



Indian Institute of Technology Madras
Office of Alumni and Corporate Relations

Celebrating the Generosity of **Dr. Prabhakar Raghavan** and **Mrs. Srilatha Raghavan**

Impact of your Giving in 2023



Director's Message

Greetings!

IIT Madras continues to retain her top position for the eighth consecutive year, in the National Institute Ranking Framework, thanks to the world-class research of its faculty and students. The contribution and support of *Alumni and well-wishers like you* has crucially helped this standing and stature. Our achievements in research, education, innovation and entrepreneurship have also earned us the recognition of an 'Institute of Eminence' as well as the top position in the Atal Innovation Ranking from the Government of India.

The institute is making an indelible mark with her '*research with impact*' in several areas including quantum computing, drinking water technology, industrially relevant mathematical models for governance, rendering cancer-cure more effective. Our centres of excellence, the Center for Innovation, Nirmaan – the pre-incubator, the Incubation Cell, technology centres such as '*IITM-Pravartak*' and others, work in unison for not just our nation's building, but societies *world-wide*. We aspire to be locally impactful and globally relevant through all these efforts.

Towards exploring new research frontiers, a Department of Medical Sciences and Technology has been launched to conjoin medicine and engineering. Similarly, a School of Sustainability is on the horizon to research sustainable practices in the Global South. The campus is moving towards 'carbon-net-zero' goal through water conservation by 100% recycling, efficient garbage disposal, and electrification of vehicles. The traditional education system is undergoing a paradigm shift, with our online Bachelor of Science programme in Data Sciences and the National Program of Technology Enhanced Learning, that have won Gold in the 'Lifelong Learning' category and Silver in the 'Best Online Program' category of the Wharton-QS Reimagine Education Awards 2022 respectively. IIT Madras is leading this revolution from the front.

Such achievements are not possible without the deep-rooted faith and support of alumni and well-wishers such as yourself. We are indebted to you for your generous, bountiful, and impactful contributions. On behalf of IIT Madras, I offer you our deepest gratitude for continuing to strengthen the Institute. Together with your support, we are confident of building an IIT Madras that is more inclusive, diverse, and enabled by an ecosystem to be nationally relevant and globally recognised. Thank you!



Prof. Kamakoti Veezhinathan
Director, IITM

Dean's Message

Greetings!

I express my heartfelt gratitude to you for your generous support to IIT Madras. We appreciate your passion in supporting the causes you do and I assure you that your contributions will be optimally utilized. This report has been compiled to convey how your largesse has touched lives and made a difference at IIT Madras. In keeping with the rapid, contemporary strides in science, technology we have set ambitious goals for ourselves – your continued enthusiasm and support will help us greatly in these endeavors.

IIT Madras is far more diverse in its set of pursuits, more green and more research-focused. And yet, it remains unchanged over these years, it is still the best Institute in the country, and attracts the best students that India has to offer to come and make a mark. I also cordially invite you to visit your campus to see for yourself, the impact of your contribution, and the growth and transformation the Institute has undergone over the years.

We can never express our gratitude enough for all that you have done – Thank You!

