A LWE-Based Secret Sharing Scheme

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Abstract

We present a secret sharing scheme whose security can be reduced to the hardness of the Learning With Errors (LWE) problem. This is a strong property since the LWE problem is believed to be very hard, as hard as worst-case lattice problems hence offering security in the quantum world. The scheme has certain technical advantages: it requires only basic operations and it allows sharing several secrets at the same time.

Reference


**Index Terms**

Computer Science  
Security

**Key words**

secret sharing  
learning with errors  
lattices