SAITO BASES AND STANDARD BASES FOR PLANE CURVES

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Abstract: In this paper we describe how to compute a Saito basis of a cusp, a plane curve with only one Puiseux pair. Moreover, the 1-forms of the Saito basis that we obtain are characterized in terms of their divisorial orders associated to the "cuspidal" divisor of the minimal reduction of singularities of the cusp. We also introduce a new family of analytic invariants for plane curves computed in terms of Saito bases.

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Key words: Saito basis, analytic invariants, equisingularity, semimodule, cusp, standard basis, differential values.