

गणित विभाग, आईआईटी मद्रास  
DEPARTMENT OF MATHEMATICS, IIT-MADRAS

COLLOQUIUM

- Date / तारीख : Thursday, the 14<sup>th</sup> January, 2016
- Time / समय : 3.00 p.m to 4.00 p.m
- Venue / स्थान : HSB 357 (Madhava Hall, 2<sup>nd</sup> Floor, Department of Mathematics)
- Speaker / वक्ता : Dr. Sivaguru Ravisankar (TIFR, Mumbai)
- Title / शीर्षक : "Several Complex Variables and the Bergman Projection"

**Abstract:**

We begin with an overview of complex analysis in higher dimensions (also called several complex variables) which is in sharp contrast to the analysis in one dimension; in particular, focussing on the natural boundary for holomorphic functions on certain domains and the lack of *good* model domains.

We then focus our attention on a powerful tool in several complex variables: the Bergman projection – for a domain  $\Omega \subset \mathbb{C}^n$ , it is the orthogonal projection from  $L^2(\Omega)$  onto  $L^2(\Omega) \cap \{\text{holomorphic functions in } \Omega\}$ . We will discuss the basic features and several interesting properties of the Bergman projection.

Examples will be used throughout our presentation and the only pre-requisites we assume are complex analysis in one variable and basic functional analysis.

"All are invited"



Dr. T. V. Anoop  
(Seminar in-charge)  
Assistant Professor  
गणित विभाग  
Department of Mathematics  
भारतीय प्रौद्योगिकी संस्थान मद्रास  
INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
चेन्नै / CHENNAI - 600 036



Head, Department of Mathematics  
अध्यक्ष / HEAD  
गणित विभाग  
Department of Mathematics  
भारतीय प्रौद्योगिकी संस्थान मद्रास  
INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
चेन्नै / CHENNAI - 600 036