



Dear Friends,

Greetings from IIT Bombay!

Hope you all are healthy and safe.

With a spike in COVID cases in entire Maharashtra, this month also witnessed a tough time for Institute functionaries. To tackle the situation, more strict rules are made and followed. The campus reboot continued with its phase IV-B in execution allowing the final year UG students to return. Amidst this tough time, we're delighted to inform you that IIT Bombay has secured No.1 rank on QS ranking this year too. Also, the institute held its first-ever online general elections. We congratulate all the winning candidates and wish them all the best for a successful tenure.

I want to thank each one of you for your support and contribution towards the first ever annual fundraising campaign of the Institute- 'Cherish IIT Bombay' campaign. We have received overwhelming response from donors and well-wishers all over the world.

IIT Bombay celebrated its 62nd Foundation Day on March 10, 2021, where the Institute honored its Distinguished Alumnus Awardees, Young Alumnus Achiever Awardees, and Prof. S.C. Sahasrabudde Life Time Achievement Awardee. The Institute, in the honour of Prof. S.C. Sahasrabudde and wishes of his students (alumni), renamed 'Lifetime Achievement Award' of IIT Bombay as 'Prof. S.C. Sahasrabudde Life Time Achievement Award'. Prof. Krithi Ramamritham became the first recipient of this award for his immense contributions to the Institute. Adding to that, Prof. R. Sunoj was honored with 'Prof. S.C. Bhattacharya Award for Excellence in Research in Basic Sciences' and Prof. Pushpak Bhattacharya has been awarded 'Prof. H.H. Mathur Award for Excellence in Research in Applied Sciences' for the year 2020. We were honored to have Rajesh Gopinathan, CEO and Managing Director of TCS as our chief guest for this function.

With the generous contribution received from our eminent alumni Mr. Sharad Kumar Saraf (B.Tech., EE, 1969) and Mr. Sudarshan Kumar Saraf (B.Tech., ME, 1970), IIT Bombay is setting up the 'Technocraft Centre for Applied Artificial Intelligence' (TCA2I). Through TCA2I, the Institute intends to foster collaboration between industry and academia in Applied Artificial Intelligence through research and outreach.

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News From IIT Bombay



Alumni Initiative - Executive Education Complex

The 'Executive Education Complex' built on the fourth floor of Shailesh J Mehta School of Management building was inaugurated by Director Prof. Subhasis Chaudhuri on March 2, 2021.

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Product and Technology Development

This section will carry a series of articles showcasing the latest technology and product development activities at IIT Bombay. In this month, we present five start-ups fostered at Society for Innovation and Entrepreneurship (SINE), IIT Bombay. SINE is an umbrella organisation at IIT Bombay for fostering entrepreneurship and nurturing tech start-ups. It is a business incubator which provides 'Start to scale' support for technology-based entrepreneurship and facilitates the conversion of research activity into entrepreneurial ventures.



[Ayu Devices Pvt. Ltd.](#)

Inventor/s name: Adarsha Kachappilly and Tapas Pandey, Dr. Rupesh, Prof. B. Ravi, Dr. Nambiraj and Dr. Lancelot Pinto

Technology/Product: AyuSynk, Wireless Digital Stethoscope.

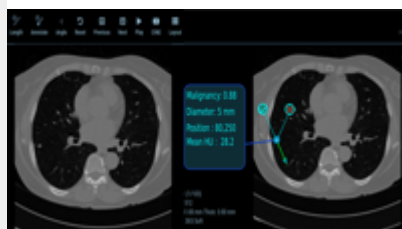
Conventional stethoscope does not allow wireless listening of chest sounds. Also amplification and recording, sharing and analysis of Chest sounds is not possible since the data is not captured digitally.

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[Endimension Technology Pvt. Ltd](#)

Inventor/s name: Bharadwaj KSS

Technology/Product: AI software to automatically read medical images and detect diseases at an early stage.



The idea took shape when our team participated and won in LUNA-16, an International AI challenge for early-stage Lung cancer detection. The team finished 1st out of 360 Indian teams beating the likes of Intel-research and an FDA-approved product from Canon. This result gave the team confidence and belief to pursue this idea further.

