

Dr. Anand Rajaraman & Dr. Venky Harinarayan

IMPACT OF YOUR GIVING IN 2023

## **Message from Director**

### **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 education. innovation 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.



Prof. KAMAKOTI VEEZHINATHAN Director, IITM

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 in May 2023 to conjoin medicine and engineering. Similarly, a School of Sustainability has also been created in October 2023 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. MAHESH PANCHAGNULA Dean, Alumni & Corporate Relations, IITM

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 utilised. 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 endeavours.

Dean

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!



### Dr. Anand Rajaraman and Dr. Venky Harinarayan



Anand Rajaraman is a serial entrepreneur, venture capitalist, and academic based in Silicon Valley. He co-founded two successful startups: Junglee (acquired by Amazon.com) and Kosmix (acquired by Walmart). He helped create Amazon's Marketplace, and created and co-headed WalmartLabs. He also is a co-inventor of the concept underlying Amazon Mechanical Turk, which played a key role in the development of Machine Learning and Deep Learning. Anand was an early investor in many

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**Education Roadmap** 

successful companies including Facebook, Lyft, AppNexus, Aster Data, and Efficient Frontier. His

academic research has won several major awards, and he is a co-author of "Mining of Massive

Indian Institute of Technology, Madras Bachelor of Technology, Computer Science 1989 - 1993

Datasets", a popular textbook on the topic of Big Data.

Stanford University MS & PhD, Computer Science 1993 - 1996



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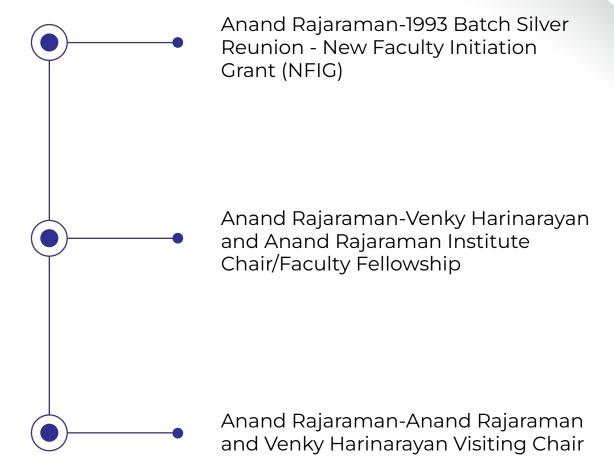
Venky Harinarayan is an entrepreneur and investor. He was a founder of Junglee—a pioneering shopping search engine that was acquired by Amazon.com, a founder of Kosmix—an innovative search and categorization company that was acquired by Walmart Stores, Inc., and a founding investor in Efficient Frontier—a leading search and social media marketing company that was acquired by Adobe. Together, these start-ups were valued at \$1 billion at the time of their acquisition. Venky has also played the role of entrepreneur in two of the most successful retailers of our times — Walmart and Amazon.com. Most recently, at Walmart, as Senior Vice President of Global e-Commerce, Venky created and ran @WalmartLabs, the innovation arm for the world's largest company. At Amazon.com, Venky helped create the Marketplace business, that today accounts for more than half of all the units sold. He also invented the concept underlying Amazon's Mechanical Turk.

## **Education Roadmap**

Indian Institute of Technology, Madras Bachelor's Degree, Computer Science 1984 - 1988 UCLA MS, Computer Science 1988 - 1990 Stanford University PhD, Computer Science 1993 - 1996

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# **Summary of your Contributions**



# Dr. Anand Rajaraman 1993 Batch Silver Reunion

## **NEW FACULTY INITIATION GRANT (NFIG)**



Two Professors who recently joined have received benefits through NFIG

**Shotaro Tada**Dept. of Metallurgical and Materials Engineering

Aslam Kunhi Mohammed

Dept. of Civil Engineering



**Research Area:** Novel heterogeneous catalyst consisting of main group elements

**Project Title:** Facile design of Polymer - Derived frustrated Lewis pair (FLP) catalyst toward energy related applications

Sanctioned Amount: INR 24.85 Lakhs – USD 34,041

### Feedback from the Professor:

I am thrilled to express my gratitude to the 1993 batch Alumni for their tremendous contribution towards the New Faculty Initiating Grant (NFIG). I am truly grateful for this opportunity.

As I begin this research journey, I aim to strike a balance between the originality of my research and its potential contribution to society. I am deeply passionate about developing novel-metal-free-functional ceramics that can activate and transform small molecules such as hydrogen (H2) and carbon dioxide (CO2) into sustainable fuel or energy for future mobility. I believe that this research has the potential to make a significant impact on society by promoting sustainable and environmentally-friendly energy solutions.