Prof. Mahesh Panchagnula
Dean, Alumni & Corporate Relations, IITM



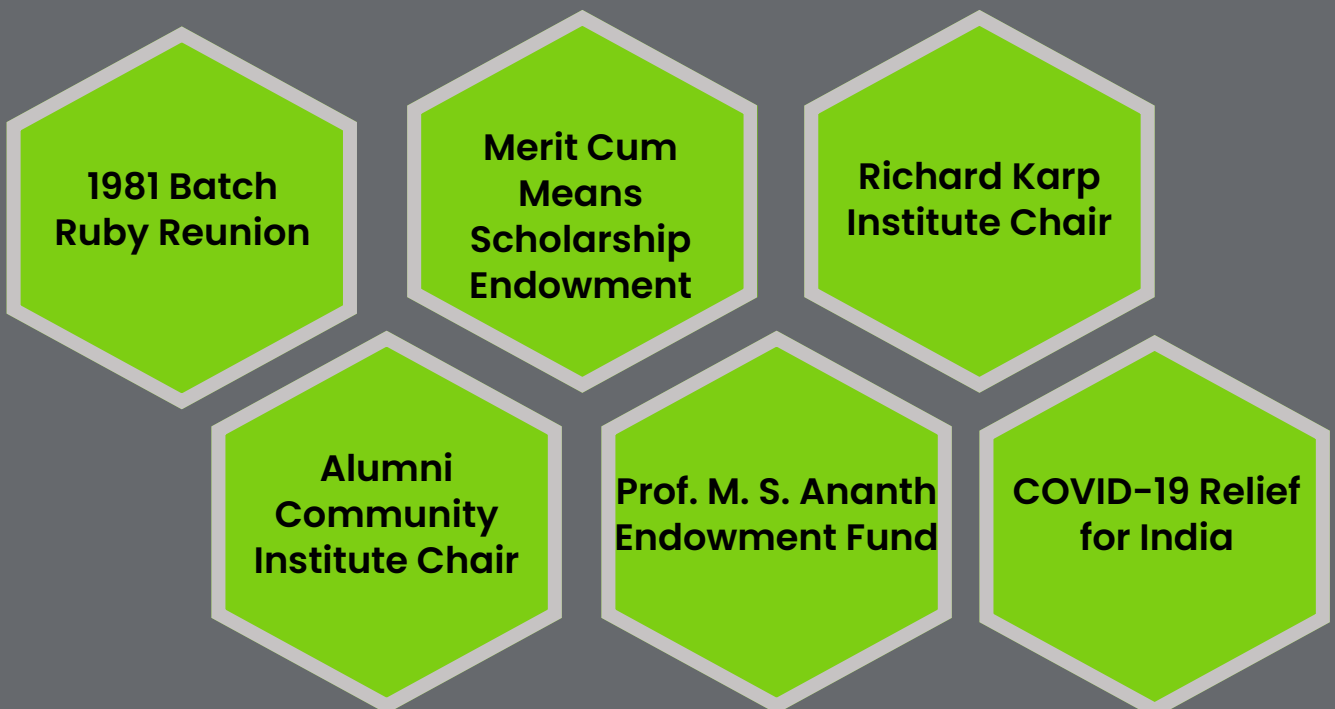


Dr. Prabhakar Raghavan holds the position of Senior Vice President at Google and oversees a wide range of the company's Knowledge & Information products. Under his leadership, the Apps business expanded from a set of consumer apps to an enterprise solution that is a major contributor to Google's Cloud business. He also grew both Gmail and Drive past 1 billion MAUs and introduced several machine intelligence features in G Suite, including Smart Reply, Smart Compose, Drive Quick Access each leading to measurable improvements in user experience.

Mrs. Srilatha Raghavan, the spouse of Dr. Prabhakar Raghavan, holds a strong fondness for IIT Madras and has made voluntary contributions to the institution. She is a distinguished women and an esteemed individual. Mrs. Srilatha is passionate about improving children's education, empowering women, and preserving biodiversity on earth. Following her career in tech, she is an angel investor and advisor to early-stage tech startups. She serves as an advisor and board member at Surge Sportstech Inc. and is VP of the Board at the nonprofit organization, Maitri.



The report will present a thorough assessment of the impact that your contributions have made towards the causes outlined below:



1981 Batch Ruby Reunion



After 40 years, the graduating class of 1981 got back together for their belated Ruby reunion on December 21, 2022. During this reunion, the batchmates unanimously agreed to contribute towards the incorporation of E-mobile buses at IIT Madras campus.

