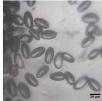


## Outreach Programs

## THE INSTITUTE OF MATHEMATICAL SCIENCES

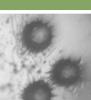
IV Cross Road, CIT Campus, Taramani. Chennai 600113, Tamil Nadu https://www.imsc.res.in/







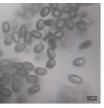


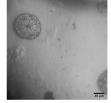












# $IMSc\ Outreach\ Calendar^*\ 2019-2020$

Vigyan Pratibha Teachers Workshop I 9th 11th Sept 2019 Regional workshop for teachers in the Vigyan Pratibha program

Enriching Mathematics Education 28th Sept 2019 Workshop for high school mathematics teachers

IMSc Open Day: TBD 2019

Day-long program of science talks and activities for school students

Mathematical topics in Biology 11th Oct 2019

Workshop for college students

கணித கானகம்: 24th Oct 2019

Mathematics and science program in Tamil for school children

College Teachers Workshop: 25th 30th Nov 2019 Workshop for mathematics teachers of engineering colleges

Vigvan Pratibha Teachers Workshop II 2nd 6th Dec 2019

Regional workshop for teachers in the Vigyan Pratibha program

Women in Science: 11th Feb 2020

Science outreach initiative for girl students as part of the UN International Day of Women and Girls in Science

Science at the Sabha: 16th Feb 2020

Talks on science for the general public at the Music Academy

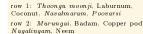
Summer School Student Workshop: 12th - 20th May 2020

Week-long summer science workshop for high school students

College Teachers Workshop: 25th 30th May 2020 Workshop for mathematics teachers of arts and science colleges

Facets: 9th 10th July 2020 Mathematics program for college students

\*Dates are tentative We also host other thematic workshops and public lectures Watch this site for updates https://www.imsc.res.in/outreach/ Follow us on 💆 @IMScChennai



### About the cover:

Pollen grains on anthers of a flower contain the male gametes of seed plants These are transported to stigmas of flowers by different modes - from wind and water to insects and bats - depending on the species of plant The pollen can then fertilize ovules to form a seeds

Pollen grains span a range of sizes  $(6-100 \ \mu m)$  They also come in many mathematical shapes and arrangements and can have different surface textures each of which is characteristic of certain plant families and species For example pollen of all dicots (like Navalmaram) have 3 fold symmetry while monocot pollen (like coconut) has radial symmetry

Pollen grains are coated with a layer of Sporopollenin an extremely resistant substance It is so strong and unreactive that it can survive for over 500 million years and is seen in fossil records There is evidence that Sporopollenin is a polymer but we don t yet understand entirely what it s

Scientists who study pollen are called Palv nologist s

The front page shows pollen§ from a few common flowering trees from the IMSc campus (scale bar =  $20 \mu m$ ) At the top of this page you can see the flowers that the pollen came from Can you guess which pollen on the

front cover is from which of the flowers above? The best way to find out is to pick up a flower and look at the pollen under a microscope Happy pollen seeking

 $\S{Pollen\ images\ taken\ using\ a\ Foldscope}$ 

The Institute of Mathematical Sciences (IMSc) is dedicated to fundamental research in the broad scientific disciplines of theoretical physics mathematics theoretical computer science and computational biology IMSc outreach activities include various programs that bring students and teachers into direct contact with research scientists. One of our largest initiatives "Science at the Sabha" is an annual event for the general public featuring talks on current scientific research