Off-shell BRST-VSUSY Superalgebra for D=4 BF Theories in Superconnection Formalism

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Abstract: We propose the superconnection formalism to construct the off-shell BRST-VSUSY superalgebra for D=4 BF theories. The method is based on the natural introduction of physical fields as well as auxiliary fields via superconnections and their associated supercurvatures defined on a superspace. We also give a prescription to build the off-shell BRST-VSUSY exact quantum action.

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