

#### **3D GRAPHY ENGINEERING WORKSHOP 2022**

#### 3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY

3D GRAPHY is a platform for 3D Technology Training, Skill development, Education, Research, Technology consultancy and Service for Students and Professional across different Sectors. The sectors we are promoting the 3D technology is in Aerospace, Defence, Space Technology, Drones, Robots, Automotive, Marine, Shipbuilding, Oil & Gas, Dental, Medical and others. 3D Technology includes 3D Printing, 3D Imaging, 3D Scanning, 3D Design, 3D Software, 3D Simulation and 3D Visualisation .i.e. AR & VR is revolutionising all the Major Sectors. 3D GRAPHY WORKSHOP is a series of events conducted on various industries and sectors. The current event held on 17<sup>th</sup> March 2022 is on the topic, 3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY 2022 which will address the Automotive companies, OEM's, 3D Design, companies about 3D Printing and 3D Visualisation technologies. It is our 40<sup>th</sup> event and is a Virtual event Organised by TRINITY MEDIA & MARKETING SOLUTIONS. The company is promoting 3D Technology from India conducting Events for last 7 years. And due to pandemic all our events will be conducted through Virtual Conference & Exhibition to ensure knowledge, network and business continues with a real time experience close to an actual physical exhibition through our platform. The supported by all automotive companies and research associations. ARAI is our Industry Association Partner.

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Message from Dr.S Chandrasekar, Director, Roots Group of Companies, Coimbatore, India

Dear Industry Respondents,

First of all I would like to thank my friend Dr.Shibu John, Founder - 3D Printing World | 3D Graphy | AI World and a Host of other organizations, related to Additive Manufacturing, to have invited me to attend this august event.

My heartfelt greetings to Dr. Shibu John, organizer of this event, Dr. Nagahanumaiah, Director - Central Manufacturing Technology Institute, Bengaluru, the key note speaker for the day and every distinguished Resource Person for today's events. I wish to humbly convey my gratitude to Dr. Shibu Join to have chosen to bestow me as the Guest of Honor.

Additive manufacturing (AM), also known as 3D printing, is a transformative approach to industrial production that enables the creation of lighter, stronger parts and systems.

It is yet, another technological advancement made possible by the transition from analog to digital processes.

In recent decades, communications, imaging, architecture and engineering have all undergone their own digital revolutions. Now, AM can bring digital flexibility and efficiency to manufacturing operations. AM uses data (CAD) software or 3D object scanners to direct hardware to deposit material, layer upon layer, in precise

AM uses data (CAD) software or 3D object scanners to direct hardware to deposit material, layer upon layer, in precise geometric shapes.

As its name implies, AM adds material to create an object. By contrast, when you create an object by traditional means, it is often necessary to remove material through milling, machining, carving, shaping or other means. Although the terms "3D printing" and "rapid prototyping" are casually used to discuss additive manufacturing, each process is actually a subset of additive manufacturing.

While additive manufacturing seems new to many, it has actually been around for several decades. In the right applications, additive manufacturing delivers a perfect trifecta of improved performance, complex geometries and simplified fabrication.

As a result, opportunities abound for those who actively embrace additive manufacturing.

With the release of the Strategy by Ministry of Electronics & Information Technology, Innovation and R&D ecosystem will be encouraged in PPP mode to transform existing research knowledgebase to develop Additive Manufacturing grade materials, 3D printer machines and printed indigenous products for vast domestic and international market in various sectors including electronics, photonics, medical device, agro and food processing etc.

With this scenario in the background, there could not have been a better time to conduct this exclusive event titled 3D Graphy Engineering workshop 2022 - 3D Printing and 3D Visualization for Automotive Industry and about the topic 3D Technology – A game changer for Automotive Industry.

Wish all the specialists and resource persons and all the participants who are virtually attending this programme a great session and lots of takeaways at the end of the day.

Dr. S Chandrasekar, Director, Strategic Sourcing & Plant Engineering, Roots Group of Companies Coimbatore, Tamil Nadu, India, **B** 



Message from Dr. Shibu John, Founder, Trinity Media / Founder & MD, 3D GRAPHY LLP

Dear Respondents,

It gives me immense pleasure to share the potential of a Game Changing technology called 3D Printing. This is indeed a unique technology, which is benefiting almost all sectors. And since we are operating in a digital world a technology like this can only help change the dynamics of manufacturing to benefit all the end users. Automotive Sector is also benefiting a lot from this technology. 3D Printing is also called Additive manufacturing, Rapid Prototyping and **DIGITAL MANUFACTURING**.

