

From Data to Net Zero

AI-Driven Innovation for a
Sustainable Saudi Cement Sector

Save the Date

07 – 09 September 2026 · B19 · KAUST

<https://fci-sa.org>



National Committee
Cement Companies

جامعة الملك عبد الله
للعلوم والتقنية
King Abdullah University of
Science and Technology



وزارة الصناعة
والثروة المعدنية
Ministry of Industry and Mineral Resources



وزارة الطاقة
MINISTRY OF ENERGY

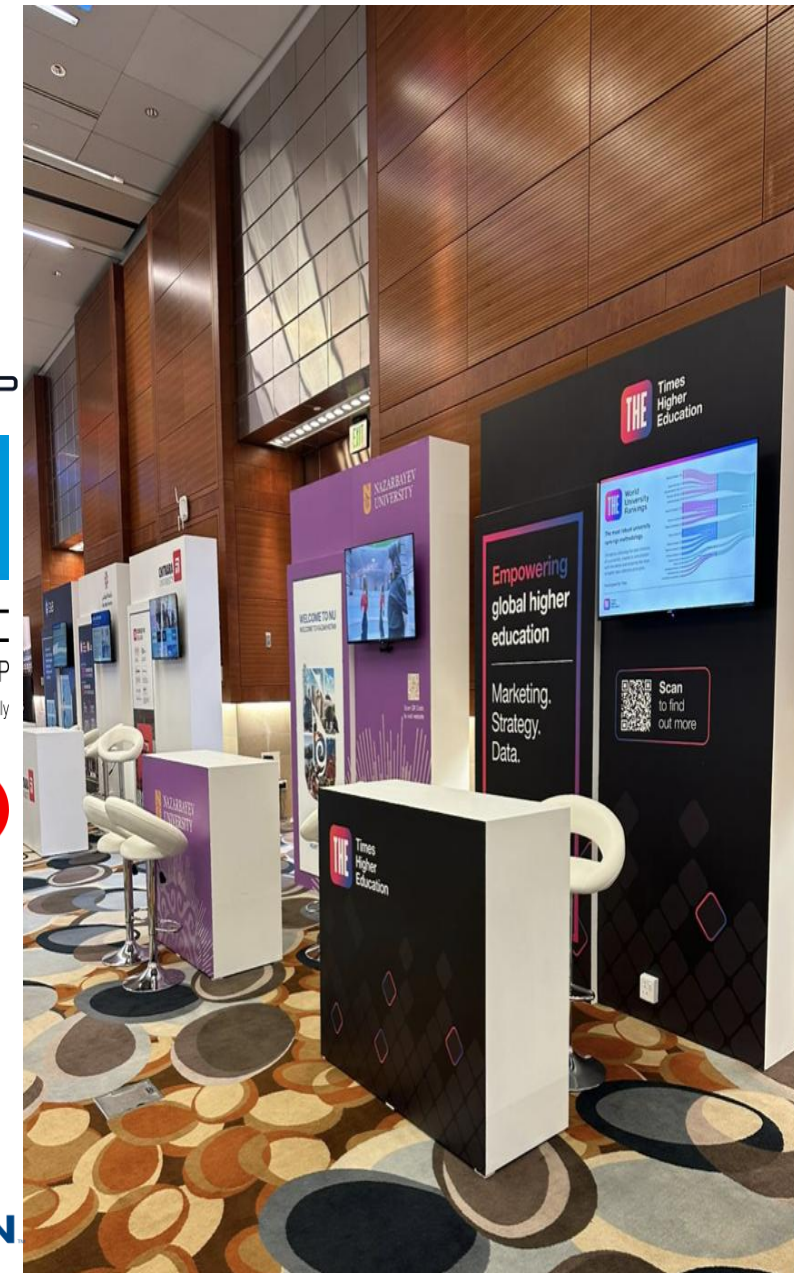


The second time, the sector shows up at full strength.



FCI's inaugural workshop in 2025 convened the Saudi cement industry alongside KAUST leadership, ministry representatives, and global producers. That was the founding gathering. FCI 2nd Conference is where the roadmap becomes execution.

Participating Companies



Conference Overview

Three days, one deliberate arc.

The agenda is engineered to move participants from foundations to case evidence to policy commitment, in that order. Miss one day and the arc breaks.

Day One • 07 Sep **Capability Building**

AI, Statistics & Machine Learning Masterclass

A structured, hands-on training day. Statistics fundamentals, ML foundations, supervised and unsupervised learning, neural networks. Grounded in real cement plant data. Led by KAUST, A³&Co., and Optimitive.

