

Vol. 1, Issue 1, 2020

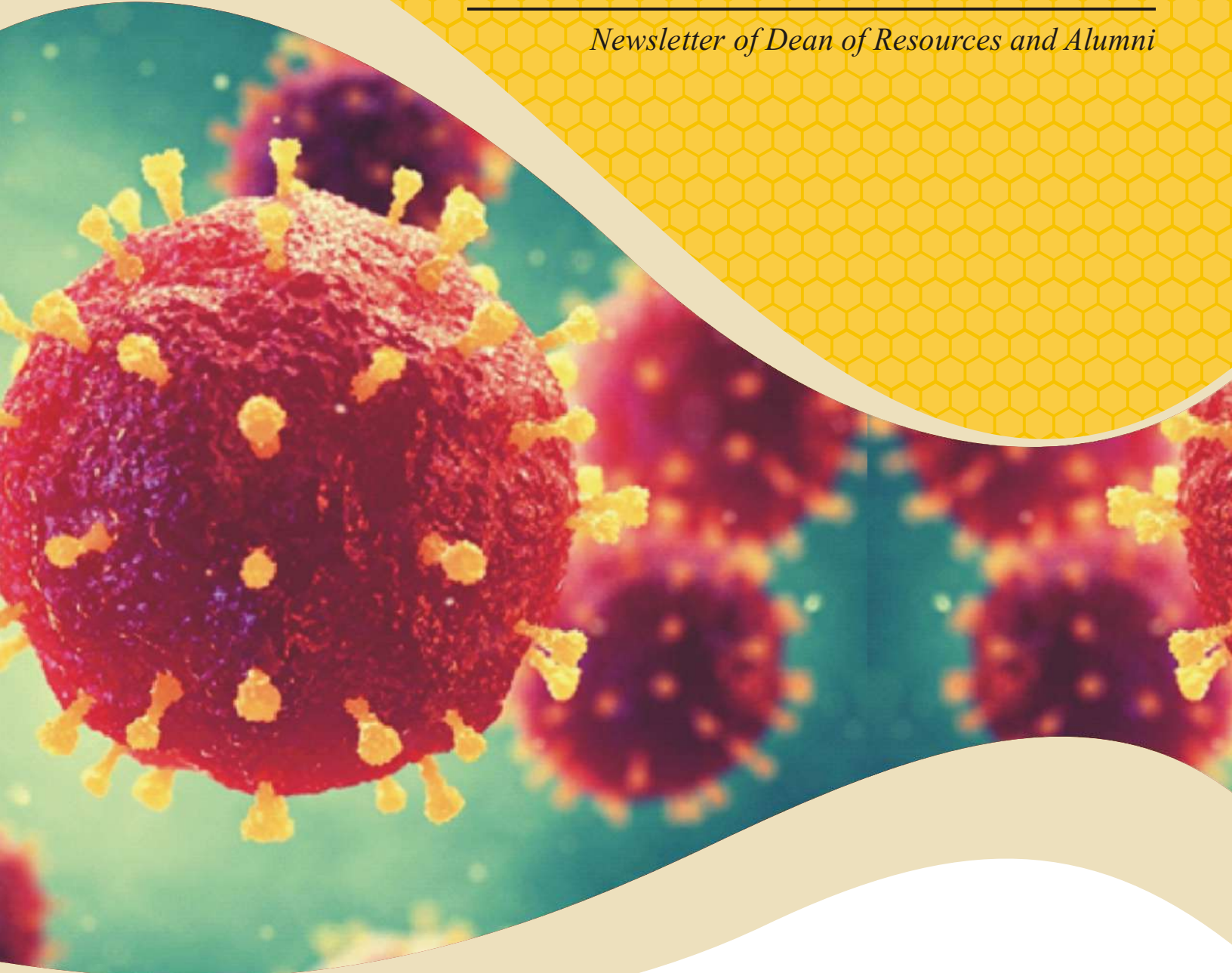


March 2020

IITKONNECT

Connecting Institute's Diaspora

Newsletter of Dean of Resources and Alumni



Coronavirus (Image courtesy –world hepatitis alliance)
Together we fight, together we find solutions.

