"Truth is ever to be found in simplicity, and not in the multiplicity and confusion of things"
- Sir Isaac Newton
"In so-called sunrise sectors like my branch, Computer Science, or Electronics Engineering ... finding someone above 40 (years) in top companies in India is a rare sight (going by my experience). A lot of my colleagues and co-travelers in my professional journey are unemployed as of today .. so to be employed till 80, one needs to ignore short-term gains and focus on long-term benefits," writes IIT-Delhi Professor Smruti Rajan Sarangi.

(A Lesson from IIT is a weekly column by an IIT faculty member on learning, science and technology on campus and beyond. The column appears every Friday)

— Smruti Rajan Sarangi
Let me go back to the day that I got my IIT JEE result. The moment my father told me my rank on the phone, my branch was decided: Computer Science (CS). It is something that I had earned with years of hard work. Whether I was actually interested in CS or whether it had great career prospects in India was not something that required to be debated. The method of choosing a university in the US for doing a PhD followed the same method – do what others are doing. In fact, after my PhD, I don’t seem to have gained any great wisdom and I again joined the private sector based on the perceived rank of companies.

If I think back, we all do this. In fact, psychologists have a name for this phenomenon, “the mimetic theory of desire.” It basically says that a man does not know what to desire, he instead, decides to highly value what others consider desirable. In poorer societies like ours, mimesis or imitation is much stronger than richer societies where individuals can make more independent choices.

The key question that arises is whether a different set of choices would have led to a better outcome? Would I have been happier today if let’s say I would have done a B.Tech in Civil Engineering? That is a counterfactual question, which is impossible to answer unless some day technology is developed to rewind one’s life. Nevertheless, there are a couple of things that I should have known and considered, which were unknown to me and my social circle when these decisions were being made. These are things that one realises with age and experience. LinkedIn also helps create a better world view, because it nicely shows the correlation between someone’s position in life today and the choices that she made 20 years ago.

The biggest lesson that I have learnt is that no branch is good and no branch is bad. The wearer knows where the shoe pinches. For those who feel that Computer Science is the ultimate nirvana, let me highlight a couple of things. In this field, there are no transportation costs or manufacturing costs, which basically means that one company in the Silicon valley can make a product, which the entire world can use. Because of the internet, there is no notion of distance. Even though this makes the life of the consumer great, the sad part is that for almost every product there will only be one or two vendors. You will have one or two search engines, one or two operating systems, one or two word processors, so and so forth. This automatically implies that there will be a small set of engineers who will do the core work, and the rest will be delegated to bug fixing and support-oriented roles.
IIT Bombay, IIT Delhi among top 200 in QS World University Rankings list; DU, Anna University debut in top 500


With 45 Indian universities in the latest rankings -- up from 41 last year -- India has one less university in the top 200 rankings in the 20th edition of the QS World University Rankings list compared to the previous edition.

The Indian Institute of Technology (IIT) Bombay has broken into the world's top 150 universities in the recent edition of the QS World University Rankings 2024, climbing 23 positions to attain the 149th rank globally. Meanwhile, IIT Delhi comes in second spot when it comes to Indian universities at 197 and Indian Institute of Science (IISc) Bangalore at 225.

With 45 Indian universities in the latest rankings -- up from 41 last year -- India has one less university in the top 200 rankings in the 20th edition of the QS World University Rankings compared to the previous edition.

Among the top 10 Indian institutions are IIT Kharagpur at the fourth spot with a ranking of 271, IIT Kanpur at 278, IIT Madras at 285, IIT Guwahati at 364, IIT Roorkee at 369. India has two entrants in the world’s top 500 universities with the University of Delhi (407) and Anna University (427) making their debut.

"I'd like to congratulate Indian universities on their ever-improving performance. We've rated 2900 institutions for this year's ranking system, and there are 45 Indian universities that are appearing in the ranking. That is a 297 per cent increase over the last nine years. There has been a continuous, steady improvement by Indian universities," Nunzio Quacquarelli, Founder & CEO, of QS, said.

