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## Info. Sheet 5; Advanced Topics in Geometry E1 (MTH.B505)

### Corrections

- Lecture Note page 12, line 4 of Example 4.2:  $[[X, Y], Z] + [[Y, Z], X] + [[Z, X], Y] = \mathbf{0}$
- Lecture Note Page 15, Definition 4.12:  
A curve  $\gamma(t)$  on  $M$  whose acceleration vector field vanishes identically is called a *geodesic* on  $M$ .  
 $\Rightarrow$   
A curve  $\gamma(t)$  on  $M$  such that  $[\ddot{\gamma}]^T$  vanishes identically is called a *geodesic* on  $M$ .
- Lecture Note Page 15, Example 4.13: Geodiscs  $\Rightarrow$  Geodesics
- Lecture Note Page 15, line 3 of Example 4.13:  $(\sqrt{k})t \Rightarrow (\sqrt{k}t)$
- Lecture Note Page 15, line 4 of Example 4.13:  $1/\sqrt{k} \Rightarrow 1/k$
- Lecture Note Page 16, line 5:  $H^3(-1) \Rightarrow H^2(-1)$
- Lecture Note Page 16, bottom: components  $\Rightarrow$  component

### Q and A

**Q 1:** 講義内 (原文ママ: 講義です) で, 測地線を, (リーマン多様体)  $\subset \mathbb{E}^n$  に対して定ぎしましたが,  $\mathbb{E}_1^3$  といったローレンツ多様体でも同様に定義するのでしょうか.

**A:** それを今回やります.