■ ■ ■ www.iitk.ac.in/dora ■ ■ ■

Fight Against Covid-19

Together we find solutions

As the world continues to battle against Covid-19 pandemic, many across the globe are racing against time to save humanity & have joined hands to come-up with faster & affordable medical solutions to save human lives. With countries practically coming to a standstill under lockdowns, the black hole of Coronavirus is testing the spirit and grit of mankind. As Amanda Lindhout says, '....it is the spirit inside of all of us that has an enormous capacity to survive', it is with this spirit that at IIT Kanpur, faculty, researchers, students, our alumni and the entire community joined hands & applied their knowledge & skills and came forward to serve humankind.

The IIT Kanpur Consortium developed an indigenous, affordable, invasive ventilator. The consortium comprised of IITK faculty Prof. Amitabha Bandhopadhyay, mentored by IITK alumnus, Dr. Saurabh Srivastava; IITK incubated company NOCCA Robotics, Pune headed by Mr. Nikhil Kurele and Mr. Harshit Rathore; a global team of experts in biomedical engineering, R&D, Supply chain, MedTech business leaders, and leaders of Indian industry; and the Indian Angel Network. The estimated price of this ventilator is expected to be Rs. 70,000/-. ANSYS collaborated with NOCCA Robotics to develop the prototype. Under their CSR initiatives, Standard Chartered Bank and ICICI Securities Ltd. have donated generous amounts. These funds are now being channelled towards developing & testing the prototype for quick availability at hospitals.



A team led by Prof. Tarun Gupta, Prof. J. Ramkumar & Dr. Sandip Patil, Director, E-Spin Nanotech, designed and developed a low-cost protective face mask equivalent or next best thing to N95 available in the market. With the rise in number of cases around the country, acute shortage of such protective mask in the market was visible. The low-cost masks would be available to the frontline medical staff as well as to the general population. Dr. Sandip Patil, industrial partner, would be producing the mask.

With the spread of Covid-19, the scarcity of Personal Protective Equipment (PPE) rose as it is widely used by the workers especially in the medical sector. A team of researchers, led by Prof. Nitin Gupta designed Polyethylene-based Improved Protective Equipment under Scarcity (PIPES-Kit) based on thin cylindrical rolls/pipes of polyethylene (polythene), which is non-porous and commonly used in the industry for packaging and making plastic-bags. The design and the production process of the PIPES Kit is open-source, so that a small/medium-scale factory anywhere can start making them in large quantities within a few days.



A research team, led by Prof. Nagma Praveen, Prof. M.L.N. Rao & Prof. Ashis K Patra were granted funding from SERB-DST, India for designing & developing cost effective virucidal coating of surgical masks for preventive measures against COVID-19. & cost-effective surface coating. The idea is based on a combination of anti-microbial polymer coating & functionalized virucidal drugs to attain a synergistic anti-viral effect. Doctors & nurses, treating COVID-19 patients would benefit from this as it would add a layer of security for them. The team aims to develop a basic prototype within three months & collaborate with potential industrial/start-up companies for large-scale production.

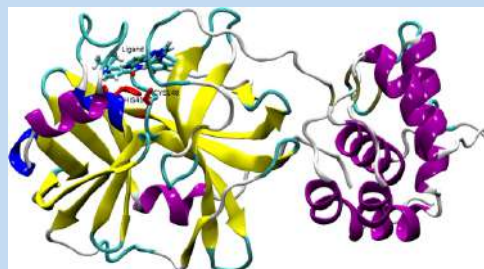
Prof. Laxmidhar Behere ran a community kitchen at Type-2 Community Centre in IITK. The kitchen prepared meals and packaged them that were later distributed to the poor families and their children around the campus. The community kitchen was able to cater to more than one thousand families, especially children. Many residents of the campus offered their volunteer services either in running the kitchen or they generously donated raw food materials.



