1173-60-198   **Fabrice Baudoin**, **Qi Feng**, **Xi Geng** and **Cheng Ouyang*** (`couyang@uic.edu`), 851 South Morgan Street, MSCS (M/C 249), University of Illinois at Chicago, Chicago, IL 60607, and **Samy Tindel**. *Equivalence of control distances.*

We show that for a hypo elliptic SDE driven by a fractional Brownian motion (fBm), the control distance of the system is locally equivalent to the corresponding sub-Riemannian distance. In a particular case when the solution is the signature of the fBm the equivalence is global. (Received September 20, 2021)