Massachusetts Institute of Technology (MIT), University of Cambridge and University of Oxford are the top three universities globally. Among the top 10 global universities are also Harvard University at number four, Stanford University at number five, Imperial College London at number six, ETH Zurich at number seven, National University of Singapore (NUS) at number eight, UCL at nine and University of California, Berkeley (UCB) at the tenth spot.
IIT Delhi Alumni Chapter in Mumbai Celebrates Successful Networking Event

The IIT Delhi Alumni Association, Mumbai Chapter, is pleased to announce the resounding success of their recent networking event held in the city. The event brought together over 100 esteemed IITD alumni based in Mumbai, providing an excellent opportunity for collaboration, exchange of experiences, and fostering a strong sense of community among the alumni.

Under the leadership of Chapter President Parrag Jain Nainutia, IAS and Principal Secretary of Maharashtra Government, he expressed his delight at witnessing the vibrant gathering of IITD alumni. He emphasized the significance of their unity, shared experiences, and collective contributions towards the growth and progress of the community. He urged the alumni to continue supporting each other and strive to make a positive impact on the world.

Mr. Gaurav Goyal, Secretary of the Mumbai Chapter Alumni, noted the exceptional diversity and talent within the alumni community. The IIT Delhi alumni in Mumbai consist of accomplished corporate heads, distinguished government officials, including IAS and IPS officers, creative individuals, and self-made billionaires. This rich mix of expertise and achievements created the perfect environment for networking and forging meaningful connections.

Ankit Garg, Managing Partner of Wealthy Nivesh, a boutique wealth management firm, graciously sponsored the event. As an organization run by IIT Delhi and IIT Roorkee Alumni, Wealthy Nivesh sees itself as a natural partner for such events and is proud to be associated with the Mumbai Chapter Alumni.

Dignitaries such as IITDAA Secretary Sh. Pankaj Kapadia, Past President IITDAA Sh. Kalpen Shukla, and senior alumni Sh. Praveen Tyagi (Founder of IITianPace), among others, also participated in the event. The success of the IIT Delhi Alumni Chapter networking event in Mumbai exemplifies the power of collaboration, camaraderie, and mutual support within the alumni community. These gatherings not only strengthen personal and professional connections but also create avenues for the exchange of ideas, mentorship, and collaboration on impactful initiatives.
About IIT Delhi Alumni Committee Mumbai Chapter:

The IIT Delhi Alumni Committee Mumbai Chapter aims to foster a strong sense of community and facilitate networking among IITD alumni based in Mumbai. The chapter organizes events and initiatives to promote collaboration, knowledge sharing, and personal growth among its members.

About IIT Delhi Alumni Association

IIT Delhi is an ‘Institute of Eminence’ as declared by the Govt of India. IITD enjoys global recognition for its academic excellence, contemporary research work, successful corporate leadership and unparalleled entrepreneurial spirit!

IIT Delhi Alumni Association (IITDAA) has 58,000 members spread across geographies who are engaged in activities encompassing diverse sectors. These alumni have earned accolades and global acclaim wherever they have worked.

JEE Advanced 2023: IIT Delhi To Conduct Open House for IIT JEE Qualified Female, PwD Candidates


IIT Delhi will be hosting the open house at 9 am tomorrow in hybrid mode. JEE Advanced 2023 qualified candidates will get an opportunity to interact and understand the academic and career prospects in various streams.
Indian Institute of Technology, IIT Delhi will be conducting the JEE Advanced 2023 open house on June 24. The open house will be hosted for the IIT JEE Qualified Female and PwD Candidates. As per the statement by IIT Delhi, the JEE Advanced 2023 open house will be begin at 9 am tomorrow in hybrid mode. JEE Advanced 2023 qualified candidates will get an opportunity to interact and understand the academic and career prospects in various streams.

The IIT Delhi open house will be facilitating the candidates to learn about various scholarships, fellowships, and other resources to support a student’s academic journey at IIT Delhi. Students will get an opportunity to interact with the Deans, IIT Delhi faculty members, and student volunteers representing various academic departments to understand the academic and career prospects in various disciplines.

IIT Delhi open house is being organised by the Initiative for Gender Equity & Sensitisation (IGES) and the Office of Accessible Education (OAE) at the institute, holds immense significance for promoting diversity and gender equity at IIT Delhi.

IIT Delhi will be hosting the open house in hybrid mode. Students attending the session online will be able interact with the current students, who will share their first-hand experiences of campus life, extracurricular activities, and the supportive community at IIT Delhi.

While those who plan to attend the open house physically will be able to take a tour of the institute, during which they can explore the various campus facilities, including the library, hostels, eateries, and other infrastructure that facilitates an excellent learning experience.