Project update:

Call for the Tender process for E-bus has been completed

Technical review with supplier is completed

Technical review with supplier is completed

Financial bid open / Purchase order release to the supplier is in progress

Delivery lead time is three months from the purchase order date and the first E-bus is expected to be in campus by the end of December 2023

E-CART

4 E-carts were purchased and launched on July 7th, 2023, and are currently being used inside the campus. This e-cart has been immensely useful to the students and faculty alike in moving around the campus. Visitors have also used it to enjoy the scenic beauty of the campus



Merit Cum Means Scholarship Endowment

The Merit-Cum-Means Scholarship fully supports the cost of tuition fees which is Rs. 90,000/- per annum for a student until 2015. From 2016, the tuition fee has been revised to Rs. 2 lakhs per annum. The Govt. Merit-Cum-Means Scholarship has been revised to 2/3rd of Rs.2 lakhs (i.e., 1.33 Lakhs). This leaves a sum of Rs. 66,667/- to be borne by the student.

Eligibility Criteria

- ✓ Parental income should be greater than Rs. 1 lakh and less than Rs. 5 Lakhs per annum
- ✓ Degree - B. Tech / Dual Degree
- ✓ CGPA - Above 5

The following are the student beneficiaries of the MCM scholarship that you have supported



Hemant Pravin Rajhans

ED22B021

Dual Degree - Engineering Design
CGPA Range: 7 - 8

Gratitude Note

This tuition fee will allow me to focus on my studies and pursue my academic and career aspirations without the added burden of financial stress.

My Achievements

Speaking about my own accomplishments, I would say that passing one of the most difficult exams, the JEE Advanced, is my greatest academic success. My biggest non-academic accomplishment is that I no longer identify as an introvert, which makes me happy.

Gratitude Note

The scholarship is one of the best initiatives to help EWS students, it has helped me avail scholarship on tuition fees for studying in this wonderful institute. This has financially helped me and my family very much. I will try to put in my best efforts in utilizing the benefits of this scholarship. I thank all the alumni of IITM who have contributed into this program to help economically weaker students.



Hemsainath Reddy Vayyala

MM22B031

B.Tech - Metallurgical and Materials
Engineering
CGPA Range: 7 - 8

Richard Karp Institute Chair

Richard Karp Institute Chair was instituted in 2015 by the thoughtful contribution of **Dr. Prabhakar Raghavan** and it was named after his Prof. Richard Karp who is a computational theorist at the University of California, Berkeley where he is currently a Professor Emeritus.



First occupant of the Richard Karp Institute Chair :



C. Siva Ram Murthy

Visiting Professor

Department of Computer Science and Engineering
IIT Hyderabad

Areas of Research:

- ✓ Resource management issues in 5G/6G wireless networks - user association, spectrum allocation, interference and power management, service function chaining, security, and user privacy preservation.
- ✓ Efficient solutions for resource provisioning and harmonious coexistence of heterogeneous wireless technologies in fog computing enabled IoT networks.
- ✓ Development of ultra-reliable and low latency communication services in NR-V2X for enhancing road safety and traffic efficiency.

Current Research :