How does this operate? In 3D printing, the first step is to make a virtual design of the desired object, and subsequently the virtual design is made in a CAD file by using a 3D scanner or by using a 3D modelling program with software. The next step is to get the 3D file to print it; the 3D modelling software in the 3D printer will "slice" the design into numerous layers, and uses the material to create the object layer by layer. It is a process of making 3D objects using plastic, metal, ceramic, wood, gold powder and composite materials, usually layer upon layer, to build physical models, prototypes, patterns, tooling components, and production parts. There is a great deal of R & D going into the various materials to ensure it can be used for various requirements. It is estimated that the global 3D printer market will grow at a **CAGR of 29.5%** during the period 2021-2026. This is inspite of pandemic.

**3D GRAPHY** is a platform for 3D Technology Training, Education, Research & Service for Students, Professionals and Technology experts. It has 3 divisions focussing on each specialisation and sectors – **3D GRAPHY DENTAL & MEDICAL**, **3D GRAPHY ENGINEERING** & **3D GRAPHY KIDS & SCHOOL. More details you can please find in our website** <u>WWW.3DGRAPHY.IN</u>

And the current event is conducted under **3D GRAPHY ENGINEERING**. Here is website link with details <u>https://engineering.3dgraphy.in/</u>

We have conducted 39 events in the last 7 years and this would be our 40<sup>th</sup> event the **3D GRAPHY ENGINEERING WORKSHOP** – **3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY** to be held on **17**<sup>th</sup> March 2022. It is a day workshop with speakers and delegates participating from 3D Printing, 3D Visualisation expertise and end users from Automotive companies, OEM's, Engineering Colleges with Students and Faculties joining to learn the potential of 3D Printing and its benefits. We will also have different 3D Printer machines, 3D Imaging Cos, 3D Software, 3D Design, 3D simulation and material companies share knowledge with the latest updates and projects.

We are happy to invite all the end users from different specialisation from Automotive industry for a good knowledge, networking and business opportunity. Here is the conference page with details of the event the virtual event for an experience <u>https://engineering.3dgraphy.in/workshop.html</u>

Due to pandemic even this event we are conducting virtually. But am sure it would have the same opportunities as the virtual event platform is very close to a physical event as we have dedicated meeting rooms, VIP Lounge, Lobby, experience centre and virtual exhibition booths for good interaction.

We welcome you all for the event.

Thanking You,

Dr. Shibu John Founder, Trinity Media & Marketing Solutions Founder & Managing Director, 3D GRAPHY LLP. Secretary General & Founder, 3D Printing Education & Research Association

#### Inauguration of 3D GRAPHY & 3DPERA Shri. Subhash Desai, Honorable Minister for Industries, Govt. of Maharashtra, India



### AGENDA

Trinity Media & Marketing Solutions (TMMS) jointly with 3DPERA is conducting 3D GRAPHY ENGINEERING WORKSHOP 2022 – 3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY event to be held on 17<sup>th</sup> March 2022. We will have lectures, panel discussion & Q & A to be conducted by professionals, scientists and researchers from 3D Printing , Automotive Companies, Auto Component manufacturing cos, material scientist who are experts in each specialization. We will also have 3D printing hardware, 3D Imaging, 3D Software, 3D Design, 3D Simulation, 3D Visualisation and Material companies also sharing the insights about the technology. So, there will be use cases shared by speakers with all the participants attending from the end users side. The event is supported by all Automotive Companies and research Associations. ARAI is our Industry Association Partner.

Due to the pandemic all our events for the past 2 year where conducted through Virtual Conferences and Exhibition for students and professionals to get the same opportunity for learning through our platform sitting at home or offices to have a live experience through their laptops. This will be a real time experience like an actual physical event since it is a license event software which is interactive. The intent is to have an active participation of students and professionals for Knowledge, Networking and Business. We have meeting rooms for students and professionals to interact directly with the speakers and others in VIP lounge and exhibition booths. The main title of the event is "3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY 2022



**3D GRAPHY ENGINEERING WORKSHOP 2022 – 3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY** will address all the 3D Printing innovative solutions with materials used in Automotive to meet the requirements.

The 3D printing technology has given rise to spectacular achievements in the automotive industry, starting from the possibility of fast prototyping, through a more and more widespread production of final car parts, and ending with 3D manufacturing of nearly the whole cars. And with the advent of more 3D printing machines with the choice of materials we shouldn't be surprised with a growing interest in 3D printing on the part of large concerns, such as Mitsubishi Chemical or BASF, which see a serious and profitable business in using FDM printing technology in the automotive sector.

