

1096-60-1119

**Etsuo Segawa\*** ([e-segawa@m.tohoku.ac.jp](mailto:e-segawa@m.tohoku.ac.jp)), 980-8579, Japan. *Limit behaviors of quantum walks and spectral measure on the unit circle.*

We propose a method which connects a spectral measure of the unit circle to limit theorem of discrete-time quantum walk. We give examples that this method works well to show the weak convergence theorem in which specific stochastic properties of the quantum walks obtained by measurement of its quantum system; linear spreading and localization, for not only spatial homogeneous cases but also some spatial inhomogeneous cases. (Received September 13, 2013)