

DEAN'S MESSAGE



Dear Alumnus:

“You can get excited about the future. The past won’t mind.”

—Hillary DePiano, playwright and author

Greetings and best wishes for a safe, healthy, happy, and prosperous new year 2023 to you and your family.

After a rough few years, it is indeed relieving that the world is closing the chapter on the pandemic and finally turning a new page toward normality. Let us look forward to the upcoming new year 2023 and the immense possibilities that it brings with it.

IIT Bombay has had a very busy celebration-filled December

2022.

One of the benefits of life returning to normalcy was the many events we could host in person.

Amidst the many reunions that took place during the final month of 2022, we held our flagship annual Alumni Day on December 25, 2022. There was palpable energy and excitement on campus as we hosted our alumni who joined us – in person – from all over the world. We were all united by our love for our alma mater and it was wonderful to meet so many alums from different batches. We came together, updated each other on our lives today, and reminisced about our Institute days – whether that was 10, 25, 40, 50, or 60 years back.

Please look for a detailed write-up of Alumni Day 2022 under the Special Report section in the newsletter. But I did want to take a quick moment and highlight some notable moments – some old and some new – of the event here.

- First, I would like to congratulate the recipients of our Distinguished Service Award (DSA) and Chapter Service Award (CSA). These awards honour and applaud our alumni’s participation and commitment toward the development of their alma mater.
- We welcomed and honoured members of IIT Bombay’s first-ever graduating batch from 1962. It was one of the most heart-warming moments of the entire day.
- As part of Alumni Day, we unveiled two important campaigns: the second iteration of our annual donor drive – GO IITB Campaign 2023 (please look for the section called Giving in the newsletter for more details on the GO IITB Campaign) and Project Evergreen, the first-of-its-kind alumni-led initiative that will see the construction of new hostels on campus. I am delighted to note that the presentations of these campaigns were met with a very positive response from our alumni attendees.
- We recognised our major donors for 2022 with a special ‘Donor Wall,’ which was unveiled to honour the philanthropic contributions of this year’s top contributors to the Institute. The alums featured on this wall were recognised for their huge contribution towards the sustained progress of the Institute. Our heartfelt gratitude to all of them!
- We also launched the brand-new Dean ACR website with many new features including a virtual donor wall. Please feel free to let us know what you think of the new site. Your feedback is extremely important to us at the Dean ACR office. Please click on the link here: <https://alumni.acr.iitb.ac.in/>
- I would also like to thank IIT Bombay’s Class of 1997 who broke records and pledged Rs. 26 crores towards their alma mater. The amount is the highest of any silver jubilee batch!

I encourage you to give back to your alma mater as much as you can, and to the cause that’s most personal to you. If you would prefer to give back to a cause other than the highlighted ones from the GO IITB campaign or Project Evergreen, please contact the Dean ACR office and we will guide you through the process.

Before I move on and apprise of you the other events from December 2022, I want to, once again, thank all of our alumni who showed up in person and online in such huge numbers and made Alumni Day 2022 so memorable.

December 2022 was also a month of reunions.

- The class of 1971 celebrated a momentous occasion on campus between December 16-18, 2022 – their Golden Jubilee Reunion. The three days were filled with excitement and activities as alumni from across the globe came together after 50 years to their cherished alma mater. The Class of 1971 also broke records when they made an extraordinarily generous pledge of Rs. 38.5 crores as part of their Legacy Project. This is the highest contribution made by a Legacy Batch so far.
- IITB's Class of 95 came together and pledged Rs. 21 Cr. towards the enhancement of the Institute's infrastructural facilities. To honour their philanthropic contribution, IIT Bombay has named its famous Basketball court, 'Arena 95.'
- IITBAA and SARC organised the decennial reunion of the Class of 2010. I was privileged to update them on the significant strides made by their alma mater over the past few decades. I also apprised them of our vision to be amongst the top science and technology institutes in the world by 2030.
- I would now like to share some key events that took place last month at your alma mater.
- Hearty congratulations on the extraordinary work done by IITB's faculty who continue to bring glory and accolades to the Institute. Our professors have won awards and fellowships, published scholarly papers in reputed academic journals, become members of prestigious associations, been appointed to editorial positions in scholarly publications, and more. More details on my very impressive colleagues can be found in a separate section titled 'Faculty Accolades' in the newsletter.
- The Institute organised Tech Connect – the Institute's largest research outreach activity that inspires, influences and kindles the scientific temperament of children, students, and adults of all ages alike. The three-day period saw TechFest 2022 hosting ninety exhibition booths that covered, among other areas, educational outreach, student tech teams, and start-ups from IITB's own incubator SINE.
- IIT Bombay Research Park organised a one-day interdisciplinary conversation with stakeholders to build a sustainable world. Dignitaries from the institute, government, and industry participated in the many panel discussions on sustainability. Please look for a more detailed write-up on the event in the News section of this newsletter.
- I am delighted that the IIT Bombay family continues to push boundaries in space exploration and discovery. Astrophysicists from IIT Bombay including Prof. Varun Balerao, members of GROWTH-India, and an international team experienced a rare event. Using the GROWTH-India telescope (GIT) they studied a rare and bright optical flare caused by a dying star's encounter with a supermassive black hole. I wish them the very best and hope they're able to experience more such events in the future. The link to the original article can be found in the News section of this newsletter.

If the end of the year is filled with melancholy at a year gone by and missed possibilities, the beginning of a brand-new year brings with it hope and new prospects. Let me leave you with this intriguing and thought-provoking quote by Ralph Waldo Emerson who said, "The only person you are destined to become is the person you decide to be."

IIT Bombay has a clear mission and vision for who, what, and where we want to be by 2030. And to get there – we need our alumni's support, now more than ever before. But I know from experience that when the Institute has asked for its alumni to rally around us – you have collaborated, partnered, and walked side-by-side with us and ensured that we fulfil all the goals that we have set. I am sure of your continued support and for that, we are forever grateful.

Before I say ‘until we meet again next month’ – I want to wish you a very happy and joyful new year once again. May 2023 bring you all that you desire as well as good health, happiness, and joy for you and your family. And let us all collectively keep our fingers crossed that the worst is behind us and that we can look forward to a pandemic-free 2023 and the upcoming decade in front of us.

Happy 2023!

Sincerely,

Prof. Ravindra D. Gudi, Ph.D., FNAE and FIChE

Dean – Alumni and Corporate Relations

Institute AI & ML Chair Professor

FACULTY INTERVIEW



Prof. Sudarshan Kumar: Flying High

Prof. Sudarshan Kumar is the Institute Chair Professor & Head of the Aerospace Engineering Department, IIT Bombay. In this tete-a-tete, Prof. Kumar elaborates on his myriad research pursuits and shares the secret behind his astonishing 100+ research papers published in reputed journals. We are delighted to speak with Prof. Kumar for the Dean ACR Newsletter – Knowledge Tree.

Prof. Kumar, thank you for speaking to us today. To begin with - can you quickly take us through your academic and career trajectory?

I received my bachelor’s degree in Mechanical Engineering from Marathwada University, Aurangabad. Back then, aerospace was emerging as a major focus area in the country, with regular updates in the news on the indigenous development of missiles and the Light Combat Aircraft (LCA) programme. This intrigued me and led me to join the Aerospace Engineering Department at the Indian Institute of Science (IISc) Bangalore for my master’s degree. I continued at IISc and pursued my Ph.D. and specialised in ‘flameless combustion,’ a new technique for reducing emissions and enhancing the performance of combustion systems. Subsequently, I joined Tohoku University (Sendai, Japan) for my Post-doctoral research for two years before joining the Department of Aerospace Engineering at IIT Bombay as a faculty member.

What made you interested in Aerospace Engineering? And a quick fun question...did you ever want to be a pilot?

Fun question first. Do you know that the UG curriculum in the aerospace departments at IITs gives students a chance to experience flying an airplane? In the "Flight Testing Lab" students get the opportunity to be co-pilots for a few short flights. IIT undergrads used to visit IIT Kanpur for this week-long course.

I had a similar opportunity when I was at IISc courtesy of the Centre for Airborne Systems Laboratory (CABS, DRDO), at the Bangalore airport. I still remember my 'flight training' sessions with AVM Ajit Lamba. Those sessions, on a twin-seater Pushpak trainer aircraft, gave us an experience that complemented what we learned in the classroom about flight dynamics. That was the closest I came to being a pilot! Seriously, I never thought about a career as a pilot, or pursuing further 'flight training.'

