPERTIES OF WALL MATERIAL BASED ON HEMP SHIVES AND CLAY MODIFIED WITH POLYSACCHARIDE-BASED POLYMERS

Urzędowski Arkadiusz and Suchorab Zbigniew

THE IMPACT OF CHANGES IN THE PHYSICAL PROPERTIES OF BUILDING MATERIAL SURFACES ON HEAT TRANSFER VIA ELECTROMAGNETIC RDIATION

12:30 Lunch

13:30 Poster section

Marko Pirc and Jurij Avsec

DEVELOPMENT OF DIAGNOSTIC ACCEPTANCE CRITERIA FOR TEMPERATURE AGED ELECTRICAL CABLES IN NUCLEAR POWER PLANTS USING CHEMICAL LABORATORY ANALYSIS DSC, FTIR, AND XRF

Dušan Strušnik and Jurij Avsec

ARTIFICIAL INTELLIGENCE ENTROPY GENERATION MODELLING OF STEAM TURBINE CONTROL VALVES AT EXTREMELY LOW STEAM MASS FLOW

Martin Keppert, Vojtěch Pommer, Klára Kulhavá, Dana Koňáková, Eva Vejmelková and Robert Černý

RESIDUAL PHYSICAL PROPERTIES OF THERMALLY LOADED ALKALI ACTIVATED SLAG

Petr Hotěk and Lukáš Fiala

SELF-HEATING POTENTIAL OF METASHALE MORTAR DOPED WITH CARBON FIBER DUST

Anna Futa, Magdalena Jastrzębska, and Zbigniew Suchorab

THE COMPARISON OF TWO POLYNOMIAL REGRESSION MODELS WITH ONE AND TWO INDEPENDENT VARIABLES IN MOISTURE DETECTION TECHNIQUE IN BUILDING MATERIALS

Magdalena Jastrzębska, Anna Futa, and Zbigniew Suchorab

THE EVALUATION OF BUILDING MATERIALS MOISTURE USING THE ANALYSIS OF COVARIANCE

Klára Kobetičová, Adam Fišer, Ivana Burianová, and Adéla Fraňková

EFFECTS OF WHITE AND RED THYME OILS AGAINST BIOFILM ISOLATED FROM MINERAL PLASTER

Vojtěch Pommer, Kateřina Šádková, Kateřina Sellnerová, Eva Vejmelková, and Dana Koňáková

DESIGN OF CONCRETE MIX WITH CALCINED BRICK SOIL



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Svetozár Malinarič

THE APPLICATION OF THE FINITE ELEMENTS METHOD IN THE STEP WISE TRANSIENT METHOD

Igor Medved' and Robert Černý

A FORMULA FOR THE MOISTURE DIFFUSIVITY FROM A PORE MODEL

Magdalena Paśnikowska-Łukaszuk, Joanna Szulzyk-Cieplak, Zbigniew Suchorab, Magda Wlazło, Arkadiusz

Urzędowski, and Jacek Zaborko

THE INFLUENCE OF 3D PRINTING TEMPERATURE ON THE IMPACT STRENGTH OF POLYLACTIDE

Jaroslav Pokorný

THE EFFECT OF BIOMASS-BASED FLY ASH ON PROPERTIES OF CEMENT PASTES

Lenka Scheinherrová, Dominika Černá, Milan Šteffek, Michal Beneš, and Jitka Krejsová

CONTROLLING THE FINENESS OF SYNTHESIZED TRICALCIUM ALUMINATE FOR CEMENT ADDITION

Richard Slávik

DIFFUSION COEFFICIENT MEASUREMENT USING DYNAMIC VAPOUR SORPTION METHOD

16:00 Cultural programme

19:00 Conference dinner

Friday, September 6th, 2024

9:00 Lectures (4 × 20 minutes)

chairman: Anton Trník

Łukasz Cieślakiewicz, Fabian Dietrich, Przemysław Brzyski, and Piotr Łapka

DEVELOPMENT OF A FIELD EXPERIMENTAL TEST HOUSE TO STUDY HEAT TRANSFER IN BIO-BASED MATERIALS WITH MICROENCAPSULATED PCM

Ján Ondruška and Marek Stančík

MECHANICAL AND PHYSICAL PROPERTIES OF TRADITIONAL PORCELAIN DOPED WITH WASTE GLASS

Štefan Csáki, Marián Žilinec, Libor Vozár, and Anton Trník

KAOLIN-BASED GLASS-CERAMIC GLAZE FOR CORDIERITE BASED HIGH-VOLTAGE INSULATORS

Anna Fehér and Róbert Kovács

INVESTIGATING THERMAL PROPERTIES OF HETEROGENEOUS MATERIALS THROUGH EXTENDED HEAT EQUATIONS

10:20 Coffee break (20 minutes)



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10:40 Lectures (3 × 20 minutes)

chairman: Štefan Csáki

Dominika Mikušová, Zbigniew Suchorab, Anton Trník, Magdalena Paśnikowska-Lukaszuk

THE POTENTIAL OF USING ARTIFICIAL INTELLIGENCE IN THE PROCESSING OF DATA MEASURED BY TDR FOR MASS MOISTURE CONVERSION OF POROUS BUILDING MATERIALS

Marián Žilinec, Štefan Csáki, Ján Ondruška, and Anton Trník

THE OBSERVATION FURNACE FOR THE MONITORING OF THE MELTING PROCESS OF CERAMIC SAMPLES

Tibor Kovács and Anton Trník

THE INFLUENCE OF LIMESTONE IN ILLITIC CLAY ON YOUNG'S MODULUS DURING THERMAL TREATMENT

11:40 Closing ceremony

12:00 Lunch