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[Haystack Analytics Pvt. Ltd.](#)

Inventor/s name: Dr. Anirvan Chatterjee

Technology/Product: The Haystack Analytics genomic analysis software enables clinical decision-making through affordable, culture-free, comprehensive and fast clinical genomics. The software is deploy-ready eliminating the need to update infrastructure or upskill manpower in your diagnostic lab.

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[Inphlox Water Systems Pvt. Ltd. \(Indra Water\)](#)

Inventor/s name: Amrit Om Nayak, Krunal Patel, Abhijit VVR, Aditya Vemuganti, Sri Teja Allaparthi

Technology/Product: Decentralized water treatment systems based on patented Electro-Coagulation and Electro-Chemical Oxidation technology for recycling Domestic and Industrial wastewater for reuse in non-potable applications.

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[Sustainable References Pvt. Ltd.](#)

Inventor/s name: Kaushik Bose, Rohan Gupta, and Soumya Bhattacharya.

Technology/Product: Ohm Assistant, an electricity activity tracker that gives real-time insights about your energy usage and house activity.

With a vision of an energy-efficient future, SustLabs is trying to change the way electricity is consumed and understood in our homes.

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Faculty Interview

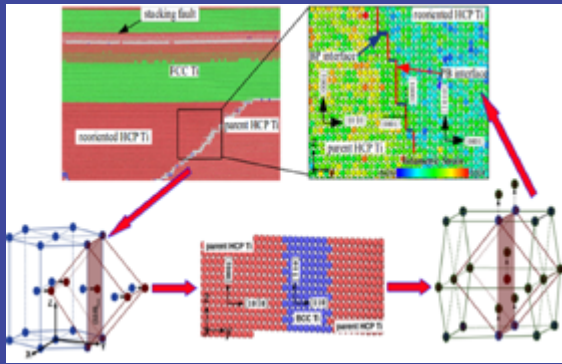
Academia gives you the freedom to try new ideas and the urge to keep learning

Prof. Saurabh Lodha, faculty at Electrical Engineering department at IIT Bombay has received the Young Career Award in Nano Science & Technology (2020), Swarnajayanti Fellowship(2016-17) by DST among many other recognitions. His research interests span the areas of CMOS process integration and device physics, 2D materials and devices, molecular devices, metal-semiconductor interfaces and wide bandgap power devices.

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Student Research

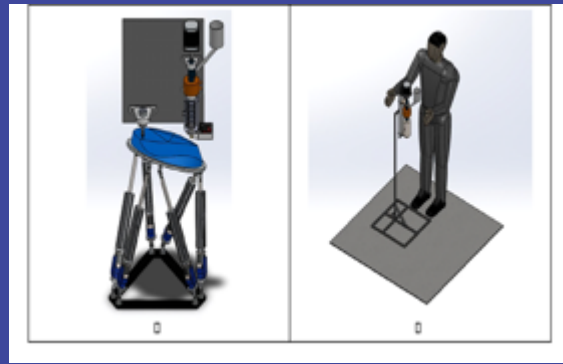


Designing Nanolayered Metal Composites: Mimicking Nature

Name: Sumit Maurya (Ph.D.) | Department: Mechanical Engineering | Supervisor: Prof. J. F. Nie at Monash University and Prof. Alankar at IIT Bombay

Layered materials are abundant in nature e.g. sea shells, wood and many types of rocks. These materials have exceptional mechanical properties due to the effect of layer thickness and interfaces. Multilayer metal composites are the materials with one-dimensional compositional periodicity or composition and structural periodicity. Such composites can be formed using dissimilar metals as the constituent materials without altering the individual chemistry of constituent metals.

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Screw Extrusion Multi-Axis Hybrid Layer Manufacturing (SEMA-HLM)

Name: Yash Mittal (Ph.D.) | Department: Mechanical Engineering | Supervisor: Prof. K. P. Karunakaran

SEMA-HLM is a one-of-a-kind, hybrid manufacturing technique for 3D printing applications. Equipped with an induction based additive head, a high-speed spindle based subtractive head and a multi-axis kinematics motion system; SEMA-HLM can surpass the current bottlenecks of FDM 3D printing and provide better manufacturing techniques. The additive head is a screw extrusion system with an incrementally-varying-pitch screw, for an efficient metering of melt flow.

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