The late '90s were exciting times for aerospace students, especially at IISc. By then the success of our missile and space programmes was visible to everyone. By 2001, even LCA Tejas had gone on its first flight. My interest in aerospace engineering strengthened through interactions with various faculty members like Prof. Satish Dhawan, Prof. R. Narasimha, Prof. Mukunda, Prof. Govindaraju, Prof. Balakrishnan, and Prof. Raghunandan. Incidentally, Prof. Raghunandan is an alumnus of the first aerospace batch of IIT Bombay. Even the occasional visitors who came to our college inspired many of us to pursue careers in aerospace engineering.

Imagine someone like Dr. Abdul Kalam (the father of our missile programme) visiting your department frequently and interacting with students over a cup of coffee or tea!

Your research interests include a wide range of subjects. Can you zero in on your key research areas and explain what they mean in layman's language?

During my Ph.D. I studied pollution from the engines of passenger airplanes which was already a big concern at that time. The primary challenge facing passenger aircraft was the reduction of harmful CO and NO_x emissions in the troposphere. Therefore, I chose to work on a new emission reduction technique, known as 'flameless combustion' or 'mild combustion.' This technique helps reduce emissions by an order of magnitude and helps improve the system's life and performance significantly.

Since then, I have been working in many areas related to combustion and propulsion. However, these areas can be broadly classified into fundamental and applied research. On the fundamental research side, we work on measuring the speed at which a flame propagates in a fuel-oxidizer mixture. We study the effect of parameters such as fuel type (kerosene/petrol/diesel/LPG etc.), temperature and pressure of the mixture, and environment. For instance:

How fast can the flame travel in a hydrogen-air or LPG-air mixture?

Is the speed the same everywhere, e.g., does the flame spread at different speeds in Mumbai and Leh?

Will a particular LPG cook stove design work efficiently both in Mumbai and Leh?

Some of these answers come directly from the flame speed measurement and its dependence on pressure and temperature.

At IIT Bombay, we have indigenously developed a new diverging channel-based technique for flame speed measurements even at high-pressure and high-temperature conditions. This is a very unique technique that has been wholly developed at IIT Bombay and recognized across the world as the best technique for fuel characterization.

On the applied side, we are interested in developing combustion systems with improved performance, i.e., ultra-low CO and NO_x emissions, and better combustion efficiency through both experimental and computational investigations.

What are the implications of your research in the real world?

Our flame speed measurements help validate and improve detailed chemical reaction mechanisms to accurately predict the fuel-burning behaviour. Many chemical kinetic research groups have been using our experimental data to improve their models.

Our applied research on flameless combustion is also being considered by DRDO for next-generation engines for possible applications. This technique can help them develop a quieter engine with better performance and longer component life. We have developed hydrogen combustion codes with detailed chemistry, which were used by ISRO for Scramjet modelling, design, and optimization.

We have also developed a new indigenous anti-hail gun system. This anti-hail gun is currently being tested in Himachal Pradesh to establish its efficacy in fighting hailstorms. These hailstorms frequently destroy the apple crop, resulting in significant losses to farmers and horticulturists. By developing this technology indigenously, we hope to reduce the initial cost to a fifth of what a farmer must pay for an imported anti-hail gun. We also hope to reduce operational costs to a tenth of the present costs by using LPG as fuel instead of acetylene gas. This should make this technology affordable to farmers across the country and help minimize their losses due to hailstorms.

You have published an overwhelming number of (well over 100) scholarly papers. Can you take us through the role and importance of publishing in today's academic climate?

Journals are typically peer-reviewed, as the submitted articles are reviewed by others working on those subjects before they are accepted for publication. Just as we gain knowledge from the published work of others

(textbooks and articles), our publications may also benefit others interested in similar topics. Publications further the intellectual development of a field, as each publication adds new information to the same.

Participating in this process has the added benefit of improving one's research and communication skills. The new knowledge generated through these scholarly articles helps incubate and inculcate newer ideas, which can then be taken from the laboratory to market through R&D. These research outcomes also help in correcting misconceptions and help explain basic questions that require clarification.

For example, our recent research on experimental measurement of flame burning velocity has helped the energy industry explore and develop newer fuels with specific characteristics to meet the market requirements and sell these fuels in the premium category.

What advice would you give the next generation of IIT Bombay students who wish to pursue research and publish their work?

I would advise budding researchers to follow their peers and join a specific laboratory to learn experimental techniques and understand what research means. Joining a laboratory group and working hard will help the student explore uncharted territories in different fields. They will make a new group of friends and mentors, who will help them learn and contribute to the same. These will eventually lead to students being able to publish their scholarly papers.

How has the IIT Bombay ecosystem helped you navigate your professional life and career goals and ambitions?

The support system for research as well as teaching at IIT Bombay is amongst the best across all IITs. The orientation programs initiated by the Dean-Faculty and Dean-R&D are very helpful for newer faculty members and allow them to quickly establish their research labs and initiate research activities at the Institute.

Over the years I have received unstinted support from various sections of the Institute while carrying out research activities. These include the execution of sponsored projects, purchase of new equipment, maintenance, etc. The support systems at IRCC and the Material Management sections have been exceptionally supportive.

Changing gears – can you tell us a little bit more about Prof. Kumar outside of academics? What are some of your hobbies? How do you destress from your daily commitments?

Yes. This is indeed a very important aspect of life: one must have hobbies or activities outside one's main job. I have played competitive badminton for the last several years and represented IIT Bombay in the inter-IIT staff tournaments. I love swimming, listening to folk music, and enjoying old Bollywood songs as well as classical instrumental music, which helps me relax from my daily commitments.

Finally, what does the future hold for you, Prof. Kumar?

This is perhaps the toughest question to answer. If one knows what the future holds for him/her, he/she will stop working and wait for things to come automatically. So, better than wondering about the future, one should follow the karma philosophy from the Bhagawad Gita, which states:

कर्मण्येवाधिकारस्ते मा फलेषु कदाचन ।

मा कर्मफलहेतुर्भूर्मा ते सङ्गोऽस्त्वकर्मणि ।

And on that note, we would like to thank Prof. Kumar for speaking to us. Prof. Kumar's dedication to his academic and research endeavours is truly inspiring. Undoubtedly, we will see him bring more accolades to the Institute in the future and wish him the very best going forward. Once again, thank you, Prof. Kumar.

GIVING



<https://youtu.be/FbyYQJMzy5w>

IIT Bombay launched the 2022-23 edition of its annual GO IITB fund-raising campaign for various critical and timely initiatives on campus.

IIT Bombay is now an 'Institute of Eminence' and its mission going forward is to establish globally competitive infrastructure including Centres of Excellence and state-of-the-art labs; attract, nurture and retain exceptional faculty who perform cutting-edge research and mentor students; and provide holistic education to our students.

IIT Bombay needs its extensive alumni community to rally around and donate generously to its alma mater. With its alumni's support, the Institute hopes to create a bright future for the next generation of scientists, researchers, entrepreneurs, and thought leaders. This will, in turn, allow IIT Bombay to take the lead in nation-building and solve challenges of national and global importance.

The Institute has identified the following five critical categories for this year's GO IITB campaign: Student Scholarships, IT Hardware, Institute Development Fund (IDF), Project Evergreen – Alumni-Led Student Housing, and Young Faculty Awards (YFA). The Institute urges its alumni to donate generously to their alma mater and ensure IIT Bombay's Tryst with Excellence.'

DONATE

https://alumni.acr.iitb.ac.in/donation/?cause=current-campaign-greatest-needs&sub_cause=go-IITB-annual-fund-raiser



<https://acr.iitbombay.org/causes/scholarship/>

Student Scholarships

IIT Bombay is committed to providing the best and most holistic education to all its students. But, often, financial constraints hold back highly accomplished students from pursuing higher education. The institute is committed to providing these students with financial scholarships that will help level the playing field. Student scholarships form an integral part of IIT Bombay taking the lead in nation-building as

it facilitates India's efforts to make high-quality education available to every deserving young student. To accomplish this challenging goal, the Institute needs its alumni's support so that no meritorious youngster gets left behind.



