

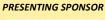
#### **3D GRAPHY ENGINEERING WORKSHOP 2022**

#### 3D PRINTING & 3D VISUALISTION FOR MARITIME & SHIPBUILDING

#### TOPIC: "3D TECHNOLOGY A GAME CHANGER FOR MARITIME & SHIPBUILDING

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 12<sup>th</sup> January 2022 is on the topic, 3D PRINTING & 3D VISUALISATION FOR MARITIME & SHIPBUILDING 2022 which will address the Shipbuilding companies, OEM's, Ship repair cos, shipping lines, Ports about 3D Printing and 3D Visualisation technologies. It is our 39<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 event will also be promoted by our Industry Association Partners & Maritime Gateway who is a leading maritime publication in India with a global presence.

ORGANISER



**INDUSTRY ASSOCIATION PARTNERS** 



OFFICIAL PLATFORM

GRAPHY













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. Maritime & Shipping Sector will benefit 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 38 events in the last 7 years and this would be our 39<sup>th</sup> event the **3D GRAPHY ENGINEERING WORKSHOP** – **3D PRINTING & 3D VISUALISATION FOR MARITIME & SHIPBUILDING** to be held on **12<sup>th</sup> January 2022**. It is a day workshop with *speakers and delegates participating from 3D Printing, 3D Visualisation expertise and end users from Shipbuilding* **companies, OEM's, Ship repair cos, shipping lines, Ports, Maritime Institutes 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 Maritime & Shipbuilding 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

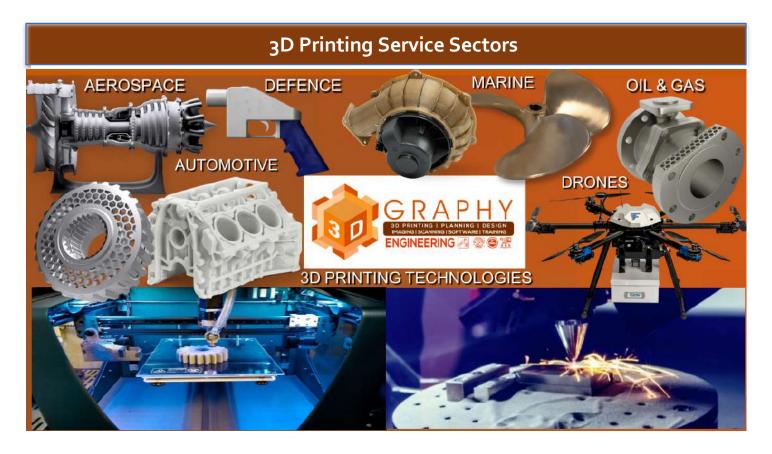
#### Inauguration of 3D GRAPHY & 3DPERA Shri. Subhash Desai, Honorable Minister for Industries, Govt. of Maharashtra, India



## AGENDA

**Trinity Media & Marketing Solutions (TMMS)** jointly with **3DPERA** is conducting **3D GRAPHY ENGINEERING WORKSHOP 2022 – 3D PRINTING & 3D VISUALISATION FOR MARITIME & SHIPBUILDING** event to be held on **12<sup>th</sup> January 2022**. We will have lectures, panel discussion & Q & A to be conducted by professionals, scientists and researchers from 3D Printing , Maritime and Shipbuilding 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.

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 MARITIME & SHIPBUILDING 2022** " and our media partner is Maritime Gateway will also help us promote the event and the 3D technology in the midst of the end users from Shipbuilding and Ports who will join to benefit from the day event.



**3D GRAPHY ENGINEERING WORKSHOP 2022 – 3D PRINTING & 3D VISUALISATION FOR MARITIME & SHIPBUILDING** will address all the 3D Printing innovative solutions with materials used in Maritime & Shipbuilding to meet the requirements.

