3D Printing Technology to Take Center Stage at SmartMTX in Red Deer, Alberta

Apr. 4-5, 2023, industry leaders will showcase their innovative technologies & applications for structural 3D printing at SmartMTX in Red Deer, Alberta.

RED DEER, ALBERTA, CANADA, January 18, 2023 /EINPresswire.com/ -- Western Canada's newest platform for exploring the opportunities that fuel smart manufacturing growth and innovation, SmartMTX, will be held April 4-5, 2023, at Parkland Pavilion, Westerner Park, in Red Deer, Alberta. The exhibition will feature over 40,000 square feet of exhibitions, industry talks, discussion panels, and an on-site concrete 3D Printing Demonstration.

One of the many highlights of the SmartMTX will be real-time demonstrations of innovative 3D printing technologies and applications for structural construction. The demonstrations will include companies who are changing the landscape of the construction industry by integrating natural construction materials with 3D printing. Demonstration contributors will include 3D Space Terraform, 3D Printed Homes Corporation, Green Violin, and StrongPrint3D.

The potential impact of technology advancements will also be on display during the SmartMTX as these innovative companies demonstrate how by using 3D printing technology, a highly durable Accessible Public Washroom prototype can be printed in one day, or even half a day. The prototype will be outfitted with the interior components to demonstrate how quickly these units can become functional. This is an exciting opportunity to showcase the potential of 3D concrete manufacturing and how this technology could be applied as a solution to societal challenges such as affordable housing and housing affordability.

“Canada faces two closely related housing crises, a shortage of Affordable Housing and a frightening loss of Housing Affordability. The first phrase, Affordable Housing describes housing for which some portion of the occupancy cost is subsidized. The second phrase, Housing Affordability refers to the ratio of a region’s median income to that region’s median house price, whether rental or purchase,” says Ed Macnab, Chief Executive Officer, 3DPHC - 3D Printed Homes Corporation.

"There is more to this technology than just printing," Yasushi Ohki, Executive Director with Green Violin explains. "Regular cement has a lot of water in it and is susceptible to the freeze-thaw events we experience in the north, as well as to fire. In a fire the water boils and explodes the concrete, freeze thaw expands and forces further cracking of the concrete. Concrete is not climate resilient, but the sustainable material that we are using in our narrative, geopolymer seems to be, that is where the whole cutting-edge portion of 3D printed concrete houses comes in." Yasushi further details that 3D Printed concrete with geopolymer shells can be repurposed for housing or alternative shelter needs. This is important because the extended durability of the technology means it could last for up to 1000 years. The printing technology also enables unique prints to be as cost effective as mass-produced structures; so unique cultural or community aspects can be integrated into the design.

"3D printing offers vast untapped potential for Western Canada's manufacturing sector. The application of these technologies is potentially game changing," says event organizer and Manufacturing and Export Enhancement (MEE) Cluster, Executive Director, Peter Krzesinski. Adding, "implementing 3D printing technologies can seem intimidating to small and mid-sized manufacturers. Our hope is that by bringing together solution providers, support organisations, and manufactures we can demonstrate the vast potential of this technology and the supports available to those who are interested in its implementation."

Construction printing isn't limited to cementitious materials either. 3D Space Terraform (3DST) Inc explores construction printing solutions based on the materials (biomaterials) around us, sourcing on-site natural soils and combining them with local agricultural 'waste' products like hemp fibers. "Our goal at 3DST is to explore and reconfigure natural soils for construction printing applications using advanced natural building science and engineering to provide community-appropriate housing solutions.

We have been printing with multiple materials towards this end, from local clay combinations to hempcrete and various natural (clay-based) geopolymers - a continuation of our work in natural building and long experience in 3D printing," Christina Goodvin, CEO of 3D Space Terraform explains. "Whether we print a small cottage, greenhouse, or array of garden beds, we will focus on health, safety, form and function, and accessibility."

SmartMTX will serve as an opportunity for manufacturers to identify local resources to support their business's growth and learn about smart manufacturing technologies. SmartMTX is free to attend, but registration in advance is required and can be completed at www.smartmtx.ca/attend.

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