

# Advancing Alkali-Activated Materials | DuRSAAM 2023 Symposium February 8-10, 2023 | Ghent, Belgium



Marie Curie Innovative Training Network

PhD Training Network on **Du**rable, **R**eliable and **S**ustainable Structures with Alkali-Activated Materials

## www.dursaam2023.eu

The DuRSAAM2023 Symposium "Advancing alkali-activated materials" focusses on new developments in all aspects of alkali-activated concrete, sometimes also referred to as geopolymer concrete. The programme is focussed on bringing stakeholders together along the triple helix academia – industry – government, to foster developments in circular concrete. To maximise interactions, the symposium is organized as a physical event, around 5 thematic tracks with keynote speakers, poster and oral presentations. You are invited at Ghent to join 3 days of exchanging knowledge, to jointly move the agenda for more circular concrete forward and to facilitate alkali-activated concrete more widely into practice.

– Stijn Matthys, Ghent University, symposium chair –

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### Track 1: Mix-design and microstructure

Mix design and rheology | microstructure & transport properties | microstructural modelling and reaction kinetics | (etc.)

Through understanding mix formulations, their reaction kinetics and time dependent microstructural development, value insights are gained into alkaliactivated materials, especially at paste or mortal level and in view of workability, mechanical performance and durability of alkali-activated concretes. Mix designs targeting a wide variability of precursors, including those from local urban mining, are of interest; as well as hybrid solutions combining Portland cement with alkaliactivated slags and ashes.

### Track 2: Durability performance

Carbonation, chloride ingress, rebar corrosion | freeze-thaw and other forms of concrete degradation | creep and shrinkage | fire | (etc.)

To scale up the use of alkali-activated concrete into practices, a good understanding of their durability performance is key. Grasping degradation of AAM concrete in relevant service environments and enhancement of durability, allows to explicitly design concrete products and structures for the required service life or may demonstrate equivalent performance with traditional concretes.

#### Track 3: Structural applications and behaviour

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Load bearing behaviour | long-term deformations | fibre reinforced concrete | precast concrete | repair and strengthening | (etc.)

Structural applications of AAM concrete refer to both new and existing structures. This looks into various forms of reinforcement and fabrication of alkali-activated load bearing concrete, in terms of structural behaviour and design..

#### Track 4: Service life and life cycle assessment

Service life modelling| life cycle assessment| life cycle costing | sustainability performance indicators | (etc.)

To apply alkali-activated concrete into the built environment, nowadays, it is important to underpin their sustainability performance in terms of achievable service life and life cycle performance.

#### **Track 5:** Industry perspective and application cases

Applications | demonstrators & cases | lessons learned by practitioners & governments | standardisation | policies | (etc.)

This last track focusses on application or demonstration examples and experiences by all stakeholders involved in the implementation of alkali-activated concrete, including standardisation efforts, tendering experiences, etc..

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## **IMPORTANT DATES**

Pre-registration of authors	August 27, 2022
Registration of authors	October 21, 2022
Extended abstract submission	October 28, 2022
Preliminary acceptance	November 11, 2022
Deadline early-bird registration	November 18, 2022
Notification of review feedback	December 16, 2022
Camera-ready manuscript	January 20, 2023

All contributors need to register and pay the fee after preliminary acceptance (11 November) in order to be included in the programme.

## **SUBMISSION TYPES**

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Linked to the symposium tracks:

Preferred option: <u>extended abstract + poster presentation</u> → poster session event with poster pitches, meet & greet at the posters and a poster competition

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Secondary option: <u>extended abstract + oral presentation</u> → talk during the presenter sessions

The DuRSAAM 2023 Symposium specifically choses not to have parallel sessions. As such, the organizing committee has the right to alter your submission type if required.

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## SYMPOSIUM LOCATION: Ghent Belgium



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## SYMPOSIUM VENUE: de Bijloke, Ghent

Ghent map

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"Despite being one of Belgium's oldest cities, Ghent remains small enough to feel cosy but big enough to be a vibrant, relevant centre for trade and culture." – Citation Lonely Planet

Photo by Esmurziyev

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## **ABOUT DuRSAAM**

DuRSAAM is a collaborative PhD framework creating a critical mass of experts skilled in innovative alkali-activated material (AAM) concrete, as a key enabling technology for a sustainable and resilient built environment. AAM technology presents a new generation of materials, ideally conceived to respond to the need for more efficient, durable, eco-friendly and reliable construction, and utilizing by-product resources as raw materials. Modern concrete targets low carbon footprint, lower energy consumption and reduced use of primary resources. In this respect, DuRSAAM answers unmet industry demands, to facilitate emerging AAM technology for continued market entry and to unlock its potential in society. The consortium brings together 7 academic (Ghent University, Technical University Delft, Karlsruhe Institute of Technology, University of Sheffield, University of Patras, University of Zagreb, ETH Zurich) and 15 non-academic partners, to excel in the scientific development and exploitation of AAM concrete. DuRSAAM runs from 2018 till 2023 and delivers world-leading training in this multidisciplinary field through 13 PhDs in interrelated aspects of AAM concrete, fibre reinforced high-performance concrete, and textile-reinforced mortar, as well as sustainability assessment. The DuRSAAM 2023 Symposium is the final event of this European Marie Curie Action.

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#### See you at DuRSAAM2023 in Ghent!

Please follow <u>www.dursaam2023.eu</u> for latest updates and further information Contact us at <u>symposium@dursaam2023.eu</u>

Photo by Mouton