

Lemma:

$W \text{ ccp} \implies N_R(W) \text{ ccp}$

proof:

—— sketch: balls in l^∞ metric are products of balls

I think I can hear you so it's OK

Take $B(w_1, R) = B_1 \times B_2 \times B_3$

Draw path in B between w_1 and p_1

Call the path $\alpha = (\alpha_1, \alpha_2, \alpha_3)$

The path we want is $\beta = (\alpha_1, \alpha_2, p_1')$

From Me to Everyone:

11:12 AM

p_1' is in B_3 and α_1 is in B_1 and α_2 is in B_3 . So β is in B because B is the product of three balls