

On the transport of measures by controlled flows

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joint work with Andrey Sarychev²

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We consider a smooth control system with n -dimensional space state. For such a system, a natural extension of the notion of controllability is as follows: given two Borel probability measures in \mathbb{R}^n , is there a control such that the corresponding flow by the control system transports the first measure into the second?

Realistically, we can not expect to obtain exact controllability in the sense above. However, we discuss some conditions which imply approximate controllability in a weak sense.