



# From Learning to Doing

SCIENCE, EDUCATION AND PUBLIC SERVICE IN CHENNAI

Chennai, as the centre of the **Madras Presidency** in pre-Independence India, is special among Indian cities in its **contributions to science, mathematics, education and public service in health.**

Chennai's **Presidency College** is the only college in the country to have two Nobel prize winners among its alumni, the physicists **C.V. Raman** and **Subrahmanyan Chandrasekhar**. The biophysicist **G.N. Ramachandran** did his world-famous work while at **Madras University**.

Srinivasa Ramanujan, the mathematical genius, studied at **Pachaiyappa's College** and worked for a time at the **Madras Port Trust**, while doing his mathematics. **Father Racine**, who headed the Department of Mathematics at **Loyola College** for many years, inspired many of India's best mathematicians in the first few decades after Independence.

Chennai's contributions to the field of medicine through education and public service also stand out. The **Voluntary Health Services**, the **Adyar Cancer Institute**, **SCARF** and the **National Institute for Research in Tuberculosis** have been pioneers in their respective fields. The **Crocodile Bank** and the **Snake Park** have made exceptional contributions not only to conservation but to education. Today, institutions such as **IIT Madras**, **Anna University**, the **Chennai Mathematical Institute** and the **Institute of Mathematical Sciences** extend Chennai's long-standing tradition of combining high-quality teaching with research.

These panels highlight some of Chennai's traditions in science, mathematics, education and public service, together with the people and institutions that helped to shape them.

Curated by: Gautam Menon, K.N. Raghavan and P. Varuni (IMSc)

This calendar was produced as a part of an exhibition highlighting Science, Education and Public Service in Chennai, brought out by the **Institute of Mathematical Sciences** ([www.imsc.res.in](http://www.imsc.res.in)) for *Science at the Sabha* 2019, its annual outreach event for the general public.



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MSSRF



MSSRF



MSSRF

**M.S. SWAMINATHAN**

**M.S. Swaminathan Research Foundation**

M. S. Swaminathan's work as a plant geneticist led to the development of new varieties of wheat and rice, fuelling India's Green Revolution. He is the founder and chairman of the M.S. Swaminathan Research Foundation (MSSRF) in Chennai.

**MARCH  
2019**

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APRIL  
2019



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## SERVING THE UNDER-SERVED AND STIGMATIZED

Dr. Sarada Menon is a psychiatrist, social worker, the founder of Schizophrenia Research Foundation (SCARF) and the first woman psychiatrist in India. Dr. Suniti Solomon, and her student at the Madras Medical College, Dr. Sellappan Nirmala, tested and confirmed India's first AIDS case in 1986.

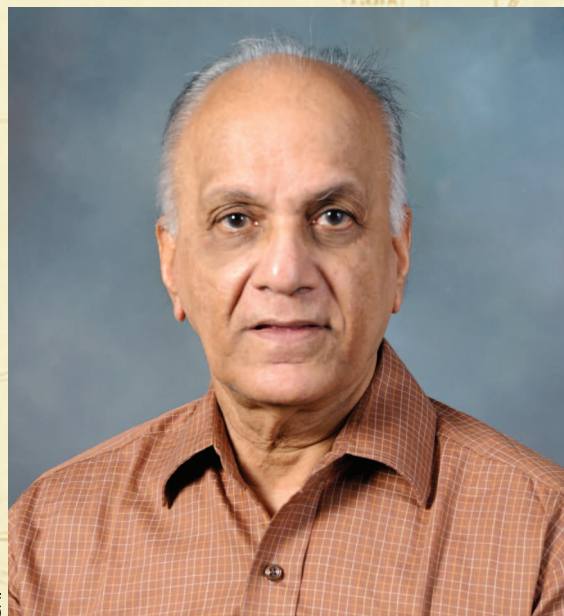




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**MAY  
2019**



CMI



CMI



Advitee Roy

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**C.S. SESHADRI**

**The Chennai Mathematical Institute**

C.S. Seshadri, among the first students inspired by Father Racine at Loyola College, founded what is now known as the Chennai Mathematical Institute (CMI). He has made several fundamental research contributions in the field of algebraic geometry.





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**JUNE  
2019**



Cedric Bregnard



Gautam Menon



Romulus Whitaker

## ROMULUS WHITAKER

**The Snake Man of India**

Romulus Whitaker is a leader in conservation ecology and education in the field of Indian herpetology. He founded the Madras Snake Park in 1972 and the Madras Crocodile Bank Trust in 1976.

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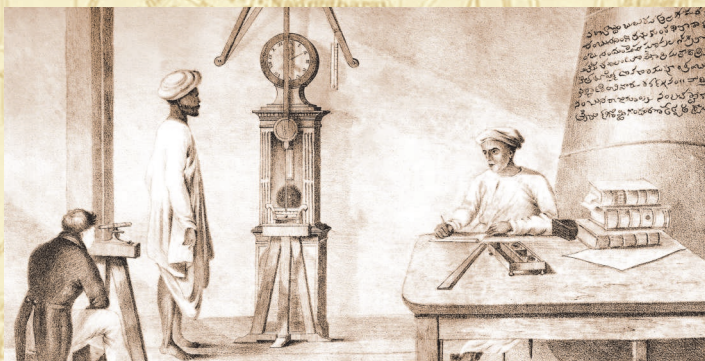
# From Learning to Doing

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JULY  
2019



Varuni P., IMSc



John Goldingham, Madras Observatory

Discovery and observations of a new Planet (Asia).  
By Norman R. Pogson, Government Astronomer at Madras

A new planet, between the 11<sup>th</sup> and 12<sup>th</sup> magnitude, was discovered here on the night of April 17<sup>th</sup>. — No ring micrometer being in the observatory and the planet not leaving illumination, the method of *Boguslawski* was employed, with two comparison stars and a single thick bar. I enclose herewith a series of observations thus made, conjointly, by me and also by my fourth assistant *Rajenindra Chary*, whose aptitude for observation and calculation affords me much satisfaction.

