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A LOGARITHMIC SOBOLEV INEQUALITY FOR ONE-DIMENSIONAL MULTIVALUED STOCHASTIC DIFFERENTIAL EQUATIONS

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Abstract: We establish a logarithmic Sobolev inequality for a one-dimensional multivalued stochastic differential equation associated with the subdifferential of a convex lower semicontinuous function, using an explicit expression for the Malliavin derivative of the considered process. This result is given under some mild conditions on the coefficients.

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