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Koichiro Akiyama^{*} (koichiro.akiyama@toshiba.co.jp), 1 Komukai Toshiba-cho Saiwai-ku, Kawasaki, Kanagawa 2128582, Japan, Yoshinobu Fujiwara (yoshinobu1.fujiwara@toshiba.co.jp), 1 Komukai-Toshiba-cho Saiwai-ku, Kawasaki, Kanagawa 2128582, Japan, and Yasuhiro Goto (ygoto@cc.hokkyodai.ac.jp), 1-2 Hachiman-cho, Hakodate, Hokkaido, Japan. On the difficulty of finding sections of fibered algebraic surfaces.

We construct a public-key cryptosystem which security is based on the difficulty of finding sections of fibered algebraic surfaces. In this talk, we review an efficient algorithm to find sections and present some important parameters related to the difficulty. Also we show some experimental results using this algorithm. (Received August 29, 2006)