The automotive sector has liked 3D printing and has been using its opportunities on a daily basis more and more often. 3D Designers and Automotive engineers open to innovation implement bold ideas with the use of the technology, thus, extending the pallet of engineering benefits and optimising the manufacturing processes.

3D printing technology in the automotive industry was used primarily for prototyping. But now things have changed as research reports shows that 3D printing is more and more often used in manufacturing the final car parts. The researchers expect that 3D printing market in Automotive sector will generate USD 9 billion revenue in the next 7-8 years. The leaders in using the additive technology to manufacture final car parts is Volkswagen, BMW and Ford.

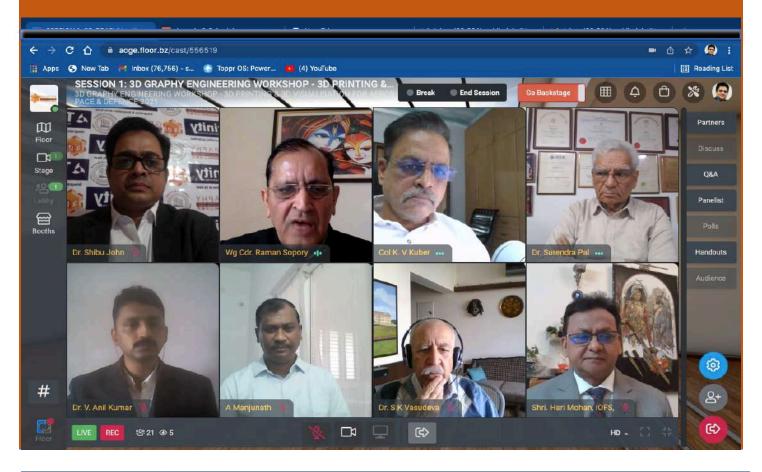
3D printing technology can be used effectively to produce custom automotive parts. With the help of 3D printing technology, many automotive parts can be customized as per customer preference might boost the performance/ experience of customers. In the case of vintage vehicles and luxury cars, many of the spares can be printed with 3D printing technology.

When producing complex parts and tools, 3D manufacturing has an advantage over conventional (numerical control based) manufacturing technology. 3D manufacturing can produce highly complex parts (turbochargers, gear shifters, water connectors for engines, brake caliper, etc.), which are hard to produce by conventional manufacturing technology.

In addition to this, 3D printing can be useful in solving the inventory problem of many automotive OEMs. Manufacturing of complex automotive parts such as suspension systems, nozzles, valves, and tools requires a considerable amount of time, energy, and cost. Besides, automotive OEMs are spending a significant amount on maintaining an inventory of these complex parts and tools, which resulted in increased production cost. Therefore, many automotive OEMs are looking towards 3D printing technologies to manufacture parts and tools on-demand, resulting in lower inventory.

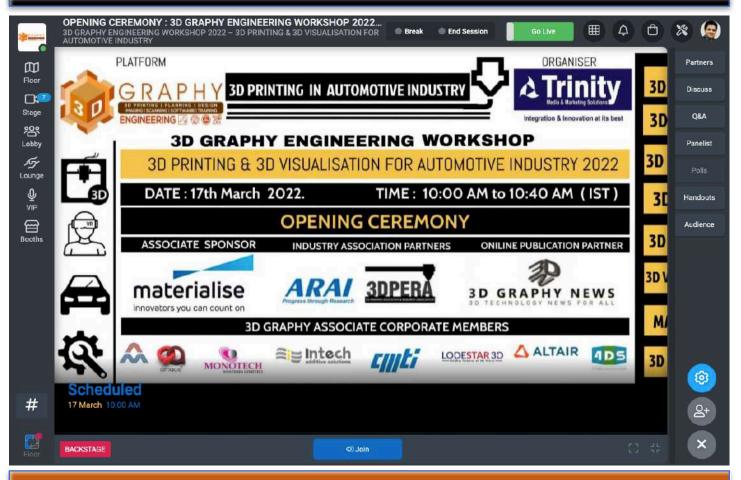
**3D GRAPHY is a platform designed by Trinity Media & Marketing Solutions (TMMS)**. It is a platform for training, education, research and events. We are conducting our 40<sup>th</sup> event the **3D GRAPHY ENGINEERING WORKSHOP 2022 – 3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY** to be held on **17<sup>th</sup> March 2022**. We will have lectures, panel discussion & Q & A to be conducted by professionals, scientists and researchers from 3D Printing , Automotive Companies, Auto Component manufacturing cos, material scientist who are experts in each specialization. The platform will be a great knowledge, networking and business opportunity for companies and institutions to be updated of the growth potential of this technology for times to come. The event is supported by all Automotive Companies and research Associations. ARAI is our Industry Association Partner.

