



Central European Symposium on Thermophysics (CEST 2021)

September 1st – 3rd, 2021, Dom Pracy Twórczej w Kazimierzu Dolnym nad Wisłą,
Kazimierz Dolny, Poland

Conference programme

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Wednesday, September 1, 2021

13:00 – 14:30 Conference registration

13:00 – 14:30 Lunch

14:45 Conference opening

15:00 Invited lecture (30 minutes)

chairman: Zbigniew Suchorab

Sebastian Werle

WASTE BIOMASS AS AN ALTERNATIVE ENERGY SOURCE – APPLICATION OF THE THERMAL TREATMENT
METHODS IN THE CIRCULAR ECONOMY CONTEXT

15:30 Lectures (4 × 20 minutes)

chairman: Zbigniew Suchorab

Lukasz Ciešlikiewicz, Piotr Łapka, and Fabian Dietrich

IN-FIELD INVESTIGATION AND COMPARISON OF TWO DEVICES FOR DRYING MASONRY WALLS

Agnieszka Malec, Monika Garbacz, Lukasz Guz, and Pawel Golanek

EVALUATION OF THE DEGREE OF MICROBIAL INFECTION IN LIVING QUARTERS BY GAS CHROMATOGRAPHY
AND ELECTRONIC NOSE

Piotr Kosiński and Patrycja Bakula

MOISTURE CONTENT MEASUREMENTS OF NATURAL FIBROUS MATERIALS USING DEEP AND SURFACE
ELECTRIC METHODS

**Fabian Dietrich, Piotr Łapka, Lukasz Ciešlikiewicz, Piotr Furmański, Maris Sinka, Laura Vitola, and
Diana Bajare**

MICRO-SCALE MODELING-BASED APPROACH FOR CALCULATION OF THERMAL CONDUCTIVITY OF BIO-BASED
BUILDING COMPOSITE

16:50 Coffee break (20 minutes)

17:10 Lectures (5 × 20 minutes)

chairman: Anton Trník

Jaroslav Pokorný, Jiří Šál, and Radek Ševčík

THE ROLE OF PROCESSING PROCEDURES ON PROPERTIES OF WASTE TIRES RECYCLED PRODUCTS

Lukáš Fiala, Michaela Petříková, Petr Konrád, Wei-Ting Lin, and Robert Černý

OPTIMIZATION OF ELECTRODE EMBEDMENT FOR SELF-HEATING EXPERIMENTS OF MULTIFUNCTIONAL
GEOPOLYMERS



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Jan Fořt, Miloš Jerman, and Robert Černý

EFFECT OF SUPERABSORBENT POLYMERS ON HYDRATION HEAT EVOLUTION OF CEMENTITIOUS MATERIALS

Jan Kočí and David Šilhánek

PRELIMINARY ASSESSMENT OF CFD MODELS SUITABLE FOR SIMULATION OF PROCESSES IN TUNNEL KILNS

Václav Kočí, Jiří Maděra, Klára Kobetičová, and Dana Němcová

INFLUENCE OF BIOFILMS ON THERMAL PERFORMANCE OF SELECTED PLASTERS

19:00 Dinner

Thursday, September 2, 2021

9:00 Invited lecture (30 minutes)

chairman: Anton Trník

Marta Kadela

FOAMED CONCRETE AS A MATERIAL USED IN THE BUILDING DUE TO ITS THERMAL PARAMETERS

9:30 Lectures (4 × 20 minutes)

chairman: Anton Trník

Przemysław Brzyski and Zbigniew Suchorab

THE EFFECT OF CASEIN ADMIXTURE ON THE MOISTURE PROPERTIES OF HEMP-LIME COMPOSITE

Dariusz Majerek, Grzegorz Łagód, Vaclav Kočí, and Robert Černý

DENSITY-BASED CLUSTERING OF E-NOSE OUTPUT FROM MOLD-CONTAMINATED BUILDINGS

Karol Ścisłowski and Ksenia Siadkowska

COMPARATIVE STRESS ANALYSIS OF ACTUATOR MODELS USING SMART MATERIAL ALLOYS

Ksenia Siadkowska, Karol Ścisłowski, Rafał Kliza, Błażej Czajka, and Mirosław Wendeker

THERMAL IMAGING MONITORING OF THE PROTOTYPE RESEARCH INSTALLATIONS

10:50 Coffee break (20 minutes)

