

Twisted duality and BV-algebras on the (co)homology of quadratic Poisson structures

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Abstract. This paper is devoted to the calculation of Poisson (co)homologies for polynomial Poisson algebras in two variables and their Koszul dual Poisson algebras. According to the computation results, the twisted Poincaré dualities were recovered via modular derivations. Moreover, the relations between the modular derivations of polynomial Poisson algebras and their Koszul dual Poisson algebras were given explicitly. Finally, we also investigate the existence of Batalin–Vilkovisky algebra structures on their Poisson cohomology groups.

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