



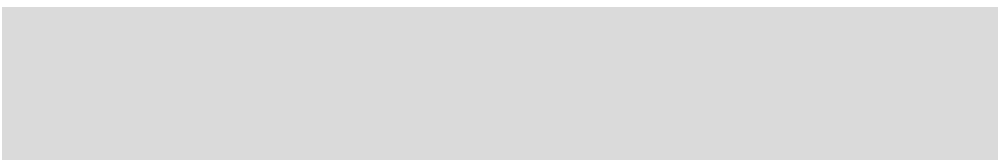
Indian Institute of Technology Madras
Office of Alumni and Corporate Relations

Celebrating the Generosity of



Mr. Krishna Mahesh

Impact of your Giving in 2023



Director's Message

Prof. Kamakoti Veezhinathan
Director, IITM



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!

Dean's Message

Prof. Mahesh Panchagnula

Dean, Alumni & Corporate Relations, IITM



Greetings!

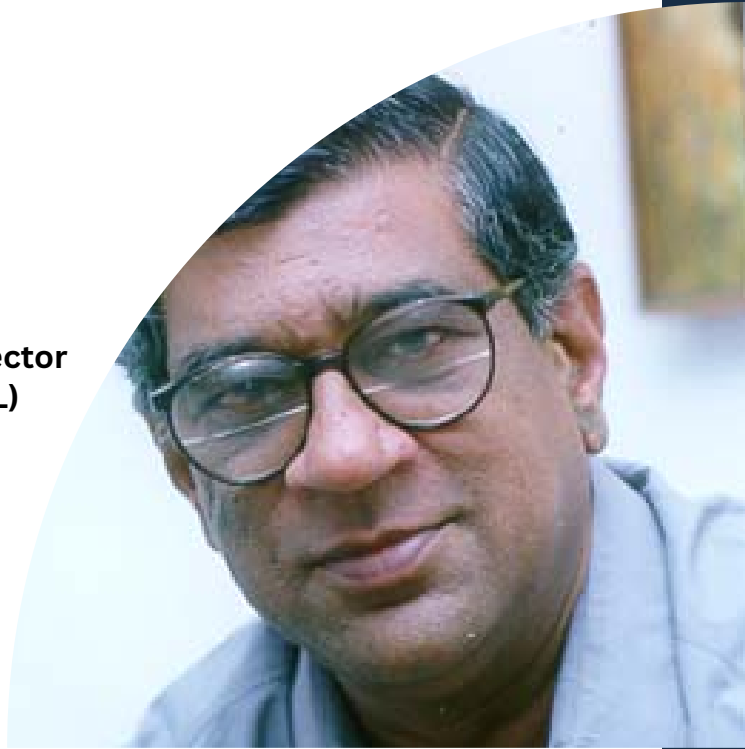
I express my heartfelt gratitude to you for your generous support to IIT Madras. We appreciate your passion in supporting the causes you do and I assure you that your contributions will be optimally utilized. This report has been compiled to convey how your largesse has touched lives and made a difference 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!

Mr. K. Mahesh

**Chairman and Managing Director
Sundaram Brake Linings (SBL)**



Mr. K. Mahesh, born on October 11, 1943, was a dedicated leader and a man of principles. He hailed from the esteemed TVS Group and served as the whole-time director of T V Sundaram Iyengar & Sons Private Ltd. He earned a bachelor's degree in Metallurgy from the Indian Institute of Technology Madras and held significant roles, including Chairman and Managing Director. Even after retirement, Mr Mahesh remained actively involved as a director and non-executive chairman. His contributions extended beyond his own company, as he played a pivotal role in starting the cluster program in ACMA, benefiting numerous automotive component industry plants over the last two decades.

A man of principle, a dedicated leader and a soft-hearted person, Mr. Mahesh was also known to be a perfectionist and a taskmaster. He deeply imbibed the TVS philosophy and looked after not only his company but also the health of the automotive component industry.

Mr. K. Mahesh, received the prestigious **Jamsetji Tata Award for 2009** in recognition of his **outstanding role in promoting quality management in his company and industry.**





Mr. Krishna Mahesh

Mr. Krishna Mahesh, an accomplished leader in the automotive industry, brings with him a wealth of expertise and experience. Following in the footsteps of his father, Mr K Mahesh, he now holds the esteemed position of Managing Director at Sundaram Brake Linings Ltd. With a mechanical engineering degree from Stanford University and an MBA from Harvard Business School, Mr Krishna's exceptional academic background is complemented by his hands-on experience in lean manufacturing techniques gained at McKinsey & Co. His dedication to excellence and innovation led him to undertake extensive training in the Toyota Production System at Toyota Motor Manufacturing, North America.