<https://acr.iitbombay.org/campaign/go-iitb-annual-fund-raiser/>

IT Hardware

The pandemic proved to be a challenging time for IIT Bombay's students, especially those from economically weak backgrounds. Lockdowns, social distancing, and quarantining resulted in online education becoming the need of the hour. As a result, several financially strapped students faced tremendous economic hardships trying to acquire expensive laptops and reliable internet connections that would enable them to continue their education online. With the

alumni community rallying around their alma mater, IIT Bombay successfully supplied these students with hardware (laptops) and network resources that ensured their continued education and kept them up-to-date with their studies. Through this experience, IIT Bombay realised the critical need to continue this exercise and instituted the 'IT Hardware Assistance Scholarship' which supports financially constrained students.



<https://acr.iitbombay.org/campaign/go-iitb-annual-fund-raiser/>

Institute Development Fund (IDF)

The 'Institute Development Fund (IDF)' was established over 15 years ago and has played a vital role in IIT Bombay's sustained growth. The IDF is an unrestricted fund that is used by the Institute to cater to high-priority initiatives.

IIT Bombay is committed to emerging as one of the top universities in the world by 2030. In line with this vision and mission, the Institute has set specific goals including nurturing world-class research ecosystems by building Centres of Excellence (CoE), state-of-the-art labs in emerging areas of research, micro-factories, and more. To achieve the same, the Institute needs to focus on several critical initiatives such as infrastructural development, enhancement of research facilities, student scholarships, and more.



<https://acr.iitbombay.org/causes/hostel/>

Project Evergreen - Alumni-Led Student Housing

IIT Bombay continues to be the first-choice Institute for undergraduate and postgraduate students in the country. Today, the Institute has over 13,000 students on campus and the number is growing steadily. While this is a matter of great pride for the Institute, the lack of adequate boarding and lodging facilities on campus to house these students is a critical challenge that needs a timely solution.

In a first of its kind, IITB's alumni have come together to design, fund, and construct a brand new, world-class, hostel complex, called Project Evergreen, that can replace the Institute's 50-plus-old hostel infrastructure. This first-of-a-kind alumni-led Project Evergreen will set up a state-of-the-art hostel complex, which will replace hostels 7 and 8. Additionally, a women's hostel, Hostel 21, will also be constructed to house the increasing number of female students on campus.

Project Evergreen will cost around Rs. 150-160 Cr., or USD 20M, and is a crucial initiative that needs immediate and ongoing support from our alumni.

For more information, please access the Project Evergreen website: <https://acr.iitb.ac.in/evergreen>



<https://acr.iitbombay.org/campaign/go-iitb-annual-fund-raiser/>

Young Faculty Award (YFA)

The YFA program offers outstanding young faculty from all over the world the opportunity to join IIT Bombay's prestigious faculty body. YFA provides them with a vibrant and challenging ecosystem to engage in trailblazing research, reduces the financial burden they face, facilitates their smooth transition to IITB from industry and/or their stints at foreign universities, and more. Hiring these extraordinary young faculty enhances the learning experience of students at the

Institute, which, in turn, results in the overall growth of IIT Bombay.

Donate generously to the GO IITB campaign's five critical causes.

https://alumni.acr.iitb.ac.in/donation/?cause=current-campaign-greatest-needs&sub_cause=go-IITB-annual-fund-raiser

SPECIAL REPORT



Alumni Day 2022 – A Day of Memories, Reunions, and Milestones

There was a palpable sense of excitement at the IIT Bombay campus as the Institute held its annual alumni day event on December 25, 2022. The special occasion celebrated the coming together of its alumni to campus after a two-year pandemic break and hosted several key events. These included the conferring of the Distinguished Service Award

(DSA) and Chapter Service Awards (CSA), the Silver Jubilee Reunion of the Class of 1997, the launch of the annual GO IITB campaign, the unveiling of the Donor Wall, as well as the launch of the Dean ACR's new website. Alumni attended the occasion and interacted with students, faculty, staff, and the extended IIT Bombay community.

Prof. Ravi Gudi, Dean ACR, kicked off the occasion by welcoming everyone to the special occasion. Prof. Subhasis Chaudhuri, Director, IIT Bombay, addressed the attendees in an inline mode and said, "IIT Bombay sees the success of its alumni as its own success like a mother always does about her children. We are delighted to have them all at home and look forward to their continued association with IIT Bombay."

<https://youtu.be/D6Ck0Qeh-OA>

Along with our exceptionally talented students and faculty, our alumni play a key role in the continued growth of IIT Bombay's journey of excellence. Most of our alumni continue to stay connected to the Institute despite having graduated years back. And on Alumni Day 2022, many of them returned to their cherished alma mater on Alumni Day 2022 to reminisce, rejoice, reconnect, and celebrate with the Institute, students, faculty, and each other.



The Distinguished Service Award (DSA) and Chapter Service Awards (CSA)

As part of the Alumni Day celebrations – the Distinguished Service Award (DSA) and Chapter Service Awards (CSA) were conferred on select alumni. They are an integral part of the Institute and were honoured for their contributions and dedicated service to their alma mater.

The DSA was instituted in 1999 and is given to alumni who, besides being achievers in their own chosen domains, have contributed in a notable and sustained manner to the progress of the Institute. The award consists of a certificate, memento, and an Uttaria. The recipients of the 2022 Distinguished Service Awards include Mr. Ajit Jawle, Mr. Nitin Doshi, Mr. Nandkishore Nemade, Mr. Suhas Mehta, Mr. Mayur Sirdesai, and Mr. Jignesh Patel.

The CSA was instituted during the Diamond Jubilee year celebrations and is conferred on select alumni who have contributed in a very notable and sustained manner to the progress of their Chapter and the Institute. Alumni who received the Chapter Service Award for 2022 consist of Mr. Rajendra Melville, Mr. Suhas Deshpande, Mr. Rijas Shareef, and Mr. Vivek Barsopia.

IIT Bombay is proud of their service to the Institute and hope for their continued support in the upcoming years.



The Silver Jubilee Reunion of the Class of 1997

The Class of 1997 celebrated their silver jubilee during the Alumni Day celebrations. They added to the alumni's legacy of giving back through their generous pledge of Rs. 26 Crores towards their alma mater. The donation will be utilised towards the Institute's priority initiatives such as revamping hostel infrastructure and providing scholarships to students among others. The pledge by the Class of 1997 is the largest donation ever made by a silver jubilee batch.



Honouring Members of the Class of 1962 – the First-Ever Graduating Batch of IIT Bombay

During the reunion, there were eight very special guests present among the attendees. They were members of the class of 1962, which is the first-ever graduating batch of IIT Bombay. They were Mr. M.C. Chitkara, Mr. B. Dias. B, Mr. S. Kamath, Mr. K.L. Khanna, Mr. D. Rajparia, Mr. R.M. Satyam, Mr. D.G.K. Sastry, and Mr. J.K. Tandon.

These very esteemed guests were called upon the stage and introduced by the group’s representative Mr. K.L. Khanna, who highlighted their glorious accomplishments over the years. This was followed by Prof. K.V.K. Rao, Deputy Director, Finance and External Affairs, and Prof. Ravindra D. Gudi, Dean, Alumni and Corporate Relations who felicitated each member. The most heart-warming moment during the ceremony occurred when the members of the first graduating batch of 1962 received a standing ovation from the attendees. In his speech, Prof. Gudi lauded them for being the “very foundation of IIT Bombay.”

IIT Bombay is thrilled and sincerely grateful to the members of the class of 1962 for taking the time to be a part of their alma mater’s very special day.



Launching the Donor Wall

IIT Bombay acknowledged the generous contributions of its donors through a special ‘Donor Wall’ during the Alumni Day event. Continuing this initiative from last year, the Donor Wall was a way for the Institute to acknowledge, appreciate and recognise 2022’s top contributors to the Institute.

The dedicated Donor Wall was unveiled by Dr. Sharad Saraf, Chairman BoG, IIT Bombay, and Prof. K.V.K. Rao, Deputy Director. The donors featured on this wall were recognised for their outstanding contribution towards the sustained progress of the Institute. They have supported several critical initiatives at IIT Bombay in emerging areas of research, as well as academia. These include climate studies, digital trust, digital health, machine intelligence, chair professorships in mathematics and biostatistics, amongst others.

