



Central European Symposium on Thermophysics (CEST 2026)

September 2nd – September 4th, 2026, Velké Karlovice, Czech Republic

Conference programme

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Wednesday, September 2nd, 2026

13:00 – 14:30 Conference registration

13:00 – 14:30 Lunch

14:50 Conference opening

15:00 Invited lecture (30 minutes)

chairman: Jan Fořt

Wei-Ting Lin, Po-Hsuan Wang, Jie Chen, and An Cheng

BALANCING THERMAL INSULATION AND MECHANICAL STRENGTH IN 3D-PRINTED CEMENTLESS FOAMED CONCRETE VIA REACTIVE ULTRA-FINE FLY ASH

15:30 Lectures (4 × 20 minutes)

chairman: Jan Fořt

Willi Pabst and Eva Gregorová

THERMAL CYCLING BEHAVIOR OF FIRECLAY AND HIGH-ALUMINA REFRACTORIES CHARACTERIZED VIA THE IMPULSE EXCITATION TECHNIQUE (IET)

Szabolcs Deák and Attila Kostyák

MINIMIZING HEATING AND COOLING ENERGY REQUIREMENTS OF AHUS DURING DEHUMIDIFICATION

Bence Biró, Szabolcs Szekeres, and Ferenc Kostyák

APPLICATION OF INDIRECT EVAPORATIVE COOLING USING OUTDOOR PROCESS AIR

Vaclav Kočí and Jiří Madera

COMPUTATIONAL MODELLING OF CHEMICAL REACTIONS: COMPARISON OF CARBONATION PROCESSES IN VARIOUS HISTORICAL PLASTERS

16:50 Coffee break (20 minutes)

17:10 Lectures (4 × 20 minutes)

chairman: Ján Ondruška

Fisnik Aliaj and Arbër Zeqiraj

THERMOPHYSICAL PROPERTIES OF MTBE, N-HEXANE, CYCLOHEXANE AND TOLUENE MIXTURES: EXPERIMENT AND MODELING FROM BINARY TO QUATERNARY SYSTEMS

Paweł Juszczynski, Zbigniew Suchorab, Zenon Szczepaniak, and Dominika Kissová

PREDICTION OF MOISTURE CONTENT IN AUTOCLAVED AERATED CONCRETE BASED ON SIMULATED MICROWAVE MEASUREMENTS USING MACHINE LEARNING MODELS



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Zbigniew Suchorab, Kacper Szewczyk, and Paweł Juszczynski

THE INFLUENCE OF ANISOTROPY AND MATERIAL DENSITY ON THE VALUE OF THE THERMAL CONDUCTIVITY
COEFFICIENT OF AERATED CONCRETE

Mateusz Zieliński, Piotr Koniorczyk, Janusz Zmywaczyk, Andrzej Dębski, Piotr Wach, and Paweł Bilski

TESTS OF THERMAL DIFFUSIVITY AND SPECIFIC HEAT OF NITRIDED STEEL 38HMJ

19:00 Dinner

Thursday, September 3th, 2026

9:00 Invited lecture (30 minutes)

chairman: Anton Trník

An Cheng, Hui-Mi Hsu, Pin-Chien Cheng, Qi-Zhen Huang, Yuan-Ho Cheng

MAGNETIC AGGREGATES IN CONCRETE: DETECTION, ENGINEERING IMPLICATIONS, AND PRACTICAL TESTING
METHODS

9:30 Lectures (3 × 20 minutes)

chairman: Anton Trník

Daniel Lager

THERMOPHYSICAL INVESTIGATION OF WADED ALUMINIUM ALLOYS FOR LIGHTWEIGHT LIQUID HYDROGEN
TANKS

Klára Kobetičová, Adam Fišer, Martin Bohm, and Miloš Jerman

SELECTED PROPERTIES OF LIME-CEMENT PLASTER AFTER ADDITION OF CINNAMALDEHYDE

Martin Bohm, Jiri Madera, and Jitka Krejsová

MULTI-SCALE PORE STRUCTURE CHARACTERIZATION OF HISTORICAL LIME-BASED PLASTER USING MERCURY
INTRUSION POROSIMETRY AND DIGITAL OPTICAL MICROSCOPY

10:30 Coffee break (20 minutes)

11:00 Lectures (3 × 20 minutes)

chairman: Štefan Csáki

Cheng-Xuan Yu, Lukáš Fiala, Martin Mildner, and Wei-Ting Lin

SELF-HEATING GEOPOLYMER TILE WITH HIGH WASTE CONTENT: CALCINED CLAY–BRICK POWDER MATRIX
WITH CARBON FIBER DUST



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Petr Hotěk, Jan Fořt, Igor Medved', Cheng-Xuan Yu, and Robert Černý

SUSTAINABLE MIX DESIGN OF ALKALI-ACTIVATED SLAG BINDERS: OPTIMIZATION APPROACH TO PERFORMANCE AND ENVIRONMENTAL EFFICIENCY

