



Center for Mathematical Sciences
Mallat Family Fund for Research in Mathematics
Elisha Netanyahu Institute of Advanced Studies in Mathematics
Technion-Israel Institute of Technology



Special Lecture Series - Prof. Tyakal Nanjundiah Venkataramana:

Title of Lectures: "**Hypergeometric Functions and Monodromy**"

Abstract: The Gauss hypergeometric functions and various generalizations occur frequently in various questions in geometry and discrete groups. A question of special interest is the computation of the monodromy groups associated to these functions, and determining if they are arithmetic groups/thin groups.

In the first of these lectures, I will explain various preliminary results which reduce the monodromy computations of hypergeometric functions in one variable to questions on specific subgroups of the symplectic/orthogonal groups generated by two elements. The symplectic case is easier and I will describe some results concerning "thin-ness/arithmeticity" of these groups.

In the second, I will briefly describe results of various people on the thin-ness of hypergeometric groups of orthogonal type. I will also briefly touch upon several variable hypergeometric functions and the relation to work of Deligne-Mostow on non-arithmetic (finite covolume) discrete subgroups of the unitary group.

Lecture I: Monday, November 14, 2016 at 15:30-16:30

Lecture II: Tuesday, November 15, 2016 at 13:30-15:30

Please note that there are only two lectures in this Special Lecture Series and that the second lecture will start at 13:30 and will be two hours long.