SEMINAR
SCHOOL OF MATHEMATICS AND STATISTICS

DATE: 25TH MARCH 2021

TITLE

SIMULTANEOUS DENSITY AT INTEGER POINTS OF AN INHOMOGENEOUS QUADRATIC FORM AND LINEAR FORM.

SPEAKER

Ms. Prasuna
TIFR Bombay

VENUE | TIME

https://meet.google.com/pks-uwsh-vas,
04:00–05:00 PM.

ABSTRACT

In 1929, Oppenheim conjectured that for a nondegenerate, indefinite and irrational quadratic form Q in $n \geq 5$ variables, $Q(\mathbb{Z}^n)$ is dense in $\mathbb{Z}$. It was later strengthened to $n \geq 3$ by Davenport and proved in 1987 by Margulis based on Raghunathan's conjectures on closures of unipotent orbits. Later, Dani and Margulis proved the simultaneous density at integer points for a pair of quadratic and linear form in 3 variables when certain conditions are satisfied. We prove an analogue of this for the case of an inhomogeneous quadratic form and a linear form. This is joint work with Anish Ghosh.

ABOUT THE SPEAKER

Ms. Prasuna was an IMSc student of School of Mathematics and Statistics, UoH from 2011 batch. She was an INSPIRE fellowship holder from 2011 to 2014 and NBHM fellowship holder from 2014 to 2016. In December 2015 CSIR examination, she secured All India 1st rank. She is doing PhD at TIFR since 2016.