Joining Sundaram Brake Linings Limited in 2005 after a successful 11-year stint abroad, Mr. Krishna quickly proved his mettle, earning the position of Executive Director and significantly contributing to the company's growth. Recognised for his strategic vision and commitment to operational efficiency, he was appointed as the Chief Operating Officer in 2011. Today, as the Managing Director of SBL, Mr. Krishna continues to uphold the TVS Group's legacy of excellence while steering the company towards new heights of success. His passion for continuous improvement and dedication to driving innovation make him a valued leader within the organisation and the automotive industry.



K Mahesh Institute Chair



Prof K. Ramesh joined IIT Madras in 2000 and is currently the K Mahesh Chair Professor at the Department of Applied Mechanics, IIT Madras; as its Chairman during (2005-2009) and formerly a Professor at the Department of Mechanical Engineering, IIT Kanpur. He received his undergraduate degree in Mechanical Engineering from the Regional Engineering College, Trichy (1982), Postgraduate degree from the Indian Institute of Science, Bangalore (1984) and the Doctoral Degree from the Indian Institute of Technology Madras (1988).

Overview of your Research

- ✓ Has pioneered the area of Digital Photoelasticity internationally. It is essentially a stress analysis tool used in several fields of Engineering and Physics.
- ✓ Passionate in developing innovative educational material to teach Engineering with extensive experimental results to support the theory.
- ✓ Delivered a Video course on Strength of Materials for Swayam Prabha.



Strength of Materials

Use of photoelasticity as a tool to understand the field nature of stress is introduced right from the beginning of the course to understand not so clearly discussed concepts such as Saint Venant's Principle, Stress Concentration, and the beauty of simplifying assumptions in SOM and their pitfalls effectively.

to view the Lecture videos

[CLICK](#)



Specific Research Areas

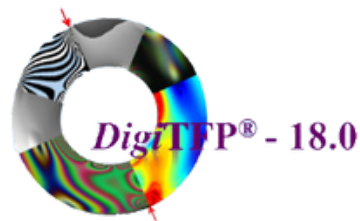
- ✓ K. Shins, and · K. Ramesh, "Closed-form displacement field equations for a disc subjected to self-equilibrated arbitrary loads", Granular Matter, 2023, 25:38, <https://doi.org/10.1007/s10035-023-01327-w>
- ✓ Anand C S. Natarajan· K. Ramesh, "Simulating Isochromatic Fringes from Finite Element Results of FEniCS", Experimental Techniques, 2023 <https://doi.org/10.1007/s40799-023-00639>
- ✓ Sachin Sasikumar, K Ramesh, "Framework to select refining parameters in Total fringe order photoelasticity (TFP)" Optics and Lasers in Engineering, Volume 160, January 2023, DOI: <https://doi.org/10.1016/j.optlaseng.2022.107277>
- ✓ Anand. C, Sundararajan Natarajan, K. Ramesh," Comparison of stress fields in phase field models using digital photoelasticity for an edge crack specimen, Proceedings of International Conference on Experimental Mechanics, Orlando 5-8 June, 2023.
- ✓ Ganesh Ramaswamy, Naman Verma, U. Saravanan and K. Ramesh, "Criticality of cracks in rails using photoelasticity and finite elements", Proceedings of International Conference on Experimental Mechanics, Orlando 5-8 June, 2023.



✔ Commercialization of Software Developed:

IIT Madras has entered into a Licensing and Monetization agreement with Online Solutions (Imaging) Pvt Ltd., Chennai for licensing the following softwares on behalf of IIT Madras in the country. The agreement has been signed and exchanged in the presence of the Dean, ICSR Prof. Manu Santhanam.

The event received wide media attention and published in [Press information Bureau of Government of India](#)



Students contributions (who were involved in Research):



Sachin Sasikumar
Direct PhD, 2022

Won the Institute
Research Award for
the year 2022



Ganesh Ramaswamy
MS/PhD, 2019

Selected as PMRF since Jan
2022 to work on Rail
Natural Temperature



Anand C
PhD, 2019

Working on the use of
FENICS to solve crack-
hole interaction
studies



Naman Verma
MS, 2020

Completing his MS on
interaction of contact
and crack-tip stress
fields



Shins K
PhD, 2019

Working on Granular
Materials

Honours, Awards & Affiliations:



Frocht Award with SEM President Jim De Clerck

➤ Received the 2023 M M Frocht Award - in recognition of outstanding achievements as an educator in the field of experimental mechanics from the Society for Experimental Mechanics (SEM), USA.

First Indian to receive the award ever since it was started in 1967.

➤ Delivered an invited talk on *Developments in Photoelasticity and its Diverse Applications* at Stanford University on 29th June 2023.

