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ERRATUM

A new class of optimal 3-splitting authentication codes

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In the paper *A new class of optimal* 3*-splitting authentication codes, (Designs, Codes and Cryptography, 38, 373-381, 2006)*, the proof of Lemma 2.3 is wrong. We give its correction as follows.

Lemma 2.3 *There exists a* $(109, 3 \times 3, 1)$*-cyclic splitting BIBD.*

Proof Take

$$B_1 = \begin{pmatrix} 0 & 1 & 2 \\ 3 & 6 & 9 \\ 21 & 35 & 69 \end{pmatrix}, \quad B_2 = \begin{pmatrix} 0 & 1 & 14 \\ 37 & 45 & 71 \\ 93 & 96 & 99 \end{pmatrix}$$

It is not difficult to check that $\{B_1, B_2\}$ forms a $(109, 3 \times 3, 1)$-EDF over Z_{109}. The conclusion follows from Theorem 2.2.

Now the proof is correct.

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