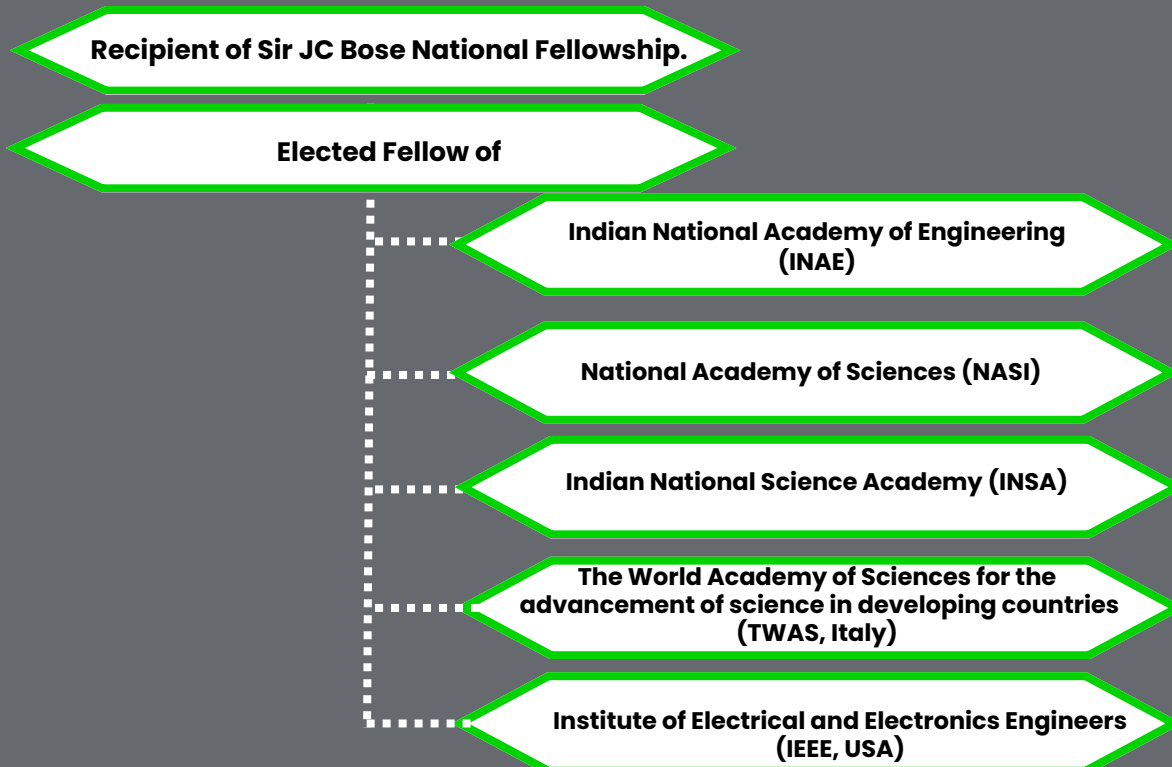
A Novel Cellular User Offloading via UAV-Borne IRS: Unmanned Aerial Vehicles (UAVs) can be leveraged to perform cellular user offloading in dynamic hotspot scenarios and enable the unserved users of overloaded gNodeB (gNB) use the unutilized bandwidth of a neighboring underloaded gNB. To reach the blocked users and to minimize the co-channel interference between offloaded users and other users, we propose using UAVs mounted with two Intelligent Reflecting Surface (IRS) panels.

We formulate the problem to minimize the total Service Level Agreement (SLA) violations cost by jointly optimizing the location of the UAV, user association, phase shifts of the IRS elements, transmit power allocation, and bandwidth allocation. Further, we propose an efficient heuristic solution to the formulated problem and show its effectiveness using numerical simulations. Through our simulations, we show that the total SLA violation cost decreases by up to 17.18% and spectral efficiency increases by up to 6.66% by using 400 elements in each IRS.

Student contributions (who were involved in Research) :



Honors, Awards & Affiliations :



Plans Ahead :

- ✓ Resource management issues in 6G wireless networks.
- ✓ Development of ultra-reliable and low latency communication services in NR-V2X for enhancing road safety and traffic efficiency.

Alumni Community Institute Chair

The Alumni Community Institute Chair is an institute level chair funded by various alumni and non-alumni across the globe.

