1139-14-258   **Chunyi Li** (`c.li.25@warwick.ac.uk`) and **Laura Pertusi*** (`laura.pertusi@unimi.it`), Dipartimento di Matematica Federigo Enriques, Università degli studi di Milano, Via Cesare Saldini 50, 20133 Milano, MI, Italy, and **Xiaolei Zhao** (`x.zhao@northeastern.edu`). *Rational curves of low degree on cubic fourfolds and stability conditions.*

In a recent work, Bayer, Lahoz, Macrì and Stellari constructed Bridgeland stability conditions on the Kuznetsov component of a cubic fourfold, which is an admissible K3 subcategory of the derived category of coherent sheaves. As a consequence, it is possible to address the problem of studying moduli spaces of stable objects in this K3 category. The aim of this talk is to describe the Fano variety of lines on a cubic fourfold and the hyperkähler eightfold, constructed by Lehn, Lehn, Sorger and van Straten from twisted cubic curves on a cubic fourfold non containing a plane, as moduli spaces of Bridgeland stable objects in the Kuznetsov component. Then, we discuss some applications concerning the categorical version of Torelli Theorem for cubic fourfolds, the relation between the period point of the Fano variety with that of the LLSvS eightfold, and the derived Torelli Theorem for cubic fourfolds. This is a joint work with Chunyi Li and Xiaolei Zhao. (Received February 13, 2018)