The Donor Wall is a token of the immeasurable gratitude the Institute feels toward its alumni. IIT Bombay is grateful to its generous donors for truly exemplifying the power of giving and continually supporting the advancement of the Institute.

Launching GO IITB Campaign and Showcasing Project Evergreen



Fundraising campaigns form an essential part of IIT Bombay’s mission to continue conducting disruptive research for societal impact and providing best-in-class facilities to its students. This year, the key initiatives that are part of the fundraising campaigns include GO IITB and Project Evergreen.

Prof. Gudi launched the annual GO IITB campaign for 2023 through a special video that was featured during this year’s Alumni Day event. This campaign supports five critical high-priority initiatives this year. They include hostel infrastructure, student scholarships, IT Hardware, Institute Development Fund (IDF), and the Young Faculty Awards (YFA).

<https://youtu.be/FbyYQJMzy5w>

Attendees also got a detailed overview of Project Evergreen – the first-of-its-kind alumni-led initiative that will see the construction of new hostels on campus. Project Evergreen was launched during last year’s Alumni Day and has made tremendous headway since then. Alumni were updated on the latest highlights of the project and encouraged to continue supporting this initiative to meet its fundraising target.

The presentations of both the GO IITB and Project Evergreen campaigns were met enthusiastically by the attendees. The Institute is sincerely thankful to its alumni for turning up in such large numbers and making the occasion fun and memorable.

To learn more about Project Evergreen, visit: <https://acr.iitb.ac.in/evergreen/>

Stay tuned to learn more about the GOIIT Bombay campaign in the coming weeks!



Launching the Brand-New Dean ACR Website

The Dean ACR office unveiled its new website on Alumni Day. Dr. Sharad Saraf, Chairman, BoG, IIT Bombay; Prof. K.V.K. Rao, Deputy Director, and Prof. Ravindra Gudi, Dean ACR launched the website in the presence of Institute functionaries, alumni, and

their family members. Mr. Ravi Gedela, CEO, DRF, gave the attendees a quick presentation on the new Dean ACR website. One of IIT Bombay's key objectives is to strengthen and nurture relationships with its alumni and the Dean ACR website will play an instrumental and critical role in this endeavour.

This website has been strategically curated and designed to act as an important intermediary between the Institute and the alumni. The Dean ACR website will provide information on the latest initiatives, key events, and activities being undertaken by the Institute. The website will also provide alumni with crucial information on various fundraising activities at IIT Bombay. Alumni are encouraged to find causes closest to their hearts and which they can fully support.

Please click here for the brand-new Dean ACR website: <https://alumni.acr.iitb.ac.in/>

IIT Bombay launched the 2022-23 edition of its annual GO IITB fund-raising campaign for various critical and timely initiatives on campus.

IIT Bombay is now an 'Institute of Eminence' and its mission going forward is to establish globally competitive infrastructure including Centres of Excellence and state-of-the-art labs; attract, nurture and retain exceptional faculty who perform cutting-edge research and mentor students; and provide holistic education to our students.

IIT Bombay needs its extensive alumni community to rally around and donate generously to its alma mater. With its alumni's support, the Institute hopes to create a bright future for the next generation of scientists, researchers, entrepreneurs, and thought leaders.



IIT Bombay – Taking Mammoth Strides in Pedagogy

IIT Bombay is an 'Institute of Eminence' and its consistent position as India's premier college is a result of it constantly evolving and reinventing itself – whether it is in research, pedagogy, or its tenacious commitment to the advancement of science and technology. While the Quacquarelli Symonds (QS) world university ranking has placed it consistently

amongst the top two institutes of India, IIT Bombay's 2030 vision is to become one of the best institutes globally in science and technology. This has resulted in the Institute aggressively setting up several Centres of Excellence (CoE) and scientific labs to break new ground in scientific research and establish projects of national and global importance.

The 'Deepak and Maya Satwalekar Design and Making Lab' is one more step in the Institute taking the lead by introducing newer pedagogical styles. Set up through the generous contribution of IITB's Distinguished Alumnus, Mr. Deepak Satwalekar [B.Tech. (Hons.), Mechanical Engineering, 1971]), the Lab will also allow the Institute to get one step closer to becoming 'Aatmanirbhar' in science and technology through indigenous means.

The Lab was officially inaugurated on Dec 19, 2022, with a special ceremony held on campus. This Lab forms an essential part of the Institute's larger Makerspace program that envisions providing a comprehensive education to first-year students through exposure to hands-on learning that will complement and strengthen theoretical concepts. This first-of-its-kind initiative at the Institute will train students to combat and overcome challenges found in real-world industrial setups, through a multidisciplinary course.

This modern facility comprises advanced equipment, and over 250 workstations and will be accessible to nearly 1,400 first-year engineering students. It will train them in the latest design and manufacturing practices in engineering, similar to those found in real-world industrial setups. Essentially, the bright and curious young minds of IIT Bombay will get to learn the latest design and manufacturing practices at the very beginning of their academic journeys itself.

The Lab also serves a larger purpose of boosting the Institute's endeavour of revamping its entire curriculum. This is in line with the National Education Policy that stresses the importance of experiential-based learning. This state-of-the-art facility will play an instrumental role in encouraging students to think beyond their academic textbooks, create, and innovate using ultra-modern technology in the real world. By tinkering and experimenting in the Lab, IIT Bombay hopes that its engineers can fully realise their capabilities and change the world for the better.

During the inauguration, Mr. Deepak Satwalekar spoke passionately about the need to provide a well-rounded education to students. This was key to his generous donation towards the lab. He also explained the crucial role that hands-on learning plays in helping students create real-world applications for classroom concepts. The event culminated with talks by Prof. Varun Bhalerao, Associate Professor, Department of Physics, and Prof. Darshan Shah, Assistant Professor, Department of Mechanical Engineering, both of whom are core members of the Makerspace Committee at IIT Bombay. The professors provided an overview of the meticulous preparation and design work involved in the successful establishment of the Lab and the amenities that will be available in this facility.

IIT Bombay is extremely grateful to Mr. Deepak Satwalekar for initiating and implementing this significant project at his alma mater. With the inauguration of this Lab, IIT Bombay takes a progressive step in its endeavour towards making experiment-based learning an essential part of its curriculum.

Undoubtedly, the 'Deepak and Maya Satwalekar Design and Making Lab' will greatly benefit the present and future generations of the Institute.

RESEARCH SPOTLIGHT OF THE MONTH



Team from IIT Bombay wins the Algorand Grant for Blockchain Research of \$350,000

The following article was originally written for the IIT Bombay website by Ms. Shilpa Inamdar-Joshi: (<https://www.iitb.ac.in/en/research-highlight/iit-bombay-team-wins-algorand-grant-blockchain-research>)

IIT Bombay is a part of a multi-institute endeavour MEGA-ACE which has received the Algorand grant for strengthening research in blockchain technology.

Today, the news is full of buzzwords such as 'cryptocurrency' and 'blockchain.' Ever wondered what they are? Blockchain is a distributed digital database that is shared using a computer network. It records transactions and tracks ownership of assets such as cryptocurrencies, land records, and goods in the supply chain.

A team from the Indian Institute of Technology Bombay (IIT Bombay) led by Prof. Manoj Prabhakaran, Department of Computer Science and Engineering, is one of the ten teams selected by the Algorand Foundation under the Algorand Centres of Excellence (ACEs) Program. Prof. Vinay Ribeiro and Prof Umesh Bellur, also from the Department of Computer Science and Engineering, are the co-leaders. The ACE program aims to award \$50 million (about Rs. 400 Cr) to the ten teams over five years. The Algorand program received 77

proposals with more than 550 participants representing 46 countries. An international panel of 27 experts from diverse disciplines selected the winners.

Cryptocurrency, which has blockchain technology at its backbone, is gaining momentum worldwide. Some well-known cryptocurrencies like Bitcoin require power-heavy processing on several computers connected to the network to record a single transaction. Due to the high-power consumption, the carbon emission is high, raising questions about its environmental impact.

