## *Project-Collaboration Highlights*

(Image: Google Gemini & SGTrains)

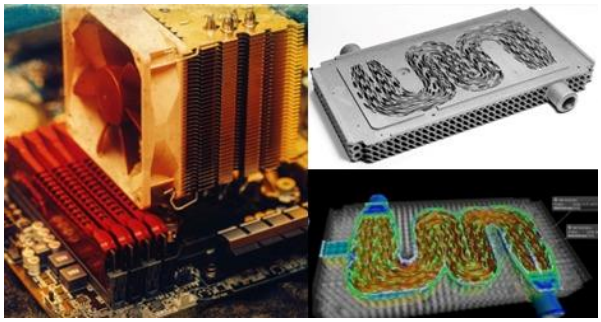
### Advancing Railway Monitoring in Singapore with Innovative Additive Manufacturing Solutions

In line with Singapore's Smart Nation initiative, our engineers are developing a first-of-its-kind condition-monitoring device for railway track points that utilises Design for Additive Manufacturing (DfAM). This innovative device aims to enhance safety by minimising the need for human intervention in addressing track point faults while also improving maintenance efficiency.

(Image: CNA, Amazon & Leon Paul USA)

### Elevate Your Game: Custom Sports Gear & Performance Optimisation

Our engineers collaborate closely with local athletes to utilise Additive Manufacturing (AM) in designing personalised fencing pistol grips tailored to each athlete's unique needs. This custom design prioritises comfort and improves grip capability. Additionally, the high-quality materials used in AM allow for the creation of a robust and lightweight pistol grip.



(Image: 123RF & nTop)

### Revolutionising Heat Exchangers: The Power of 3D Printing and Advanced Design

For a long time, traditional methods have been the go-to for making heat exchangers in industrial machinery. However, these old-school techniques come with limitations that can hold back performance because of design constraints. With Design for Additive Manufacturing (DfAM), our team can explore more complex structures that weren't possible before. This game-changing approach allows us to build heat exchangers that perform better and are more efficient.

(Image: Lawra Academy & K31)

### Transforming Medical Device Design: Advanced Ureteroscopes with Additive Manufacturing

A ureteroscope is a small, flexible tool that's used to remove kidney stones. It can break the stones into smaller pieces and then grab them with an extendable wire basket. The catch is that the shape of the basket can only handle stones that are more regular in shape. Thanks to Additive Manufacturing (AM) technology enables our engineers to create new designs of baskets that would work better for different types of kidney stones, no matter their shape.

## *Flashback*

## Highlights of MSPACO 3D Printing Challenge (Sustainability Interior Design)



### SIT Urban Railway Technology (URT-CET) 3D Printing 2024 Learning Trip to Local AM Service Bureau, ELH

Postgraduate students from the Urban Railway Technology course visited ELH Pte Ltd, one of the local AM service bureaus to see AM equipment up close and learn about various AM technologies and processes.

### IEEE-SIT Student Chapter 3D Printing Workshop 2024

The annual workshop, held in September, aimed to promote AM knowledge to students through hands-on experience at the 3D-printing lab in SIT@Dover.

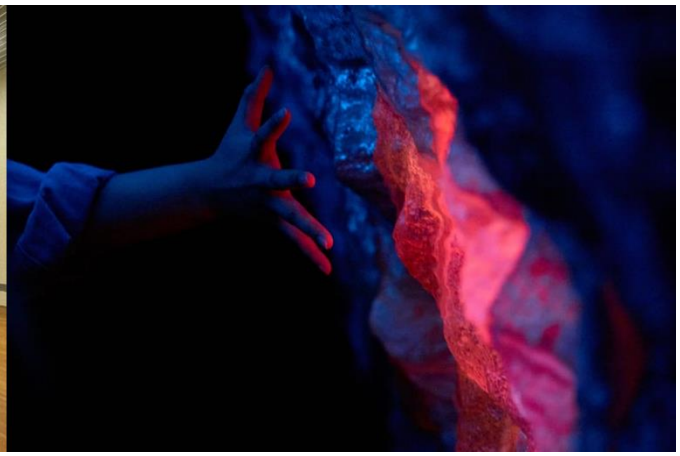


## AM Workshop in collaboration with Engineering Design & Solutioning Micro-credential

SIT is dedicated to fostering upskilling through continuous learning in the industry. The Competency-based Stackable Micro-credential (CSM) Pathways provides an excellent platform to address the industry's just-in-time skill demands and meet the needs of learners. In collaboration with the Engineering Design & Solutioning Micro-credential, engineers from NAMIC Hub@SIT conducted three specialised hands-on training sessions for students. These sessions covered the fundamentals of 3D Printing, Design for Additive Manufacturing (DfAM), and 3D Scanning to support their project work. Upon completing the Additive Manufacturing (AM) workshops, attendees received a certificate of participation from NAMIC.

## *Upcoming Events*

## Local



## Scarce City: An Interactive Art X Tech Experience

Experience Scarce City, an innovative blend of art, technology, and thought-provoking gameplay. Navigate a light-based resource game set in a 3D-printed world created from recycled plastic. NAMIC Hub@SIT is proud to be the AM technology partner for Scarce City, which will premiere at the National Gallery Singapore in January 2025. By combining serious games with immersive theatre, Scarce City aims to spark discussions about the psychology of climate change and the concept of sufficiency.

**Date:** 11 January – 30 March 2025
**Venue:** National Gallery Singapore

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## Overseas


### World Summit and Expo on 3D Printing and Additive Manufacturing

A premier global event, WSE-3DPAM brings together experts, enthusiasts, and industry leaders to explore the latest advancements and innovations in 3D printing and additive manufacturing. This annual gathering provides a unique platform to attend insightful keynote speeches, discover the latest emerging technologies, and, of course, network with like-minded individuals.

**Date:** 2 to 4 December 2024
**Venue:** Prague, Czech Republic

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### Advanced Manufacturing for Aerosp & Material

In partnership with ASTM International, the g standards organisation, Defence iQ returns wit annual conference on Advanced Manufacturin Aerospace and Materials. The two-day event more exciting opportunities to network, collab and share ideas with industry experts and end- from the aerospace sector.

**Date:** 26 to 27 February 2025
**Venue:** Mercure Bristol Grand Hotel, United Kingd

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### TCT Asia 2025

TCT Asia 2025 is a leading event focused on showcasing the latest 3D printing and additive manufacturing technology advancements. This year's event promises to be even more exciting, focusing on real-world applications, targeted intelligence, and a wide range of innovative products and services.

**Date:** 17 to 19 March 2025
**Venue:** NECC, Shanghai, China

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### NASA Lunar Recycle Challenge

With a total prize money of USD 3 million, the Lunar Recycle Challenge is a two-track, two-p global competition aimed at encouraging creativ innovative solutions for recycling waste on the M This initiative is crucial for NASA's goal of sustai long-term lunar missions, as reducing waste brou the Moon and returned to Earth is a major priority up now!

**Registration Deadline:** 31 March 2025

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