1163-94-330 Nael Rahman and Vladimir Shpilrain* (shpilrain@yahoo.com). MAKE: a Matrix Action Key Exchange.

We offer a public key exchange protocol based on a semidirect product of two cyclic (semi)groups of matrices over Z_p . One of the (semi)groups is additive, the other one multiplicative. This allows us to take advantage of both operations on matrices to diffuse information. We note that in our protocol, no power of any matrix or of any element of Z_p is ever exposed, so all standard attacks on Diffie-Hellman-like protocols (including Shor's quantum algorithm attack) are not applicable. (Received September 02, 2020)