TRUTH TABLE

Table: 16 functions induced by an arbiter PUF with two switch blocks.

	Challenge				
	$x_2x_1 = 00$	$x_2x_1 = 01$	$x_2x_1 = 10$	$x_2x_1 = 11$	$f(x_1, x_2)$
0000	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	0
0001	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	x_1x_2
0010	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	$\overline{x_1}x_2$
0011	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	x_2
0100	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	$x_1\overline{x_2}$
0101	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	x_1
0110	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	$x_1 \oplus x_2$
0111	$d_{11} + d_{21} < d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	$x_1 + x_2$
1000	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	$\overline{x_1 + x_2}$
1001	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	$\overline{x_1 \oplus x_2}$
1010	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	$\overline{x_1}$
1011	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} < d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	$\overline{x_1} + x_2$
1100	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	$\overline{x_2}$
1101	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} < d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	$x_1 + \overline{x_2}$
1110	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} < d_{14} + d_{23}$	$\overline{x_1x_2}$
1111	$d_{11} + d_{21} > d_{12} + d_{22}$	$d_{14} + d_{21} > d_{13} + d_{22}$	$d_{12} + d_{24} > d_{11} + d_{23}$	$d_{13} + d_{24} > d_{14} + d_{23}$	1