

Birational Geometry Seminar

Fall 2021

Thursday, 19:00-21:00
Jinchunyuan West Building, 2nd Floor

Schedules:

- Lecture 1: Overview of the minimal model program.
Speaker: Xiaowei Jiang
- Lecture 2-3: Cone of curves and positivity.
Speaker: Qiwei Zhu
Reference: [KM98, §1.3&1.5] or [Laz04, §1.1~1.4&2.2].
- Lecture 4-5: Base point free theorem and the cone theorem.
Speaker: Bingyi Chen
Reference: [KM98, §3.1~3.3].
- Lecture 6: Birational geometry and derived category.
Speaker: Xun Lin
- Lecture 7: Recent development in MMP.
Speaker: Xiaowei Jiang
- Lecture 8: Survey on BCHM.
Speaker: Xiaowei Jiang
Reference: [BCHM10] [HM10].
- Lecture 9: Abundance for varieties of numerical dimension 0.
Speaker: Xiaowei Jiang
- Lecture 10: Rational connectedness of Fano type varieties.
Speaker: Xiaowei Jiang

- Lecture 11: An introduction to generalised pairs.
Speaker: Bingyi Chen
- Lecture 12: Weak Zariski decompositions and log terminal models.
Speaker: Qiwei Zhu

References

- [BCHM10] C.Birkar, P.Cascini, C.D.Hacon, and J.McKernan. *Existence of minimal models for varieties of log general type*, *J. Amer. Math. Soc.* 23 no. 2(2010),405-468. 1
- [Deb01] O.Debarre. *Higher-Dimensional Algebraic Geometry*. Springer,2001.
- [HM10] C.D.Hacon and J.McKernan. *Existence of minimal models for varieties of log general type II*, *J. Amer. Math. Soc.* 23 no. 2(2010),469-490. 1
- [Laz04] R. Lazarsfeld, *Positivity in algebraic geometry I*, Springer-Verlag, Berlin, 2004. 1
- [Mat02] K. Matsuki, *Introduction to the Mori program*, Universitext, Springer-Verlag, New York, 2002.
- [KM98] J. Kollar and S. Mori, *Birational geometry of algebraic varieties*, Cambridge Univ. Press, 1998. 1