3rd International Workshop on Calcium Sulfoaluminate Cements

Monday 23 – Wednesday 25 June 2025
University of Leeds, UK

PROGRAMME SUMMARY

(subject to change)

N.B. Only presenting authors and affiliations are shown, for full details please see the Book of Abstracts. Keynote lectures are 45 minutes (40 minutes talk + 5 minutes for questions). Oral presentations are 15 minutes (12 minutes talk + 3 minutes for questions). Flash presentations are 2 minutes (1-2 slides and no questions).

Monday 23 June

08:45-09.30	*Registration*	
09:30-12:00	RILEM TC CSA General Meeting (hybrid)	
12:00-13:00	*Lunch and registration*	
13:00-13:10	Welcome to the University of Leeds	**Carlo Prato** Head of School of Civil Engineering, University of Leeds, UK
13:10-13:20	Conference opening (and H&S)	**Theodore Hanein** Chairman, University of Leeds, UK
13:20-13:30	RILEM presentation	**Frank Winnefeld** Empa, Switzerland
	SESSION 1: RAW MATERIALS AND CLINKERING **Session Chair: Eric Bescher**	
13:30-14:15	**KEYNOTE: Fundamentals of CSA-based clinkers - thermodynamic aspects and process implications**	**Alexander Pisch** *CNRS France - Laboratoire SIMaP, France*
14:15-14:45	*Tea and posters*	
14:45-15:00	Recycling of Moroccan phosphogypsum and clay in the production of belite-calcium sulfoaluminate cement: mineralogical investigation	**Wafaa Borja** *Mohammed VI Polytechnic University, Morocco*
15:00-15:15	Suitability of alternative raw materials for calcium sulfoaluminate-belite cement: raw meal optimization and clinker characterization	**Bipina Thaivalappil** *Indian Institute of Technology Madras, India*
15:15-15:30	Ternary waste system optimization to produce CSA cement: phosphogypsum, waste water sludge and limestone rich waste rock	**Mohamed El Amal** *Mohammed VI Polytechnic University (UM6P), Morocco*
15:30-15:45	Phases compositions of calcium sulfoaluminate-belite clinkers made from coal ashes using a hydrothermal-calcination method	**Maneerat Thala** *Chiang Mai University, Thailand*
15:45-16:00	Production of belite-calcium sulfoaluminate cements from various waste materials to boost their environmentally friendly features	**Antonio Telesca** *Università degli Studi della Basilicata, Italy*
16:00-16:15	Pilot-scale production of low-cost belite-ye'elimite clinker using existing raw materials in Qatar	**Wahab Abdul** *Gulf Organization for Research and Development, Qatar*
16:15-16:30	Pilot-scale synthesis of belitic calcium sulfoaluminate cement using locally sourced materials in the UK	**Vaishnav Kumar Shenbagam** *University of Leeds, UK*
16:30-17:00	Flash poster presentations	
17:00-18:00	*Poster session and reception*	