Algorand is a company that designs blockchain technology and aims to have no negative impact on the environment by reducing power consumption and, thereby, carbon emission. The Algorand Foundation attempts to grow a carbon-negative ecosystem using Algorand blockchain technology in various areas. “The Algorand blockchain technology uses a design and protocol that requires less computational power than other cryptocurrency implementations, such as Bitcoin and Ethereum, making Algorand carbon-negative,” explains Prof. Ribeiro. Algorand dedicates a part of every transaction fee for the purpose of carbon offsetting. In its pursuit to aid research in green blockchain technology, the company is setting up the Algorand Centres of Excellence (ACE) across the globe.

Blockchain facilitates the transfer of ownership of assets via transactions that are recorded on blocks, similar to transactions of a bank being recorded on pages. Each block stores the mapping, called a hash value, of the previous block, which acts as a unique ID of the content of the previous block. This is termed cryptographic chaining of the blocks using hash pointers. The ownership information of the assets recorded in the blockchain cannot be arbitrarily modified; thus, the integrity of information exists in the blockchain. The use of hash pointers ensures that the history of the transactions is tamper-proof. Often, this database of transactions called a ledger is not maintained by a single central server but by a community of participants. These participants get paid in cryptocurrencies for their services. Blockchains are best known for their crucial role in cryptocurrency systems for maintaining a secure record of transactions.

The Indian Institute of Technology Bombay team is a part of a multi-institute endeavour, a 3- year project called MEGA-ACE led by Purdue University. MEGA-ACE is a multi-institute interdisciplinary collaboration network led and coordinated by the Purdue Blockchain Lab. It includes partners from top universities around the globe. The MEGA-ACE team consists of universities from North America, South America, Europe, Australia, Africa, and Asia, including the Indian Institute of Technology Bombay and the Indian Institute of Technology Madras.

“There are many reasons to take a closer look at blockchains,” explains Prof. Prabhakaran. “For one, blockchains are still an immature technology, and many of the algorithmic and systems design choices are ad hoc. Indeed, one of the claims to fame for Algorand is that it pioneered a system that uses cryptographic techniques to do away with Bitcoin’s computationally and ecologically expensive protocol for running a lottery. But this is not the end of the story. Our research at IIT Bombay looks into several other ways a blockchain-like system can be made more robust and efficient from theoretical and practical points of view. We are also interested in resolving some of the tension between transparency and secrecy that one encounters on such systems, using advanced cryptographic techniques like secure multi-party computation. Also, at MEGA-ACE, researchers will look into new and appropriate real-life applications of blockchain technologies and complex game-theoretic questions that arise when incentivizing real-life participants with cryptocurrencies.”

Prof. Manoj Prabhakaran has been a part of the bigger MEGA-ACE team which has its roots in the theoretical cryptography community. He has been conducting research in the field of Distributed Data Repositories. Prof. Ribeiro and Prof. Bellur are working on research areas focussing on increasing the number of transactions per second and reducing the time required for confirming a transaction in a blockchain. “Blockchains are a melting pot of several technologies, and at IIT Bombay, we have a good balance of theoreticians and practitioners who can work together on this topic,” remarks Prof. Bellur.

IIT Bombay will receive around \$350K (roughly Rs. 2.8 Cr) from the total grant of \$8 million (about Rs. 64 Cr.) to the MEGA-ACE project. The MEGA-ACE team aims to educate students across the globe with multi-lingual material. For IIT Bombay and other partner institutions, the project also aims to conduct collaborative events like workshops, schools, hackathons, and blockchain days that encourage blockchain research. The MEGA-ACE team aspires to find solutions in the Algorand ecosystem that address infrastructure problems in the local communities within countries of partnering institutes like IIT Bombay.

“Blockchain technologies are evolving fast, and their current applications are largely experimental in nature. But there is a great deal of interest from Indian enterprises and governments. Going forward, as these technologies become more robust and their potential for more efficient and transparent digital transactions become better understood, these technologies are likely to see more adoption,” concludes Prof. Ribeiro.

DONOR INSTITUTED CHAIR PROFESSORSHIPS



Prof. Souvik Mahapatra appointed the P. K. Kelkar Chair for Excellence in Nanotechnology

About the Donor:

IIT Bombay's very first batch from 1962 established the P. K. Kelkar Chair for Excellence in Nanotechnology in honour of Dr. P. K. Kelkar. As the Institute's planning officer and deputy director, Dr. Kelkar was amongst the elite group of academicians who were instrumental in the setting up of IIT Bombay. He was a legend in his time in the field of technical education in India. This Chair Professorship in his name was established with a vision to elevate research in the field of Nanotechnology.

About the Appointee:

Prof. Souvik Mahapatra, Professor, Department of Electrical Engineering

Professor Souvik Mahapatra is currently the P. K. Kelkar Chair Professor for Excellence in Nanotechnology.

Prof. Mahapatra's academic background includes him getting his MSc (Physics) from Jadavpur University, Calcutta, in 1995. He then received his Ph.D. (Electrical Engineering), from IIT Bombay, in 1999. From 2000-2001 he worked at Bell Laboratories, Lucent Technologies, Murray Hill, NJ, USA. He then made the shift to academia and joined the Electrical Engineering

Department, IIT Bombay, in 2002, and has been here ever since.

Prof. Mahapatra's research interests include the reliability of CMOS logic and flash memory devices, design technology co-optimization, reliability impact on circuits, and active collaboration with several semiconductor industries in the fab-tool, EDA, IDM, foundry, and fabless ecosystem.

Prof. Mahapatra has received many awards and accolades over the years. He is a Fellow of multiple organisations including the Institute of Electrical and Electronics Engineers (IEEE), the Indian National Science Academy (INSA), the Indian Academy of Sciences (IASc), and the Indian National Academy of Engineering (INAE). He won the Vikram Sarabhai Award from the Physical Research Laboratory (PRL) in 2013.

He is now an Honorary Professor, at University College London, London, UK, from 2022-2027. Between 2017-2019 he was a Visiting Professor, School of Engineering, University of Notre Dame, USA. He was part of the graduate faculty at the School of Electrical Engineering and Computer Science, Purdue University, USA, from 2007-2016.

He has won the IBM Faculty Award twice in 2013 and 2018. He was awarded the Erasmus Mundus fellowship (visiting fellow at IMEC, Belgium), in 2015. In 2008, he was awarded the Tan Chin Tuan fellowship by the Singapore government (visiting faculty, Nanyang Technological University, Singapore). He was bestowed the Young Engineer Award by the Indian National Academy of Engineering (INAE), in 2004. In 2001, the Indian National Academy of Engineering (INAE) awarded him with the Innovation Potential of Students Projects Award 2000 – Doctoral Level.



Prof. D. N. Singh appointed the D. L. Shah Chair Professor for Innovation

About the Donor:

The D. L. Shah Trust for Applied Science, Technology, Arts, and Philosophy established the D. L. Shah Chair Professorship for Innovation to initiate new academic programmes, elevate existing R&D programmes and improve industry interactions at IIT Bombay.

About the Appointee:

Professor D.N. Singh is currently the D. L. Shah Chair Professor for Innovation at IIT Bombay.

Prof. Singh's stellar academic background includes receiving his B. Tech. in Civil Engineering; M. Tech. in Geotechnical Engineering; and Ph. D. in Geotechnical Engineering – all from IIT Kanpur.

Prof. Singh's research interests include CCUS and CCU, Synthesis & Characterization of Gas Hydrate Bearing Sediments, Geothermal Energy, Synthetic & Manmade Soils, Mining

Issues related to Geoenvironment, Valorisation of Industrial By-products for Sustainable Development, MSW Landfills, Bio-mining & Landfill Rehabilitation, Valorisation of Dredged Sediments, and Multi-phase Geomechanics.

Over the years, Prof. Singh has received multiple awards and accolades. He has received Fellowships from the Indian National Academy of Engineering (INAE), New Delhi; the American Society of Civil Engineers (ASCE); and the Institution of Civil Engineers (ICE), London, UK.

He received the 2022 Outstanding Contributions Medal, IACMAG. In 2018 he received the Canadian Geotechnical Journal Fredlund Award. He was conferred with the prestigious Prof. S. P. Sukhatme Award for Excellence in Teaching 2017. In 2014, he was bestowed with the Richard Feynman Prize. The Medal International Association for Computer Methods and Advances in Geomechanics (IACMAG) awarded him with the Excellent Contribution Award in 2008. In the same year, the International Association for Computer Methods and Advances in Geomechanics (IACMAG) Photograph presented him with an Appreciation Award. IACMAG also presented him with the Significant Junior/Senior Paper Award. In 2003 he received the SP Research Award from the Shamsheer Prakash Foundation, Rolla, MO, USA. In 1997, he was bestowed with the Career Award for Young Teachers (1997) by the All-India Council for Technical Education (AICTE), New Delhi.