First Chair occupant of the Alumni Community Institute Chair:



Prof. R. Nagarajan

Professor
Department of Chemical Engineering
IIT Madras

Education Trajectory :

- ✓ 1981 - B.Tech, Indian Institute of Madras
- ✓ 1986 - Ph.D., Yale University, United States

Research Interests :

- ✓ Ultrasonic and megasonic fields
- ✓ Cleanroom and contamination control
- ✓ Nano-particle synthesis and nano-composite formulation

Prof. R. Nagarajan is the *Alumni Community Chair Professor, Department of Chemical Engineering, IIT Madras, Robert T. Henson Distinguished Visiting Scholar, Davidson School of Chemical Engineering, Purdue University.*

After completing his 3- year term as Head of the Department of Chemical Engineering, Prof. Nagarajan has undertaken his sabbatical at Purdue University as **Robert T. Henson Distinguished Visiting Scholar** in the Davidson School of Chemical Engineering. He has conducted a Seminar Series on "**Contamination Control in High Purity Manufacturing**" for Purdue faculty and students. He has presented a paper at the **WOCA 2022 (World of Coal Ash) conference** at Covington, Kentucky, and organized a Panel at the Deshpande Symposium in Cleveland, Ohio.

A CSR project, funded by Kris and Sudha Gopalakrishnan's Pratiksha Foundation, is now in its 2nd year. With the objective of formulating nano-emulsions of spice oils for cancer treatment, the work has progressed satisfactorily to the stage of animal trials. His research priorities are coal beneficiation using the ultra-sonic fields, nano emulsions of plant oils used for cancer treatment and dust-repellent surfaces and coatings for building exteriors.

Awards and Recognition:

- ✓ Award for "**Distinguished Service to Alumni**" in IITMAA Sangam Confluence for Impact on Sep 29, 2018
- ✓ "**Eminent Engineer Award**" from the Institution of Engineers (India) in October 2018
- ✓ As a member of IITMAA's "**Thought Leadership Council**", he has contributed a Concept Note in 2022 on "Industry-Academia Relations", and to "**Global Science for Global Wellbeing**", a report published on National Science Day, 2023
- ✓ He has won several awards, including the **Outstanding Younger Member Award**, Institute of Environmental Sciences and Technology (IEST), April 1990; **Patent (# 5,879,578) Issue Award**, March 1999 several **IBM Innovation & Performance Awards and Team Awards**

- ✓ Four high-impact journal papers were published, and one patent application was filed in the past year.
- ✓ Co-wrote proposal for "Institution of Eminence", a status awarded in 2019
- ✓ Trustee on Board of Alumni Charitable Trust
- ✓ Director on Board of IITM Canada Foundation
- ✓ Chair, Travel Grant Committee, Office of ACR

