

PROGRAMME (3-07)

Monday, July 4, 2022 TUTORIAL

- 09:00-10:00:** Registration to TUTORIAL
10:00-12:00: Workshop
12:00-13:00: Laboratory demonstrations **Group A**
13:00-14:00: Laboratory demonstrations **Group B**
14:30-17:00: Short Courses + Workshop (Coffee break 15:45-16:15)
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15:30-17:30: Registration to GEOPOLYMER CAMP

Tuesday, July 5, 2022, GEOPOLYMER CAMP

8:30: Registration

9:00-9:30: Individual messages from the participants (1 minute)

9:30-10:15 : **Keynote** by Joseph Davidovits: *State of the Geopolymer R&D 2022*, with special emphasis on recent developments.; and William Hoff, Geopolymer International, USA: *Study Guide and Book Cover of the reference book Geopolymer Chemistry and Applications*.

10:20-10:45: Coffee break

First session at 10:45: geopolymer molecular chemistry; raw materials, scientific investigations.

10:45 - Joerg Lind, Wöllner GmbH, Germany: *Geosil – ready to use alkali silicates for Geopolymers*.

11:05 - Carine Lefèvre, Xatic, Luxembourg: *Metakaolins and mineral fillers in geopolymers*.

11:25 - Pierre Naproux, Sibelco, France: *Minerals for geopolymer applications*.

11:45 - Milan Bouša, Lucie Svobodová, Petr Louda, Piotr Łoś, Baturalp Yalcinkaya, Vojtěch Růžek, Technical University of Liberec, Czech Republic: *Use of Plasma Incineration Slag as a Filler in Geopolymer Composites*.

12:00: - Artem Sharko, Su Le Van, Nguyen Van Vu, Petr Louda, Katarzyna Buczkowska, Technical University of Liberec, Czech Republic: *Influence of Biomass Ashes from Selected Heat and Power Plants fillers on Geopolymer Properties*.

Focused Session at 12:15: Conductive Geopolymers: Examples of applications.

Keynote: *Breakthrough in Renewable production of Electricity in Large Scale Microbial Fuel Cells*, by Neven Ukrainczyk, Technische Universität Darmstadt, Germany.

12:45: Alex Reggiani, Italy: *Conductive and Thermal Geopolymer*.

13:00: Free Sandwich Lunch

Second session at 14:00: Themes: industrial applications, foamed panels, ceramics, high temperature, binders, composites, toxic and radioactive waste containment, applications in Art.

14:00: - Celine Boulet and Jutta Maaßen, Framatome GmbH, Germany: *Waste conditioning and treatment for nuclear waste*.

14:20: - Alex Neymark, Becq High-Performance Radiation Shielding Materials, USA: *Metakaolin-based Geopolymer as Filler Material for Dual Purpose Canisters (DPCs)*.

- 14:40 - Israa Alhameedawi, Mazaya university College, Iracq: *Investigation on Geopolymer Concrete Performance for High-Temperature Applications.*
- 15:00 – Jose Vitorio Emiliano and Sergio Graniero Echeverrigaray, National Univ. of Singapore, *Challenges and perspectives of graphene-geopolymer composites.*
- 15:20 – Liliya Dubyey, Technische Universität Darmstadt, Germany: *Role of carbon nanomaterials properties in improving geopolymers strength.*
- 15:40 – Trebla Research, Spain: *Developing geopolymer materials for the ceramic industry.*
- 15:55 – William Fiset, independent researcher, Canada: *Architecture / Masonry of the ancient sites in Peru (a field report).*

16:25: Coffee break

Wednesday, July 6, 2022

Fourth session at 9:00 - 13:15 11:00-11:30: Coffee break

Themes: building applications, eco-construction, LTGS, bricks, cements, concretes, CO2 mitigation, Global Warming.

- 9:00 – Baturalp Yalcinkaya, Milan Bouša, Petr Louda, Piotr Łoś, Katarzyna Buczkowska, Technical University of Liberec, Czech Republic: *Eco-Impact and Carbon Footprint of Geopolymers (Concrete vs. Geopolymer).*
- 9:15 - Lateef Assi, Mazaya university College, Iracq: *Review of availability of source materials for sustainable concrete.*
- 9:30 – Francesco Volpintesta, Università di Camerino, Italy: *Comparison between Geopolymer and Portland cements for Construction and Demolition Waste (CDW) upcycling.*
- 9:45 – Corbin Enz, Lorena Cifuentes, DBI, Denmark: *Upcycling construction and demolition waste into new building materials.*
- 10:00 – Aida Predam, Padrabrick, Ispahan, Iran: *Geopolymer Bricks from Waste Materials.*
- 10:15 – Mouhamadou Amar and Ali Alloul, IMT Nord Europe, France: *High performance geopolymer mortar using waste products and calcined clays.*

Focused Session: 3D printing of Geopolymer concrete

- 10:30 - William Hoff, Geopolymer International, USA: a recorded 16 min. video on the *3D printing presentation at the World of Concrete 2022 exhibition, Las Vegas, USA.*
- 10:50 – Marina Dudnikova, Andrey Dudnikov, RENCA Inc., Russia, Alex Reggiani, Italy: *Renca 3D Printing Factory – the world's first industrial 3D printing with geopolymer concrete.*

11:10-11:30: Coffee break

- 11:30 – Willy Jin, Navier Laboratory, École des Ponts ParisTech, France: *Design strategy of a geopolymer-based mortar for sustainable 3D printing.*
- 11:50 – Patrick Sonnleitner and Bruno Knychalla, Additive Tectonics GmbH, Germany: *Geopolymers for the novel additive-manufacturing-method “SCA” .*
- 12:00 – Nicolò Verardi, ReHouseit SRL, Italy: *Ferrosialate geopolymer binder and 3D printing.*

Other Papers:

- 12:20– Jean Claude GRESS Ingénieur Civil des Ponts et Chaussées, France: *Use of Geopolymer techniques for Public Works.*
- 12:40 – Simon de Weerd, SeahorseHummingbird Productions, Canada: A sunlit, south facing glass, Geopolymer concrete structure, within an enclosing solarium and garden.
- 13:00 – Nguyen Van Vu, Su Le Van, Artem Sharko, Petr Louda, Katarzyna Buczkowska - *Railway noise barriers made of environmentally friendly materials.*

13:15 - Free Sandwich Lunch – Groups – Discussions - 15:30 : End of GP-Camp 2021