3D printing has penetrated slowly but steadily in maritime and shipbuilding industry. The maritime industry is responsible for 93% of global trade as per experts opinion. And though being a key supporter in trade its own industry is facing significant challenges, from regulations to aging vessels. These challenges make it all the more important to rejuvenate the industry with new emerging technologies to make it more agile and profitable. The maritime industry includes ship manufacturing, shipping companies, logistics companies, ship repair, maintenance companies, and port authorities. And today we see them all using 3D printing technology. Also 3D Visualisation & 3d simulation for new production line.

With 3D Printing there are many applications like prototyping for proof of concept. And also final part production with customization of spare part manufacturing, on-demand manufacturing, and much more. 3D printing enables affordable and faster product development with a range of materials. This pace helps in saving huge amounts of costs. This can also help in developing customized parts for specific applications at a fraction of what it cost previously.

Ships and vessels regularly need maintenance and repair operations. Certain 3D printing technologies like directed energy deposition (DED) are used not only to build new objects but also to add material onto existing parts. In case a certain part is scratched or cracked, 3D printing can be employed to fill those cracks with a compatible metal material. If the crack is too big to be filled, engineers can use 3D scanners to scan the missing part and 3D print a part that accurately fits. The process is relatively cheap and fast, and this capability would not be possible in any traditional process.

Traditionally, the production of parts and components required for servicing any vessel is done inland and supplied to the required location, like a port or a dock. In such situations, the logistics and repair can take weeks. In cases where a vessel needs emergency repair while at sea, the vessel has to dock at the nearest port. During such situations, a vessel may remain stuck at the port for weeks while the necessary part is manufactured and shipped to the site.

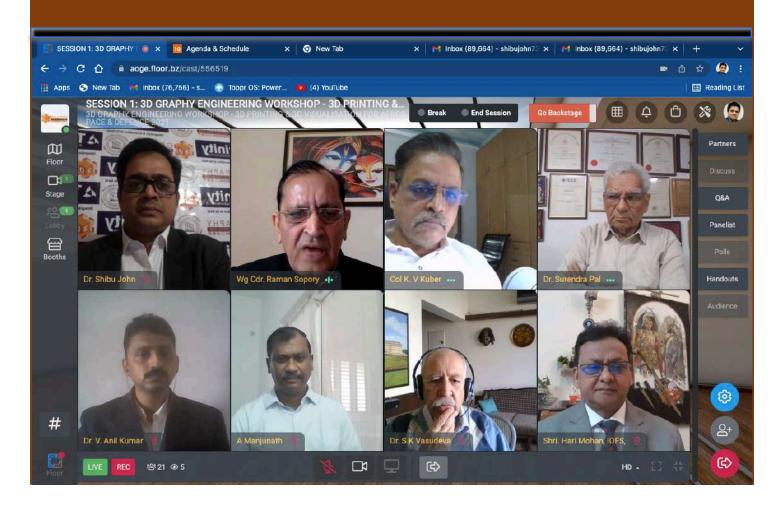
This delays the shipment and can lead to greater losses to all relevant stakeholders. To avoid such costly situations, companies are exploring options to install a 3D printer on-board. With a 3D printer on-board, any part can be manufactured on-demand and installed to avoid dire consequences without affecting the delivery timelines. Opportunities lie in exploring options like installing a 3D printer on-board or establishing 3D printing hubs at ports.

Another important aspect of 3D printing is its capability to rapidly create customized parts. 3D printing offers complete design and manufacturing freedom, so any part, no matter how complex, can be 3D printed. This customization allows manufacturers to build more efficient, durable, and cheaper parts that also use less material and generate less production waste. The maritime industry spends billions of dollars on spare parts and repairs annually. More than 50% of vessels are more than 15 years old, and the need for spare parts increases every year. Moreover, the spare parts are limited and finding them can be difficult, time-consuming, and also a costly.

To address these inefficiencies, 3D printing is the ideal solution to serve the vessels better, faster, and cheaper. By 3D printing spare parts on-demand, the costs of carrying inventory will be reduced while at the same time the spare parts will be available for every requirement in as many quantities as required. Potential applications for spare part manufacturing are being explored in many sectors, like consumer appliances, oil and gas, defense, aerospace, and different manufacturing sectors.

