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Control of certain classes of hypoelliptic diffusions

The control of diffusive systems is well developed for uniformly parabolic operators, much less so for degenerate problems. In the latter case, a general theory which cobers controllability and observability issues is still missing. However, we can give a fairly complete analysis of such properties for certain classes of degenerate parabolic equations. This talk will focus on controllability, observability, and Lipschitz stability for diffusions associated with hypoelliptic operators including the Grushin and Heisenberg laplacians.