

Analytic Methods of Constructing Bundle Sections and their Geometric Applications



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Part I		Part II
18 May 2017 2.30 - 3.20 pm	+	19 May 2017 9 - 9.50 am

IMS Auditorium, Free Admission

Abstract

Many important problems in complex geometry involve the construction of holomorphic sections of bundles with special properties. For example, the deformational invariance of plurigenera, the finite generation of the canonical ring, the abundance conjecture, effective results in algebraic geometry such as the Fujita conjecture, hyperbolicity problems, nonexistence problem for smooth Levi-flat hypersurface, the splitting of unstable plane bundle over complex projective space, algebraic-geometric techniques in the complex Neumann problem for weakly pseudoconvex domains. In these two talks, we will discuss from scratch the background and the motivation of the methods of constructing holomorphic sections of bundles. Then we will focus on some recent results and unsolved problems and promising approaches to them.

About the speaker

Yum-Tong Siu is the William Elwood Byerly Professor of Mathematics at Harvard University. He received the Stefan Bergman Prize of the American Mathematical Society. He is a member of the Goettingen Academy of Sciences, the Chinese Academy of Sciences, the American Academy of Arts and Sciences, the National Academy of Sciences, the Academia Sinica in Taiwan, and the Hong Kong Academy of Sciences. He has been an invited speaker at the International Congress of Mathematicians in Helsinki (1978), Warsaw (1983) and Beijing (2002).