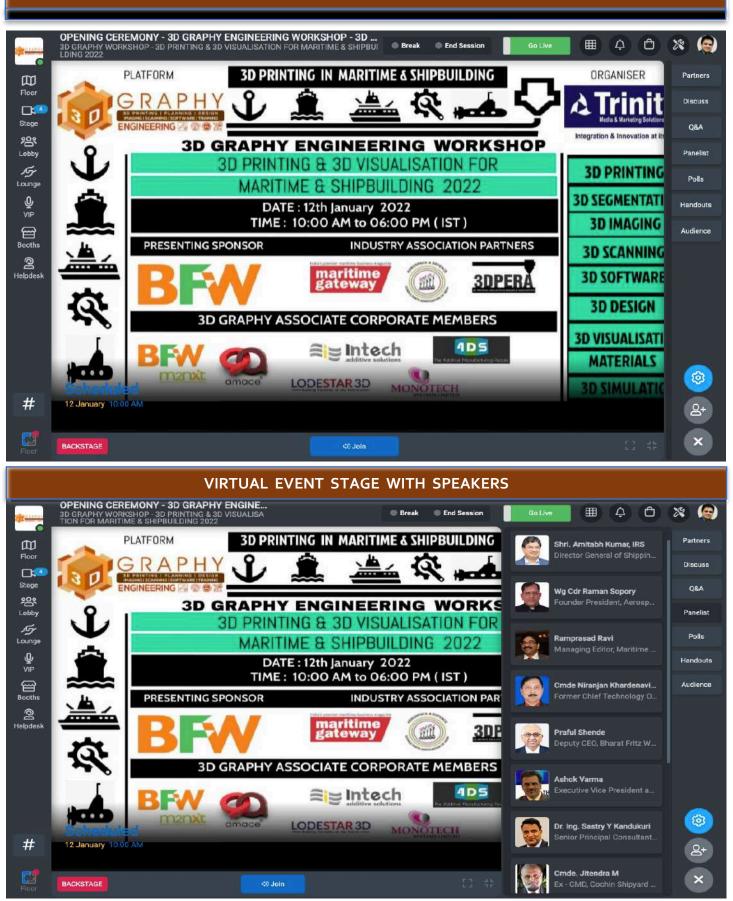
The event will have 3D printing experts address all the points and information for a better understand on the subject. The event will be a perfect platform to share knowledge, to network and propose business opportunities for Entrepreneurs looking at starting a centre for offering 3D printing services