“The Open House will allow the attendees to learn about the vibrant academic and extracurricular life on the IIT Delhi campus. The institute is committed to providing a safe and nurturing environment for students to thrive”, said Prof. Shuchi Sinha, Convenor, IGES.

“Unlocking the Power of Yoga: AIIA and IIT Delhi Develop Device to Enhance Memory and Combat Alzheimer’s”


The All-India Institute of Ayurveda (AIIA), in collaboration with the esteemed Indian Institute of Technology (IIT) Delhi, has achieved a groundbreaking milestone in the field of neuroscience. They have developed a pioneering device that provides conclusive evidence of the positive effects of Bhramari Pranayam, a significant component of Yoga, on brain neuron cells. The findings not only demonstrate the preventive
benefits but also the potential for Bhramari Pranayam to aid in the treatment of Alzheimer’s, Dementia, and Memory Loss.

The device, formulated by the AIIA Yoga Department with invaluable assistance from IIT Delhi, introduces a new dimension to our understanding of the therapeutic potential of Yoga. By inserting the device into the nostril during Bhramari Pranayam practice, it captures sound waves and conducts electroencephalogram (EEG) brain mapping. The results obtained from the device provide compelling evidence of the positive effects of Bhramari Pranayam on brain neuron cells.

In a series of comprehensive studies, conducted jointly by AIIA and IIT Delhi, the benefits of Yoga were further explored. The first study employed the newly developed device, confirming the positive impact of Bhramari Pranayam on brain health. The second study focused on athletes utilizing yoga and the ragi ball technique, revealing enhanced performance outcomes. Additionally, a third study involving policemen demonstrated significant stress reduction through yoga practice.

All three studies conclusively assert that Yoga has the potential to elevate performance levels.

These remarkable findings have far-reaching implications, offering new hope for individuals battling neurodegenerative conditions such as Alzheimer’s, Dementia, and Memory Loss. By embracing the holistic approach of Yoga, a non-invasive solution, we may be one step closer to preventing and managing these challenging disorders.

Speaking on the occasion, Prof. Dr. Tanuja Nesari, Director of AIIA, said “On International Yoga Day, I extend warm wishes on behalf of the All India Institute of Ayurveda. Our honourable Prime Minister has called upon all to embrace the theme, ‘Vasudhaiva Kutumbakam’ reflecting the collective approach of the entire government under the Ministry of Ayush. Ayurveda and Yoga, like two sides of a single coin, embody the principles of holistic well-being. By integrating Ayurveda’s physical healing and Yoga’s spiritual practice, we can cultivate health, happiness, and harmony. May AyurYoga become our guiding light towards a brighter and healthier future for all.”
Tsuyo Manufacturing and IIT Delhi collaborate to drive innovation in EV powertrain solutions
June 20, 2023  https://mediabrief.com/tsuyo-manufacturing-pvt-ltd-x-iit-delhi/

Tsuyo Manufacturing Pvt Ltd is delighted to announce a strategic collaboration with the prestigious Indian Institute of Technology, Delhi. This collaboration aims to foster co-creation, collaboration, and a platform for introducing new technological advancements in the EV space, while also bringing innovative and cost-effective solutions to boost the indigenous ecosystem for end users.

The collaboration, outlined through a Memorandum of Understanding (MOU), encompasses various areas of cooperation. Tsuyo and IIT Delhi will work together on technology transfer activities, collaborative research and development initiatives, startup linkage, and related activities, as well as professional technical training for capacity development.

By leveraging the expertise of both organizations, this collaboration aims to create sustainable and robust EV holistic solutions for EV users and manufacturers.

Highlighting the significance of this collaboration, Vijay Kumar, Director of Tsuyo Manufacturing Pvt Ltd, said, “We at Tsuyo envisaged a mutually growing association with IIT Delhi, targeting co-creation, collaborative, and corroborative platforms. Our objective is to support the introduction and advent of new required technological advancements in the EV space, while also bringing more innovative and frugal solutions to
boost the indigenous ecosystem for end users. We are committed to creating sustainable and robust EV holistic solutions for EV users and EV manufacturers.”

Adding to this further, Retd. Col. Naveen Gopal, Chief Operating Officer of IIT Delhi, said, “We are optimistic that this collaboration will encompass a wide range of activities with the specific goal of advancing the electric vehicle sector. Through Collaborative research and development projects, we anticipate revolutionary improvements in EV technology while fostering relationships with startups to support and nurture emerging entrepreneurs in the EV sector. This partnership holds tremendous potential to revolutionize the EV industry and accelerate the transition to sustainable mobility solutions.”