#### RECEPTION DESK LOBBY CONFERENCE HALL PARALLEL TRACK HALL MEETING ROOMS EXHIBITION BOOTH | SPONSORS BACKDROP SPONSORS LOGO SCROLL VIP LOUNGE HANDOUT AREA POLLING CENTRE | Q & A SESSION

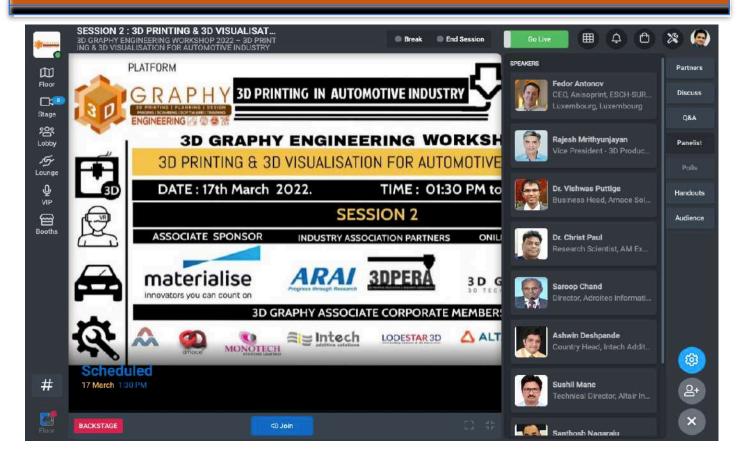


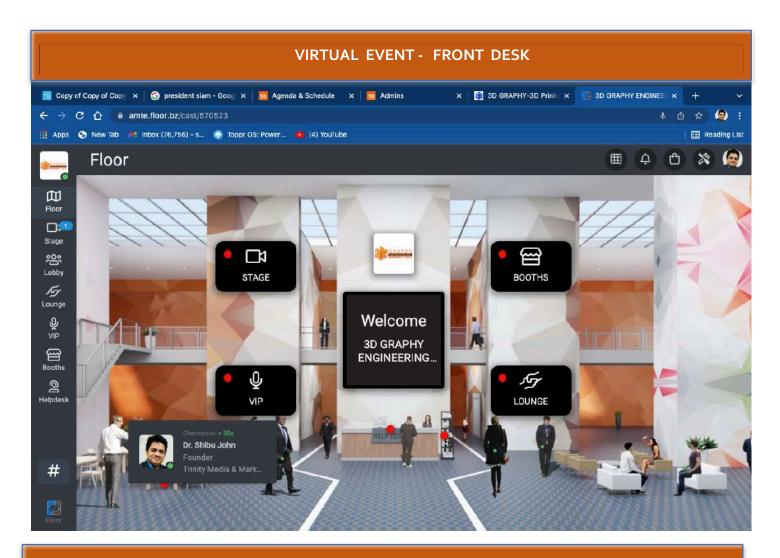


#### VIRTUAL EVENT STAGE - BACKDROP

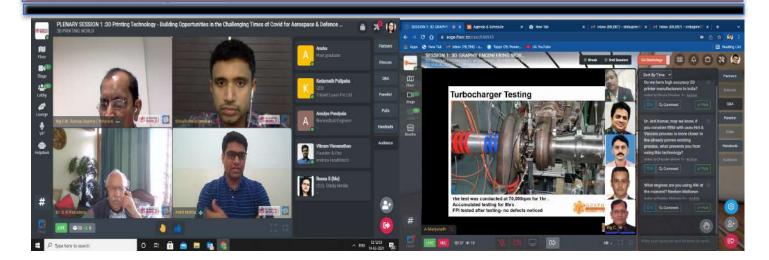


#### VIRTUAL EVENT STAGE WITH SPEAKERS





#### SPEAKER PRESENTATION & PANEL DISCUSSION



#### ORGANISER

#### **GUEST HONOUR**



Dr. Shibu John, Founder, Trinity Media & Marketing Solutions Founder & Managing Director, **3D GRAPHY LLP** Secretary General & Founder, 3DPERA Managing Editor, 3D Graphy News Mumbai, India