FACULTY ACCOLADES



Prof. Chetan Solanki Selected by LinkedIn as ONE of the Top 15 Must-Follow Thought Leaders in India for Top Voices Green

Prof. Chetan Singh Solanki has been recognised as one of the Top 15 must-follow creators in the Top Voices: Green Category India by LinkedIn. Prof. Solanki was recognised for his “passion for sustainability, climate change, and protecting the environment.” Prof. Solanki says, “I wish to leave behind a liveable planet for future generations with clean air to breathe, clean water to drink, and clean food to eat.”

LinkedIn came up with the list ahead of the world leaders meeting for the COP27 UN Climate Change Conference. Click here for more coverage of Prof. Solanki and his life inside a solar bus on LinkedIn: <https://www.linkedin.com/pulse/linkedin-top-voices-green-15-creators-follow-india-/?trackingId=yBmHJ7btSauWgj4PbRjteg%3D%3D>

Click here to read Prof. Solanki's interview on the Indiatimes website:

<https://www.indiatimes.com/news/india/iit-bombay-professor-chetan-singh-solanki-climate-change-solar-energy-yatra-578789.html>



Team Led by IITB Professor Ganesh Ramakrishnan Wins 25th National E-Governance GOLD Award 2022

A four-member team led by Prof. Ganesh Ramakrishnan, Department of CSE, IIT Bombay, received the “The 25th National E-Governance GOLD Award 2022” on November 26, 2022, from the Honourable Minister, Dr. Jitendra Singh, Ministry of Science and Technology. The other members of the team are SrivisifAI Technologies Pvt. Ltd. (industry partner of IIT Bombay) which was represented by its co-founder, Mr. Yogesh Ray; Dr. Pratap Sanap, R&D Head, SrivisifAI, and Dr. Vishal Kaushal, Research Scholar, Dept. of CSE, IIT Bombay.

For more click on this link: <https://lnkd.in/dizJjuuw>

The team won the “Outstanding research on Citizen Centric services by Academic/Research Institutions” for their work on Artificial Intelligence-based Video Analytics solutions for Safety, Security, and Compliance Monitoring. The award consists of a Crystal Trophy, Certificates, and a reward of Rs. 5,00,000.

For further details click on the link: <https://nceg.gov.in/25thnc>



Prof. Gulab Singh Conferred the "National Geospatial Award for Excellence 2021" by the Indian Society of Remote Sensing (ISRS)

Prof. Gulab Singh (Associate Professor, Centre of Studies in Resources Engineering, IITB) was conferred the “National Geospatial Award for Excellence 2021” by the Indian Society of Remote Sensing (ISRS). The ISRS Symposium held at Hyderabad in November 2022, recognised his outstanding and pioneering contributions in the area of polarimetric synthetic radar remote sensing for monitoring the earth with a particular focus on its cryosphere and biosphere. His research contributions have attempted to bridge the intellectual gap between traditional radar polarimetry theories/methods and monitoring the Earth's surface parameters. This prestigious award of ISRS recognises outstanding and conspicuously significant contributions to the advancement of remote sensing science, technology, and applications in the country.



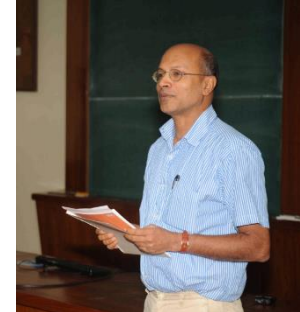
Prof. Rohit Srivastava was elected as a Council Member of NASI, the oldest Science Academy in India

Prof. Gopal Dixit, Department of Physics, has been elected as a Fellow of the "JSPS Invitational Fellowships for Research in Japan"





Prof. Balaji Ramakrishnan and his team from the Department of Civil Engineering have been selected for the "Marine Engineering Division Prize", by the Institution of Engineers, India (IEI) under the Marine Engineering category



Prof. Dipendra Prasad elected to the Fellowship of The World Academy of Sciences (TWAS)

STUDENT SUCCESS STORIES



IIT Bombay's Mars Rover Team: Taking Their First Steps to and on Mars

From dreaming about space to watching sci-fi movies onscreen – very few of us get the opportunity to build something challenging, thrilling, and practical in the field of space exploration. IIT Bombay's Mars Rover Team had the opportunity to build an actual physical Mars Rover which they entered in the International Rover Design Challenge (IRDC) 2022 and placed fifth out of 24 teams. What an outstanding accomplishment for the students and the Institute!

of the 2022 Dean ACR newsletter.

We are delighted to speak with the winning team for the first edition



Hi guys, First of all, CONGRATULATIONS! What an incredible accomplishment! I bet you guys are very proud of yourselves, as you should be. Since you worked as a team – we will pose these questions to the team as a whole. Whoever feels equipped to answer the questions – feel free to jump in. But make sure each answer represents the opinion/accomplishment of the entire team. Let's start by telling us your names and your academic background first.

Hi! We are an interdisciplinary team consisting of 40+ members. We are representatives of various departments on campus and are in different years in our education journey.

The core team is made up of four smaller subsystems that worked on different aspects of the rover including mechanical, electrical, software, and media & management.

The team is headed by three fourth-year undergraduate students - Liza Dahiya (Computer Science & Engineering), Nishant Mittal (Electrical Engineering), and Tejas Shintre (Mechanical Engineering). Our faculty adviser and mentor was Prof. P.J. Guruprasad, Professor, Aerospace Department.

For those of us who don't know...what is the IRDC 2022 competition? Can you give us some details about the competition?

The International Rover Design Challenge (IRDC) was launched during the lockdown in 2020. It's an online space engineering design and research competition conducted by the Space Robotics Society. It challenges university students to conceptualize and design the next generation of Mars Rovers. The Rovers need to be fully equipped and mission ready for future astronaut-assistive exploration operations on Mars. This online research-

oriented competition encouraged students to let their creative juices flow and explore innovative design ideas. The IITB Mars Rover team ranked 5th among 24 international teams who competed in IRDC 2022.

How did you hear about the competition and what made you decide to participate? Basically, how did the IIT Mars Rover team come about?

The IITB Mars Rover team has been closely associated with the Mars Society South Asia and has participated in this competition since its inception in 2020. But the IITB Mars Rover team was established much before IRDC came about. In 2012, a group of young and keen-eyed engineers from various backgrounds and departments on campus and who were fascinated by space, Mars, and robotics came together to start the IIT Bombay Mars Rover team. The core aim of the team was to develop and learn about technologies for Martian-based environments.



What was/is your team's mission?

The IITB Mars Rover Team is a student initiative to design, build and test Martian Rover prototypes. We aim to develop robots capable of performing autonomous traversal, and environment manipulation using a robotic arm and onboard biological testing in extra-terrestrial environments. Along the way, we explore the various technical challenges presented by such an endeavour and come up with novel and creative

solutions to overcome them.

To accomplish its mission, the team participates in the University Rover Challenge held by the Mars Society Global, as well as the International Rover Challenge organised by the Mars Society South Asia. These provide us with an opportunity to work on space challenges under engineering constraints.

How did you go from deciding to participate to then making it into the IRDC 2022 Finals?

Obviously, it was a team effort. Each subsystem conducted over a month of thorough research and background reading to ideate and develop new ideas to meet the competition requirements. The entire team worked in tandem to bring together their various ideas and integrate them into one cohesive idea, bringing us to the finals.

Can you give us some details on your actual project? Explain it to us as you would to a layperson.

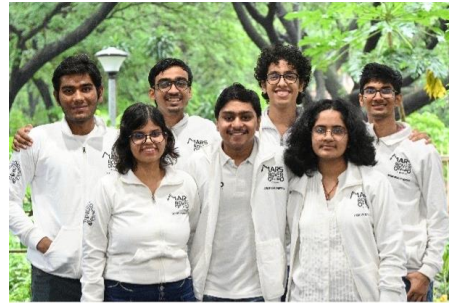
Following along the lines of our main mission, we built physical rover prototypes capable of traversing harsh environments whilst interacting with the environment and performing onboard biological tests. Essentially, we brainstormed and built a robot that can navigate rocky and unstable terrains. We also built dynamic robotic arms to manipulate the rover's surroundings. Further, we created a bio-assembly that uses collected soil samples to perform various onboard scientific tests.

