

# Mind'sPark

## News Letter

### Department of Mechanical Engineering

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**Nita Ambani** born 1 November 1963 is an Indian philanthropist. She is the chairperson and founder of the Reliance Foundation, Dhirubhai Ambani International School and a director of Reliance Industries. She is married to Reliance Industries chairman and managing director Mukesh Ambani and the owner of the Indian Premier League cricket team Mumbai Indians. In 2014 she was elected to the board of Reliance Industries. Ambani is also an art collector.

#### Jamnagar Township Project

In 1997, Mrs Ambani was involved in the project of building a company township for the employees of Reliance's refinery at Jamnagar. The project involved establishing a tree-lined and environmentally-friendly colony to house more than 17,000 residents.

#### Reliance Foundation

Reliance Foundation is an Indian philanthropic initiative founded in 2010 by Nita Ambani. Reliance Industries is a patron of the organization.

#### Dhirubhai Ambani International School

Ambani is the founder of the Dhirubhai Ambani International School which has been ranked among the best schools in Resources & Services.

Her Circle is a digital platform for women complete with its own discussion panels and social networking app. Reliance Foundation's Nita Mukesh Ambani has launched 'Her Circle' on the occasion of International Women's Day, March 8, 2022. The new initiative aims to fuel women empowerment with modern, digital tools. Launching for Indian women but extending its service to all women overseas, Her Circle will provide the ladies a "joyful and safe space for interaction, engagement, collaboration, and mutual support." "When women lean on women, incredible things happen," Ambani said at the launch. "Whether it is the women from Reliance Foundation or the national and international women leaders that I have worked with, our shared experiences show me that in the end our struggles and triumphs resonate with each other,

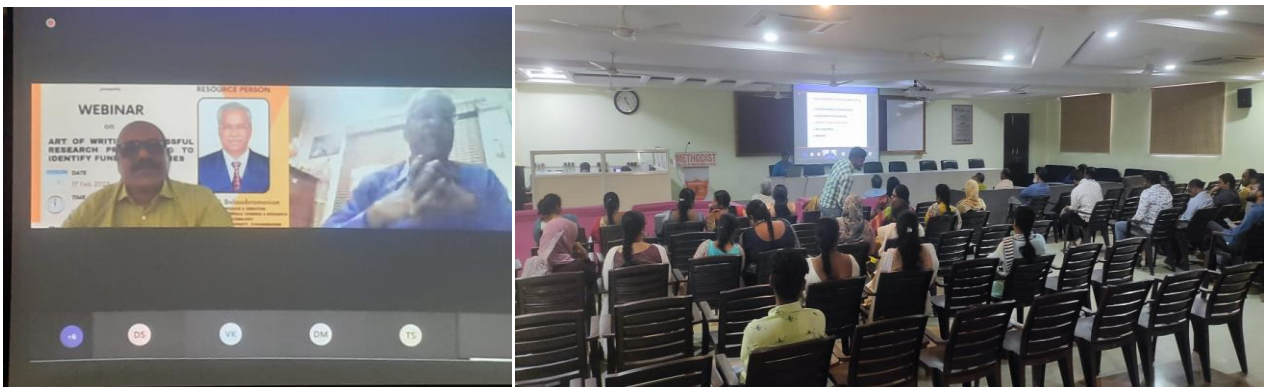
#### Nita Mukesh Ambani Cultural Centre (NMACC)

Nita Mukesh Ambani Cultural Centre (NMACC), housed within the Jio World Centre in Mumbai's Bandra-Kurla Complex (BKC) was launched by her on 31 March 2023. The idea behind the Centre is to focus on community programmes such as school and college outreach and competitions, awards for Arts teachers, in-residency Guru-shishya programs, and art literacy programs for adults among other things.

The four-storey NMACC will contain 16,000 square feet (1,500 m<sup>2</sup>) of purpose-built exhibition space and three theatres. The largest of these, a 2,000-seat Grand Theatre, will include an extraordinary and unique lotus-themed chandelier with 8,400 Swarovski crystals.

There are three dedicated spaces for the performing arts The Grand Theatre, The Studio Theatre and The Cube. The centre will also launch the Art House, a four storey space to spotlight leading Indian and international artists.

**The Webinar on Art of Writing Successful Research Proposal and Identify Funding Agencies**  
organised by Dept of Mech Engg in collaboration with R&D Cell & IQAC on 17 Feb 2023.