Audience:

- Vibrations Engineers, Quality Engineers, Process Engineers, Kiln Operators, Mill operators, Planning engineers, Finance, Supply chain, Operational excellence, Automation & IT

Day Two • 08 Sep **Applied Case Studies**

Use Cases & AI Solutions Across the Value Chain

Global and regional cement ecosystem, technology suppliers, plant operators. Documented outcomes. From pyroprocess to logistics to safety AI. Sinoma CDI, HOLCIM, GORD, KAUST, Axians, Optimitive, GORD, AKXATECH, and more.

Audience:

- Managers, engineers

Day Three • 09 Sep **Strategic Dialogue**

CEOs & Policy Makers Roundtables

The level where industry transformation is decided. Ministry of Industry, NCCC, GCCA, KAUST, and Saudi cement CEOs on the national decarbonisation roadmap. Culminates in the GCCA EPD signing ceremony and FCI Award.

Audience: CEOs, ministry, policy leads

The FCI Award for Best Saudi Cement Plant.

Presented on Day 3. Four categories recognise verified operational performance across the cement sector.

Award 01

Best in class

Specific Heat Consumption

Lowest verified kcal per kg clinker across the Saudi cement sector, indicating pyroprocess efficiency and thermal energy management.



Awarded to
*To be announced
on Day 3*

Award 02

Best in class

Specific Power Consumption

Lowest verified kWh per tonne cement across the Saudi cement sector, indicating grinding efficiency and electrical energy management.



Awarded to
*To be announced
on Day 3*

Award 03

Best in class

Alternative Fuel Award

highest Annual TSR % among the Saudi cement plants



Awarded to
*To be announced
on Day 3*

Award 04

Best in class

Blended Cement Sales Portfolio

Highest share of blended and low-clinker cement in the annual sales mix, indicating leadership on clinker factor reduction and SCM adoption.



Awarded to
*To be announced
on Day 3*

Conference Agenda

Day One

01

07 Sep 2026

Capability Building

AI, Statistics & Machine Learning Masterclass

Applied capability building for cement plant practitioners. Structured training grounded in industrial data, real plant scenarios, and challenges Saudi cement engineers encounter daily. Not a theoretical introduction.

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Morning Session 08:30 – 12:00

Statistics & Machine Learning

Prof. Naeemullah Khan

- 08:30 · Basics of Statistics
- 08:50 · Foundations of Machine Learning
- 09:10 · Supervised Learning: Regression
- 09:30 · Supervised Learning: Classification
- 10:00 · Refreshment & Networking Break
- 10:30 · Model Evaluation & Generalisation
- 10:50 · Unsupervised: Clustering
- 11:10 · Unsupervised: PCA
- 12:00 · Neural Networks

Afternoon Session I 13:30 – 15:00

Digitalization Autonomy

Amr Nader

- 13:30 · Autonomy blueprint
- 13:50 · Physical plant to digital twin
- 14:10 · Capstone: high free lime
- 14:30 · Cooler inlet diagnostic blueprint
- 14:50 · Future Plant Excellence roadmap
- 15:00 · Refreshment & Networking Break

Afternoon Session II 15:30 – 17:00

AI Process Optimizer

Javier García

- 15:30 · Intro to APC & RTO
- 15:40 · Optimisation in APC/RTO
- 16:00 · Closed-Loop AI (OCLAI)
- 16:20 · OCLAI in the value chain
- 16:30 · Supervised vs Reinforcement
- 16:40 · OCLAI cement case studies
- 16:50 · Achievable results in production

Afternoon Session II 15:30 – 17:00

Online Vibrations analysis

Holger Terhaar

- 15:30 · Monitoring mechanical equipment
- 15:45 · AI Analytics, and Early Warning
- 16:30 · Customized CM Strategy
- 16:45 Business Case for Condition Monitoring

Conference Agenda

Day Two

02

08 Sep 2026

Applied Case Studies

Use Cases & AI Solutions Across the Cement manufacturing Value Chain

Global and regional ecosystem: technology suppliers, equipment providers, service companies, academics, and plant operators. Focused presentations on real implementations, documented outcomes, and emerging solutions.

Morning • 08:30 – 12:00

08:30	Sinoma's Digital Playbook	Liu Min • Sinoma
08:45	Data-Driven Pyroprocess Optimisation	Alper Yildirim • Innomatics
09:00	AI/Advanced Process control	Mohamed Barakat • ABB
09:15	Process Optimisation with intelligent tech	Dirk Schmidt • DE-VELOP
09:30	HOLCIM Sokhna plant Lighthouse	Ramy Mostafa • HOLCIM
09:45	AI in process optimisation	Scott Ziegler • CemAI
10:00	Refreshment & Networking Break	
10:30	Process intelligence platforms	Vaideesh Narayanan. Optiverse
10:45	Safety monitoring using AI	Spencer Buchanan • Mizalah MTC
11:00	Thermal activation of kaolinite clays	Dr. Abdullah Alshahrani. Najran
11:15	Resilient Cement Plants: Strategic Roadmap	Fouad Kammoun • Thyssenkrupp
11:30	Customized Strategies for Condition Monitoring	Holger Terhaar • Flender GmbH
11:45	Yamama Cement excellence case	Meshal Alqahtani • Yamama Cement