How was it working together as a team? Take us through the many challenges we're sure you must have faced during this time.

As with any team, we had our fair share of disagreements and debates. With different thought processes, ideas, and thinking styles, there were bound to be clashes. But we navigated these tricky and potentially concerning situations through open lines of communication and maintaining a friendly and professional environment. Respecting each other's ideas and working collaboratively are some of the many values we learned along the way.

How did the IIT Bombay ecosystem help you navigate this process?

From the very first day of the challenge, IIT Bombay has been our main support. The Institute provided us with a separate work area - a lab we called our home, as well as monetary support to fund our prototypes and technical activities. Further, the Institute gave us various opportunities to present our rover and skillset. This enabled us to have a wider understanding of the project and gain important feedback from experienced members of academia.



Apart from the excitement and a sense of achievement, what does this accomplishment mean to you guys?

We have obtained 5th place internationally in this competition! The award recognises the hard work and effort we put into it. Further, it also acts as one of the qualifying factors for IRC 2023, wherein we aim to participate and demonstrate our physical rover.

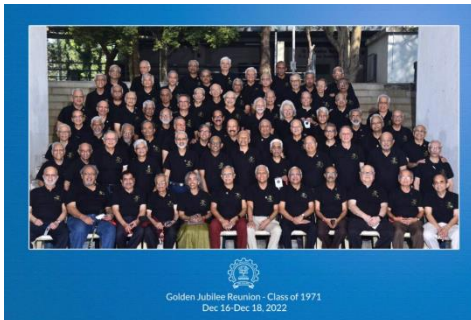


Finally, what does the future hold for all of you?

We're looking forward to competing in IRC 2023, a sister competition of IRDC, wherein we will take our physical rover model for a test run under Martian-like conditions. We shall be competing against some of the best teams in the world and hope we do our very best. We will also participate in the University Rover Challenge and continue ideating and learning new techniques along the way!

What an exceptional achievement by the Mars Rover team! The team proves that working together, imagining, envisioning, collaborating, and being mindful of one's teammates can result in magic! Hearty congratulations to the Mars Rover team. We wish them the very best for the IDR 2023 challenge. We have no doubt they will represent IIT Bombay to the fullest of their potential.

NEWS FROM IIT BOMBAY



IITB Class of 1971 Celebrates Golden Jubilee Reunion

After the pandemic-induced gap of two years, the IIT Bombay campus came alive once again. Apart from the regular activities and events, the Institute played host to several alumni reunions that were put on hold over the past two years.

One of them was the Class of 1971 who celebrated a momentous occasion on campus between December 16-18, 2022 – their Golden Jubilee Reunion. The three days were filled with excitement and activities as alumni from across the globe came together after 50 years to their cherished alma mater.

Organised by the IIT Bombay Alumni Association (IITBAA) and the Student Alumni Relations Cell (SARC), the class of 1971 got reacquainted with their fellow batchmates and the Institute's faculty members over a gala dinner which was held on Dec 16. This was followed the next day with a formal event where alumni were apprised of the very significant progress made by their alma mater over the years. They were also given an overview of Project Evergreen, a first-of-its-kind, alumni-led, initiative to revamp the hostel infrastructure at the Institute. Alumni also spent their time reminiscing over their time on campus and revisited their respective hostels, departments, and favourite hangout spots at their Institute.

The Class of 1971 also broke records when they made a substantially generous pledge of Rs. 38.5 crores as part of their Legacy Project. This is the highest contribution made by a Legacy Batch so far. The donation will support critical projects at the institute including the Pramod Chaudhari Alumni Continuing Education Centre

(PCACEC); the Deepak and Maya Satwalekar Design and Making Lab; the Good Manufacturing Practice Lab (GMP); the Alumni Centre, and the Clay Modelling Lab amongst others. Additionally, the donations will be dispersed towards the overall enhancement of the academic and infrastructural facilities on campus.

IIT Bombay continues to be grateful to its alumni for their enthusiastic participation, a generous contribution, and heartfelt commitment toward the upliftment of their alma mater.



IIT Bombay Launches Basketball Court Renamed 'Arena 95' to Honour the Class of 1995

The Institute's alumni reunions are no longer simple occasions where alumni return to their beloved alma mater and reconnect with their batchmates and the Institute. Instead, these reunions are symbolic of their legacy of giving back to their alma mater.

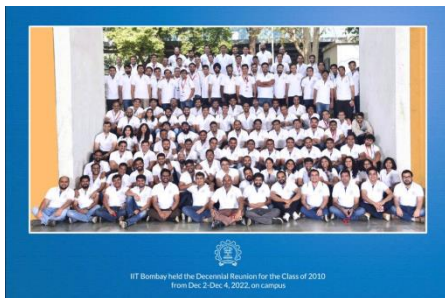
Over the past few years, IIT Bombay has been privileged to witness several of its batches pledging generous amounts towards the Institute's continued progress.

The Class of 1995 was no different. They added to the tradition during their reunion this year with their pledge of Rs. 21 crores to IIT Bombay as part of their Legacy Project. The Institute honoured their generous pledge by renaming the famous basketball court on campus into the 'Arena 95- Class of 1995 Basketball Court.'



The batch announced this pledge during their silver jubilee reunion held on Dec 26 and Dec 27, 2022. The inauguration was a fun and memorable affair as the Class of 1995 reconnected with one another and faculty members. A few batch members also participated in a friendly game of shooting hoops! During their stay on campus, batch members took a tour around campus, and revisited their favourite hangout spots and their respective departments and hostels. They also visited several new labs on campus including the Tinkerer's Lab and the Design and Making Labs.

It was delightful to see alumni coming together and reliving their cherished memories from their own days on campus. The continued support from alumni keeps the Institute motivated on its journey of excellence. IIT Bombay is extremely grateful to the Class of 1995 batch for their generosity.



IITB Class of 2010 Celebrates Decennial Reunion

IIT Bombay held the much-awaited decennial reunion for the Class of 2010. The reunion was held in collaboration with the IIT Bombay Alumni Association (IITBAA) and the Student Alumni Relations Cell (SARC), IIT Bombay after a pandemic-induced gap of two years.

The special occasion saw Prof. Ravindra D. Gudi, Dean, Alumni and Corporate Relations, updating alumni on IIT Bombay's significant advancement over the years. He provided them with an overview of the strategic steps planned by the Institute to accomplish its mission of being amongst the top science and technology institutes in the world by 2030.

The event witnessed a detailed presentation by IITB's Distinguished Alumnus, Mr. Kirat Patel (B. Tech., Mechanical Engineering, 1975), on Project Evergreen. This is a first-of-its-kind alumni-led initiative to design, fund, and build a world-class hostel complex on campus. The project will see the replacement of Hostels 7 & 8 and the construction of a women's hostel (Hostel 21) to house the growing number of students on campus. Mr. Patel gave an overview of the project's progress so far and what's coming up in the future.

The reunion culminated with a monetary pledge made by the class of 2010 as a part of their Legacy Project, which will support critical initiatives at the Institute. IIT Bombay is thankful to the class of 2010 for their generosity and for taking a trip down memory lane with their alma mater!



IIT Bombay Participates in the 55th Inter-IIT Sports Meet

The sports team from IIT Bombay made the Institute proud at the 55th Inter-IIT Sports Meet 2022. The team stood fifth in the overall championship. IITB won the gold medal in basketball (men), athletics – javelin (men) and chess; the silver medal in table tennis (men), discus &

athletics (women – 100m); and the bronze medal in football, squash (men) & hockey.



IIT Bombay sent a strong contingent that included 162 students, sports officers, coaches, and staff members to the 55th Inter-IIT Sports Meet being held after a two-year break. The sports meet took place between Dec 14 – Dec 22, 2022, at IIT Delhi and IIT Roorkee.