The collaboration between Tsuyo Manufacturing Pvt Ltd and IIT Delhi seeks to address critical challenges and transform the market scenario in the electric mobility industry. It aims to augment many areas that facilitate Indian research contributions and business prospects for next-generation EV motors.

This will be done through developing new opportunities and fostering specialized, green manufacturing practices by utilizing new and low-cost materials, improving process efficiency, and reducing dependency on foreign technology or imports.

Further to this, the partnership will promote training and upskilling resources and recent graduates in EV-specific technologies and design India-specific sustainable solutions aligned with specific geographical requirements and infrastructure constraints.

The combined vision behind this strategic collaboration of Tsuyo Manufacturing Pvt Ltd and IIT Delhi marks a significant milestone in the journey towards excellence in EV powertrain solutions. It harnesses the strengths of both organizations to bring together each of their expertise, manufacturing capabilities, and a vibrant talent pool to revolutionize the EV landscape in India.

IBC Media Organizes Blockchain and Web3 Event at IIT Delhi
June 20, 2023 https://www.cryptotimes.io/ibc-media-organizes-blockchain-and-web3-event-at-iit-delhi/

Digital India Alt Hack is an initiative to encourage India youths to develop skills for emerging technologies like blockchain and web3.
IBC Media, a pioneering organization in emerging technologies, unveiled the fourth edition of its Digital India Alt Hack in Delhi on Monday, June 19, 2023. The event took place at India’s prestigious technology institute, IIT Delhi.

The inaugural day witnessed an esteemed VVIP lineup, featuring Prashant Mittal (Director NeGD, Digital India Corporation), Ashutosh Kumar, Arpit Srivastava (Assistant Directors, Ministry of Skill Development & Entrepreneurship, Government of India), Prof P K Jain (Director, IIT BHU), and Prof Sunil Jha (Director).

Headlining the event as the flagship project sponsor was Polkadot, a venture by Web3 Foundation and Parity Technologies. Polkadot facilitates a fully-functional and user-friendly decentralized web. During his keynote address, Urban Osvald (DevRel) from Parity Technologies emphasized the significance of Web 3 and emerging technologies.

Notable highlights of the event included engaging panel discussions on “Women in Emerging Technologies” and a fireside chat titled “Creating Impact: How Women are Transforming Industries through Tech.” The
panels featured influential women leaders such as Clara Tsao (COO & Founding Officer) from Filecoin, Olga Kamenskaya (CMO) from Web3 DNA, and moderator Ovia Seshadri from Coin DCX. These sessions explored inclusivity, new frontiers in emerging technologies led by women, and their transformative impact on various industries.

Another insightful panel comprised of women leaders from emerging technologies, including Himani Agarwal (Country Head) from Azure, Microsoft India, Aastha Grover (Head-Strat up) from Invest India, Shailna Verma (General Manager; Head – Industrial Metaverse Practice) from Tech Mahindra, and Prof Priya Vasistha (Dept of Mechanical Engineering) from IIT Delhi. The panel, moderated by Abhishek Pitti (Founder & CEO) of IBC Media, delved into game-changing perspectives on bridging gaps in upskilling women developers, encouraging women to embrace emerging technology, and the current trends in this space.

Expressing his pride, Abhishek Pitti, Founder & CEO of IBC Media, said, “We are delighted to present the fourth edition of Digital India Alt Hack in Delhi. This training program is specially designed to equip students with the necessary skills in new-age emerging technologies. It offers a remarkable opportunity for our next-gen students to receive guidance from industry pioneers and mentors, gain practical experience beyond the confines of the classroom, and become future-ready for Web 3.0.”

Prashant Mittal (Director NeGD, Digital India Corporation) commented on the event, stating, “Alt Hack is a unique competition where students learn and ideate. Such initiatives offer immense benefits to students as mere reading is not enough; it is through programs like these that students gain hands-on experience.”