➤ Guest editing a special issue of Optics and Lasers in Engineering on "*Developments in Photoelasticity and Diverse Applications*" to be available by March 2024.



Special
Issue

Submit your paper >



OPTICS and LASERS
in ENGINEERING

Editor in Chief
K. RAMESH
Deputy Editor
I. BRUNO

Developments in Photoelasticity
and Diverse Applications
Optics and Lasers in Engineering

Edited by
Prof. K. Ramesh

Plans for the year 2023-24:

Research work on interaction of crack and contact stress-fields will be further studied

Rail neutral temperature studies are important to understand the behavior of continuous welded rails for buckling and fracture

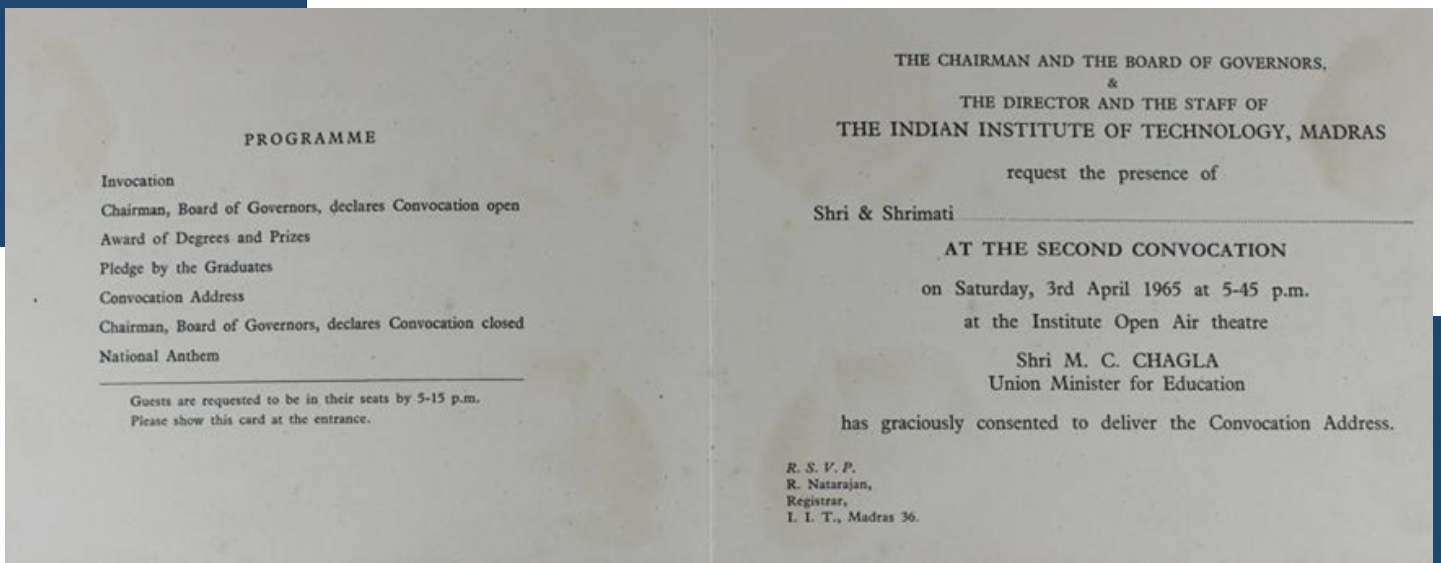
Guest editing the Special Issue on Developments in Photoelasticity and Diverse Applications

Thank you note from Chair Occupant:



Institution of Chair Professorship recognizes excellence in the chosen field. Such initiatives provide a sign of appreciation to continue the crusade for excellence. I thank the donors of K Mahesh Chair Professorship for participating in this exercise to recognize excellence.

Memories from the Convocation in 1965



Second Convocation of IIT Madras in 1965 : Invitation and programme



Dr. A. L. Mudaliar (Chairman, Board of Governors) receives Mr. M. C. Chagla at the second convocation, 1965



Prof. Lt. G. V. N. Rayudu receives Mr. M. C. Chagla at the second convocation in 1965



Dr. A. L. Mudaliar declares the convocation open



Mr. M. C. Chagla delivers the convocation address



Mr. M. C. Chagla meeting some of the eminent guests and faculty at the second convocation of IIT Madras in 1965



Prof. B. Sengupto (First Director of IIT M) introducing Mr. M. C. Chagla to the Senate members



Mr. M. C. Chagla inspects the guard of honour in 1965



German faculty members in their convocation robes in 1965

*We are grateful to you
& your family*

Mr. Krishna Mahesh



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 since 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 always in all walks of life!



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