



ODTU-Bilkent Algebraic Geometry

“Lines in singular triquadrics”

By

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Abstract: Thanks to the global Torelli theorem, one can relatively easily bound the number of lines (and even classify the large configurations of lines) in any *smooth* polarized K3-surface. The situation changes if *singular* (necessarily ADE-) surfaces are considered: only partial results are known (mainly due to Davide Veniani) and only for quartics. I will discuss our recent work where we adjust the arithmetical reduction for the singular case; in particular, I will explain why it is difficult to keep track of the lines and exceptional divisors simultaneously.

We have tested our approach in the case of octic surfaces in P^5 , most notably triquadrics. The sharp upper bound on the number of lines in a *singular* triquadric is 32, as opposed to the 36 lines in a smooth one. For special octics these bounds are 30 and 33, respectively.

Date: 4 December 2020, Friday

Time: 15:40

Place: Zoom

To request the event link, please send a message to sertoz@bilkent.edu.tr