

 29 OCT

 08.30-11.30
AM AM

 MOACON 2023
JALGAON 

3D TECHNOLOGY ENABLED ORTHOPAEDICS

DIVE INTO THE FUTURE OF ORTHOPAEDICS!



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MOACON registrations compulsory

3D technology has had a significant impact on the field of Orthopaedics. It has revolutionized the field by providing more accurate diagnostics, improving surgical outcomes, and enhancing patient care. As technology continues to advance, it will become even more sophisticated and widespread. The technology is a boon to orthopaedic surgeons, who should adapt it for future benefits to the patients.

This workshop will demonstrate all the technological advances in 3d like -

- **3D Printing:** 3D printing technology allows us to create patient-specific implants and prosthetics. which can improve surgical outcomes and reduce the risk of complications. **Orthotech India Pvt Ltd, Gujarat** has pioneered the manufacturing of PSI In India.
- **Patient-Specific Surgical Planning:** 3D imaging techniques, such as CT and MRI scans, are used to create accurate 3D models of a patient's bone and joint anatomy. Surgeons use these models to plan complex orthopaedic procedures with greater precision. **Dr. Taral Nagda** will demonstrate the use in Paediatric orthopaedics.
- **Surgical Simulation:** Virtual reality (VR) and Augmented reality (AR) technologies simulate surgical procedures. Surgeons practice their techniques on 3D models before performing actual surgeries, reducing the risk of errors and complications.
- **Guided Surgery:** During surgery, 3D navigation systems provide real-time guidance to the surgeon. This technology helps ensure the surgeon follows the pre-operative plan precisely, improving the accuracy of implant placement and alignment. **Dr. Manish Shah** and **Dr. Ashish Arbat** will show the use of this technology



and the use of Hololens in Arthroplasty from Arthro 3D.

- **Orthopaedic Implant Design:** Engineers and orthopaedic specialists use 3D modelling and simulation to design and test new implants and devices. This led to the development of more effective and durable orthopaedic solutions. **Dr. Vikas Jain** will show on bone models a few innovative implants designed by him and already operated on patients and outcomes.
- **Onco Orthopaedics:** Huge bone defects and surgical planning by 3D Technology use will be exhibited by **Dr. Abhijeet Salunke**.
- **Orthopaedic Education:** 3D models and simulations are valuable educational tools for both aspiring orthopaedic surgeons and patients.
- **Research and Development:** 3D technology is invaluable in orthopaedic research. It allows researchers to study bone and joint structures, test new treatment methods, and gain insights into the biomechanics of the musculoskeletal system. **Dr. Jaideep** from IIT Guwahati from **Orthotech India Pvt Ltd** will speak on this topic.

FACULTY



Dr. Vikas Jain
Convener



Dr. Taral Nagda
Faculty



Dr. Abhijit Salunke
Faculty



Dr. Manish Shah
Faculty



Dr. Ashish Arbat
Faculty



Dr. Lalit Maini
Faculty



Dr. Jaideep Bharadwaj
Faculty



Mr. Sushant Banerji
Owner, Orthotech
India Pvt Ltd, Gujarat

SCHEDULE

1st Session: 08.30 am - 09.30 am

- **Introduction to 3D Technology - Dr. Lalit Maini**
- **Paediatric deformity correction using 3D Technology - Dr. Taral Nagda**
- **Onco orthopaedic & 3D - Dr. Abhijit Salunke**
- **Humanoid Robotics - Dr. Manish Shah**
- **Defect & design of implants by 3D Technology - Dr. Vikas Jain**

2nd Session: 09.30 am - 10.15 am

- **Exhibition of 3D Models in Onco, Trauma & Paediatric Cases**
- **Hands-on Model Teaching**
- **Discussions and Q & A**

3rd Session: 10.15 am - 11.00 am

- **4th Dimension of AR/ MR - Arthro 3D session hololens-based surgery demonstration of Knee, Hip & Shoulder applications - Dr. Manish Shah, Dr. Ashish Arbat**
- **Discussions and Q & A**

4th Session: 11.00 am - 11.30 am

- **Imagination to Reality - 3D Modelling, Printing & it's advantages - Dr. Vikas Jain, Mr. Sushant Banerji, Dr. Jaideep Bharadwaj IIT - Guwahati & Orthotech India Pvt Ltd, Gujarat will exhibit the R&D in 3D**
- **Discussions and Q & A**