

CONEXPO-CON/AGG Tech Talks presented by AEM and CONEXPO-CON/AGG 2020

CONEXPO-CON/AGG 2020 and the Association of Equipment Manufacturers (AEM) brought information on the latest up-and-coming technologies for the construction industry to bauma CONEXPO AFRICA 2018.

Visitors had the chance to learn about changes coming to our industry when listening to eight dynamic, recorded Tech Talk sessions from the Tech Experience at CONEXPO-CON/AGG 2017.

Disruption in Additive Manufacturing – Project AME

Lonnie Love, Ph.D. Corporate Fellow and Group Leader

Oak Ridge National Laboratory

- With industry partners and university students, ORNL researchers are designing and producing the world's first 3D printed excavator, a prototype that will leverage large-scale AM technologies and explore the feasibility of printing with metal alloys.
 - Increasing the size and speed of metal-based 3D printing techniques, using low-cost alloys like steel and aluminum, could create new industrial applications for additive manufacturing
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Horizontal Directional Drilling

Corey Mass, Underground Solutions Applications Engineer

Vermeer Corporation

- Learn what trends and regulations influence the industry to adopt new technologies.
 - Learn what new technologies can be applied and how they may impact the workflow in a cost-saving manner.
 - Learn how specific, real-life HDD contractor(s) successfully applied such technologies and what benefits they experienced via measurable results and testimonials.
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Measure twice, cut once. Kiewit's winning Technology Strategy

Jake Macholtz, CEO

InEight

- Don't let technology lead you astray. Improve business practices focusing the latest innovations on key fundamentals.
 - Win jobs at the right price and execute projects with the highest quality at the lowest cost
 - Precisely manage resources by optimizing practices
 - Create a data-driven organization
 - Improve forecasting using quantities as the common denominator
 - Standardize cost codes for consistent reporting and benchmarking
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Extra Deep Cut-Off Dams

Federico Pagliacci, Vice President of Development

Soilmec

- Where we were, we are and will be... the most advanced technology in the field of deep foundations and restoration of existing dams
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Smart Environmental Responsive Materials: Living Concrete

Henk Jonkers, Researcher

Delft University of Technology

- Shares research that focuses on creating the right conditions for the bacteria to produce as much calcite as possible and on optimizing the distribution of food for the bacteria.
 - Reviews the self-healing ability of bacterial concrete and how this is affected by the various deterioration mechanisms involved, such as sulfate attacks or temperature fluctuations.
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Sustainable & Resilient Infrastructure Technologies

Marwa Hassan, Director, Regional

University Transportation Center Tran-SET Louisiana State University

- Our infrastructure is crumbling. Drastic measures need to be taken to repair, maintain and enhance our infrastructure to support our economic growth. This talk will present three emerging technologies that can enhance, the durability, sustainability and resilience of our infrastructure, namely, photocatalytic pavements capable of purifying our outdoor air quality problems, self-healing concrete pavements using microencapsulation of low cost chemical compounds and self-rejuvenating asphalt pavements capable of reversing the natural aging of asphalt concrete. It will also give an overview of a methodology that can be used to quantify sustainability of our new pavement technologies.
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Robots on the Construction Site

Robert Messina, Senior Vice President, Engineering & Technology, Chief Technology Officer

JLG

- Discussion about use of robots use on construction sites and communicate to various companies developing systems and equipment to automate and apply robots to construction tasks. The technology to allow those tasks to be completed at height or in difficult to access locations exists.
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BIM – What Everyone Should Know

Josh Bone, BIM Services Manager

JB Knowledge

- Josh Bone, BIM/VDC Specialist with over a decade worth of experience, will break down the "need to know" aspects of BIM in the construction space. Josh will review what Building Information Modeling/Management is, what programs are available for 3D modeling and how you can start implementing it into your business model. 4D BIM for scheduling and planning, the importance of technology implementation and how changes can be made within a model before mistakes are made in the field.
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