



# Exact Poisson pencils, $\mathcal{S}_T\mathcal{S}$ -structures and topological hierarchies

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We discuss, in the framework of Dubrovin-Zhang's perturbative approach to integrable evolutionary PDEs in 1+1 dimensions, the role of a special class of Poisson pencils, called exact Poisson pencils. In particular we show that, in the semisimple case, exactness of the pencil is equivalent to the constancy of the so-called "central invariants" of the theory that were introduced by Dubrovin, Liu and Zhang.

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