Prof. M. S. Ananth Endowment Fund



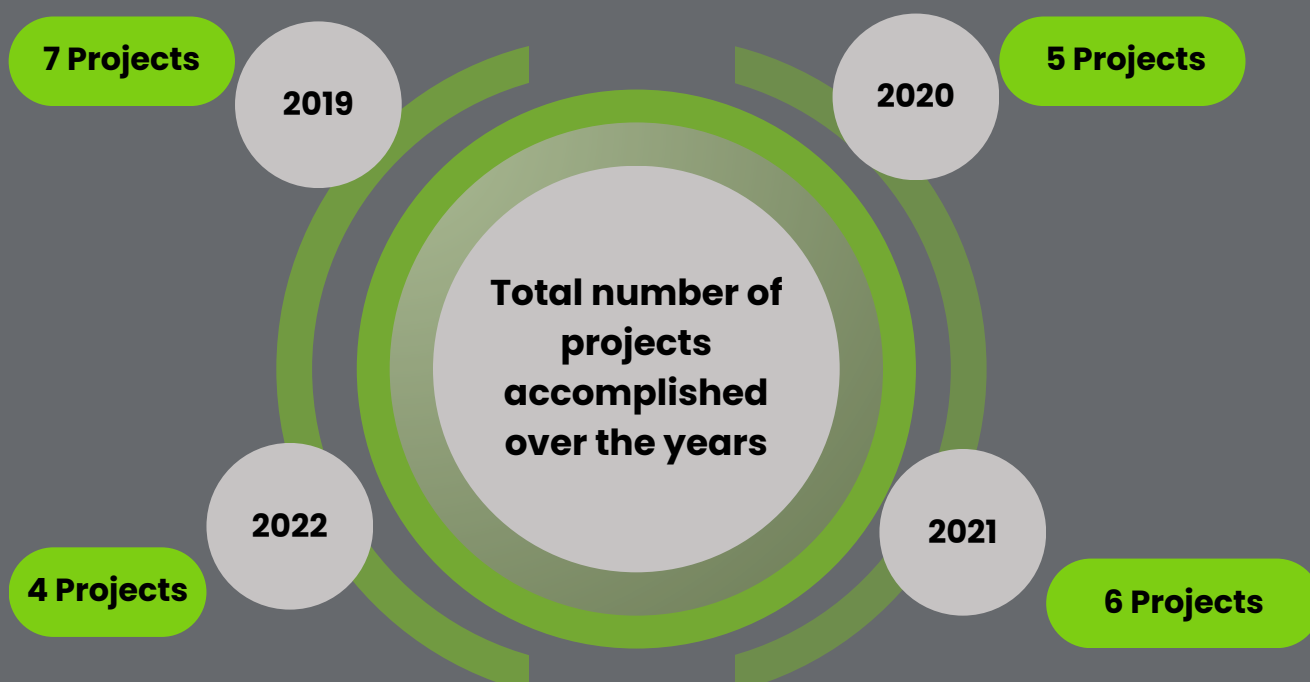
Prof. M. S. Ananth

This Endowment Fund was established to honor Prof. M. S. Ananth, who served as the Director of IIT Madras from 2001 to 2011. He is well-known for his contributions to science and teaching, as well as his tireless efforts to develop higher education and research in India.

The following activities are supported through this endowment fund:

- ✓ To support socially relevant projects.
- ✓ To support the educational needs of the children of staff members of self-help organizations who work in IITM campus.

Socially Relevant Projects:



In 2022 alone, the institute successfully executed four impactful projects.



Prof. Nikhil Bugalia
Department of Civil Engineering

Project Name:

Construction and Demolition (C&D) Waste Management and the Role of the Informal Unorganized Sector in India: Case of New Delhi

Objective of the project:

Identifying early-stage demolition projects in different parts of the City and various stakeholders involved in the identified projects to understand their roles in an informal/formal C&D waste management system through interviews. Results indicate significant environmental and economic benefits the informal sectors contribute as they engage in deconstruction, salvaging several materials otherwise considered waste and adding value to the formal recycling process through their selective demolition practices.



Prof. Madhu Mutyam
Department of Computer Science and Engineering

Project Name:

Tracking Beehive Health Using IoT Technology

Objective of the project:

The work aims to build an IoT-based tracking system to monitor the health of a beehive. It helps minimize manual inspection of the beehives so that beekeepers can handle a more significant number of beehives simultaneously, improving their income level.



Prof. Sreeram K. Kalpathy
Department of Metallurgical and Materials Engineering

Project Name:

Farmer-friendly, point-of-use, portable heavy metal sensors with cell phone interface: A new technical aid for the agricultural sector

Objective of the project:

Analyzing water quality and heavy metal presence in water samples collected from several temple tanks in Rameswaram, Tamil Nadu using the ICP-OES facility at SAIF- IIT Madras. The project is aimed at helping farmers and agricultural cooperatives to decide on soil quality by measuring soil salinity and heavy metal presence detection so that they can sow crops in the right location and maximize crop yields.



Prof. Suresh Kumar Royala
Department of Biotechnology

Project Name:

Community Screening of "Kasimedu fisherwomen" for cervical cancer using a self-sampling kit and an indigenous innovative detection device.