Dr. S Chandrasekar, Director, Strategic Sourcing & Plant Engineering, Roots Group of Companies, Coimbatore, India Governing Council Member & Co- Chairman, Global Business Development, Coimbatore Chamber of Commerce & Industry

#### **3D GRAPHY ADVISORY & GUEST**











Dr.Nagahanumaiah Director, Central Manufacturing Technology Institute, Bengaluru India

Director,

Altair India

Solutions Pvt,

Bengaluru

India

Technology Institute,

Bengaluru

India

Dr.S Chandrasekar, Director, Roots Group of Companies, Coimbatore, India

Dr. B. B Ahuja Director, College of Engineering Pune. India

Ajay Purohit, **Technical Chief** Rapid Proto & Craftsmanship, Tata Motors, Pune, India

Information

System(P) Ltd.

Delhi, India

Vijay Pankhawala, Deputy Director, ARAI, Pune, India

Solutions,

Monotech

Systems Ltd.

Chennai, India

Surat, Gujarat

#### **3D GRAPHY ASSOCIATE CORPORATE MEMBERS**



Intech Additive

Solutions,

Bengaluru,

India

Co- Founder,

Lodestar

Innovation Pvt

Ltd, Bengaluru,

India

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## **SPEAKERS**



Dr.Nagahanumaiah Director, Central Manufacturing Technology Institute, Bengaluru India



Rafiq Somani Area Vice President, India & South Asia Pacific, Ansys Inc.





Avinash Abraham Regional Manager, Materialise India



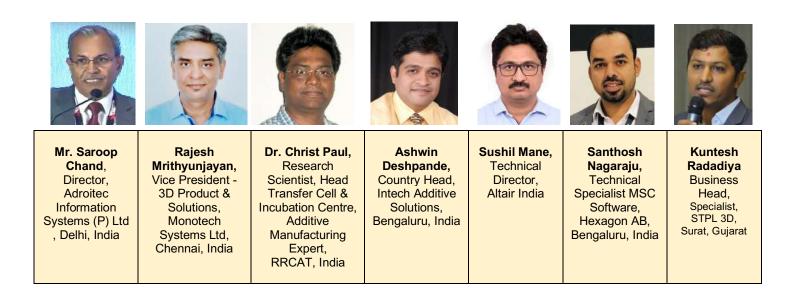
Fedor Antonov CEO, Anisoprint, ESCH-SUR-ALZETTE, LUXEMBOURG