Through the event the out comes were how to write research proposal in funding agencies & identifying the various funding agencies nationally & internationally. Participants gained knowledge on various factors to be consideration while writing successful research and development proposal.

**INDUCTION PUBLICITY EXHIBITION VEHICLE on 16<sup>th</sup> March 2023 by INDIAN AIR FORCE**





MCET & Dept of Mech Engg organised seminar /mobile exhibition entitled **INDUCTION PUBLICITY EXHIBITION VEHICLE** on 16<sup>th</sup> March 2023 for the students in campus where the WG CDR Vikram Singh addressing the students & creating awareness about **AIRFORCE** recruitment process. Students from all the departments nearly 300 attended the event & actively participated in one on one session with the IAF officials and showed interest in joining the Indian Airforce and serving the Nation.

### Awareness on Recruitment into ARMY – AGNI5 on 18<sup>th</sup> April 2023



On 18<sup>th</sup> April 2023 Dept of Mech Engg organised a Seminar on Awareness on Recruitment into **ARMY – AGNI5** for 2<sup>nd</sup> & 3<sup>rd</sup> year students for which 60 students actively participated that focused on the key facts related to the INDIAN ARMY & its career prospects which the ARMY officials patiently listened to the students doubts & helped them understand the whole process of recruitment and motivated to join the defence force and serve the Nation.

### GENERAL ARTICLE : UNVEILING THE FUTURE: TRENDS AND DEVELOPMENTS IN 3D PRINTING TECHNOLOGY

In recent years, 3D printing has emerged as a revolutionary force, reshaping industries and pushing the boundaries of what is possible in manufacturing, healthcare, construction, and beyond. From producing intricate prototypes to creating custom medical implants, the versatility and potential of 3D printing continue to expand at an exponential rate. As we venture into the future, several key trends and developments are poised to further propel this transformative technology forward.

#### 1. Mass Customization:

The era of mass customization is dawning with 3D printing at its forefront. This technology allows for the creation of personalized products tailored to individual preferences and requirements. Whether it's bespoke fashion items, customized prosthetics, or intricately designed consumer goods, 3D printing empowers users to participate in the design process, fostering greater consumer engagement and satisfaction.

**2. Industry 4.0 Integration:**

As industries embrace automation and digitalization through Industry 4.0 initiatives, 3D printing is seamlessly integrating into smart manufacturing workflows. From design optimization and digital inventory management to on-demand production and agile supply chains, additive manufacturing is playing a pivotal role in driving efficiency, reducing waste, and accelerating time-to-market for businesses worldwide.

**3. Multi-Material and Multi-Modal Printing:**

Advancements in multi-material and multi-modal printing techniques are expanding the capabilities of 3D printing beyond single-material constructs. By incorporating multiple materials, colors, and functionalities within a single print, manufacturers can create complex, multifunctional objects with unprecedented precision and efficiency. This versatility is particularly valuable in industries such as electronics, automotive, and consumer goods.

**4. Sustainability and Circular Economy:**

In an increasingly eco-conscious world, sustainability has become a central focus of technological innovation. 3D printing holds significant promise in advancing the principles of the circular economy by minimizing material waste, optimizing resource utilization, and enabling local production. Furthermore, bio-based and recycled materials are being leveraged to further reduce the environmental footprint of additive manufacturing processes.

**5. Bioprinting and Tissue Engineering:**

In the realm of healthcare, 3D bioprinting is revolutionizing regenerative medicine and tissue engineering. By precisely depositing living cells and biomaterials layer by layer, researchers can fabricate complex tissues, organs, and scaffolds for transplantation and drug discovery applications. The ability to replicate patient-specific anatomies and tailor interventions holds immense potential for personalized medicine and improved patient outcomes.

**6. Space Exploration and Off-World Manufacturing:**

The advent of space exploration and colonization has spurred interest in off-world manufacturing technologies, with 3D printing at the forefront of this endeavor. Additive manufacturing enables on-demand production of spare parts, tools, and infrastructure components in extraterrestrial environments, reducing reliance on costly and logistically challenging Earth-based supply chains.

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**Department of Mechanical Engineering****VISION**

To be a reputed centre of excellence in the field of Mechanical Engineering by synergizing innovative technologies & research for the progress of society.

**MISSION**

**M1:** To impart quality education by means of state-of-the-art infrastructure.

**M2:** To be involved in training & activities on leadership qualities & social responsibilities.

**M3:** To inculcate the habit of lifelong learning, practise professional ethics & serve the society.

**M4:** To establish industry- institute interaction for stakeholder development