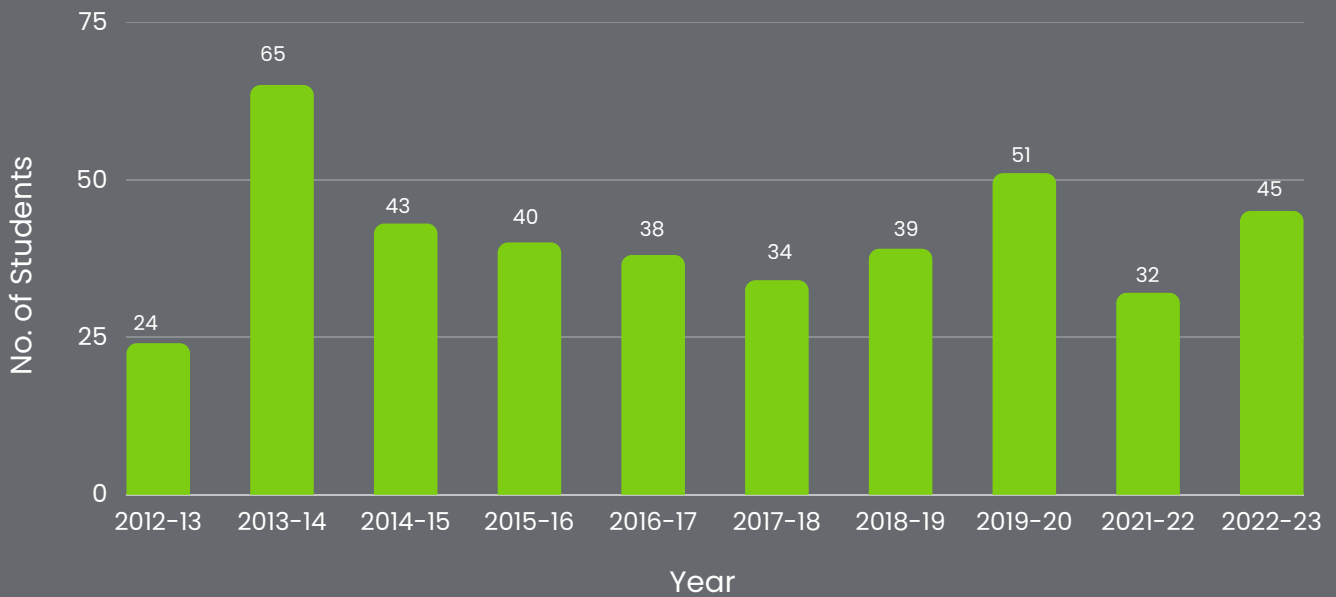
Objective of the project:

This project is aimed at a community screening of cervical cancer in Kasimedu fisherwomen and detecting an HR-HPV in these women using an indigenous detection device (developed at IITM). Fabrication of point of care device for detection of HR-HPV and continuous field work – community screening by enrolling more women into the cervical cancer screening.

Support to children of staff members of the self-help organization who work in IITM:

The below graph depicts the number of students who have reaped the benefits over the years.

Statistics from 2012 – 23



In 2022, 45 children of the IIT Madras campus Self-Help group staff have been given support to their tuition fee through this scheme.

Gratitude Note from some of the beneficiaries:



R Karthikeyan

Respected Mam

I am Karthikeyan.R son of Abirami .you've gave a yearly fees That is Help for my Studies. so I was able to concentrate with my studies perfectly. did also fees IS not pending so Thanku for your help very much. and also I am very happy. and thanku for all support.

Thanking you
by
R. KARTHIKEYAN

மாமி !

சூன்யா சாமிக்கி வந்திவிட்டது சாண்டவண்ணம் சாண்டவண்ணம்
Y. சித்திரன் VII படித்து வந்திருக்கார். சாண்டவண்ணம்
சார்மிலா V படித்து வந்திருக்கார் நாங்கள் கஷ்டப்பட்டு
படிக்க வைத்திருக்கோம். ஆனால் சாண்டவண்ணம்
மனிதன் படிப்பதற்கு பில் கொடுத்ததற்கு மிக்க நன்றியை.

சிவபாபுக்கு
Y. Sathya



Nitish and Sharmila



K. Dhanush Kumar

Good morning maam .

