

YONSEI

Math-CSE Colloquium

**Cayley octads, plane quartic curves,
Del Pezzo surfaces of degree 2, and
double Veronese cones**

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(POSTECH)

A net of quadrics in the 3-dimensional projective space whose singular members are parametrized by a smooth plane quartic curve has exactly eight distinct base points, called a regular Cayley octad. It is a classical result that there is a one-to-one correspondence between isomorphism classes of regular Cayley octads and isomorphism classes of smooth plane quartic curves equipped with even theta-characteristics. We can also easily observe a one-to-one correspondence between isomorphism classes of smooth plane quartic curves and isomorphism classes of smooth Del Pezzo surfaces of degree 2. In my talk, I will set up a one-to-one correspondence between isomorphism classes of smooth plane quartic curves and isomorphism classes of double Veronese cones with 28-singular points. Also, I will explain how the 36 even theta characteristics of a given smooth quartic curve appear in the corresponding double Veronese cone.

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**[온라인 강연] 접속 방법은 추후 별도로 공지.