The IBC Digital India Alt Hack Delhi welcomes student developers from renowned engineering colleges in Delhi to an 8-day program. The program includes orientation, education and training, ideation, and guided building with trainers. Student developers will have the opportunity to learn about blockchain, Web 3 concepts, and real-life use cases, enabling them to generate innovative ideas. On the final day of the education bootcamp, a jury panel will select three winning teams for their “Best Ideas,” and IBC Media will present.
India will see a normal monsoon in 2023, according to a new machine learning model, developed by an international team of researchers led by Indian Institutes of Technology (IIT) Delhi.

The model predicted an All India Summer Monsoon Rainfall (AISMR) of about 790 mm in the upcoming monsoon season, meaning a normal monsoon.

It demonstrated a remarkable forecast success rate of 61.9 per cent for the test period of 2002-2022. This is based on whether the model is able to predict the AISMR within plus or minus 5 per cent of the actual values observed each year.

"This study holds immense significance for the entire country, as an accurate monsoon forecast well ahead of time is pivotal for making crucial decisions in various socioeconomic sectors, including agriculture, energy, water resources, disaster management, and health," said Prof. Saroj K. Mishra, of the DST Centre of Excellence in Climate Modeling and Professor at the Centre for Atmospheric Sciences, IIT Delhi.

Prof. Mishra added that the data-driven techniques will be extended to provide state-wise monsoon rainfall prediction, making them more useful for regional applications. The AI/ML model has proven to be better performing than the current physical models used for monsoon predictions in the country.

The prediction using the AI/ML model can be made months in advance, depending on the availability of Nino3.4 index and Indian Ocean Dipole forecast, and can be updated accordingly based on their evolution.

Thus, the data-driven models are flexible to inputs and can better capture the nonlinear relations among the monsoon drivers, all while being less computationally intensive.
A handful of people running these models on a personal computer within a limited time can provide a more accurate monsoon rainfall forecast compared to the resource intensive process involved with traditional physical models, the expert said.

**FITT-IIT Delhi Introduces the SPARK Program to Empower Early-Stage Entrepreneurs for Success**


FITT-IIT Delhi ([www.fitt-iitd.in](http://www.fitt-iitd.in)), has launched the SPARK program, designed to ignite the entrepreneurial journey of early-stage entrepreneurs. SPARK is a dynamic entrepreneurship learning meticulously crafted for aspiring entrepreneurs with groundbreaking and viable startup ideas. (Information Brochure – [http://bitly.ws/FA2u](http://bitly.ws/FA2u))

With a rich legacy of fostering innovation and entrepreneurship, FITT- IIT Delhi has always been at the forefront of empowering budding entrepreneurs. The SPARK program is a testament to FITT’s commitment to nurturing talent and driving entrepreneurial excellence in the country.

Participants of SPARK will embark on a comprehensive learning experience that combines immersive experiences at the IIT Delhi campus, intensive boot camps, live online expert sessions, invaluable one-on-one mentorship opportunities, and dynamic peer support groups. This holistic approach ensures that entrepreneurs receive the necessary guidance, insights, and networks to thrive in the competitive startup landscape.

One of the key highlights of the program is its focus on equipping entrepreneurs with the skills and knowledge required to launch and scale their startups. Through a carefully curated curriculum, participants will dive into various aspects of entrepreneurship, including prototype development, product development, business strategy, marketing, finance, fundraise and much more. The program adopts a hands-on approach, combining theoretical knowledge with practical insights and real-world applications.

The program culminates with the pitch competition to be held at the end of the 12-week period. Participants will get a chance to showcase their startup ideas to a panel of esteemed IIT Delhi – faculty, judges and investors with an opportunity to join the coveted FITT-IIT Delhi portfolio and win cash grants to fuel their entrepreneurial journey.
Dr Anil Wali, Managing Director of FITT, IIT Delhi, expressed his enthusiasm for the SPARK Program. He said that “SPARK is likely to be a transformative journey towards empowering innovators and entrepreneurs by providing them with essential skills, resources, and networks”. Dr Wali emphasized the program’s focus on practical application and collaboration, encouraging participants to launch prototypes and connect with a vibrant startup community.

This immersive engagement aims to equip startup founders with the skills needed to launch their start-up and leverage time-tested toolkits for startup success. Additionally, they will have the opportunity to expand their network and connect with like-minded individuals, fostering collaborations and partnerships that drive innovation.

The pinnacle of the SPARK program is the highly anticipated program, where participants showcase their entrepreneurial prowess. Not only does this platform provide exposure to potential investors and industry experts, but it also offers the chance to join the esteemed FITT-IIT Delhi portfolio, gaining access to exclusive resources and mentorship, along with the possibility of winning valuable cash grants.