Petr Hotěk, Jan Fořt, Lukaš Fiala, Martin Mildner, and Jiří Maděra

HEATING DYNAMICS AND TEMPERATURE DISTRIBUTION IN UNDERGROUND THERMAL STORAGE SYSTEMS FILLED WITH WASTE FOUNDRY SAND

12:00 Lunch

13:00 Poster section

Magdalena Jastrzębska and Anna Futa

COMPARISON OF REGRESSION ANALYSIS AND REGRESSION TREES FOR MOISTURE PREDICTION IN CELLULAR CONCRETE

Anna Futa and Magdalena Jastrzębska

THE ANALYSIS OF REGRESSION AND NEURAL NETWORKS FOR MOISTURE ESTIMATION IN CELLULAR CONCRETE

Svetozár Malinarič

STEFAN - BOLTZMANN CONSTANT MEASUREMENT

Svetozár Malinarič and Ján Ondruška

ANISOTROPY OF THERMOPHYSICAL PROPERTIES OF 3D-PRINTED PLA COMPOSITES MEASURED BY THE EDPS METHOD

Michal Kuruc, Igor Medved', Martin Keppert, Vlastimil Bílek, and Robert Černý

STATISTICAL OPTIMIZATION OF COMPRESSIVE STRENGTH OF GGBFS GEOPOLYMERS BASED ON A LINEAR REGRESSION MODEL

Klára Kobetičová and Adéla Fraňková

BIOCIDAL PROTECTION OF MINERAL PLASTERS: EFFECT OF ESSENTIAL OILS AGAINST CYANOBACTERIA IN WATER AND COATING SYSTEM

Arbër Musliu, Fisnik Aliaj, and Arbër Zeqiraj

EXPERIMENTAL AND MODELLING STUDY OF TERNARY AND BINARY MIXTURES OF PYRIDINE, NITROBENZENE, AND BENZENE



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Arbër Zeqiraj and Fisnik Aliaj

THERMOPHYSICAL PROPERTIES OF THE TERNARY SYSTEM BUTAN-1-OL + CYCLOHEXANE + ETHYLBENZENE:
DENSITY, SOUND SPEED, AND MODELING OF EXCESS PROPERTIES

Jakub Wankiewicz, Magdalena Grudzińska, Przemysław Brzyski, and Katarzyna Kalinowska-Wichrowska

SELECTED PROPERTIES OF LIGHTWEIGHT CONCRETE WITH EXPANDED CLAY AGGREGATE CONTAINING HEMP
SHIVES

Przemysław Brzyski, Krystian Patyna, and Miroslava Kavgić

REDUCING BINDER CONTENT IN LIME–HEMP COMPOSITES: IMPACTS ON DENSITY, POROSITY, THERMAL
CONDUCTIVITY, AND WATER ABSORPTION

Dana Koňáková, Eva Vejmelková, Vojtěch Pommer, Pavel Rovnaník, and Tomáš Hupka

INFLUENCE OF PLASTICISER TYPE ON THE PERFORMANCE OF LC3 SYSTEMS WITH A HIGHER AMOUNT OF
CALCINED CLAY

Marek Mánik, Libor Vozár, and Igor Štubňa

MICROSTRUCTURAL EFFECTS OF CRISTOBALITE ADDITION ON ILLITE-BASED CERAMICS MONITORED THROUGH
ACOUSTIC EMISSION

Radomír Sokolář

RELATIONSHIP BETWEEN THE FORMATION OF DEFECTIVE AL-SI SPINEL AND TECHNOLOGICAL PROPERTIES OF
KAOLINITIC CLAYS

**Eva Vejmelkova, Michala Breníková, Martin Bohm, Martina Urbanová, Dana Koňáková, and Martin
Keppert**

STABILITY OF ACID ACTIVATED METAKAOLIN

Dominika Kissová, Anton Trník, and Zbigniew Suchorab

TEMPERATURE ANOMALIES IN SYSTEMS FOR SIMULTANEOUS MEASUREMENT OF HEAT AND MOISTURE
TRANSPORT IN POROUS MATERIALS

Grzegorz Łagód and Magdalena Pilat-Rożek

APPLICATION OF UNSUPERVISED AND SUPERVISED MACHINE LEARNING METHODS FOR CLASSIFICATION OF
MOULD IN BUILDINGS USING MULTIDIMENSIONAL DATA FROM GAS SENSORS

Arkadiusz Urzędowski

ANALYSIS OF CHEMICAL DETERIORATION MECHANISMS AND COUPLED HEAT–MOISTURE TRANSPORT IN THE
WALLS OF A HISTORIC BUILDING

Magda Wlazło, Zbigniew Suchorab, Agnieszka Malec, and Jarosław Zubrzycki

DETECTION AND ESTIMATION OF 1-OCTEN-3-OL AND 2-METHYL-1-BUTANOL USING MOS GAS SENSOR ARRAYS



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AND ARTIFICIAL INTELLIGENCE MODELS

16:00 Cultural programme

19:00 Conference dinner

Friday, September 4th, 2026

9:30 Lectures (4 × 20 minutes)

chairman: Anton Trník

Ján Ondruška

THERMAL DIFFUSIVITY ANISOTROPY OF CARBON FIBRE-REINFORCED PLA COMPOSITES FABRICATED BY FUSED FILAMENT FABRICATION

Stefan Csaki and Zoltán Lukács

STABILIZATION OF ZIRCONIA BY MGO AND CaCO_3 ADDITIVES

Marek Mánik and Libor Vozár

EFFECTS OF ZEOLITE INCORPORATION ON THE THERMAL PROPERTIES OF METAKAOLIN-BASED GEOPOLYMERS

Marián Žilinec, Stefan Csaki, and Anton Trník

MONITORING OF CORDIERITE-BASED GLAZE PERFORMANCE USING ACOUSTIC EMISSION TECHNIQUES

10:50 Closing ceremony

11:30 Lunch
