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**Agenda** 

Advancing the Indian Metal Additive Manufacturing Ecosystem

## Day 1 - Wednesday, 27th July 2022

### **Inaugural and Keynote Session**

| <u>Time</u>        | Speaker/Topic  |
|--------------------|--|
| 09:00 - 10:00 hrs  | Registration & Networking  |
| 10:00 - 10:05 hrs  | Welcome Address: Aditya Chandavarkar, Managing Editor, AM Chronicle                  |
| 10:05 - 10:25 hrs  | Inaugural Session  |
| 10:25 - 10:50 hrs  | Build a comprehensive ecosystem of additive manufacturing in India                   |
|                    | Keynote Address: Jaspreet Sidhu, CEO NCAM  |
| 10:50 - 11:15 hrs  | Opportunities for Metal Additive Manufacturing in Aerospace                          |
|                    | Keynote Address: Dr Kishora Shetty, Lead Engineer, Boeing India                      |
| 11:15 - 11:40 hrs  | Metal Additive Manufacturing in Space Programs                                       |
|                    | Keynote Address: Dr Anil, Scientist SF, VSSC, ISRO                                   |
| 11:40 - 12:05 hrs  | Keynote Address: Michel Pereme, Director Global Channel Business - Simufact, Hexagon |
| 12:05 - 13:05 hrs  | Roadmap to Scale Metal Additive Manufacturing in India -                             |
| 12.03 - 13.03 1113 | Industry Roundtable and launch of the Metal AM Industry Workgroup                    |
| 13:05 - 14:00 hrs  | Lunch  |

### Technical Session 1: Standards, Certification and Qualification | Session Chair: Dr Shirish Kale, GD - CEMILAC

| <u>Time</u>       | Speaker/ lopic  |
|-------------------|---|
| 14:00 - 14:25 hrs | Navigating the Global AM Standards Landscape  Dr Alex Liu, Head of AM Programs, ASTM International  |
| 14:25 - 14:50 hrs | Metal Additive Manufacturing Qualification and Airworthiness Certification for Aero – Applications<br>Dr Ram Prabhu, Scientist E, CEMILAC   |
| 14:50 - 15:15 hrs | Standards and certification requirements for strategic AM application Dr U Chandrasekar, Program Director, Wipro 3D   |
| 15:15 - 1540 hrs  | User Case Study   |
| 15:40 - 16:30 hrs | PANEL DISCUSSION: Standards, Qualification and Certification as enablers of Metal Additive Manufacturing in India Panel Moderator: Dr Rafi Khalid, Senior Lead, ASTM International Panelists: Dr Shirish Kale, GD CEMILAC   Dr U Chandrasekar, Wipro 3D Dr Dheepa Srinivasan, Pratt and Whitney |
| 16:30 - 17:00 hrs | Evening Tea   |
|                   |   |

### Technical Session 2: Modelling Simulation, DfAM, Pre-processing | Session Chair: Vaman Kulkarni

Speaker/Topic

Time

| <u> </u>          | Specific Action  |
|-------------------|--|
| 17:00 - 17:25 hrs | Modelling Simulation strategies for Metal Additive Manufacturing  Manjunath Adiga, Honeywell Aerospace   |
| 17:25 - 17:50 hrs | Design consideration for Energy Application  Mihir Patel, Additive Manufacturing Leader, Baker Hughes  |
| 17:50 - 18:15 hrs | XFEM simulation of Fatigue behaviour of AM fabricated Ti alloy  Dr Javaganthan, IIT Madras   |
| 18:15 - 19:00 hrs | PANEL DISCUSSION: First Time Right with Metal Additive Manufacturing Panel Moderator: Vaman Kulkarni   |
|                   | <u>Panelists:</u> Manjunath Adiga, Honeywell Aerospace   Dr Amaresh Chakrabarthy, IISc<br>Mihir Patel, Baker Hughes   Santhosh Nagaraju, Hexagon   Avinash Abhraham, Materialise                                     |
|                   | Millin Pater, Daker Hughes   Santhosh Nagaraju, Hexagon   Avinash Abhraham, Materianse   |
| 19:00 hrs onwards | Metal AM Users Networking Dinner Powered by Hexagon<br>Global insights on metal AM - Michel Pereme - Hexagon<br>Industry Chat - A candid discussion with industry leaders - Putting India on the Global Metal AM Map |
|                   |  |