Krishna Kashyap Singh, Senior Engineer, Amace Solutions Pvt, Bengaluru India

## **B**

## **SPEAKERS**





10.00 am (IST)	Registration
10:00 am - 10:10 am (IST)	Welcome Address by <b>Dr. Shibu John,</b> Founder, TRINITY MEDIA, Managing Director, 3D GRAPHY LLP, Secretary General & Founder, 3DPERA – Announcing the event –3D GRAPHY ENGINEERING WORKSHOP 2022 – 3D PRINTING & 3D VISUALISATION FOR AUTOMOTIVE INDUSTRY – TOPIC " 3D TECHNOLOGY A GAME CHANGER FOR AUTOMOTIVE INDUSTRY".
10:10 am - 10:15 am (IST)	Welcoming the PATRON & 3D GRAPHY ADVISORY MEMBERS
10:15 am - 10:20 am (IST)	<b>Welcoming our GUEST OF HONOUR, Dr. S. Chandrasekar,</b> Director, Strategic Sourcing & Plant Engineering, Roots Group of Companies, Coimbatore, India, Governing Council Member & Co-Chairman, Global Business Development, Coimbatore Chamber of Commerce & Industry
10:25 am -10:30 am (IST)	Introducing the 3D GRAPHY CORPORATE ASSOCIATE MEMBERS
10.30 am - 10:40 am (IST)	Announcement & Launch of 3D GRAPHY NEWS – "3D Technology News For All" - Online News platform
Session 1	"3D TECHNOLOGY A GAME CHANGER FOR AUTOMOTIVE INDUSTRY".
10:45 am - 11:25 am (IST)	KEYNOTE SPEAKER : Dr. Nagahanumaiah, Director, Central Manufacturing Technology Institute, Bengaluru, India
11:30 am - 12:05 pm (IST)	Rafiq Somani, Area Vice President, India & South Asia Pacific, Ansys Inc
12:10 pm - 12:30 pm (IST)	Sathish Kumar, Senior Application Specialist, India & SE Asia, Stratasys
12:35 pm - 12:55 pm (IST)	Avinash Abraham, Regional Manager, Materialise India
01:00 pm - 01.30 pm (IST)	Lunch & Networking
Session 2	3D PRINTING & 3D VISUALISATION TECHNOLOGY INNOVATIONS FOR
	AUTOMOTIVE SECTOR – 3D printer Hardware Machine, 3D Scanners, 3D Software, 3D Imaging
	Visualisation & 3D Design & Materials.
01:30 pm - 01:50 pm (IST)	Fedor Antonov, CEO, Anisoprint, ESCH-SUR-ALZETTE, LUXEMBOURG
01:55 pm - 02:15 pm (IST)	Rajesh Mrithyunjayan - Vice president, 3D Product & Solutions, Monotech Systems Ltd
02:20 pm - 02:40 pm (IST)	Krishna Kashyap Singh, Senior Engineer, Amace Solutions Pvt, Bengaluru, India
02:45 pm - 03:05 pm (IST)	Dr. Christ Paul, Research Scientist, RRCAT, India
03:10 pm - 03:30 pm (IST)	Saroop Chand, Director, Adroitec Information Systems (P) Ltd, Delhi, India
03:35 pm - 03:55 pm (IST)	Ashwin Deshpande, Country Head, Intech Additive Solutions, Bengaluru, India
04:00 pm - 04:20 pm (IST)	Sanjeev Kumar, Business Head, Lodestar Innovations Pvt Ltd, Bengaluru, India
04:25 pm - 04:45 pm (IST)	Sushil S Mane, Technical Director, Altair India
04:50 pm - 05:10 pm (IST)	Santhosh Nagaraju, Technical Specialist MSC Software, Hexagon AB, Bengaluru, India
05:15 pm – 05:35 pm (IST)	Kuntesh Radadiya, Business Head, STPL 3D, Gujarat, India
05.05 00.00	
05:35 pm - 06:30 pm	PANEL DISCUSSION :
(IST)	"3D TECHNOLOGY A GAME CHANGER FOR AUTOMOTIVE INDUSTRY ".
	Vijay Pankhawala, Deputy Director, Automotive Research Association of India – MODERATOR Dr. Nagahanumaiah, Director, Central Manufacturing Technology Institute, Bengaluru, India Saroop Chand, Director, Adroitec Information Systems (P) Ltd, Delhi, India Sathish Kumar, Senior Application Specialist, India & SE Asia, Stratasys Fedor Antonov, CEO, Anisoprint, ESCH-SUR-ALZETTE, LUXEMBOURG Rajesh Mrithyunjayan, - Vice president, 3D Product & Solutions, Monotech Systems Ltd Krishna Kashyap Singh, Senior Engineer, Amace Solutions Pvt, Bengaluru, India Dr. Christ Paul, Research Scientist, RRCAT, India Dr. Shibu John, Founder, Trinity Media, Managing Director, 3D GRAPHY LLP, Managing Editor, 3D GRAPHY NEWS
06:00 pm – 6.05 pm ( IST)	Closing of the event

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### DELEGATE REGISTRATION

Category	Registration fee
Students – Engineering College, Research Institutes, Design Schools and others	Rs. 750
Professionals – Automotive Engineers, Mechanical Engineers, 3D Designer, OEM's, Material scientist and others	Rs. 1500
<b>3D Printing Services Provider</b> - (3D Printer Machine- Hardware, Software, 3D Scanners, Material cos, 3D Printing Service Bureau and others	Rs. 2800
International Delegate	USD 75

#### ACCOUNT DETAILS

Bank Name	State Bank of India
Beneficiary	Trinity Media & Marketing Solutions
Account No.	33911180450
IFSC/ NEFT/ RTGS	SBIN0011670
MICR No.	400002184
Bank Address	Suyogi CHS Ltd, Shop no. 1 – 5, Bldge no. 31, Tilaknagar, Chembur, Mumbai 400089, Maharashtra
GST No.	27AFUPJ9046C1Z4

Below is the payment link - For Domestic delegate Payments ( By Instamojo)

https://www.instamojo.com/@shibujohn

Below is the payment link - For International delegate Payments ( By PAYPAL )

https://paypal.me/ShibuJohnTrinity?locale.x=en\_GB

DELEGATE REGISTRATION FORM

Please visit the website link below to find the delegate form and fill your details to register

https://engineering.3dgraphy.in/workshop.html

DEMO LINK OF THE VIRTUAL EVENT PLATFORM (Past event link to experience the platform)

https://aoge.floor.bz/cast/556519