Tuesday 24 June

	SESSION 2: HYDRATION AND CHARACTERISATION **Session Chair: Angeles De la Torre**	
09:00-09:45	**KEYNOTE: Hydration of CSA cements: exploring single phases to whole systems, from early to long-term reactions**	**Daniel Jansen** *Friedrich-Alexander Universität Erlangen-Nürnberg, Germany*
09:45-10:00	Characterisation of ye'elimite by SEM-EBSD-EDX	**Christiane Rößler** *Bauhas-University Wiemar, Germany*
10:00-10:15	Influence of w/c ratio on the hydration of CSA clinker with varying percentages of calcium sulfate	**David Torrens-Martin** *Universitat Politècnica de Catalunya-Barcelona TECH, Barcelona*
10:15-10:30	^{7}Li MAS NMR spectroscopy: An advanced tool to approach early hydration of CSA cements	**Geo Paul** *Università del Piemonte Orientale, Italy*
10:30-11:00	*Coffee and posters*	
11:00-11:15	Temperature-dependent phase assemblage and pore solution evolution during early hydration of belite-ye'elimite-ferrite cement	**Sabina Dolenec** *Slovenian National Building and Civil Engineering Institute, Slovenia*
11:15-11:30	CSA hydration mechanisms: the effect of w/c ratios on the hydration kinetics of silicious phases and the contribution of hydrates to mechanical strength	**Qiao Wang** *RWTH Aachen University, Germany*
11:30-11:45	Interaction of calcium sulfoaluminate belite cements with alkanolamine admixtures: Insights from hydration and structural build-up at early ages	**Tu-Nam Nguyen** *Georgia Tech, USA*
11:45-12:00	The influence of polycarboxylate ether (PCE) superplasticizers on the early ettringite formation in pure ye'elimite-calcium sulfate systems	**Jakob Schreiber** *GeoZentrum Nordbayern, Germany*
12:00-12:15	Early hydration reactions of calcium sulfoaluminate cement in water and alkaline media	**Luís Urbano Durlo Tambara** *Bundesanstalt für Materialforschung Undprüfung (BAM), Germany*
12:15-12:30	Effects of excess sulphate on the synthesis and hydration of belite-alite-ye'elimite cements	**Zhi Li** *Imperial College London, UK*
12:30-13:30	*Lunch and posters*	
	SESSION 3: PERFORMANCE AND DURABILITY **Session Chair: Vaishnav Kumar Shenbagam**	
13:30-14:15	**KEYNOTE: The role of risk in engineering: Lessons from the past applied to CSA cements**	**Cameron Murray** *University of Arkansas, USA*
14:15-14:30	Self-healing repair mortar based on calcium sulfoaluminate-expansive agent	**Berrabeh Safae** *INSA Rennes, France*
14:30-14:45	Hydration, microstructure, and mechanical performance of seawater-mixed CSA/OPC/SF blended cement systems	**Ye Li** *Harbin Institute of Technology, China*
14:45-15:00	Hydration and physical properties of BCSA mixtures with PLC, LC3 and alternative SCMs	**Visa Isteri** *CTS Cement Manufacturing Corporation, USA*
15:00-15:30	*Tea and posters*	
15:30-15:45	To develop low CO_2 binder system by ternary blend of CSA-blast furnace slag-MgO	**Ahmad Nawaz** *Shenzhen University, China*
15:45-16:00	Hydration of calcium sulfoaluminate cement in the presence of carbonated supplementary cementitious materials	**Frank Winnefeld** *Empa, Laboratory for Concrete and Asphalt, Switzerland*
16:00-16:15	Sustainable rapid setting concrete with desert sand and recycled aggregates	**Padmaja Krishnan** *New York University Abu Dhabi, UAE*
16:15-16:30	Effects of steel fibres on the performance of BCSA mortars cured at different temperatures	**Jack Ambrose** *University of Sheffield, UK*
16:30-17:00	*Group photo*	
17:00 onwards	*BBQ (off campus at Weeetwood Hall Estate)*	

Wednesday 25 June

	SESSION 4: PERFORMANCE AND DURABILITY cont. **Session Chair: Frank Winnefeld**	
09:00-09:15	Physical and microstructural characteristics of BCSA cement concrete in service in the field for 30 years.	**Eric Bescher** *University of California Los Angeles, USA*
09:15-09:30	Time dependence of chloride transport properties and corrosion resistance in BCSA cement composites	**Robert J. Thomas** *Clarkson University, USA*
09:30-09:45	Role of pore structure on resistance to physical crystallization damage of calcium sulfoaluminate (CSA) cement blends	**Lisa Burris** *The Ohio State University, USA*
09:45-10:00	Evaluating the performance of calcium aluminate and calcium sulfoaluminate cement mortars incorporating fly ash and limestone powder	**Tijani Mohammed** *Bureau of Mining Regulation and Reclamation, USA*
10:00-10:15	Evaluating early-age properties and volume change in polymer modified belitic calcium sulfoaluminate (BCSA) cements: field and lab testing	**Daniel D. Akerele** *University of Washington, USA*
10:15-10:45	*Coffee and posters*	
	SESSION 5: APPLICATIONS AND LIFE CYCLE **Session Chair: Lisa Burris**	
10:45-11:30	**KEYNOTE: Green by design: a critical examination of CSA cement's environmental footprint**	**Jose-Luis Galvez-Martos** *Tecnalia Research and Innovation, Spain*
11:30-11:45	Digital concrete application with CSA cement	**Fulvio Canonico** *Buzzi SpA, Italy*
11:45-12:00	Design, construction, and early-age response of high early strength, low-embodied CO2 full-sized concrete slabs	**Fabian Paniagua** *CTS Cement Manufacturing Corporation, USA*
12:00-12:15	Mineral foams with CSA cement as binder material	**Lukas Koch** *MBCC Investments GmbH, Germany*
12:15-12:30	Innovative lightweight and sustainable composite material for building applications	**Corradino Sposato** *Trisaia Research Centre, Italy*
12:30-12:45	Calcium sulfoaluminate cement: a promising binder for the stabilization and solidification of beryllium waste	**Celine Cau Dit Coumes** *Université de Montpellier, France*
12:45-13:00	*Prizes and close*	
13:00-14:00	*Lunch*	
14:00 onwards	*Free time*	