A NEW BEGINNING

In April 2020 Prof Sanjeev Sanghi completed his tenure as Dean AAIP and Prof. Naveen Garg assumed the charge of the post.

Prof. Sanghi’s tenure, which began in August 2016, has been remarkable for vigour, enterprise and dynamism resulting in numerous initiatives which turned out to be immensely successful and which have laid a strong foundation for a big leap forward.

Throughout his time with AAIP Prof Sanghi served with sheer dedication and made it possible for AAIP to grow and introduced several new initiatives and events. His vision and guidance enabled AAIP to hold visits and talks by dignitaries and prominent alumni such as John Kerry, US Secretary of State, Winston Peters, Deputy Prime Minister of New Zealand, Education Ministers of Australia, Japan, Syria, UAE, Malaysia, and several others.

His efforts played a crucial role in the establishment of the IITD Global Endowment Fund in October 2019, with the fund being inaugurated by the Hon’ble President of India. The total alumni donations (committed + received) in this period were an astounding Rs. 385 crores.

He spearheaded several initiatives such as IIT Delhi joining International academic groups like McDonnell Academy (Washington Univ.) and Heritage group (Europe), the establishment of an Alumni Portal with Payment Gateway (which was also used in an emergency situation like the IITD Covid-19 Benevolent Fund) and setting of Development Office which handles all Alumni donations and associated expenditure. His efforts have also led to a sharp increase in the number of international students on campus and an improvement in the Student exchange program.

IIT Delhi is grateful for Prof Sanjeev Sanghi’s dedication and his irreplaceable contribution to reach to the position we enjoy today. With Prof Naveen Garg, AAIP carries forward the momentum, creating new initiatives, events, and projects aimed at strengthening bonds between alumni, students, and the Institute.
Researchers at IIT Delhi’s Kusuma School of Biological Sciences have developed a low-cost Covid-19 detection kit using the indigenously developed technology. The kit was approved by the Indian Council of Medical Research (ICMR), the apex biomedical research body which is at the centre of the fight to contain the Covid-19 outbreak, on 23rd April 2020. The institute has now identified an industry partner and aims to get production rolling.

IIT Delhi’s team identified unique regions (short stretches of RNA sequences) in the Covid-19 /SARS COV-2 genome. These regions are not present in other human coronaviruses, providing an opportunity to detect Covid-19 accurately. The lead researcher from KSBS, Professor Vivekanandan Perumal, said, “This highly sensitive assay was developed by extensive optimization using synthetic DNA constructs followed by in vitro generated RNA fragments.” Regarding technology used for the detection kit, IITD Director Prof V Ramgopal Rao said, “we know tests will cost a few hundred rupees. It too can come down if production volumes increase. IIT Delhi has internally funded this research, and we have applied for a patent.” This kit is the first probe-free assay for COVID-19 approved by ICMR and it will be useful for specific and affordable high throughput testing. It can easily be scaled up as it does not require fluorescent probes. At present, the market cost of Covid-19 test kit is pegged at Rs 4,500.

IIT DELHI KSBS TEAM
Prashant Pradhan (PhD Scholar), Ashutosh Pandey (PhD Scholar), Praveen Tripathi (PhD Scholar), Dr Akhilesh Mishra, Dr Parul Gupta, Dr Sonam Dhamija, Prof Vivekanandan Perumal, Prof Manoj B. Menon, Prof Bishwajit Kundu, Prof James Gomes
IIT Delhi has committed a total of INR 1 crore worth of High-Performance Computing (HPC) Resource for COVID-19 research to merit-based proposals. These were selected from a nationwide call of proposals made by the government and private academic institutions as well as private companies in association with academic partners from all over the country to use the supercomputer resource PADUM. Each proposal was required to have a maximum cap of Rs 10 lakh worth of computational resources.

The allocations were made for a 3-month duration to ten selected proposals for free, which may extend to a period of six months on evaluating their performance. The deadline for submitting proposals was 15th April 2020 following which they were evaluated by experts from IIT Delhi on a first come first serve basis.

Researchers from all over the country can also avail computing power for COVID-19 research on payment basis. In this payment basis mode, IIT Delhi is allocating a budget of INR 5 crore worth of HPC computational resources for the next 6 months.

IIT Delhi Researchers have developed a web-based dashboard, PRACRITI (PRediction and Assessment of CoRona Infections and Transmission in India, see: http://pracriti.iitd.ac.in), for predicting the spread of COVID-19 in India. A key parameter of interest on COVID-19 is R0 which refers to the number of people to whom the disease spreads from a single infected person. For instance, if an active COVID-19 patient infects two uninfected persons, the R0 is two. PRACRITI provides the R0 values of each district and state in India based on the data available.

The projections are given for a three-week period, which is updated weekly. The model also accounts for the effect of different lockdown scenarios, such as the effect of locking down the district boundaries, and implementing different levels of lockdown within a district. The predictions in the dashboard are based on a newly developed mathematical model that divides the population into four classes, i.e. susceptible, exposed, infected, and removed.

The team is led by Prof. N. M. Anoop Krishnan, in collaboration with Prof Hariprasad Kodamana. It includes Mr Hargun Singh, Mr Ravinder, Mr Devansh Agrawal, Dr Amreen Jan, Mr Suresh, and Mr Sourabh Singh has developed this dashboard.

