## 报告人： 华诤

## 单位：香港大学

## 时间：12月19日（周二）下午1：00-2：00

## 邀请人： 杜荣

## 地点：闵行数学楼401室

## 题目： Contraction algebra, singularities and enumerative geometry

摘要 : Contraction algebra was first defined by Donovan and Wemyss for three dimensional flopping contraction. It is a (in general) noncommutative algebra representing the non-commutative deformation functor of the flopping curve in a 3-fold. This algebra builds deep relation between singularity theory of Gorenstein 3-folds, group of auto-equivalences of CY 3-folds and enumerative geometry of Gopakumar-Vafa invariants. It is expected that three dimensional Gorenstein singularities that admits crepant resolutions can be classified explicitly via contraction algebras.

The talk is based on my joint work with Yukinobu Toda (1601.04881) and preprint 1610.05467.

## 报告人简介：University of Wisconsin-Madison, Madison, Wisconsin, USA Ph.D. in Mathematics, 2009；Kansas State University, Manhattan, KS, U.S. Visiting assistant professor Sep, 2011 - May 2012 ； University of British Columbia, Vancouver, BC, Canada Postdoctoral fellow August, 2009 - August, 2011；University of Oxford, U.K. Oct - Nov, 2012； Chinese University of Hong Kong, Hong Kong Sep 2012 - Aug 2013； Imperial college London, London, UK Feb - April, 2011 ；Max-Planck-Institute fur Mathematik, Bonn, Germany May - Aug, 2010 May - Aug, 2012；University of Hong Kong, Hong Kong, Assistant professor.

His research interest is Algebraic geometry. In particular, he is interested in derived category, toric varieties and geometry of Calabi-Yau manifolds, Quantization of Donaldson-Thomas theory and Bridgeland stability conditions on Calabi-Yau manifold.