Once again, I would like to express my heartfelt appreciation to the 1993 batch for their support and encouragement. I am excited about this new chapter in my research career, and I look forward to sharing the results of our work with you all in the near future - Thank you.



**Click here to view Shotaro Tada's Bio-Data** 

Research Area: Molecular modelling of construction materials

**Project Title:** Atomic level insights into cementitious materials

Sanctioned Amount: INR 78,474 – USD 1,075

#### Feedback from the Professor:

I am myself an alumnus of IITM and it is a pleasure to see how active our alumni are to support the growth of the institute.

As a new faculty here, I certainly appreciate the NFIG grant which not only helps us to initiate setting up our lab, but also helps in making short trips to conferences or other institutes in India to initiate our collaborations.

I sincerely thank the efforts of the 1993 batch and hope you continue to be strong supporters of IITM and let us help bring IITM to the list of top 100 universities in the world.



Click here to view Aslam Kunhi Mohammed's Bio-Data

# Dr. Anand Rajaraman and Dr. Venky Harinarayan Institute Chair/Faculty Fellowship



**Prof. Shweta Agrawal** 

The previous recipient of the Faculty Fellowship was Ret. Prof. Pandu Rangan C.

Prof. Shweta Agrawal was awarded the first VHAR faculty fellowship in the department of Computer Science and Engineering in 2022. Prof. Shweta has made several foundational contributions to the area of cryptography with a particular focus on post quantum cryptography, which seeks to secure information against the devastating attacks of quantum computers.



Click here to view Prof. Shweta Agrawal's profile



Click here to view Prof. Shweta Agrawal's home page

For her work, she has received the following awards and honors:

## 1. ACM (Association for Computing Machinery) India Outstanding Contributions to Computer Science by a Woman Award (OCCW), 2022.

Awarded by ACM (Association for Computing Machinery) India for outstanding contributions to the field of cryptography and her dedication to mentoring women in science and technology.

### 2. B Yegnanarayana award for excellence in research and teaching, 2021.

Awarded by IIT Madras for excellence in research and teaching.

### 3. Best Paper Award, Eurocrypt 2020.

Awarded jointly with Dr. Shota Yamada for paper "Optimal Broadcast Encryption from Pairings and LWE" which resolved the long standing open problem of optimal broadcast encryption from simple assumptions.

Significance: This is the first time a scientist from an Indian institution received a best paper award at a flagship IACR conference (ranked A\* on CORE).

### 4. Invited talk at Asiacrypt 2020.

Shweta Agrawal was the first scientist from an Indian Institution was an invited speaker at a flagship IACR conference (please see here for a complete list).

### 5. Swarnajayanti Award, 2019.

Awarded by SERB and DST for outstanding research in the area of post quantum cryptography.

Significance: Received for the first time by a scientist in the department of Computer Science and Engineering, IIT Madras.

- 6. Associate Editor for Journal "Information and Computation". Term: 2023 2026.
- 7. Associate Editor for Journal of Cryptology. Term: 2023 2028.

### 8. Program Co-Chair Asiacrypt 2022.

The International Association for Crypologic Research, which is the global scientific organization leading research in cryptography, organizes three flagship conferences every year, organized by geographical regions: Asiacrypt for APAC, Eurocrypt for EMEA and Crypto for Americas. The chairs for these conferences are chosen from the respective regions. Shweta Agrawal served as the co-chair for a committee of 82 top global experts and with their help, selected a program from 363 excellent submissions.

9. Area Chair for "Public Key Primitives with Advanced Functionalities" at Eurocrypt 2024.

# Dr. Anand Rajaraman and Dr. Venky Harinarayan Visiting Chair

The objective of the endowment is to help the institute build capability in emerging areas through leadership in the visiting professor's chosen field.



**Prof. David Peleg** 

Norman D. Cohen Professorial Chair of Computer Sciences, from the Weizman Institute of Science

Venky Harinarayanan and Anand Rajaraman Visiting Chair Professor (2019 – 2023), CSE department at IIT Madras



Dr. Vyas Sekar

Associate Professor ECE Department, Carnegie Mellon University

Venky Harinarayanan and Anand Rajaraman Visiting Chair Professor (2019 – 2023), Young Alumni Achiever awardee, 2022



### **WE ARE GRATEFUL TO YOU!**

### ANAND RAJARAMAN AND VENKY HARINARAYAN





Thank you for your sustained generosity to IIT Madras over the years. Contributors such as yourselves 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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