Afternoon • 13:30 – 17:00

13:30	How AI Is Enhancing Cement Plant Optimization	Javier Garcia • Optimitive
13:45	Smart plant construction methodology	Tong Rui • TCDRI
14:00	Maximizing alternative fuel flexibility	Wolfgang Hammer • ATEC
14:15	Downstream Silo Visibility → Loyalty	Francisco Iglesias • SiloConnect
14:30	Cement Plant Logistics Optimisation	Holger Suess • Axians
14:45	CEMENTO-AI: Real-time clinker quality	Dr. Wahab Abdul. GORD
15:00	Refreshment & Networking Break	
15:30	Digitalisation & AI-ML for Process Monitoring	Amit Agarwal • AKXATECH
15:45	Digital SOP Platform for Cement Operations	Samer Al-Zamer • SMART
16:00	Spares description standardisation	Mohammad Alfawaer
16:15	AGI in the Physical World	Kristine Mo • AI ² Robotics

Conference Agenda

Day Three

03

09 Sep 2026

Strategic Dialogue

CEOs, Ministry & Policy Makers Roundtables

The level where industry transformation is actually decided. Senior executives from Saudi cement companies, the Ministry of Industry, and national policy makers convene for facilitated high-level panels.

Opening · 08:30 – 09:30

Welcome addresses & sector outlook

08:30	Welcome address . KAUST	Sir Edward Byrne · KAUST
08:40	Welcome address . Ministry	Eng. Turki Al-Babtain · MIM
08:50	Saudi cement sector outlook	Majed Osailan · NCCC
09:00	FCI Progress Report & Objectives	Prof. Bassam Dally · KAUST
9:10	EPD Plans for Saudi cement sector	Mohamed Zayed · KAUST
9:20	EPD Tool signing ceremony	Eng. Turki Al-Babtain, Sir Edward, Thomas
9:30	FCI Award ceremony	Eng. Turki Al-Babtain, Sir Edward, Winners
9:50	Group Photo	Eng. Turki Al-Babtain, Sir Edward, Audience

Session 1

10:00 – 11:00

Saudi cement sector Decarbonization Roadmap

10:00 GCCA Decarbonization roadmap

Thomas Guillot · GCCA

Panel Roster (10:20 – 11:00)

Moderator

Prof. Bassam Dally
KAUST



Cement Plants

Abdulsalam Aldraibi
SPCC CEO



Ministry

Mosleh Al Emrani
MIM



Global Association

Thomas Guillot
GCCA CEO



Green Buildings

Yazeed Abusabir
Mostadam



11:00 : 11:30

Refreshment & Networking Break



Session 2 AI Adaptation & Operations Excellence

11:30 – 12:30

11:30 Interpretable Physics Twin (fault detection)

Prof. Shehab Ahmed · KAUST

11:40 AI in process optimisation

Dr. Mohamed Foad · Riyadh Cement

11:50 Panel discussion

Panel Roster (11:50 – 12:30)

Moderator
Dr. Mohamed Foad
Riyadh Cement



Scott Ziegler
CEMAI



Oliver Kanders
ALCEMY

Shoel Al Ayed
Riyadh Cement CEO



Prof. Shehab Ahmed
KAUST



Amr Nader
A3&CO



12:30 – 15:00

Lunch & Exhibition – Laboratory Tour – Arab Scholars Museum Visit

Session 3 Decarbonization enablers

15:00 – 16:00

15:00 HOLCIM decarbonisation journey

Mohamed Gouda · HOLCIM

15:10 RDF preparation and handling

Boris Sassenrath · Fuel Technology

15:20 Panel discussion

Panel Roster (15:20 – 16:00)

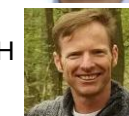
Moderator
Kiran Badkar
Najran Cement



Muhammad Nasir
KAUST



Boris Sassenrath
Fuel-Technology GmbH



Majed Osailan
City Cement CEO



Global Producer
Mohamed Gouda
HOLCIM



Session 4

16:00 – 16:30

Saudi Cement CEOs Roundtable & Closing



Prof. Bassam Dally



Majed Osailan



Shoel Al Ayed



Mohamad Al Matrafi



Aly Al Ayed



Abdulkader Shoikan

Saudi Cement Companies



Conference Team



Mohamed Zayed



Siham Hannou



Amani Basagur



Muhammad Nasir, PhD



Chiara Canciani, PhD