#### 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



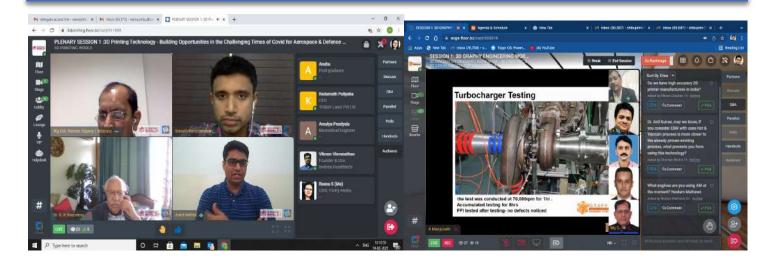


### VIRTUAL EVENT STAGE - BACKDROP





### SPEAKER PRESENTATION & PANEL DISCUSSION



		CHIEF GUEST		PATRON		PRESENTING PARTNER	
<b>Dr. Shibu John,</b> Founder, Trinity Media & Marketing Solutions Founder & Managing Director, 3D GRAPHY LLP Secretary General & Founder, 3DPERA Mumbai, India		Shri. Amitabh Kumar, Director General of Shipping, Directorate General of Shipping, Ministry of Ports, Shipping and Waterways, Government of India		<b>Mr. Ramprasad Ravi,</b> Managing Editor & CEO, Maritime Gateway, Hyderabad, India		<b>Mr. Praful Shende,</b> Deputy CEO, Bharat Fritz Werner, Bengaluru, India	
3D GRAPHY ADVISORY MEMBERS							
SastryFKandukuriSSeniorFPrincipalPrConsultant –AcDigital&Metallurgy,CoAdditiveAs	Vg Cdr. Raman Sopory Founder resident, erospace Defence onsultants ssociation of India, Delhi, India	Dr. Surendra Pal, Ex Vice Chancellor, Defence Institute of Advanced Technology, Ministry of Defence, Govt of India, Pune Maharashtra, India	Ramprasad Ravi, Managing Editor, Maritime Gateway, Hyderabad, India	Cmde Niranjan Khardenavi s, Retd, Former Chief Technology Officer ( Quality Assurance) INDIAN NAVY, Govt. of India	Cmde Naresh Kumar Retd, Ex- CMD, Hindustan Shipyard Ltd, DRas Defence Research & Studies	Cmde Anil Jai Singh, Vice President, Indian Maritime Foundation, Ex -INDIAN NAVY, ( Specialised in Anti-Submarine Warfare)	Cmde Jitendra M, Ex- CMD, Cochin Shipyard Ltd. Ex- CMD, Pipavav Shipyard, India

