



ASTM INTERNATIONAL
Additive Manufacturing Center of Excellence

Specialty Workshop Series

Reshaping the Building and Construction
Landscape with Additive Manufacturing

April 14, 2020 | Renaissance Downtown Hotel, Dubai



ASTM INTERNATIONAL
UAE CHAPTER

www.astmuae.org

Register today! www.amcoe.org/dubai

The ASTM International United Arab Emirates Chapter provides a forum for technical experts and others to network and to participate in standards-related activities. The three primary goals are to strengthen the involvement of UAE technical experts in standards-related activities and events to help meet the region's needs; to share information on the UAE's and the Gulf's societal needs and emerging trends so ASTM can develop solutions; and to provide a direct link between the UAE and ASTM International. www.astmuae.org

To further an environment for UAE technical experts and ASTM International to partner and address emerging trends in construction, sustainability, energy efficiency, green building and more, the ASTM International Additive Manufacturing Center of Excellence is conducting a Specialty Workshop on Reshaping the Building and Construction Landscape with Additive Manufacturing (AM) in conjunction with the ASTM International UAE Chapter.

AM advancements have led to increased adoption of these technologies in industries such as aerospace, healthcare, and automotive. In addition, case studies for AM in building and construction demonstrate its potential to revolutionize this industry. These benefits include:

- Reduced lead times, cost, and labor;
- On-site construction and automation; and
- The opportunity to build beyond the Earth.

The use of AM for building and construction has great potential. However, published data and a greater understanding of AM in the industry are needed. Also needed are internationally recognized standards for AM construction methods, materials, and processes to further its adoption in building codes and its use by industry.

Why attend this workshop?

This workshop will bring stakeholders and experts together to present their views and thoughts on accelerating AM adoption for building and construction. One workshop goal is a roadmap that captures challenges, gaps, applications, opportunities, and trends from stakeholders in government, industry, and academia. The roadmap will facilitate standards and policy development as well as technology resource planning.

Who should attend?

This workshop is open to all building and construction industry professionals who are interested in exploring how AM technology can advance the industry through innovation and standardization. This workshop will provide a forum for you to share your thoughts and concerns, gain insights, propose solutions, and engage in meaningful discussions with technology leaders.

Theme	Fundamentals	Benefits
Additive Manufacturing Construction	<ul style="list-style-type: none"> - Materials - Process - Technology 	<ul style="list-style-type: none"> - Reduced labor, lead times, costs - On-site construction - Construction beyond Earth

Topics include, but not limited to:

- AM applications in construction
- Materials development
- Building architecture and design
- Construction horticulture
- Robotics in AM construction
- Types of AM technologies for building and construction
- AM technology process challenges
- Testing, inspection, qualification, and certification
- AM construction beyond Earth

For more information, contact workshop chairs:

Alexander Liu
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Professor Tan Ming Jen
Nanyang Technological University Singapore
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Professor Rashid K. Abu Al-Rub
Khalifa University
(rashid.abualrub@ku.ac.ae)



Morning Session

Chair: Professor Rashid

- 8:00 a.m.** Arrival/Registration
- 8:30 a.m.** Opening Remarks/Announcements
Mohsen Seifi
ASTM International
- 8:50 a.m.** Welcoming Remarks
Rashid Bin Fahad
ASTM UAE Chapter President

Khala Khalaf
ESMA Head of Standards Development

Shakir Farsakh
Principal Commercial Officer at the Embassy
- 9:00 a.m.** Industry Challenges for 3D Printing in Construction
Khaled Awad
CEO of Advanced Construction Technology Services, Past President of American Concrete Institute
- 9:20 a.m.** Talk 2
- 9:40 a.m.** Accelerating safe and reliable adoption of AM in Building & Construction
Mr. Nisar
Tuv Sud
- 10:00 a.m.** Break
- 10:30 a.m.** 3D Concrete Printing in Construction
Luai Kurdi
Besix 3D
- 10:50 a.m.** Smart Additive Manufacturing & Robotics in Building I& Construction
Willy Ng
Hamilton Labs
- 11:10 a.m.** 3D Concrete Printing – Sustainability Perspective
Edouard Baaklini
3D VinciCreations
- 11:30 a.m.** Panel Discussion: The Future of AM Construction
Willy Ng
Hamilton Labs

Matthew Carli
Lactcrete

Jakob
COBOD

Edouard
3D Vinci Creations

Afternoon Session

Chair: Tan Ming Jen

- 1:30 p.m.** 3D Printing, the Trojan horse forcing the digitalization of construction
Matthew Carli
Lactcrete
- 1:50 p.m.** 3D Printed Building Construction – Evaluating this Cutting Edge Construction Method
Ghaith Bakir
UL
- 2:10 p.m.** Industry challenges for 3D printing in construction
Jakob Jørgensen
COBOD
- 2:30 p.m.** Talk 10
Professor Theo Salet
TU Eindhoven University
- 3:30 p.m.** Additive Manufacturing in Construction - Driving Innovation in Parallel with Regulations
Sam Ruben
Mighty Buildings, Inc.
- 3:50 p.m.** Talk 12
Dr. Bashar El-Khasawneh
Khalifa University
- 4:10 p.m.** Panel Discussion: What is Next (Near Term) for Additive Manufacturing Construction?

Professor Theo Salet
TUE

Mahendran
NAMIC

Prof Panda
IIT
- 4:40 p.m.** Closing Remarks
Alex Liu
ASTM International
- 5:00 p.m.** Workshop Adjourns
- 6:00 p.m.** Reception

UAE Registration Fees

	Early Registration (by 3/1/20)	Normal Registration (after 3/1/20)
Full-Time Students	\$150	\$200
Chapter/ASTM Members	\$250	\$300
Non-ASTM Members	\$350	\$400

Register Today! www.amcoe.org/events

For additional information amcoe@astm.org | www.astmuae.org

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