	Mastr. M. T.	App. a	App. d	Log. of Parall. $\times \Delta$	Comparisons	Observer
					No. Stars	
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18	11 30 39	15 50 50.72	16 -1 12.7	9.502a	12	z
19	13 49 27	15 50 29.72	15 55 7.9	9.365a	9	z
20	11 46 44	15 49 33.93	15 49 50.1	9.686a	8	z
20	13 20 12	15 49 51.64	15 49 26.5	9.534a	12	z
21	11 09 5	15 49 25.97	15 43 55.3	9.431a	13	R. P <sub>1</sub>

## THE MADRAS OBSERVATORY

The private astronomical observatory set up in Madras by William Petrie in Egmore in 1786 was among the first western-style observatories outside Europe. Norman Pogson, working at the Observatory, made the first observation of the element Helium. The Observatory also served as a reference point for the “Great Trigonometric Survey” of India.

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**AUGUST  
2019**



Dr. Nandini Murali



Sankara Nethralaya

## ACCESSIBLE HEALTH CARE

Chennai has been a leader in providing quality accessible health care. Dr. Muthulakshmi Reddy and Dr. V. Shanta are associated with the Adyar Cancer Institute. Dr. K. S. Sanjivi founded Voluntary Health Services and Dr. S.S. Badrinath started Sankara Nethralaya.

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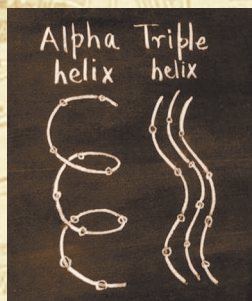
SEPTEMBER  
2019



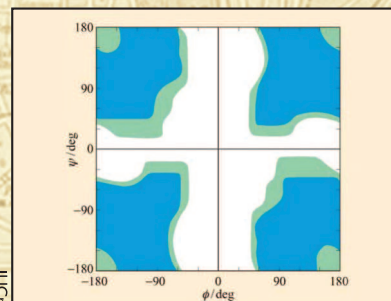
IUCr



Kirubanath, IMSc



IUCr



The Open University

**G.N. RAMACHANDRAN**

**The Madras Group**

G.N. Ramachandran made world-famous contributions to the fields of biophysics and biochemistry in the mid-20th century, while he was at Madras University.

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OCTOBER  
2019

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IMSc



IMSc



IMSc



IMSc

## THE INSTITUTE OF MATHEMATICAL SCIENCES

“A Small Institute with a Big Heart”

The Institute of Mathematical Sciences (IMSc) is an internationally known centre of research, not only in mathematics and physics, but also in areas such as computer science and computational biology.





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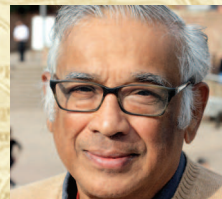


## PRESIDENCY COLLEGE

The Presidency College in Chennai is the only institution in the country to have two Nobel Laureates among its alumni, the physicists C.V. Raman and Subrahmanyam Chandrasekhar. S.R. Srinivasa Varadhan, another alumnus, was awarded the Abel Prize in mathematics in 2007.



Chandra X-ray Observatory



Markus Pössel

NOVEMBER  
2019

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DECEMBER  
2019



Loyola College



Loyola College



Varun P. IMSc

## FATHER RACINE AND INDIAN MATHEMATICS

Much of the deepest Indian work on geometry in the last seven decades can be traced to the influence of a French Jesuit priest, Father Racine, who headed the department of mathematics at Loyola College, Chennai, for three decades and inspired a generation of students.

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JANUARY  
2020



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## INTERPRETING ANCIENT SCRIPTS

Iravatham Mahadevan (1930 - 2018) is known for his contributions to the decipherment of the Tamil-Brahmi script and for his work on the Indus Valley inscriptions.





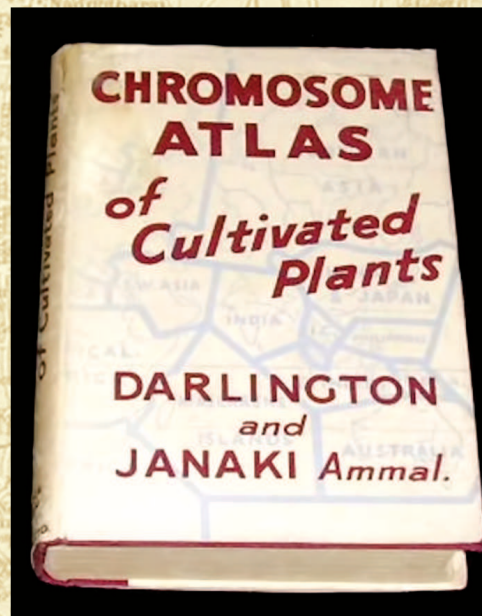
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**FEBRUARY  
2020**



John Innes Archives



## JANAKI AMMAL

**India's first woman botanist**

Janaki Ammal, born in 1897, a leading botanist and geneticist, was one of the first women to earn a doctorate in Botany in the USA. Her career spanned a number of institutions in different countries.

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