Fight Against Covid-19

Together we find solutions

Prof. Jayant Singh and Dr. Sudip Roy of Prescience Insilico Pvt. Ltd. are working to screen compounds that can become a potential drug (New chemical entity) for COVID-19. The aim of the current work is to computationally screen millions of molecules available in chemical databases, using a technology platform developed at Prescience Insilico Pvt. Ltd. for faster development (spotting) of molecules that could be more efficacious than available FDA approved drugs. These selected drug-like molecules with high binding affinities toward SARS-CoV2 targets will be published in open-source journals and databases. These molecules will encourage chemists and biologists worldwide to use as it is or scaffold to test and validate against COVID-19. The work is supported by the CSR activity of GSTIN and Suraj Logistix Pvt. Ltd.



Researchers at IITK have developed "rapid two-step personnel disinfection system" that combines two separately practised disinfection approaches into a new, cost-effective, sequential and rapid disinfection process that is safe for human beings. It is currently being used at IITK Health Centre for the outsiders coming to the campus to externally sanitize anyone within two minutes. The equipment can be used at hospitals, or any public space.

MedTech at IITK along with its start-up company, McGeeks Mechatronics, has developed a low-cost flat folded version of face shield for the front line Covid-19 task force. It protects the eyes from direct exposure to the fine droplets, specifically if patient is sneezing or coughing. The design is simple 3D printing and can be manufactured using only transparent PEGT/APET sheets with the help of laser cutting machines.



Prof. Vinod K. Singh (Department of Chemistry) & his team made more than 100 litre sanitizer for the Health Centre, IITK and security personnel. The sanitizer was alcohol based & made on the guidelines of WHO. The team has already supplied more than 25 litres to the Health Centre.



**NO STARVATION
IN TIMES OF
CORONA**

IIT Kanpur, with Kanpur Parivartan Forum, Feeding India (Kanpur) and FICCI Ladies Organization took up the task of ensuring that **No Starvation in the Times of Corona**. Due to lockdown, many migrant workers, street vendors, construction workers etc. lost their livelihood and are still struggling to feed their families. This group provides the marginalized and poor families of the population everyday with 1125 cooked food packets and about 700 family packs (4 kg flour, 2 kg rice, 2 kg dal, 1 kg sugar, tea, oil, spices, and biscuits).

With more than 90 volunteers, the teams have been divided for planning, procurement, packaging and distribution. Till now 8500 family ration packs and 10,000 lunch packets have been distributed in more than 120 bastis across 50+ locations in Kanpur city. The team also reached out to brick kiln workers of Chaubepur.

Tech Innovation Hub at IITK

IITK was chosen for Tech Innovation Hub (TIH) in Cyber Security of Cyber Physical Systems by DST India. The Hub will focus on Critical Infrastructure, Automotive & UAV security. TIH, named as National Technology Hub for Cyber Security of Cyber physical Systems, will focus on industrial collaboration, creation of start-up ecosystem & indigenous cyber security products & services, and human resources.



P.K. Kelkar Library gets Automated

P K Kelkar Library implemented the Radio Frequency Identification technology (RFID) for its collection of books, a state-of-the-art auto-detection technology that provides a self-service facility and automated material handling. It also implemented self-check-in kiosk using biometric finger impression for students and return the books through a 24X7 drop box.



Defence Expo Lucknow 2020

IIT Kanpur participated in the Defence Expo Lucknow 2020. VTOL Aviation India showcased different novel aerial systems developed indigenously. VTOL Aviation India also exhibited "Akshat NX", a 75 kg weight class VTOL capable of fixed-wing UAV with a payload capacity of 20 kg.



Smart Grid Control Center gets Inaugurated

Mr. Mrityunjay K. Narayan, Joint Secretary of Ministry of Power & IITK alumnus, & Mr. A.K. Mishra, Director, NSGM India, inaugurated Smart Grid Control Center in IITK. The Center has advanced Metering infrastructure integrated with Meter Data Management System along with home automation & rooftop solar PV integration.



Technopark@iitk holds Defence Technology Meet

Technopark@iitk held Special Interest Group Meet on 4th Feb. 2020 in IITK on defence technology & invited industries and R&D organizations for interactive sessions with the faculty experts. The industries also got a glimpse of the current cutting-edge research at IITK.



