

CORRECTION !

10/15/17 ①

to my notes on pp 269-272

page ③ of NOTES

let L be a right Leibniz algebra

i.e. $[*, z]$ is a derivation

$$[[x, y], z] = [[x, z], y] + [x, [y, z]]$$

let $I = \text{span} \{ [x, x] : x \in L \}$

(the linear span is enough)
Contrary to what I said in my notes

claim I is a left ideal and a right ideal for Oct 6 p ③

(i.e. two sided so that L/I is a Leibniz alg
actually a Lie algebra)

Recall from the notes for October 6 (Notes for pp 269-272)

~~that~~ that in a right Leibniz algebra p. ②

$$[x, [y, z]] = -[x, [z, y]]$$

Therefore if $x, y \in L$ then

$$[y, [x, x]] = -[y, [x, x]]$$

so $[y, [x, x]] = 0$ & I is a left ideal.

To see that it is a right ideal consider

$$[[y, y] + x, [y, y] + x] = [x, x] + [[y, y], [y, y]] + [x, [y, y]]$$

+ $[[y, y], x]$, so $= 0$ (left ideal)
(there is a misprint in Rakhimov's survey on Gol'tsov's p. 229)

$$[[y, y], x] = [[y, y] + x, [y, y] + x] - [x, x] - [[y, y], [y, y]] \quad \therefore \text{right ideal } \textcircled{P}$$