

# Rijndael by *J. Daemen and V. Rijmen*

|                         |  |
|-------------------------|--|
| Block size              | 128 bits   |
| Key Size                | 128, 192, 256 bits   |
| Speed                   | ~18-20 cycles / byte   |
| Mathematical Foundation | Galois Fields  |
| Implementation          | <ul style="list-style-type: none"><li>• Substitution-permutation network</li><li>• Basic operations : <math>\oplus</math>, <math>+</math> , shift</li><li>• Small code : 98k</li></ul> |

Adopted by the NIST in December 2001

# (pure) Encryption Modes

a.k.a. how to encrypt long messages

**ECB - Electronic Code Book**

**CBC - Cipher Block Chaining**

CFB - Cipher Feedback

OFB - Output Feedback

**CTR - Counter**