**Time** 

**Agenda** 

Advancing the Indian Metal Additive Manufacturing Ecosystem

### Day 2 - Thursday, 28th July 2022

Technical Session 3: Materials for Additive Manufacturing | Session Chair: Dr Satyam Suwas, IISc Bengaluru

| 08:30 - 09:30 hrs<br>09:30 - 09:55 hrs | Networking and Tea  Review of Advancements in Metal AM Powders  Dr Dheepa Srinivasan, Pratt and Whitney   |
|--|---|
| 09:55 - 10:20 hrs                      | Metal Powders for Tooling Applications  Dr Shashi Kumar, Indo MIM   |
| 10:20 - 10:45 hrs                      | User Case Study   |
| 10:45 - 11:25 hrs                      | Future of Metal Additive Manufacturing Materials<br><u>Moderator:</u> Dr Dheepa Srinivasan<br><u>Panelists:</u> Dr Satyam Suwas, IISc Bengaluru   Dr Sasikumar, Indo MIM<br>Dr Priyanshu Bajaj, M4P |

Speaker/Topic

### Technical Session 4: AM Process, Technology and Applications | Session Chair: Dr C.P. Paul, RRCAT

| <u>Time</u>        | Speaker/Topic   |
|--------------------|---|
| 11:25 - 11:45 hrs  | Application Case Study - Space  |
| 11:45 - 12:05 hrs  | Srinath R, Agnikul Space  Application Case Study - Oil & Gas  |
| 12:05 - 12:25 hrs  | Rahul Wagh, Senior Engineering Manager, Innovation, Baker Hughes  Application Case Study - Aerospace/Aviation |
| 12.05 - 12.25 1113 | Arpit Sahu, Co-Founder, Objectify   |
| 12:25 - 12:50 hrs  | Application Case Study - Aviation Interiors Sreekanth Rao, Sr. Principal Engineer, Collins Aerospace          |
| 12:50 - 13:30 hrs  | PANEL DISCUSION: Driving demand for Metal AM in Industrial Applications  Panel Moderator: Dr C.P.Paul         |
|                    | Panelists: V.Narasaiah, Shell   Arpit Sahu, Co-Founder, Objectify   Rahul Wagh, Baker Hughes                  |
|                    | Sreekanth Rao, Collins Aerospace   Shripathi, Hexagon   |
| 13:30 - 14:10 hrs  | Lunch   |

### Technical Session 5: AM Process, Technology, Applications | Session Chair: Aditya Chandavarkar

| <u>Time</u>       | Speaker/Topic  |
|-------------------|--|
| 14:10 - 14:30 hrs | <b>Application Case Study - Medical 3D Printing</b> Dr Kaushik Chatterjee, IISc                        |
| 14:30 - 14:50 hrs | <b>Application Case Study - Medical Devices</b><br>Vishwanath Nayak, Principal Engineer, GE Healthcare |
| 14:50 - 15:10 hrs | Application Case Study - Medical 3D Printing Maltesh Somashekarappa                                    |
| 15:10 - 15:30 hrs | Summary and VoT  |
| 15:30 - 17:30 hrs | Networking and Tea   |

# Metal Additive Manufacturing Symposium 2022

Advancing the Indian Metal Additive Manufacturing Ecosystem

# **Keynote Session**







Dr Anil Kumar Scientist SF, VSSC ISRO

**Expert Speakers** 



**Dr Alex Liu**Head of AM Programs
ASTM International



Dr Ram Prabhu Scientist E CEMILAC



Dr U Chandrasekar Program Director Wipro 3D



**Dr Rafi Khalid** Senior Lead ASTM International



Dr Jayaganthan R.
Professor, Dept of Engg. Design



Dr Shirish Kale Group Director, CEMILAC, DRDO



Dr Dheepa Srinivasan Chief Engineer Pratt & Whitney



Manjunath Adiga Sr. Engineering Manager Honeywell Aerospace



Antony Paul
DGM & Hea
AM Centre of Excellence, L&T



Dr Satyam Suwas
Professor & Chair, Dept. of Materials



Vaman Kulkarni Industry Expert / Advisor Ex-Director, Honeywell Solutions



Dr Amaresh Chakrabarthy Senior Prof & Chairperson, CPDM, IISc Bengaluru



Ankit Sahu Co-Founder Objectify Technologies



Avinash Abhraham Regional Manager Materialise India



Prakasam Anand Country Head - India EOS GmbH



Dr C.P. Paul Head, Laser AM Lab RRCAT



Srinath R Co-Founder & CEO Agnikul Space



Rahul Wagh Senior Engineering Manager Baker Hughes



Arpit Sahu Co-Founder Objectify



**Sreekanth Rao** Sr. Principal Engineer Collins Aerospace



















# **Experts from**





































# Registration

Join MAMS 2022 and Connect with the entire Metal Additive Manufacturing Ecosystem at one place including Users, Software Providers, Technology and Material Manufacturers, Researchers, Policy Makers, and Standards/Certification/Qualification Bodies



**Click to Register**