**Eligibility:**

– Entrepreneurs / Startups with unique and innovative business ideas

– Ideas that have commercialization potential

– Technology Readiness Level: 2 to 4

Applications for the program are now open and aspiring entrepreneurs are encouraged to apply by June 20, 2023. Interested individuals can submit their applications at – [https://lnkd.in/dpM3Fz8f](https://lnkd.in/dpM3Fz8f). To learn more about the program – [http://bitly.ws/FA2u](http://bitly.ws/FA2u).

**IIT Delhi, IIM Rohtak improve in NIRF ranking**


The Indian Institute of Management Rohtak and IIT Delhi have improved their position in the National Institutional Ranking Framework (NIRF).
The IIM has witnessed a significant jump in its ranking from the 16th position in 2022 to the 12th position to the management ranking this year.

With this achievement, IIM Rohtak becomes the only highly ranked management institute in Haryana.

The IIT Delhi has also improved its ranking in the overall category from its earlier rank of four to three.

IIM Rohtak was the first IIM to be set up in North India and is the only IIM in the Nation Capital Region. According to the IIM, the institute's rank has seen a consistent increase from the 29th rank five years ago to 12th this year.

Currently, the IIM Rohtak is the largest IIM in terms of student strength with nearly 1700 students in various long duration programmes.

The institute said that the IIM has done research and consulting projects for multiple institutions and departments like the Ministry of Home Affairs, Ministry of Agriculture, Ministry of Tourism and NDRF.

Meanwhile, the Indian Institute of Management Ahmedabad has been declared number one management institution in the NIRF ranking, followed by the Indian Institute of Management Bangalore.

The Indian Institute of Management Kozhikode has achieved the third position in the ranking.

Speaking of the NIRF India Rankings 2023, Prof P.V. Rao, Dean, Planning, and Head Rankings Cell, IIT Delhi, said that IIT Delhi has been consistently doing exceedingly well in the NIRF rankings.

"It has retained its 2nd rank in the engineering category consecutively for the last five years. This year, the institute has improved its ranking in the overall category from its earlier rank of four to three. In the research category also, the institute is in the top three," he said.

He said that the research contributions made by the IIT Delhi faculty and researchers have played a key role in the rankings of the institute.

He said that IIT Delhi has also been consistently doing very well in terms of innovative teaching methodology.

He added that the institute has built a research ecosystem so that faculty and students can excel in research. "The start-up and innovative culture on campus put our students ahead of their peers," he said.
IIT Delhi Researchers Develops Mobile Robot “Robomuse 5.0” To Carry Payloads Upto 100 Kg


Researchers at IIT Delhi have developed a mobile robot called “Robomuse 5.0”. The mobile robot is suitable for various industries to carry payloads up to 100 kg and perform object manipulation by installing an arm on top of it. As claimed by researchers, this mobile robot is also a good research platform for various teaching and research organisations. A licencing agreement has been signed between IIT Delhi’s Technology Innovation Hub, named IHFC, and a Pune-based company, SVR InfoTech, for the technology transfer of Robomuse 5.0.

Speaking about the origin of Robomuse 5.0, the IIT Delhi researchers claims that it goes back to a robot built by IIT Delhi students for the Doordarshan- Robocon (DDR) competition in 2008. To test its reliability and robustness, it was later installed at the institute’s Student Activity Centre (SAC) to move on a straight path autonomously for 24 hours until it was reported non-functional by, said a security personnel on duty.
Over the next few years, several modifications were carried out in Robomuse as B.Tech. and M.Tech. projects based on the feedback received from time to time. The work was carried out under the supervision of Prof. S.K. Saha, Department of Mechanical Engineering at IIT Delhi. The robot was showcased at many exhibitions and conferences earlier, and its software is copyrighted.

“Robomuse 5.0, with its ROS (Robot Operating System)-enabled features, has a modular mechanical design with a zero turning radius. As a result, autonomous navigation and control are very simple,” Prof. S.K. Saha, Department of Mechanical Engineering, IIT Delhi, said.

The mobile robot, Robomuse 5.0, can have multiple applications, including the transportation of heavy items on a factory shop floor. If a manipulator is fitted on its top, the mobile manipulator can perform pick-and-place operations, e.g., to dispose of a faulty item in a bin.