



THE UNIVERSITY OF
CHICAGO

Departments of Mathematics and Statistics
ALGEBRAIC GEOMETRY SEMINAR

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**Fundamental Groups of Compact Kähler Manifolds:
Survey of Results and Open Problems**

WEDNESDAY, June 4, 2014, from 4:30–6:00 PM
203 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

There has been great interest in the study of the topology of complex algebraic varieties at least since the foundational work of Lefschetz and Hodge in the 1920's and 30's. The fundamental group was emphasized by Serre in the 1950's and 60's. The basic problem is to know if there is a group-theoretic characterization of the fundamental groups of a given class of algebraic varieties, say of smooth projective varieties. This seems presently out of reach. In this talk I will attempt to summarize the present state of knowledge: A number of restrictions are known, usually obtained by some kind of Hodge theory and apply to compact Kähler manifolds. A number of interesting examples are also known. I will also discuss a number of open problems.

Organizers:

For further information on this event, please email Lek-Heng Lim at lekheng@galton.uchicago.edu or Madhav Nori at nori@math.uchicago.edu.

UCAGS Seminar URL: <http://www.stat.uchicago.edu/~lekheng/ag.html>