I am K.channamma's son .

Thank you so much maam for giving us money .

It has helped us .

We will be always thankful to you maam

We will never forget this .

Respected madam

My self K.vinushya iam studying 10th standard.

My mother name K. Shanthi. I wish to thank you for
the support and help my education. I wish to express
my heartfelt gratitude for your help in
financing my studies.



K. Vinushiya

COVID-19 Relief for India

The COVID-19 pandemic became an emerging global health crisis and required the best of our efforts to overcome it. The sudden outbreak of pandemic had already created an enormous medical and financial burden shattering many lives.

The second wave of COVID-19 immensely affected the public's mental health and well-being in a variety of ways, including isolation and loneliness, job loss and financial instability, and illness and grief. Many organizations, institutions, and individuals came forward to support the nation both financially and socially.

Glimpses of the contributions:

- IIT Madras handed over **200 oxygen concentrators** to the **Government of Tamil Nadu**.



Donated BiPAP units, Injections and medicines

- Contributed **200 oxygen concentrators** (5 litres each) to the **Government of Telangana**.

IIT Madras launched a campaign to raise funds for supporting various causes. The Institute exceeded its goal of raising \$1 million in 48 hours. Overall IIT Madras Alumni and other well-wishers have come together and raised more than \$2 million.

Below are the causes for which the funds were used:

1. Purchase of Oxygen cylinders, BiPAP machines, Injections, and Medicines
2. Healthy meals for students who were stranded in the institute during covid.
3. Financial help to more than 150 Ph.D. scholars to pursue their research without any constraints.

- Contributed **200 oxygen concentrators** (10 litres each) to the **Government of Karnataka**.



- Contributed **1000 units of covid medicines** to Sri Venkateswara Institute of Medical Science (SVIMS), Chittoor



- **Provided healthy meals to students** who were stranded during Covid pandemic with the help of a nutritionist. Arrangements were made to serve paneer, banana, and eggs as optional extras.



- **Financial support was provided to Ph.D. scholars as stipend.** This helped them to carry out their research without hindrance.

Gratitude notes from some of the Ph.D. scholars



Ajay A P

"I wish to thank all the donors from the bottom of my heart. The relief provided helped me look after my family during that nightmare phase and thereby focus on my research more"

"I am really appreciative of the assistance received from my alumni during my most difficult time. I'm hoping that someday I'll be in a position to help out my fellow students"



Sunny Sharma



Bhadra Hrishikesh

"The pandemic was a tough period for all of us. And it is very stressful for scholars especially when they are on the final stage and the stipend period has ended. I am very grateful to the alumni and non alumni members who contributed in supporting scholars like me. You are inspiration to us by making us understand the importance of giving back to our community"

"I would like to express my sincere gratitude to all the alumni and non-alumni donors for generously donating towards the cause of Covid-19 relief with which we were supported with our stipend. I wish to prolong my appreciation to all who worked behind to make the entire process work smoothly. The financial support from you helped me greatly"



Dipanjan Majumdar

We are grateful to you

Dr. Prabhakar Raghavan, Mrs. Srilatha Raghavan and Family

Thank you for your sustained generosity to IIT Madras over the years. Contributors such as yourself enable our students and Professors to dream big and work towards a better and brighter future. We hope you are proud of your alma mater and how it has remained steadfastly committed to academic and research excellence during and after your time here. You and your family have been instrumental in facilitating this significant growth.

Our efforts to nurture the culture of academic excellence that is the hallmark of IIT Madras – quality education, cutting-edge research, and unfettered creativity – shall continue. We are privileged and humbled to have you and your family walking with us along this trail. We wish you and your family the best in all walks of life!



Indian Institute of Technology Madras, Chennai – 600036

www.iitm.ac.in

For more information, please contact:
Office of Alumni and Corporate Relations
T: +91-44-2257 8390 | acr.iitm.ac.in



September 2023