India

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





10.00 am (IST)	Registration
10:00 am - 10:10 am (IST)	Welcome Address by Dr. Shibu John, 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 MARITIME &
	SHIPBUILDING – TOPIC " 3D TECHNOLOGY A GAME CHANGER FOR MARITIME & SHIPBUILDING".
10:10 am - 10:15 am (IST)	Welcoming the PATRON & 3D GRAPHY ADVISORY MEMBER - Mr. Ramprasad Ravi, Managing Editor,
40.45 40.00 (IOT)	Maritime Gateway, Hyderabad, India
10:15 am - 10:20 am(IST)	Introducing the CHIEF GUEST – Shri. Amitabh Kumar, DG Shipping, Directorate of Shipping, Ministry of
10:20 am - 10:25 am(IST)	Ports, Shipping and Waterways, Govt. of India Introducing the <b>Presenting Sponsor Partner - Mr. Praful Shende</b> , Deputy CEO, Bharat Fritz Werner.
10:25 am -10:35 am (IST)	Welcoming the 3D GRAPHY ADVISORY MEMBERS –
10:25 am - 10:35 am (IST)	<b>Dr. Ing. Sastry Kandukuri</b> Senior Principal Consultant – Digital Metallurgy, Additive Manufacturing and
	Certification, DNV AS Norway
	Wg Cdr. Raman Sopory, Founder President, ADCAI, Delhi, India
	Cmde Niranjan Khardenavis. Retd, Ex Chief Technology Officer (Quality Assurance) Indian Navy
	Cmde Naresh Kumar Retd Ex- CMD, Hindustan Shipyard Ltd, DRaS Defence Research and Studies
	Cmde Anil Jai Singh, Vice President, Indian Maritime Foundation, Ex -INDIAN NAVY, (Specialised in Anti-
	Submarine Warfare
	Cmde Jitendra M, Retd. Ex- CMD, Cochin Shipyard Ltd. Ex- CMD, Pipavav Shipyard, India
10.35 am – 10:40 am( IST)	Introducing the 3D GRAPHY CORPORATE ASSOCIATE MEMBERS
Session 1	"3D TECHNOLOGY A GAME CHANGER FOR MARITIME & SHIPBUILDING".
10:40 am – 11:15 am (IST)	KEYNOTE SPEAKER : Mr. Ashok Varma, EVP & Global Leader Additive Manufacturing, Bharat Fritz Werner.
11:15 am – 11:45 am (IST)	TBD
11:45 am – 12:10 pm (IST)	Dr. Ing. Sastry Kandukuri, Senior Principal Consultant – Digital Metallurgy, Additive Manufacturing
	and Certification, DNV AS Norway
12:10 pm – 12:35 pm (IST)	Mr. Daniel Tan, Venture Technology Lead, 3D Printing Marine Products, Wilhelmsen, Singapore
12:35 pm - 01:00 pm (IST)	Mr. Antony Paul, Head Additive Manufacturing Centre of Excellence, L & T Defence
01:00 pm - 01.15 pm (IST)	Lunch & Networking
Session 2	3D PRINTING & 3D VISUALISATION TECHNOLOGY INNOVATIONS –
04.45 04.40 (IOT)	3D printer Hardware Machine, 3D Scanners, 3D Software, 3D Imaging Visualisation & 3D Design & Materials.
01:15 pm - 01:40 pm (IST)	Mr. Rajesh Mrithyunjayan - Vice president, 3D Product & Solutions, Monotech Systems Ltd
01:45 pm - 02:10 pm (IST)	Dr. Vishwas Puttige, Business Head, Amace Solutions Pvt, Bengaluru, India
02:15 pm - 02:40 pm (IST) 02:45 pm - 03:10 pm (IST)	Mr. Chandan Mishra, Director & Co- Founder, Lodestar Innovations Pvt Ltd, Bengaluru, India Mr. Saroop Chand, Director, Adroitec Information Systems (P) Ltd, Delhi, India
03:15 pm – 03:40 pm (IST)	Mr. Saroop Chand, Director, Adroitec miorination Systems (P) Etd., Denn, mida Mr. Ramkumar Krishnan, Director Application & Consulting, Intech Additive Solutions, Bengaluru, India
03:45 pm – 04:10 pm(IST)	Mr. Vijay Chowdhary, Senior Account Manager, Faro Technologies.
04:15 pm – 04:40 pm(IST)	Mr. Sushil S Mane, Technical Director, Altair India
04:40 pm – 05:00 pm(IST)	Mr. Avinash Abraham, Account Manager, Materialise - India
05:00 pm – 06:00 pm ( IST)	PANEL DISCUSSION :
	"3D TECHNOLOGY A GAME CHANGER FOR MARITIME & SHIPBUILDING ".
	SD TECHNOLOGT A GAME CHANGERT OR MARTHME & SHIP BOILDING .
	MODERATOR : MR. RAMPRASAD RAVI, Managing Editor & CEO, Maritime Gateway, Hyderabad, India
	Wg Cdr Raman Sopory, Founder President, ADCAI, Delhi, India
	Mr. Ashok Varma, EVP & Global Leader – Additive Manufacturing, Bharat Fritz Werner
	Daniel Tan, Venture Technology Lead, 3D printing Marine Products, Wilhelmsen, Singapore.
	Cmde Jitendra M, Ex- CMD, Cochin Shipyard Ltd. Ex- CMD, Pipavav Shipyard, India
	Cmde Niranjan Khardenavis. Retd, Ex- Chief Technology Officer (Quality Assurance) Indian Navy,
	Dr. Ing. Sastry Kandukuri, Senior Principal Consultant – Digital Metallurgy, Additive Manufacturing and
	Certification, DNV AS Norway
	Cmde Naresh Kumar, Retd. Ex- CMD, Hindustan Shipyard Ltd, DRaS Defence Research and Studies
	Cmde Anil Jai Singh, Vice President, Indian Maritime Foundation, Ex -INDIAN NAVY, (Specialised in Anti- Submarine Warfare)
	Dr. Vishwas Puttige, Business Head, Amace Solutions Pvt ,Bengaluru India
	Dr. Shibu John, Founder, Trinity Media, Managing Director, 3D GRAPHY LLP
06:00 pm – 6.05 pm ( IST)	Closing of the event

## ORGANISER

## OFFICIAL PLATFORM



Integration & Innovation at its best



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# PRESENTING SPONSOR



# 3D GRAPHY ASSOCIATE CORPORATE MEMBERS







LODESTAR 3D









## **DELEGATE REGISTRATION**

Category	Registration fee
Students – Engineering College, Maritime Institutes, Research Institutes and others	Rs. 750
<b>Professionals</b> – Marine Engineers, Mechanical Engineers, Maritime Experts, Shipbuilding ompanies, Ship repair cos, OEM's, Material scientists, Ship Classification cos, 3D Designers 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