IITK releases Postal Cover

To mark Diamond Jubilee year of IITK, the Institute collaborated with the Indian Postal Service to release a Postal Cover that carried a photo of IITK PK Kelkar Library & the stamp highlighting the Diamond Jubilee logo on 25th January.



Alumni in Focus



Dr. Sandip Patil (PhD/CHE/2013) was awarded for the Bangalore Nano: Nano innovation Award for the high impact Nanotechnology Innovation and commercialization.



Dr. Ajay Bhushan Pandey (BT/EE/1983) was appointed the new finance secretary of India. He successfully led the Department of Revenue, GST Network and UIDIA.



Dr. Abdul Qayum (BT/CE/2008) was felicitated with National Awards for eGovernance 2020. It was the recognition of the work he did in Arunachal Pradesh to reduce the number of forest fire cases. He is currently the Deputy Conservator of Forests Chandigarh.



Dr. Jayathi Y Murthy (BT/ME/1979) Ronald and Valerie Sugar Dean & Distinguished Professor University of California, was elected as a member of the prestigious National Academy of Engineering (NAE), USA.



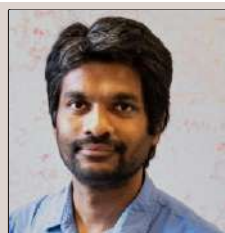
Dr. Pawan K Goenka (BT/ME/1975), MD, Mahindra & Mahindra Ltd. was elected as an International Member to the prestigious USA National Academy of Engineering.



Dr. Rajeev Gautam (BT/CHE/1974) President & CEO, Performance Materials & Technologies, Honeywell, Morris Plains, N.J. was elected as a member of the prestigious USA, National Academy of Engineering.



Dr. Arvind Krishna (BT/EE/1985) was appointed as the CEO of IBM. He previously served as the Senior Vice-President, Cloud and Cognitive Software at IBM.



Prof. Mohit Bansal (BT/CSE/2004) was awarded the prestigious Director's Fellowship by The Defense Advanced Research Projects Agency (DARPA), University of North Carolina.



Mr. Mahesh Parustkar (M.Sc/CHM/2016) was awarded the Presidential Fellowship by the Ohio State University in autumn 2019 for his work on Feedstock Materials to Value-Added Products via Enantioselective Cobalt Catalysis.



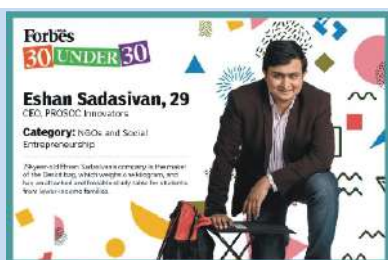
Mr. Karan Singh (BT/CSE/2015) was awarded the Jacobus Fellowship, the highest graduate student honor awarded each year by Princeton University. Mr. Singh was awarded for his dissertation on refining learning algorithms.



Dr. Monika Raj (PhD/CHM/2009) received the prestigious Sloan Foundation Research Fellowship 2020. She is an assistant professor at Auburn University, specializing in organic chemistry.



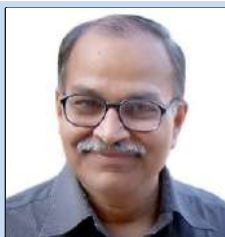
Dr. Abhishek K. Jha (PhD/EE/2017) has been invited to join the editorial board of the IEEE Sensors Journal, USA. The IEEE SJ, USA is a peer-reviewed, semi-monthly, premier journal devoted to sensors and sensing phenomena.



Forbes 30 under 30 (2020 List)

Eshaan Sadasivan featured in 'Forbes 30 under 30 Class of 2020 India'. His company PROSOC produces lightweight DeskIt (foldable study table) for the underprivileged children.

Faculty Achievements



Prof. H. C. Verma has been awarded the Padma Shri. Prof. Verma previously served as a faculty in the Department of Physics, IIT Kanpur.



