

MATBUD'2018 Preliminary Detailed Conference Programme

(version 23.04.2018)

DAY 1 25 June 2018, Monday

10:00 - 11:00 **Registration** - "Kotłownia" Conference Hall

11:00 - 11:30 **Conference opening ceremony**

11:30 - 12:00 **Plenary Session**

Key note paper

On site deployment of 3D printing for the building construction – The case of Yhnova™
P. Poullain, E. Paquet, S. Garnier and B. Furet

12.00-12:45 **Session I: New generation concretes**

12:00-12:15 Evaluation of suitability for 3D printing of high performance concretes
M. Kaszyńska, M. Hoffmann, S. Skibicki, A. Zieliński, M. Techman, N. Olczyk and T. Wróblewski

12:15-12:30 Influence of the w/c ratio and aggregate composition on the autogenous shrinkage in self-consolidating concrete

A. Zieliński and M. Kaszyńska

12:30-12:45 Low cement content SCC (Eco-SCC) – the alternative for ready-mix traditional concrete

M. Urban

12.45-14:30 **Session II: Modeling of concrete behavior and test methods**

12:45-13:00 Influence of tensile cracking and of aggregate size on concrete permeability
M. Choinska, H. Al-Khazraji, N. Benkemoun and A. Khelidj

13:00-13:15 Application of the nanoindentation method in assessing of properties of cement composites modified with silica-magnetite nanostructures

E. Horszczaruk, Jędrzejewski, J. Baranowska and E. Mijowska

13:15-13:30 Failure mode in shear of steel fiber reinforced concrete beams

J. Krassowska, M. Kosior-Kazberuk

13:30-13:45 Concrete propensity to fire spalling: testing and observations

I. Hager, K. Mróz, and T. Tracz

13:45-14:00 High frequency impulse ground penetrating radar application in assessment of interlayer connections

J. Sudyka, L. Krysiński, A. Zofka, M. Pszczoła and P. Jaskuła

14:00-14:15 Assessment of the compressive strength of lime mortar in the joints of brick walls - case study

D. Łątka and P. Matysek

14:30 - 15:30 **Lunch "GIL" Gallery**

15:30 - 17:00 Session III: **Waste products as components of sustainable building materials**

15:30- 15:45 Towards the utilization of waste glass powder in sustainable cement based overlays

L. Sadowski

15:45-16:00 Assessing the Performance of Concrete Containing Recycled Glass on Tensile Splitting Strength and Resistance to Alkali Silica Reaction

Ch.-H. Ho, A. Almonieay, K. Kyaw and P.M.S. Maung

16:00-16:15 Chemical testing of post-process ashes from municipal waste combustion

T. Stryszewska, M. Dudek

16:15-16:30 Physical properties of post-process fly ash from TWTP Krakow

A. Nowak-Michta, B. Kabat

16:30-16:45 Influence of cement substitution by calcareous fly ash on the mechanical properties of polymer-cement composites

B. Jaworska, P. Lukowski and J. Jaworski

17:00 - 17:15 **Coffee break**

17:15-17:30 Lightweight concrete with copper slag waste as sand substitution

R. Jaskulski and W. Kubissa

17:30-17:45 Application of ceramic dust as a modifier reducing the extent of rheological deformations in airfield pavement concrete

M. Linek

17:45-18:00 Assessment of preliminary suitability of Fe- and Cr-rich waste material for the production of building ceramics.

E. Kłosek-Wawrzyn, P. Murzyn

Directly after the Session III: **"Ice-breaking evening"** – CUT Campus, Warszawska St. 24

DAY 2 26 June 2018, Tuesday

9:00- 11:00 Session IV: **Cement pastes and mortars**

- 9:00-9:15 Hydration degree development of blast furnace slag blended cement pastes using thermogravimetric Analysis (TGA)
W. Deboucha, N. Leklou and A. Khelidj
- 9:15-9:30 The impact of lithium nitrate on the physical and mechanical properties of Portland cement
J. Zapala-Slaweta and Z. Owsiak
- 9:30-9:45 Effect of boron-containing aggregates on setting and hardening of Portland cement mortars
A. Antolik, M.A. Glinicki and M. Gawlicki
- 9:45-10:00 Influence of temperature on the properties of non-air-entrained and air-entrained cement mortars modified with different plasticisers and superplasticisers types
B. Łażniewska-Piekarczyk
- 10:00-10:15 Effect of redispersible polymer powder on setting time of thin-bed mortars
M. Kulesza, D. Dębski and J. Fangrat
- 10:15-10:30 Hydrophobisation of mortars containing waste polyurethane foam
D. Barnat-Hunek, S. Duda, M. Garbacz and G. Łagód