IITD fights COVID-19
ETEX, an IIT Delhi start-up, has launched an affordable and effective face mask, KAWACH, for protecting and safeguarding people from the risk of COVID-19. The core textile team in the Department of Textile and Fibre Engineering, IIT Delhi has also provided several technical inputs and supported the efficiency of the product.

KAWACH mask is at par with N95 in terms of proper fitting, and engineered filtration layer that could provide up to 98% filtration efficiency. The mask price is kept affordable (below Rs.45) so that it can reach masses for enhanced protection.

Prof. Bipin Kumar, Textile and Fiber Engineering Dept., IIT Delhi said, “India has several massive challenges ahead – disposal of PPEs (including mask and coveralls) after one-time use and ensuring the minimum use of nonwoven technology for making PPEs. Disposing of synthetic polypropylene nonwoven could have a detrimental effect on the environment. Finding other textile solution that offers reusability, biodegradability, affordability, and scalability for PPEs is the need of the hour.” They are currently working on new prototype designs to make a mask that is washable and reusable at least 10 times.

IITD fights COVID-19

IIT Delhi-made Antiviral Nano-coatings to be Used in Medical Masks, N95 Respirators

The Department of Science and Technology (DST) has approved support for upscaling antiviral nanocoatings developed by Prof Ashwini Kumar Agrawal. The nano-coating will be used for producing anti-COVID-19 Triple Layer Medical masks and N95 respirators in large quantities. Prof Agrawal developed N9 blue nanosilver at SMITA Research Lab, IIT Delhi, under the nanomission project, and will be carrying out the upscaling work in association with two industrial partners Resil Chemicals Pvt Ltd. Bangalore and Nanoclean Global Pvt Ltd, New Delhi.

Resil chemicals will provide N9 blue nanosilver. Nanoclean Global (an IITD startup) will provide face masks and PPE materials for the application of nanocoating and will help in the design and fabrication of samples at their facilities. Professor Agrawal, along with his team, further proposes to evaluate antiviral properties of this compound against COVID-19 in association with AIIMS, New Delhi, and ILBS, New Delhi.

IIT Delhi Startup ETEX Launches Affordable and Effective Face mask, KAWACH, against COVID-19

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IIT Delhi has launched life-long institute email id for its alumni

The id would be as yourname@alumni.iitd.ac.in. You can get this email id by filling out a request form available at the URL: https://alumni.iitd.ac.in/register/. After registration, the Institute will verify your details within 5 working days and send the credentials for the requested alumni email address on the email-id which was used for the registration. This e-mail id can be accessed through Gmail. This alumni email address will be the primary mode of communication for institute related information. This will also help the institute update your information and bring us one step closer to our broader vision of creating a close-knit network of alumni.

I4 Challenge: Ideation at Isolation; Implementation at Institution

To encourage its students to continue learning and develop new skills, IIT Delhi launched the 'I4 Challenge' amid suspension of academic activities due to COVID-19 lockdown. This initiative was designed as an innovative competition for all IITD students (UG, PG & Doctoral). The challenge requires them to find modern solutions to challenges in topical areas of innovation, design & society. Students are allowed to participate individually or in a group (max 3) and choose problems of their interest from a list of challenges curated with the help of faculty across depts. Cash prize will be given to the winners. The deadline for the challenge has been extended till 30th May.

Startup@IITD::AI Enabled Smart Clothing

Movtrack Biomedical Pvt. Ltd., is a wearable health-tech company focused on physiotherapy and fitness markets. It designs novel AI-enabled clothing to re-invent the exercise experience of physiotherapy/rehabilitation patients and gym-goers. The clothes wirelessly connect to the users’ and physicians’ smart-phones or other computers to provide them audio-visual guidance and analytics about exercises and musculoskeletal health.

Anupam Kumar, the co-founder of the company, said that he got the idea for this product in 2017. They pitched it to the UT Design Startup Challenge based on which the team got $10,000 in cash funding and $35,000 in student engineering services for developing the technology.

They needed to develop low-cost smart textiles to easily bridge the gap between established textile pipelines and the field of electronics. They did so in partnership and mentorship with Dr Deepti Gupta at IIT Delhi. He also says that they are currently developing their MVP and are looking to collaborate with physical therapists to evaluate our smart clothing and software in future.

Resumption of classes and admission to PG and PhD programmes at IIT Delhi

It is likely that the classes may resume in the first week of July. Students will return to campus in a phased manner according to a schedule to be finalized and communicated in due course.
Human Resource Development Minister Ramesh Pokhriyal 'Nishank' has lauded IIT Delhi for its research accomplishments against the COVID-19. A number of long term and short term projects are going on in the institute.

The institute has made available access to thousands of e-books and e-journals outside campus. The e-resources can be accessed by students using their Kerberos IDs and passwords.

IIT Delhi makes available 3,800 of Coursera courses for free to students through the “Coursera for Campus” program.

An online event titled Leadership Talk with Sh Jayant Sinha, MP, Lok Sabha & Distinguished Alumnus IIT Delhi and Prof V Ramagopal Rao, Director was held on 28th April 2020.
GIVE BACK TO IIT DELHI
(April 2020)

PROF. SOUMITRA DUTTA CHAIR: INR 19.7 Lakhs
GLOBAL ALUMNI ENDOWMENT FUND: INR 10 Lakhs
(Mr Parag Dhol)

GIVING WEEK 2020: INR 7.24 Lakhs
1979 RUBY REUNION: INR 1.87 Lakhs
IIT DELHI BENEVOLENT FUND: INR 17.3 Lakhs