11:10 Lectures (4 × 20 minutes)

chairman: Václav Kočí

Małgorzata Szafraniec and Danuta Barnat-Hunek

EFFECT OF NATURAL RELEASE OILS ON CONCRETE WETTABILITY

Piotr Koniorczyk, Janusz Zmywaczyk, Tomasz Ślęzak, and Mateusz Zieliński

THERMAL DIFFUSIVITY AND THERMAL EXPANSION INVESTIGATIONS OF TITANIUM GRADE 5



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Zdeněk Veselý, Michael Gulyj, and Ilona Slavíková

THE EFFECT OF EXTERNAL LOADING ON THE OPTICAL PROPERTIES OF HIGH EMISSIVITY THERMOGRAPHIC PAINT LABIR FOR LOW TEMPERATURE APPLICATIONS

Agnieszka Żelazna and Justyna Gołębiowska

PERFORMANCE STUDY OF A COOLING SYSTEM WITH A SERIES CONNECTION OF THERMOELECTRIC MODULES

12:30 Lunch

13:30 Virtual lectures (5 × 20 minutes)

chairman: Grzegorz Łagód

Ákos Lakatos and Sándor Szanyi

RESULTS ON THERMAL ANNEALING OF GRAPHITE ENHANCED POLYSTYRENE INSULATIONS

Imre Csáky

INTERNAL AIR TEMPERATURE DIVERSIONS IN SUMMER PERIOD IN THE CASE OF A RESIDENTIAL BUILDING

Anatoliy Taran, Daniil Voronovych, Mykola Nechiporuk, Volodymyr Filipov, and Oksana

Podshyvalova

HEAT-SHIELDING COATING FOR SPACECRAFT BASED ON THE DIRECTIONALLY CRYSTALLIZED LAB6–NBB2 EUTECTIC ALLOY

Mouatassim Charai, Ahmed Mezrhab, Mustapha Karkri, and Ligia Moga

THERMAL PERFORMANCE STUDY OF PLASTER REINFORCED WITH ALFA FIBERS

Daniel Urbán

THE EFFECT OF PLASTIC SHIELD ON THE SPEECH ATTENUATION: A CASE STUDY

15:10 Poster section

16:10 Cultural programme

19:00 Conference dinner

Friday, September 3, 2021

9:00 Virtual lectures (5 × 20 minutes)

chairman: Ján Ondruška

Igor V. Kudinov, Vasilij K. Tkachev, Anton V. Eremin, and Konstantin V. Trubitsyn

MATHEMATICAL MODELING OF LOCAL NON-EQUILIBRIUM HYDRODYNAMICS IN MOVING LIQUIDS

Anna Fehér, Róbert Kovács

ANALYTICAL EVALUATION OF ROOM TEMPERATURE NON-FOURIER HEAT PULSE EXPERIMENTS

Lenka Scheinherrová, Magdaléna Doleželová, Michaela Petříková, and Alena Vimmrová

INFLUENCE OF DRYING METHODS ON COMPOSITION CHANGES OF GYPSUM PASTE AT EARLY AGE



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Radosław Raczyński

STRUCTURAL AND DYNAMIC ANALYSIS OF THE PROTOTYPE MAIN ROTOR BLADE SECTION

Klára Kobetičová, Martin Böhm, Jana Nábělková, Kateřina Lišková, and Robert Černý

EFFECT OF STORAGE TEMPERATURES ON SELECTED WOOD PROPERTIES AFTER CAFFEINE TREATMENT

10:40 Coffee break (20 minutes)

11:00 Virtual lectures (5 × 20 minutes)

chairman: Zbigniew Suchorab

Tomáš Húlan, Štefan Csáki, and František Lukáč

THERMAL TRANSFORMATIONS OF GLASS IN ANORTHITE COMPOSITION

Marek Mánik, Michal Kuruc, Terézia Cabanová, and Igor Medved'

DIFFUSION COEFFICIENT OF EXPANDED POLYSTYRENE IN ENVIRONMENTS WITH VARYING RELATIVE
HUMIDITY

Dmytro Nosov and Anton Trník

ISOTHERMAL THERMODILATOMETRIC STUDY OF ILLITIC CLAY DURING SINTERING

Peter Pős, Ján Ondruška, Martin Keppert, and Anton Trník

THERMAL EXPANSION AND MASS CHANGE OF ILLITE/SMECTITE – WASTE GLASS MIXTURES

Miroslav Čekon and Richard Slávik

THERMAL PERFORMANCE OF CERAMIC HOLLOW BRICK MODIFIED WITH LOW EMISSIVITY COATING

12:40 Closing ceremony

12:50 Lunch