The Inter-IIT Sports Meet started in 1961 with five IITs that competed in five different sports. Circa 2022, it is the longest-running inter-collegiate sports meet in the country. The Inter-IIT Sports Meet now hosts 23 IITs competing in 13 different sports to win the overall General Championship Award. This year, over 3500

players from the various IITs participated in the various sporting events.



Team from IIT Bombay Participates in Human Proteome Organisation (HUPO) World Congress in Mexico

A team from IIT Bombay including 8 students/ postdocs participated in the Human Proteome Organisation (HUPO) World Congress in Mexico. Prof. Sanjeeva Srivastava was selected as “Humans of HUPO” (a recognition given to very few scientists from the world proteomics community to highlight their work). He will be the guest editor for two special issues on clinical proteomics.



Indian Astronomers, Including Astrophysicists from IITB, use the GROWTH-India Telescope (GIT) to Study a Very Rare Tidal Disruption Event (TDE)

Members of the GROWTH-India collaboration worked with an international team to study a bright optical flare caused by a dying star’s encounter with a supermassive black hole.

What happens when a dying star flies too close to a supermassive black hole?

“It doesn’t end well for the star”, says Varun Bhalerao, an astrophysicist at IIT Bombay. “The star gets violently pulled apart by the black hole’s gravitational tidal forces. The shreds of the star form a spinning disc around the black hole and are eventually consumed by it. Such events are called Tidal Disruption Events, or TDEs.”

Indian astronomers using the GROWTH-India Telescope (GIT) recently studied a very rare TDE, where the black hole took part of the stellar material and launched it as “relativistic jets” – beams of matter travelling close to the speed of light. The results of this study, jointly with a large international team, were published in the journal Nature on November 30, 2022.

For more, read the entire original article – click here:

<https://sites.google.com/view/growthindia/results/AT2022cmc?fbclid=IwAR38cmsA2GKKA085IYcp6UaW3EmUkziN7UjbCshgjWO0FPMOkAhvKc43rPE&pli=1>

INSTITUTED HIGHLIGHTS



IIT Bombay Celebrates TechConnect 2022

TechConnect is IIT Bombay’s largest research outreach activity that inspires, influences, and kindles the scientific temperament of children, students, and adults of all ages alike. TechConnect showcases the Institute’s R&D achievements which include its contributions to basic research and reaching out to fulfil critical societal needs and industry requirements.

Dr. V. Narayanan, Director, Liquid Propulsion Systems Centre (LPSC), Indian Space Research Organisation (ISRO), along with Prof. Subhasis Chaudhuri, Director, IIT Bombay, Prof. Milind Atrey, Dean (R&D), and other Institute functionaries inaugurated TechConnect 2022 on December 16, 2022.

During the three days, TechFest 2022 had ninety exhibition booths covering, among other areas, educational outreach, student tech teams, start-ups from IITB’s incubator SINE and technologies ready for transfer. The core organising team included Prof. Prasanna Gandhi and Prof. Vikram Vishal and other student coordinators.



IIT Bombay and The Water Innovation Centre: Technology, Research, Education Host "2nd International Conference on Water Technologies 2022"

The Water Innovation Centre: Technology, Research, Education, IIT Bombay, recently organised the “2nd International Conference on Water Technologies 2022.” Held over a period of two days from Dec 1 – Dec 2, 2022, the Institute organised the conference in collaboration with the Asian Universities Alliance in a hybrid mode.

Many eminent and well-renowned speakers shared their expertise and views on sustainable and smart technologies for water quality and purification. The event focused on the promising and revolutionary advancements being made in the interdisciplinary research fields of membrane filtration, desalination, sensors, photocatalysis, and pollutant removal from wastewater. The conference was also a wonderful platform to understand industry technological trends and expectations from reliability engineering with evolving demands.

The program concluded with a challenging leadership workshop presented by Prof. Anita Mahadevan-Jansen, which looked at the qualities that make a leader.



IIT Bombay Research Park Organises One-Day Interdisciplinary Conversation with Stakeholders to Build a Sustainable World

On November 30, 2022, the IIT Bombay Research Park organised a one-day interdisciplinary conversation with stakeholders to build a sustainable world. Speakers, delegates, and participants congregated on campus to discuss and deliberate on vital environmental topics and the sustainable way forward.

The event began with a welcome address by Prof. S. Sudarshan, Deputy Director, Academic and Infrastructural Affairs. The Chief Guest, Dr. M. Ravichandran, Hon'ble Secretary, Ministry of Earth Sciences, Government of India, attended the event virtually. In addition, Dr. Nitin Kareer, Additional Chief Secretary of the Revenue and Forest Department, Government of Maharashtra, and Shri Amar Nath, Additional Secretary Department of Administrative Reforms, Public Grievances & Pensions, were the Guests of Honour.



Mr. Nadir Godrej, Chairman & Managing Director of Godrej Industries Ltd., set the stage for the day-long insightful talks with his Plenary Lecture which was rendered beautifully as a poem.

Six parallel sessions were held on the topics of Air & Water Quality, Food-Energy-Water nexus, Sustainable & Resilient Infrastructure, Climate Change Mitigation & Green Technology, Climate Policy & Circular Economy, and AI for Sustainability.

The Institute hopes that the outcomes and engagement opportunities that this conclave offered will get the ball rolling toward a community that will champion sustainable development. These include representatives from science, technology, and policy leaders from academia, industry, and government. The IIT Bombay faculty shared the ongoing initiatives on the campus with the attendees.

The day ended on a high note with a stimulating panel discussion between stakeholders on the topic – 'Academia, Government, Industry, Community: Nexus for Sustainability.' The panellists were:

- Sujata Saunik, Additional Chief Secretary, Department of General Administration, Government of Maharashtra
- Satyajit Bhatkal, the CEO of Paani Foundation
- Jai Asundi, Executive Director, CSTEP
- Ashwini Hingne, Senior Manager – Climate, WRI India
- Ravi Panga, Director & CEO, Causis E-Mobility
- Raghu Murtugudde, Faculty, Climate Studies, IIT Bombay

The wheel to Pledge for Sustainability encouraged attendees to make a sustainable choice that they could implement daily.

UPCOMING EVENTS



Reunion Class of 1978

IIT Bombay will celebrate the reunion of the Class of 1978 in January 2023. It has been 45 years since the Class of 1978 graduated, and almost 50 years since they first met on campus. Despite living on different continents and having widely divergent lives and careers – IITB's alumni still share bonds that have endured for half a century. So, return to your alma mater, reconnect and reminisce with your batchmates and hostel mates and rediscover your favourite campus. Come to the reunion of the Class of 1978 and make lifelong memories.

If you're in India, please register here for the event: <https://www.iitbombay.org/e/reunion-class-of-1978>

If you're overseas, please register here: <https://www.iitbombay.org/e/reunion-class-of-1978-usd>

Day & Date: Fri, Jan 13, 2023 - Sun, Jan 15, 2023

Time: 11.00 am onwards

Venue: IIT Bombay Campus



Golden Jubilee Reunion Class of 1970

IIT Bombay will celebrate the Golden Jubilee Reunion of the Class of 1970 in January 2023.

Since the 1970 Golden Jubilee Reunion should have taken place in 2020, the pandemic played spoilsport to the event. But IIT Bombay and IIT Bombay Alumni Association resolved to hold an in-person reunion for the 1970 batch, even if it happened three

years later. So, please come back to your alma mater during this milestone occasion and relive your glorious memories from the past with your fellow alums.

If you reside in India, please register here for the event: <https://www.iitbombay.org/e/golden-jubilee-reunion-class-of-1970-alumni-residing-in-india>

If you reside overseas, please register here: <https://www.iitbombay.org/e/golden-jubilee-reunion-class-of-1970-alumni-residing-in-abroad>

Day & Date: Sat, Jan 28, 2023 - Mon, Jan 30, 2023

Time: 9.00 am onwards

Venue: IIT Bombay Campus



DSSE Entrepreneurship Symposium

The Desai Sethi School of Entrepreneurship will host an entrepreneurship symposium in the upcoming new year. Apart from unveiling the new DSSE building, the symposium will host two panel discussions. The topics are 'Evolving Role of Entrepreneurship Education and Academic Incubators' and 'Fostering Entrepreneurship Ecosystem from Research to Impact.'

Day & Date: Tuesday, Jan 31, 2023

Time: 4.00 pm – 7:00 pm

Venue: IIT Bombay Campus