1148-60-93 **Kei Kobayashi*** (kkobayashi5@fordham.edu), Fordham University, 113 West 60th Street, New York, NY 10023, and **Sixian Jin**. *Strong approximation of stochastic differential equations driven by a time-changed Brownian motion with time-space-dependent coefficients.*

The rate of strong convergence is investigated for an approximation scheme for a class of stochastic differential equations driven by Brownian motion composed with a random time change $(E_t)_{t\geq 0}$, where the time changes considered include the inverses of stable and tempered stable subordinators. The coefficients of the stochastic differential equations depend on the regular time variable t rather than the time change E_t, which makes it difficult to analyze the error ascribed to the approximation. To overcome this difficulty, we utilize a Gronwall-type inequality involving a stochastic driver to control the moment of the error. Moreover, in order to guarantee that an ultimately derived error bound is finite, we establish a useful criterion for the existence of exponential moments of powers of the random time change. (Received January 26, 2019)