

\Rightarrow Contradiction.

\Rightarrow Thus, $\dim(V_{c_1} \cap \dots \cap V_{c_k} \cap U) \geq 2$.

$\Rightarrow \dim(V_{c_1} \cap V_{c_2} \cap V_{c_3} \cap U) \geq 3$, for, if not, then by the argument above,

$\dim(V_{c_1} \cap V_{c_2} \cap V_{c_3} \cap U) = 2$ (\because In case,

$\dim(V_{c_1} \cap V_{c_2} \cap V_{c_3} \cap U) \leq 1$, by the argument above,

$\dim(V_{c_1} \cap V_{c_2} \cap V_{c_3} \cap V_{c_k} \cap U) = 0$ or -1 .)

Again, $V_{c_1} \cap V_{c_2} \cap V_{c_3} \cap U = A_1 \cup \dots \cup A_k$, A_j 's irreducible components.

If $A_j \neq \emptyset$, $\exists C_j'' \in A_j$.

\Rightarrow Choose C_4 s.t. C_4 is not tangent to C_j'' .

It is possible since $\bigcup V_{C_j''}$ is a set of measure zero in W .

$\Rightarrow \dim(V_{c_1} \cap V_{c_2} \cap V_{c_3} \cap V_{c_k} \cap U) = 1 \Rightarrow$ Contradiction.

Continue this procedure, then we have

$\dim(V_{c_1} \cap V_{c_2}) \geq 4$, which is absurd, since if C_1 is not tangent to C_2 , then $V_{c_1} \neq V_{c_2}$ and $\dim(V_{c_1} \cap V_{c_2}) < 4$ (\because For smooth C_1, C_2 , V_{c_1} & V_{c_2} are irreducible)

$\Rightarrow \pi_1 : I \longrightarrow (W)^5$ is generically finite to one.

Suppose that assertion 1 is not true.

If for some smooth C_1, \dots, C_5 ,

$V_{c_1}, V_{c_2}, \dots, V_{c_5}$ meet transversely away from the subvariety of singular conics, then