IMSc Outreach Calendar* 2018–19

Science, Journalism, Media: 20th – 21st Aug 2018
A workshop on science communcation connecting scientists and journalists

IMSc Open Day: 8th Sept 2018
Day long program of science talks and activities for school students

Enriching Mathematics Education: 4th – 5th Oct 2018
Workshop for high school mathematics teachers

கணித கானகம்: 26th Oct 2018
Mathematics and science program in Tamil for school children

College Teacher Workshop: 26th Nov – 1st Dec 2018
Workshop for mathematics teachers of Engineering colleges

Women in Science: 11th Feb 2019
Science outreach initiative for girl students as part of the
UN International Day of Women and Girls in Science

Science at the Sabha: 24th Feb 2019
Talks on science for the general public at the Music Academy

Summer School Student Workshop: 14th - 22nd May 2019
Week-long summer sceince workshop for high school students

College Teacher Workshop: 27th May – 1st June 2019
Workshop for mathematics teachers of Arts and Science colleges

Facets: 8th – 9th July 2019
Mathematics program for college students

*Dates are tentative. Visit our website for updates:
https://www.imsc.res.in/outreach/

About the cover:

How many ways can you divide a plane using *only* regular unit polygons?

There are exactly 21 arrangements of regular polygons of unit side length that can share a vertex to fill the space around it — with no overlaps or gaps. These vertices are marked on the front and back cover with ✳. Can you prove there are no more?

Of these 21 arrangements, 11 can be repeated on the plane to form a pattern of regular polygons (again, no gaps or overlaps). These 11 patterns are called **uniform tilings** or Archimedean tilings. The front cover shows 9 such patterns. Can you find the other 2?

Mathematicians study tiling patterns to try and understand what shapes or combinations of shapes can tile a plane. Tiling patterns have applications in various fields including chemistry, physics and computer science. Historically, patterns derived from these tilings are commonly used as motifs in Islamic architectures from Spain to India.

Reference: "Tilings and Patterns" by B. Grünbaum and G. C. Shephard

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.
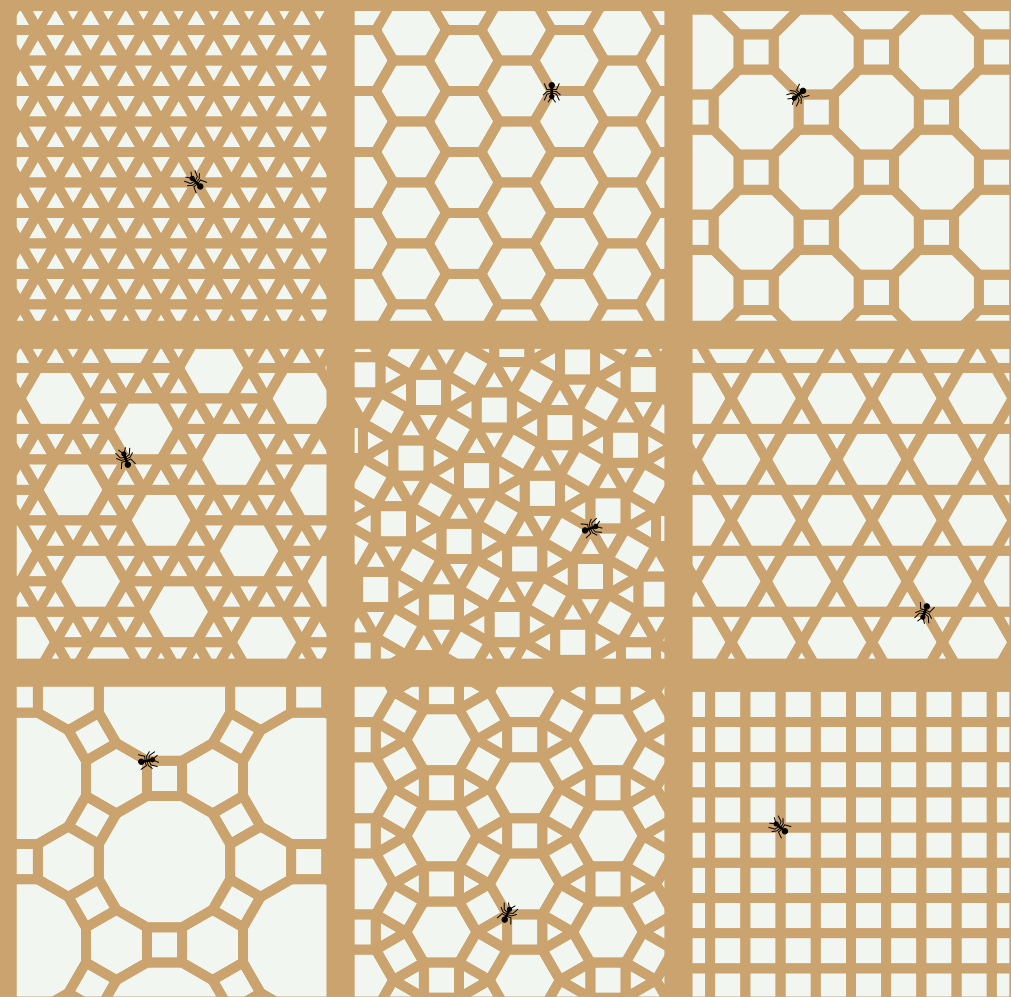
Outreach Programs

THE INSTITUTE OF MATHEMATICAL SCIENCES

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