**TESTING FOR ANDERSON’S PUF:**

The maximum of only 90 bit can only be done in sasebo g2 board for which I got the results with real time simulation with the board as :A screenshot of a computer

Description generated with very high confidence

REGION -1 and region-2:

TEST 1 :

CHALLENGE : x01abcf265789634256daa12

RESPONSE : x102a51901ac59ddd4079991

TEST 2:

CHALLENGE : x1111111111111111111111

RESPONSE : x0c0bf9959adfdfddc37bb95

TEST 3:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFFf

RESPONSE : x100851901ac595d94079891

REGION -1 and 3:

TEST 1:

CHALLENGE : x1111111111111111111111

RESPONSE : x18a8f8307956090428f6323

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x1808b030695609040076321

REGION -1 and 4:

TEST 1:

CHALLENGE : x1111111111111111111111

RESPONSE : x03a8500112701c20a37844f

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x07a8701116789c2ca378c4f

REGION -2 and 3:

TEST 1:

CHALLENGE : x1111111111111111111111

RESPONSE : x26d714f039343742c2a171c

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x264704702134350282a131c

REGION -2 and 4:

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x03d35208852c400604838c0

REGION -3 and 4:

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x03a82ff112701c25a35743a

This tells that the Anderson PUF is giving random responses for different challenges

**INTRA-PUF VARIATION TEST:**

Thus intra puf variation is good and has good standards but the effect of this when we give the same input we tend to get a different response and error is likely to occur at 30%.

A screenshot of a social media post

Description generated with very high confidence

This tells us that the error is happening because of the

The Virtex5 Board has been divided into 4 regions and it has been proved that it gives different output on different regions.

The xc5vlx30 board has an array of 80\*30 (row\*col):

A close up of a logo

Description generated with very high confidence

REGION 1 : X0Y0 TO X28Y40

REGION 2 : X0Y41 TO X28Y79

REGION 3 : X32Y0 TO X52Y40

REGION 4 : X32Y41 TO X52Y79

It has two slices.

**Modified Anderson PUF:**

Results of the Modified Anderson PUF based on region Test:

Region -1 with 2:

TEST 1:

CHALLENGE : x1111111111111111111111

RESPONSE : x11cad11018c4b75008db991

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x3a164c549900d2d30821410

Region -1 with 3 :

TEST 1:

CHALLENGE : x1111111111111111111111

RESPONSE : x010bf9859adfdfddcffbb95

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x3a064054990192d30820410

Region -1 with 4 :

TEST 1:

CHALLENGE : x1111111111111111111111

RESPONSE : x03a8400116701824a37804f

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x07a8400116701c24837844f

Region -2 with 3 :

TEST 1:

CHALLENGE : x1111111111111111111111

RESPONSE : x26d714f029343742c2a571c

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x2647007020343502c2a131c

Region -2 with 4 :

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x03db5228cd2ce40748f8d5

Region -3 with 4 :

TEST 2:

CHALLENGE : x11FFFFFFFFFFFFFFFFFFFFF

RESPONSE : x08da4634ed3b780665f901

The modified Anderson PUF also proves to give good variation.