1120-57-28 **Naoyuki Monden*** (monden@isc.osakac.ac.jp), Department of Engineering Science, Osaka Electro-Communication University, 18-8, Hatsu-cho, Neyagawa, Osaka 572-8530, Japan. *Stable commutator length of Dehn twists and the signatures of surface bundles.*

It is well-known that the signature of surface bundles over surfaces is $4n$ for an integer n. Especially, the signature vanishes if the base genus is 0 or 1. In this talk, for any integer n, we construct surface bundles of fiber genus at least $39|n|$ over the surface of genus 2 with signature $4n$. Such examples are constructed using mapping class group arguments. Moreover, by applying the construction techniques, we give factorizations of powers of Dehn twists as products of commutators. As a corollary, we obtain new upper bounds for stable commutator lengths of Dehn twists. (Received January 23, 2016)