## Advanced Topics in Geometry A1 (MTH.B405)

Kotaro Yamada kotaro@math.sci.isct.ac.jp

http://www.official.kotaroy.com/class/2025/geom-a1

Institute of Science Tokyo

2025/04/25 (Corrected: 2025/04/25)

## Notice

May 02 (Fri): Tuesday's programme.
No lecture of "MTH.B405"

• Next Lecture: May 09 (Fri)

• Deadline of today's homeworks: April 30 (Wed) 10:00JST.

## Q and A

毎回 zoom 録画 がアップされるのでしょうか.
Will zoom recordings be uploaded each time?
Comment: そのつもりです. Yes.

• On the blackboard file 3, the lemma states that  $d^2f = 0$  for all functions and used schwarz theorem for the proof. Don't we need to assume that  $f \in C^2$  at least?

**Comment**: Of course f must be  $C^2$ . Sorry that I might drop the declaration:

In our context, we assume all quantities are of class  $C^\infty$  whenever otherwise stated.

## Q and A

• Actually I don't understand first and second fundamental forms *I* and *II*. I think I didn't learn these two concepts during my undergraduate studies. Would you please give me some suggestions about reference materials?

Comment: Don't worry. These concepts will actually be introduced in 4th lecture. At this time, think that they are only "words".