

Intersection Theory on Mixed Curves

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Abstract: We consider two mixed curve $C, C' \subset \mathbb{C}^2$ which are defined by mixed functions of two variables $\mathbf{z} = (z_1, z_2)$. We have shown in our previu paper that they have canonical orientations. If C and C' are smooth and intersect transversely at P , the intersection number $I_{top}(C, C'; P)$ is topologically defined. We will generalize this definition to the case when the intersection is not necessarily transversal or either C or C' may be singular at P using the defining mixed polynomials.