Prof. Sudhir Jain has been awarded the Padma Shri. He is currently the Director of IIT Gandhinagar. Prof. Jain previously served as a faculty in the Department of Civil Engineering, IIT Kanpur.



Prof. Debabrata Goswami, Dept. of Chemistry, joined the Editorial Board of Science Advances as an Associate Editor. Science Advances is a multidisciplinary journal by the American Association for the Advancement of Sciences.



Prof. Sudeep Bhattacharjee, Dept. of Physics, joined as an Editorial Board member of the Springer Journal: Reviews of Modern Plasma Physics.



Prof. Jayant Singh was awarded the SERB-STAR in the Engineering Sciences category, a prestigious recognition in cutting-edge research.



Prof. Animangsu Ghatak was awarded the SERB-STAR in the Engineering Sciences category, a prestigious recognition in cutting-edge research.



Prof. Vinod K. Singh, Department of Chemistry has been elected as the President of the Chemical Research Society of India for the next three years (2020-2023).



Prof. Bushra Ateeq, Dept. of Biological Sciences & Bioengineering, gets selected as the co-recipient of the year 2020 CDRI Award for Excellence in Drug Research in Life Sciences category.



Prof. J. N. Moorthy, Director of IISER Thiruvananthapuram, has been awarded the SASTRA-CNR Rao Award for excellence in Chemistry and Materials Science for the year 2020.



Prof. Jaleel Akhtar was appointed as an Associate Editor of the IEEE Sensors Journal. The Journal focuses on the numerous sensor technologies spanned by the IEEE, and on emerging sensor technologies.



Prof. Joydeep Chakraborty, Department of Physics, has been selected to join INYAS as a member for five years from January 2020.



Prof. Sudhanshu Shekhar Singh, Department of Material Science and Engineering has been appointed as a Member of Council, the highest decision making body, of the Indian Institute of Metals (IIM) for the year 2019-2020.



The Women's Cell of IIT Kanpur organised its annual 5 km Run and Walk event on 1st March with the theme *Don't be a Bystander, Stand against Sexual Harassment!* A policy on "Romantic or sexual relationships between individuals in positions of authority & students/employees of the Institute", formulated by the Cell, has recently been adopted by the Institute.



Brave Blue World, a documentary about innovative water programs from all over the world, including two from India, was screened on 25th February in IITK. An interactive session was held with Dr. Raj Bhattaraj, Visiting Professor at IITK & Trustee, Water Environment Federation.



The new building for the Opportunity School was inaugurated on 2nd February by Shri Devendra Singh "Bhole", MP, Lok Sabha. The building was made possible due to financial support by Dr. Chandralekha Singh & Dr Jeremy Levy in memory of Dr Singh's father Shri Harihar Prasad Singh.



The Cell for Differently Abled Persons, IITK organized a Health Camp on 1st February. Dr. Srikant Pandey, Dr. Debarati Paul & Dr. Omji Dwivedi, experts from ALIMCO, provided free health check-up & consultation.

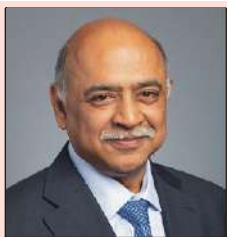


The Counselling Service at IITK organised an event on 20th Jan. *From Lost To Found* under the mental health initiative of SAMVAD with the intentions of building empathetic and nurturing spaces at IITK. The event included a sharing of stories of struggles and survival of two IITK students.

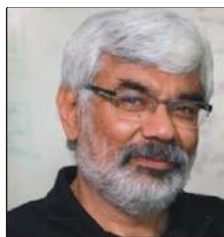


Fit India Movement, started by the Government of India, promotes a healthy body leads to healthy a mind. Counselling Services, IITK organized a 5 km run on 25th January to promote good mental and physical health named *Untangle – It's OK not to be OK*.