10:45 – 11:15 **Coffee break**

10:45- 14:00 Session V: **Durability and environmental impact**

- 10:45-11:00 Frost resistance of concretes containing ground granulated blast-furnace slag
P. Łukowski, A. Salih and J.J. Sokółowska
- 11:00-11:15 The impact of air content on the durability of concrete under combined sulphate and freeze-thaw attack
J. Marczewska and W. Piasta
- 11:15-11:30 Chemical corrosion of external stairs – case study
P. Czapik and Z. Owsiak
- 11:30-11:45 Calcareous Fly Ash Content Significance To Self-Terminating Carbonation Model of Concrete
P. Woliński, P. Woyciechowski and G. Adamczewski
- 11:45-12:00 Influence of cement type on carbonation of concrete mixtures
Ch. Tassos, K. Sideris, A. Chatzopoulos, N. Pistofidis and E. Chaniotakis
- 12:00-12:15 Analysis of protective features of concrete in precast prestressed floor slabs (HC type) against chloride penetration
Z. Szweda
- 12:15-12:30 The content of chlorides in blast-furnace slag cement as a factor affecting the diffusion of chloride ions in concrete
J. Kuziak, P. Woyciechowski, R. Kobyłka and A. Wcisło
- 12:30-12:45 The influence of metahalloysite addition on tobermorite formation studied by X-ray powder diffraction and scanning electron microscope
A. Skawińska
- 12:45-13:00 Alkali-silica reaction and microstructure of concrete subjected to combined chemical and physical exposure conditions
D. Józwiak-Niedźwiedzka, M. Dąbrowski, K. Gibas, A. Antolik and M.A. Glinicki

- 13:00-13:15 Impact of the air-entrained concrete with the blast-furnace slag cement on the intensity of reinforcement corrosion process
W. Raczkiwicz, W. Grzmil and J. Zapala – Sławeta
- 13:15-13:30 Application of acrylic-based coatings for concrete protection
A. Kozak
- 13:30-13:45 Evaluating the Influence of Polymer Modified Asphalt Binders on Low Temperature Properties
A. Abdelaziz, Ch.-H. Ho and M. Snyder

14:00 - 15:00 **Lunch "GIL" Gallery**

15:00 - 17:00 Session VI: **Geopolymers and soil-cement materials**

- 15:00-15:15 Resistance to external sulfate attack - Comparison of two alkali-activated binders
M. Komljenović, N. Džunuzović and V. Nikolić
- 15:15-15:30 Study of an alkali-activated binder based on tungsten mining mud and brick powder waste
N. Sedira and J. Castro-Gomes
- 15:30-15:45 Influence of water to solid ratio on mechanical properties of GBFS-based geopolymer foam concrete
T. Piotrowski and P. Prochoń
- 15:45-16:00 Effect of High Temperature on Mechanical Properties of Geopolymer Mortar
M. Sitarz, I. Hager and J. Kochanek
- 16:00-16:15 The Effect of Additives on the Properties of Metakaolin and Fly Ash Based Geopolymers
M. Łach, K. Korniejenko, M. Hebdowska-Krupa and J. Mikula
- 16:15-16:30 Influence of Soil-Cement Composition on its Selected Properties
K. Brasse, T. Tracz, T. Zdeb and P. Rychlewski
- 16:30-16:45 Toward a better understanding of the effects of cement treatment on microstructural and hydraulic properties of compacted soils
H. Ranaivomanana and A. Razakamanantsoa

17:00-18:00 Plenary meeting of the Scientific Committee

19:30 Conference Dinner

DAY 3 27 June 2018, Wednesday

9:30-11:00 Session VII: Structural materials performance evaluation

- 9:30-9:45 The influence of an applied standard test method on a measurement of concrete stabilized secant modulus of elasticity
L. Domagala and J. Dobrowolska
- 9:45-10:00 Usefulness of porphyry and amphibolites as a component of concrete for airfield pavements
M. Linek, P. Nita, P. Wolka and W. Żebrowski
- 10:00-10:15 Probability calibration of deformation factor for timber roofs in the Polish mountain zones
T. Domański and K. Kmieciak
- 10:15-10:30 Material properties and the energy balance in standardized fire testing
W. Węgrzyński and P. Turkowski
- 10:30-10:45 Rational application of hot finished rectangular hollow sections in steel structures
K. Kuchta and I. Tylek

11:00 – 11:30 Coffee break

11:30- 13:00 Session VIII : Energy-efficient building materials

- 11:30-11:45 Energy and hygrothermal performance of built-in mineral wool thermal insulations
B. Nagy and T.K. Simon
- 11:45-12:00 Multifunctional decorative coatings based on cement-silicate binder
A. Shaybadullina, G. Yakovlev, V. Grakhov, I. Polyanskikh and Y. Ginchitskaya
- 12:00-12:15 Influence of Load-bearing Structure on Size of Bonded Facade Cladding
P. Liška, B. Nečasová and J. Šlanhof
- 12:15-12:30 Impact resistance of external thermal insulation systems
E. Sudoł, D. Dębski, R. Zamorowska and B. Francke
- 12:30-12:45 Inverted roof insulation kits and their durability
B. Francke and R. Geryło
- 12:45-13:00 Hygrothermal modelling of masonry blocks filled with thermal insulation
B. Nagy

13:15 – 14.00 Plenary closing session

14:00 **Lunch "GIL" Gallery**
