

# GLIMPSES INTO MATHEMATICS

## KERALA SCHOOL OF MATHEMATICS

A joint venture of DAE, Govt. of India and KSCSTE, Govt. of Kerala

January 06 - 10, 2025

*Glimpses into Mathematics* is a series of programs at Kerala School of Mathematics for providing opportunity to students at the MSc level to have a look into advanced topics in mathematics and familiarize themselves with research topics. These lectures are given by experts in various areas spanning a duration of one to two weeks.

**Abstract:** Which numbers can be written as sums of two squares -- as  $x^2 + y^2$ , for integers  $x, y$ ? Which numbers can be written as  $x^2 + 2y^2$ ? Such questions have been studied for centuries, with notable contributions by Fermat, Lagrange, Euler, Gauss, and Dirichlet. The study of binary quadratic forms is one of the most beautiful areas of Number Theory. Some years ago, one cumbersome construction in the theory was substantially simplified by Manjul Bhargava.

### Application Procedure

Fill out the application form at the following link:

<https://forms.gle/ZTbDXnZrpzRiZjrXA>

### Deadline

The last date for receiving applications is by 5 PM, December 10, 2024.

For further details, please write to [glimpsesintomathematics@ksom.res.in](mailto:glimpsesintomathematics@ksom.res.in)

**Course:** Integral Binary Quadratic Forms

**Instructor:** Chandan Singh Dalawat,  
Central University of Rajasthan

**Background required:** We will give an overview of the theory accessible to a wide audience. No prior knowledge of Number Theory, beyond the rudimentary properties of integers, will be assumed. PhD Scholars and young faculty members are also eligible to apply.

### Selection Process

The selection will be based on your scores in your previous degree program, and on the recommendation letter sent by the head of the department of the applicant's current institution. Only those applications received through the online form mentioned below will be considered. Selected candidates will be informed through email.

**CLICK HERE TO APPLY**