DISTINGUISHED ALUMNUS AWARDS 2019



Dr. Arvind Krishna (BT/EE/1985) is the Chief Executive Officer at IBM, New York. **Awarded for Professional Excellence.**



Prof. Shankar Subramaniam (PhD/CHM/1982) is a Chair and Professor of Bioengineering, University of California, San Diego. **Awarded for Academic Excellence.**



Prof. Nitash P. Balsara (BT/CHE/1982) is a Professor of Chemical and Biomolecular Engineering, Berkeley College of Chemistry, University of California at Berkeley. **Awarded for Academic Excellence.**



Prof. Ajeet Rohatgi (BT/EE/1971) is a Regents' Professor at the School of Electrical and Computer Engineering, Georgia Institute of Technology. **Awarded for Academic Excellence.**



Prof. Rajesh Gopakumar (MSc/PHY/1992) is the Director of the International Center For Theoretical Sciences (ICTS-TIFR) in Bangalore. **Awarded for Academic Excellence.**



Dr. Krishnamurthy V. Subramanian (BT/EE/1994) is the Chief Economic Advisor to the Government of India. **Awarded for Professional Excellence.**



Dr. Ajay Kumar (BT/EE/1984) is the Defence Secretary to the Government of India. **Awarded for Professional Excellence.**



Dr. Dinesh Kumar Jain (BT/MT/ME/1981/1983) is a Member of Lokpal of India. **Awarded for Professional Excellence.**



Dr. Ravindra Kumar Dhariwal (BT/CHE/1975) is the Co-Founder and Chairman of Sagacito Technologies. **Awarded for Professional Excellence.**



Mr. Ajeet Singh (BT/CHE/1997) is the Co-Founder and Executive Chairman of Thoughtspot. **Awarded for Entrepreneurship Excellence.**



Dr. Arun Seth (BT/EE/1973) is the Chairman and Co-Founder of Global Groupware Solutions. He was also the former Chairman of British Telecom and Nasscom Foundation. **Awarded for Entrepreneurship Excellence.**



Mr. Praveen Bhagwat (BT/CSE/1990) is the Founder and CTO of Mojo Networks. **Awarded for Entrepreneurship Excellence.**

Satyendra K. Dubey Memorial Award 2019



Mr. Vikas Vaibhav is an IPS officer, DG in Eastern Range, Bhagalpur, Bihar. Awarded for his unbending integrity in upholding human values as an IPS officer and his service to the common people.

Distinguished Services Award 2019



Mr. Rakesh Sharma (MT/NET/1978) is the Board Member at Arsha Vidya Gurukulam, New Jersey. Awarded for his contributions in facilitating major fundraising efforts of the institute & alumni events.



Dr. Ram B. Misra (BT/ME/1968) is the Professor of Management & Information Systems in the School of Business at Montclair State University, New Jersey.

Young Alumnus Award 2019



Mr. Manu Prakash (BT/CSE/2002) is an associate professor of Bioengineering at Stanford University. Awarded for the application of the principles of soft condensed matter to understand the functioning of living and non-living matter.



Deepak Garg (BT/ME/2003) is the Founder & CEO of RIVIGO, the fastest growing technology -enabled logistics company in India. Awarded for his contributions to make logistics faster and safer using technology and data.

Giving Back



Dr. Dev Joneja (BT/ME/1984) donated generously a sum of USD 200,000 for setting up the *Arjun Joneja Chair* in the Department of Civil Engineering. He is the Chief Risk Officer at Exodus Point Capital Management, New York.



Mr. Ranodeb Roy (BT/CSE/1990) generous contribution would be used for *Dr. Mahua Menon & Mr. Ranodeb Roy Young Faculty Research Fellowship*. Part of the donation would be given to *Student with Disability Project*. Mr. Roy is the CEO at RV Capital Management, Singapore.

your generosity can make a change



<https://www.youtube.com/watch?v=HS3VmmBughA&t=3s>

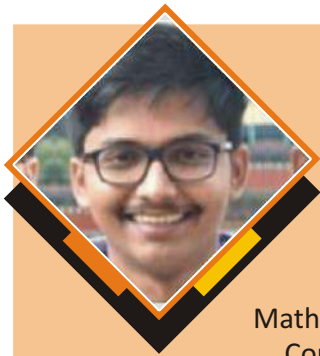
52nd Convocation

Dr. B.V.R. Mohan Reddy, Founder & Executive Chairman of Cyient, was the chief guest. Honorary degrees were awarded to Dr. Tessy Thomas, Scientist & Director General of Aeronautical Systems, DRDO; Mrs. Sudha Murty, Author & Chairperson, Infosys Foundation, and Mr. Pallela Gopichand, Chief National Coach, Badminton Association of India.



Someshwar Jain
Mathematics & Scientific Computing
President's Gold Medal

For the best academic performance among the graduating students of all disciplines in all the 4-year / 5-year undergraduate programmes.



Sunil Kumar Pandey
Mathematics & Scientific Computing -
Computer Science & Engineering
Director's Gold Medal

For outstanding all round achievement and leadership among all the students graduating in 5-year undergraduate programmes.



Anant Narayan Vats
Computer Science & Engineering
Director's Gold Medal

For outstanding all round achievement and leadership among all the students graduating in 4-year undergraduate programmes.



Mugdha Arora
Electrical Engineering
Ratan Swarup Memorial Prize

For the best all rounder among all the students graduating in 4-year / 5-year undergraduate programmes



Santosh Kumar C
Electrical Engineering
Dr. Shankar Dayal Sharma Medal

For the best all round performance of a graduating student in the MTech/MBA/MDes/MSR/PhD/MSc-PhD Dual Degree programmes based on general proficiency including character and conduct, excellence in academic performance, extra-curricular activities, and social service



Reunions

Back on its golden hinges the gate of Memory swings, and my heart goes into the garden and walks with the olden things. - Ella Wheeler Wilcox



50th Reunion 1969 Batch (8th – 10th Nov. 2019)



35th Reunion 1985 Batch (22nd-25th Nov. 2019)



40th Reunion 1979 Batch (13th-16th Dec. 2019)



25th Reunion 1995 Batch (28th-31st Dec. 2019)



45th Reunion Class of 1975 (3rd-5th Jan. 2020)



40th Reunion Class of 1980 (9th-8th Feb. 2020)

IITK Alumni Association Diamond Jubilee Events



IITK Alumni Association, Bangalore held a grand event to mark sixty years of IITK foundation on 29th Nov. 2019 in Bangalore. The event was graced by Dr. K. Radhakrishnan, Chairperson BOG, IITK, who was also the Chief Guest. The event was also attended by industry leaders, academicians and IITK faculty. Brainstorming sessions were held to discuss industry-academia collaboration, the role of alumni in strengthening the image of the Institute and the future ahead.



IITK Alumni Association, Mumbai held a second event to mark sixty years of IITK foundation on 22nd February in Mumbai. The event witnessed some insightful speeches by top industrialists like, Dr. Krishnamurthy Subramanian on ethical wealth creation; Dr. Pawan Goenka on Future of Mobility in India; Mr. Sanjeev Puri on Agrisector.

IITK Diamond Jubilee Committee Meet



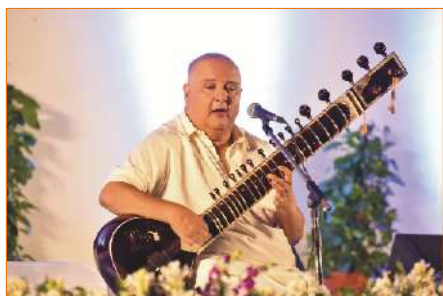
One-Day Meet was held by Alumni Association IITK Diamond Jubilee Committee in New Delhi on 15th February to discuss the future trajectory of the institute and the role of IITK in producing and promoting cutting-edge technology. The event was graced by the presence of prominent Government officers, Dr. Ajay Kumar, Defence Secretary, Prof. Ashutosh Sharma, Secretary Science and Technology, and Shri Anil Kumar Srivastava, Member Niti Ayog. Director, IITK, Prof. Abhay Karandikar led the panel discussion on the role of IITK in producing world-class R&D.

Artist Corner






Debasish Ghorui

PhD Scholar, Design Programme, IITK
Received all India merit award for
the excellence in art by Tourism, Art Culture,
Sports and Youth Affairs Department,
Jharkhand, Government (2018).



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